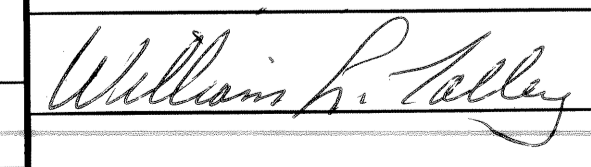


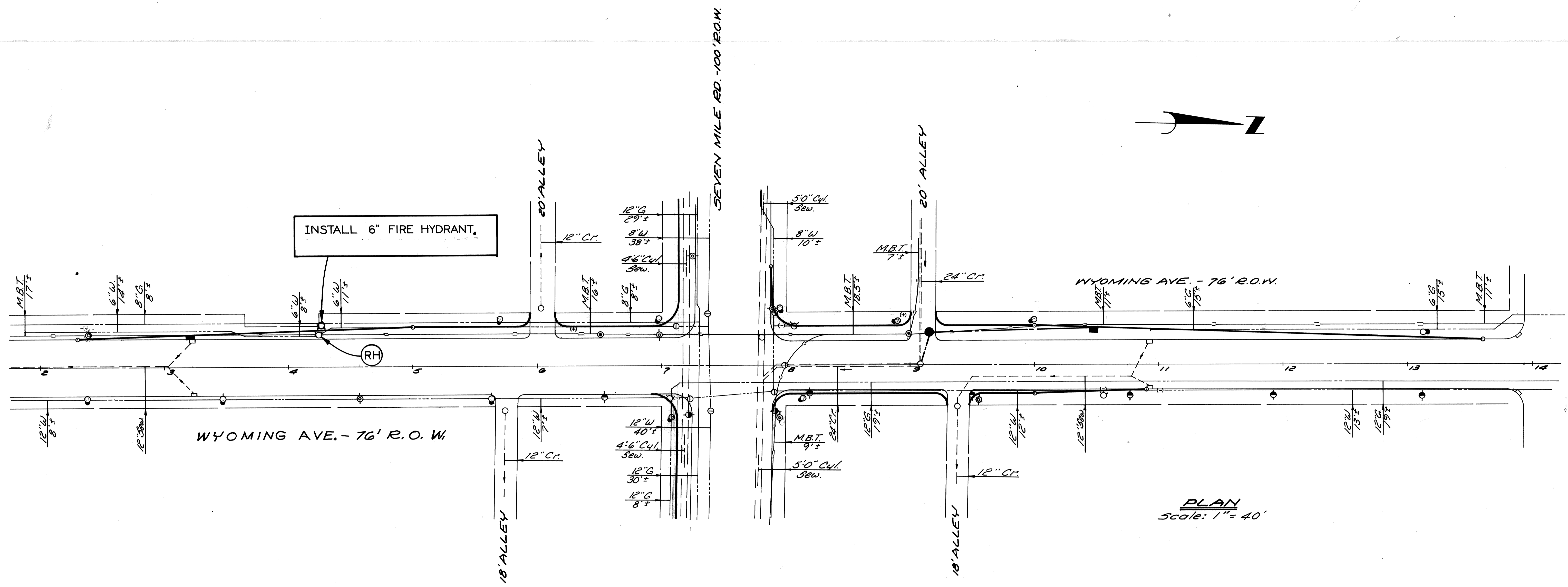
FIRE HYDRANT PAY ITEMS (THIS SHEET)	QUANTITIES
RELOCATE HYDRANT - METHOD I	2 EACH
RELOCATE HYDRANT - METHOD II	1 EACH

LEGEND
 (AS) Adjusting Structures
 (RH) Removing Existing Fire Hydrant
 (See Pay Items, This Sheet)

NOTES
 1. For utility legend see sh. no. 24.
 2. Locations of exist. utility lines are based on best available records and are not guaranteed for accuracy.

CALL MISS DIG
 48 HOURS PRIOR TO
 CONSTRUCTION 647-7344

REFERENCE DRAWINGS DESIGNED BY: W.B. DRAWN BY: MRE/M.S. TRACED BY: CHECKED BY: RP/S.J.		APPROVED: 	CITY OF DETROIT CITY ENGINEERING DEPARTMENT	SEVEN MILE RD. - WYOMING AVE. INTERSECTION IMPROVEMENT UTILITIES-SEVEN MILE RD.	SHEET 19 OF 52 SHEETS CONTRACT No. 11418A DRWG No. DATE 3-89
--	--	---	--	---	---



PLAN
Scale: 1" = 40'

FIRE HYDRANT PAY ITEMS (THIS SHEET)	QUANTITIES
FIRE HYDRANT	1 EACH
REMOVE HYDRANT - METHOD I	1 EACH

LEGEND
 (RH) Remove Exist. Fire Hyd.
 (See Pay Items This Sheet.)

- NOTES**
1. For Utility Legend, see St. No. 24.
 2. Locations of exist. utility lines are based on best available records & are not guaranteed for accuracy.

CALL MISS DIG
 48 HOURS PRIOR TO
 CONSTRUCTION 647-7344

REFERENCE DRAWINGS DESIGNED BY: W.B. DRAWN BY: MAB/M.S. TRACED BY: CHECKED BY: RP/S.J.	APPROVED: 	CITY OF DETROIT CITY ENGINEERING DEPARTMENT	SEVEN MILE RD. - WYOMING AVE. INTERSECTION IMPROVEMENT	20 OF 52 SHEETS CONTRACT No. 11418A
			UTILITIES - WYOMING AVE.	DRWG No. DATE 3-89

NO.	DESCRIPTION	DATE
1		
2		

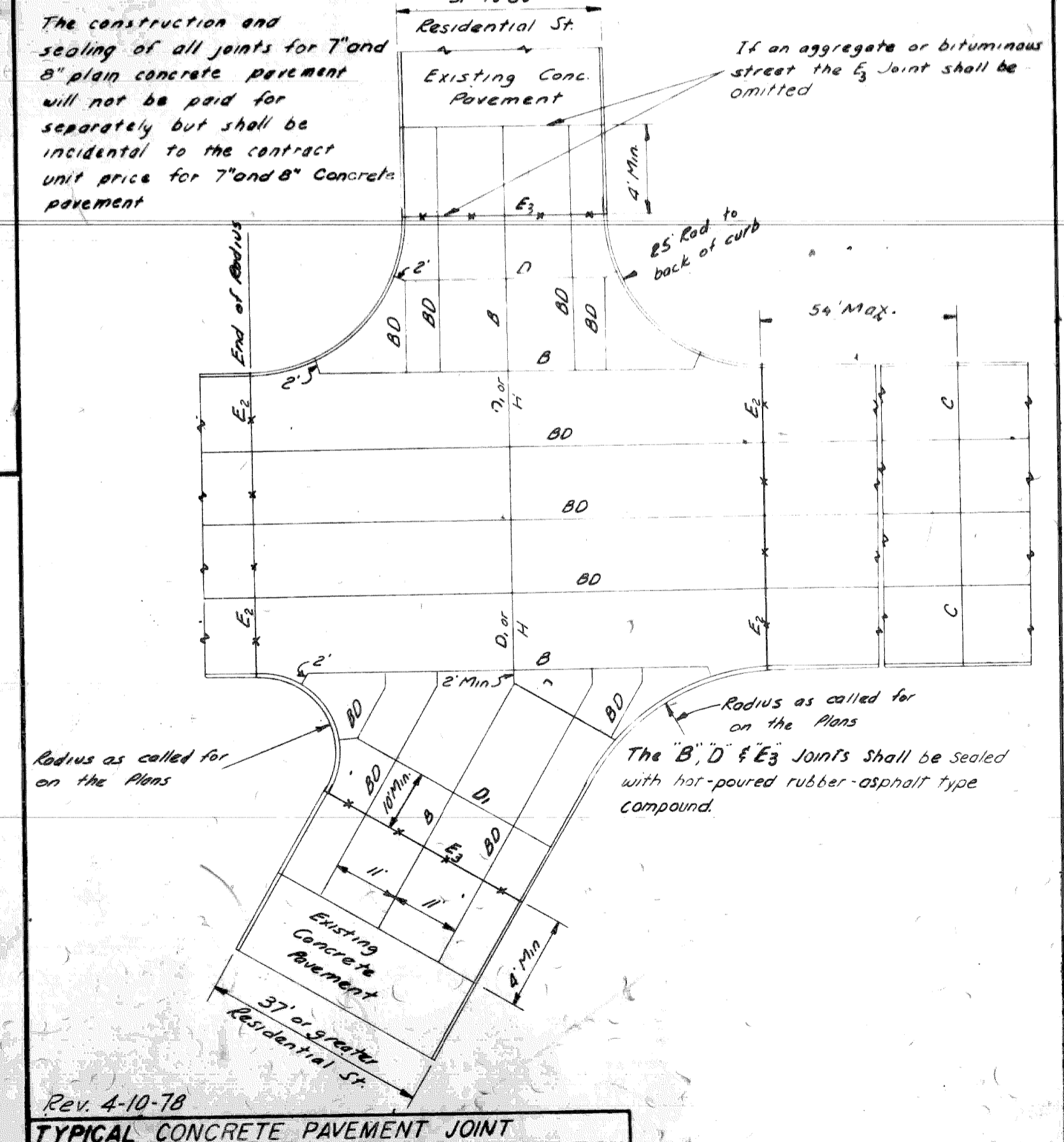
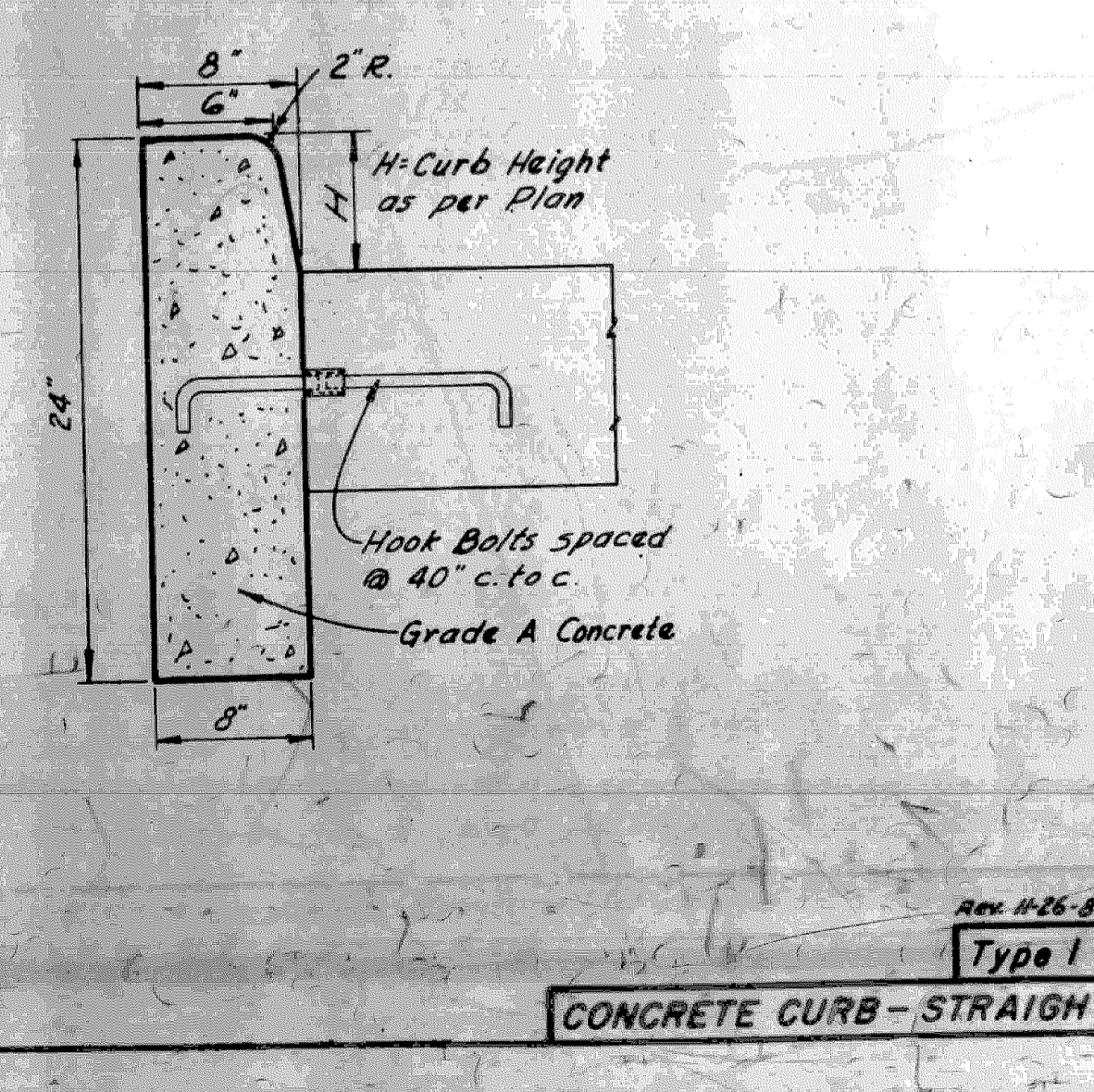
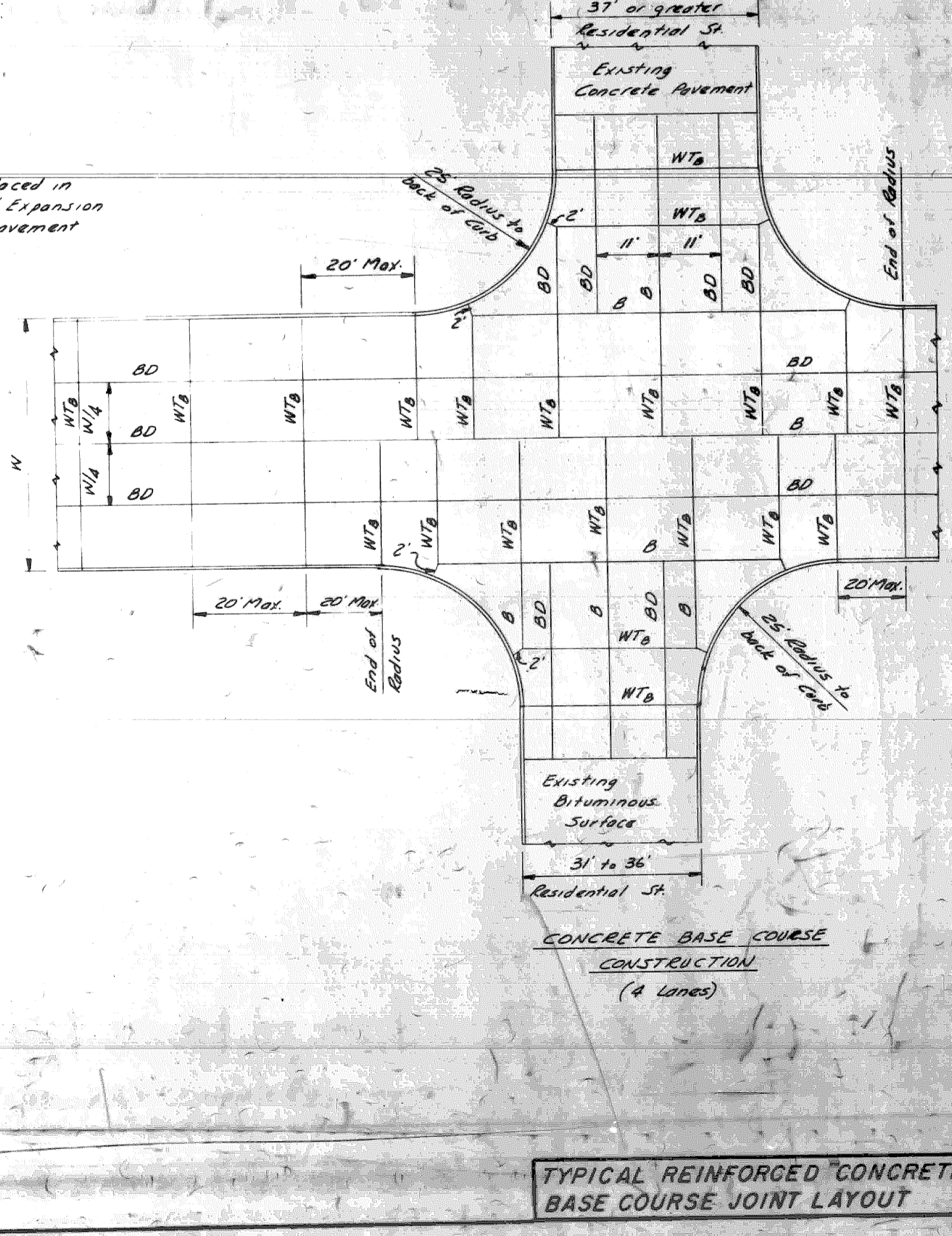
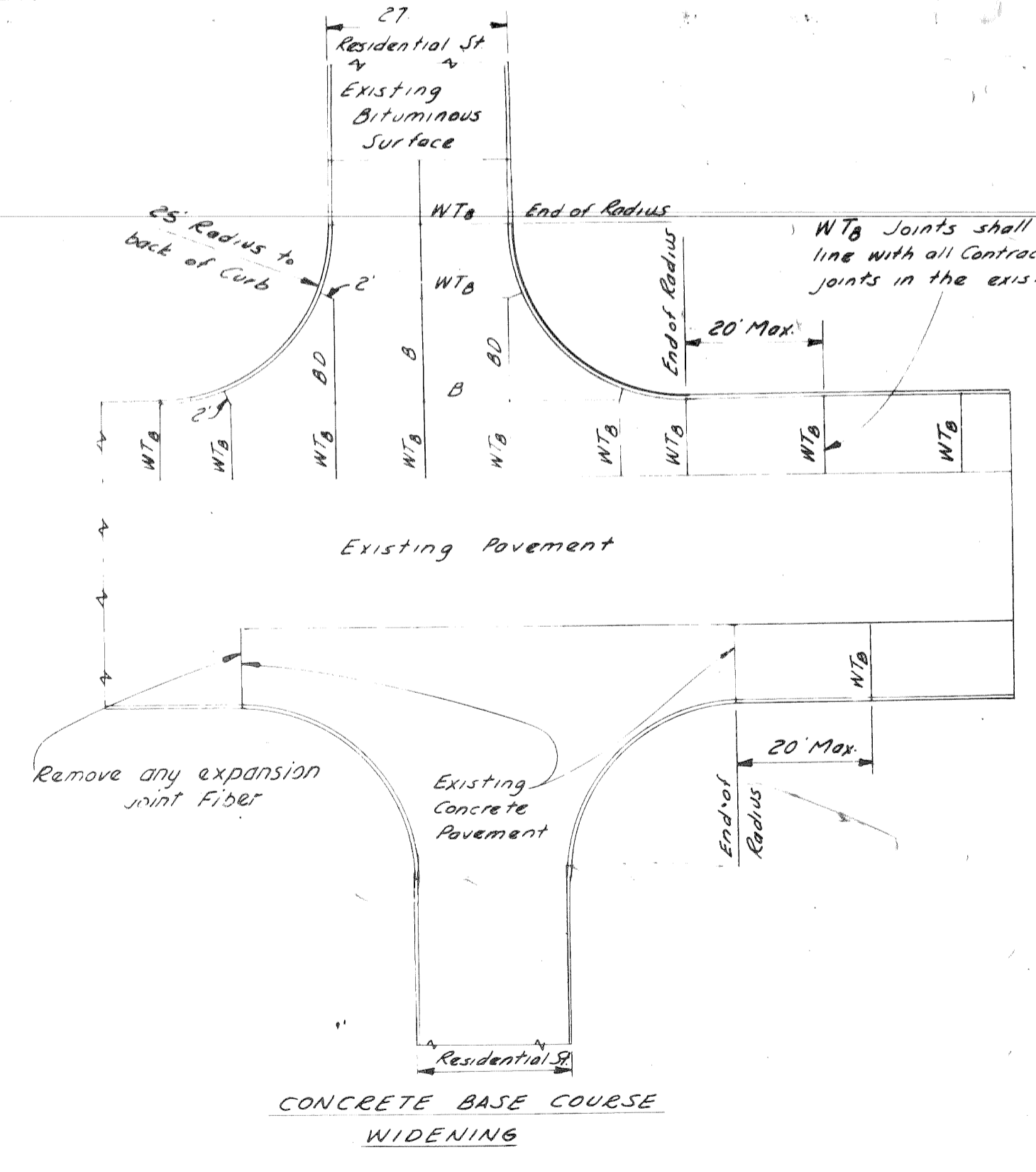
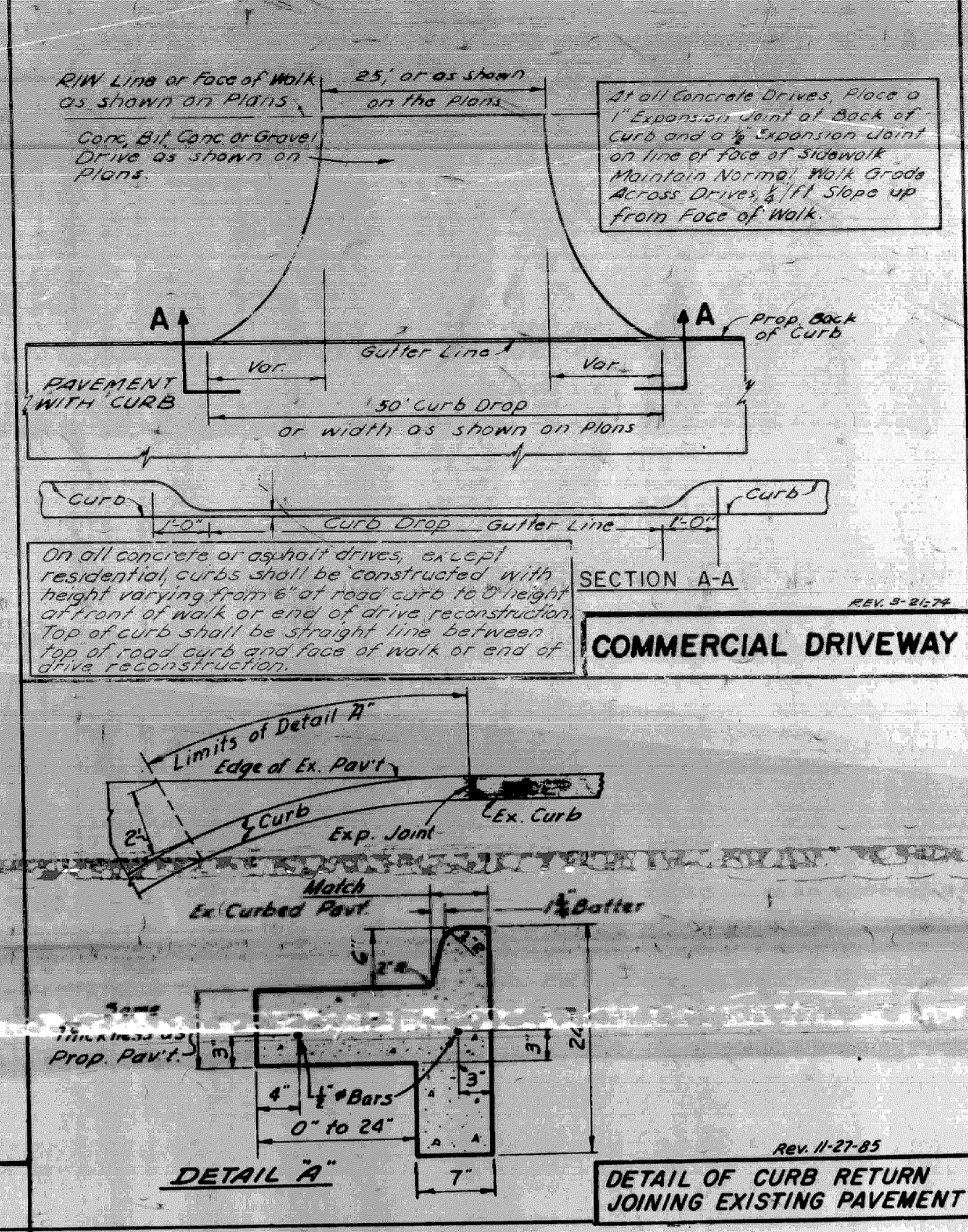
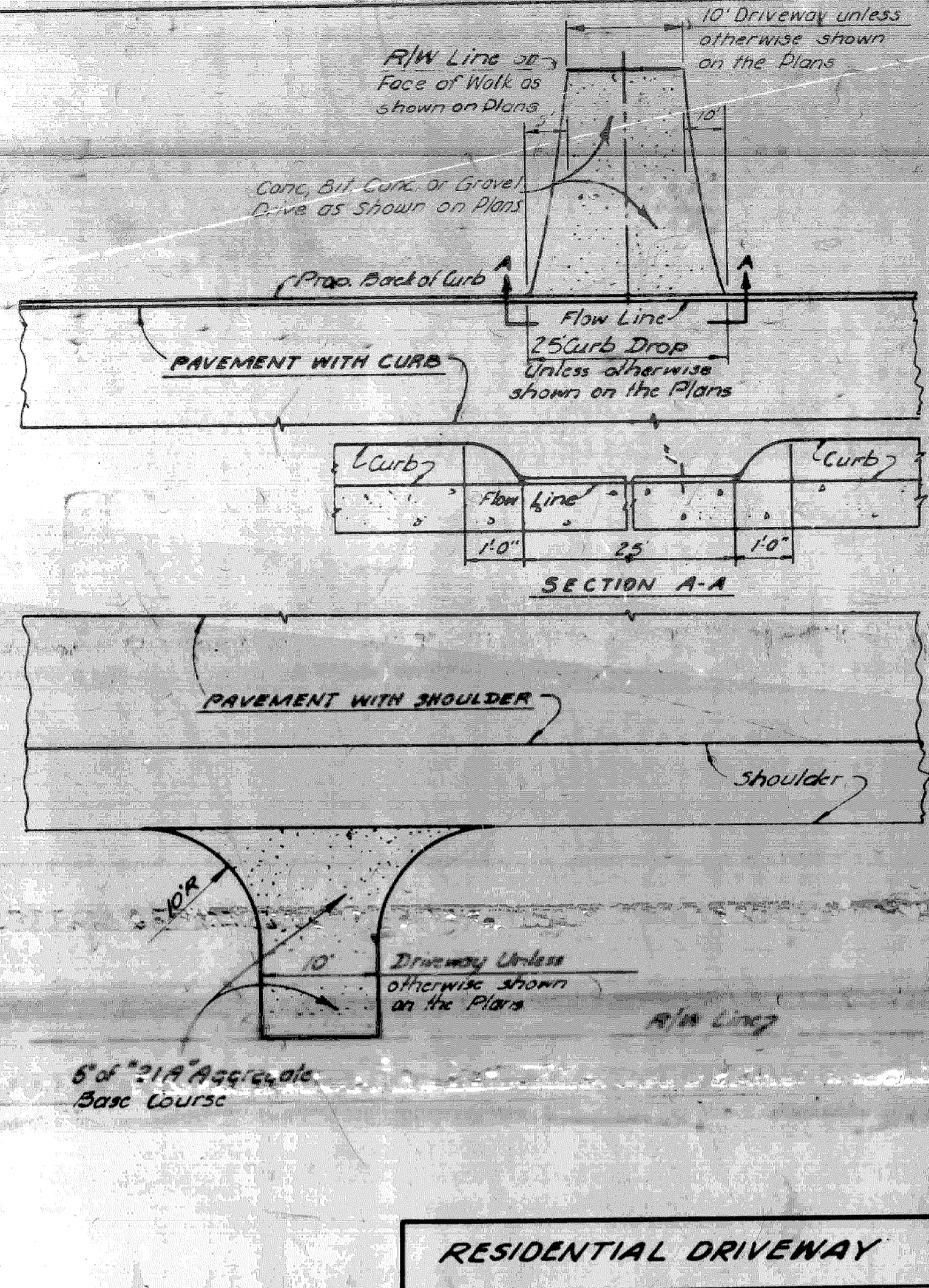
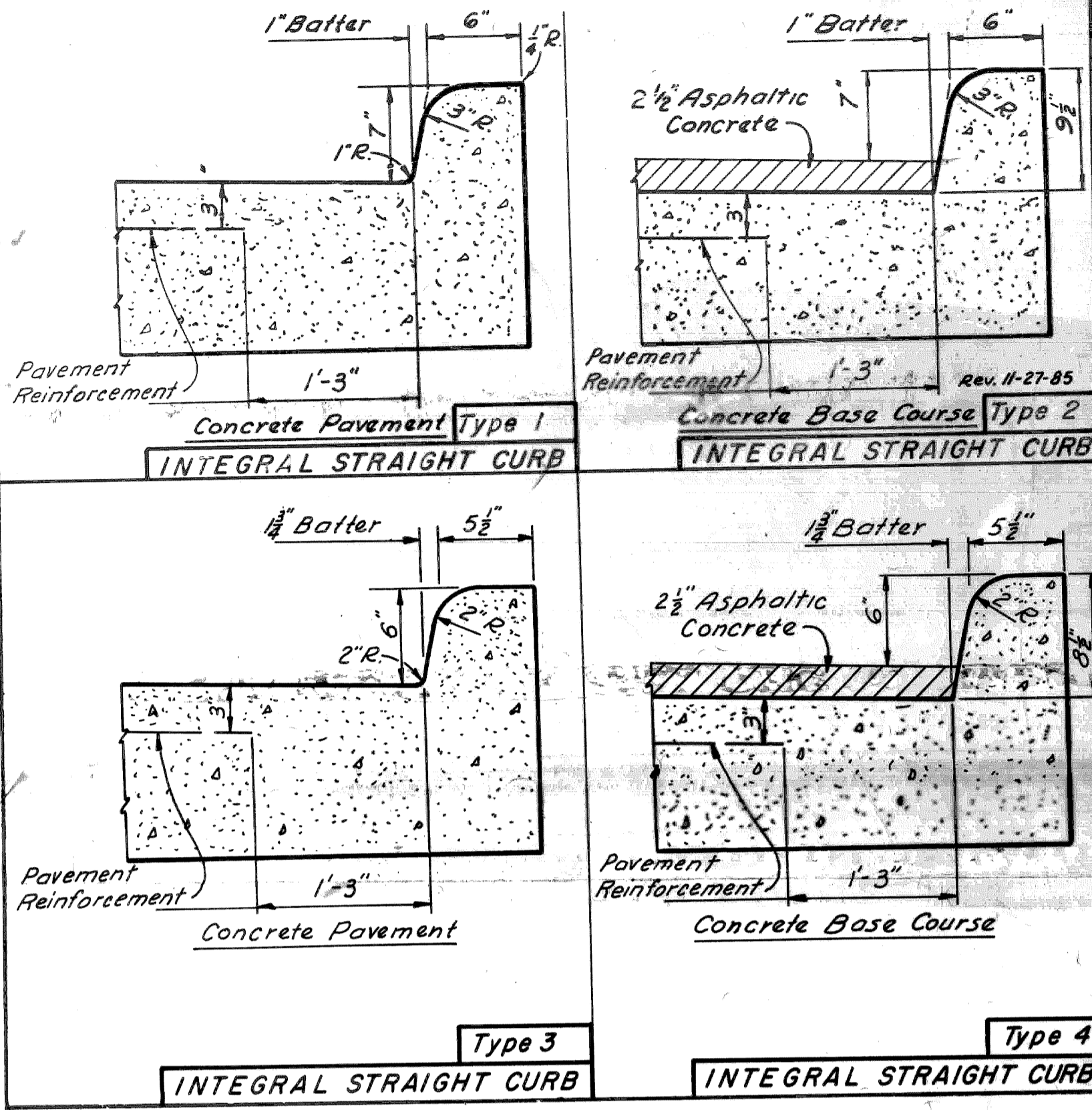
INTEGRAL CURBS

ALL TRANSVERSE JOINTS IN THE CONCRETE PAVEMENT SHALL EXTEND ENTIRELY THROUGH THE INTEGRAL CURB AND BE OF THE SAME KIND AND THICKNESS AS PROVIDED FOR THE PAVEMENT. SEE SPECIAL DETAIL II 39c, TREATMENT FOR TRANSVERSE JOINTS THROUGH INTEGRAL CURB.

THE JOINT MATERIAL SHALL BE PRECUT SO AS TO CONFORM TO THE GEOMETRIC SHAPE AND CROSS SECTIONAL AREA OF THE CURB, AND SHALL BE PLACED IN CONTACT WITH THE FILLER MATERIAL IN THE PAVEMENT.

INTEGRAL CURBS, WHICH ARE PLACED AS PART OF A CONCRETE BASE COURSE PAVEMENT SHALL HAVE TRANSVERSE PLANE OF WEARNESS JOINTS, FORMED BY PLACING A PREMOULDED BITUMINOUS FILLER 1/4" THICK, ENTIRELY THROUGH THE CURB, IN EXACT ALIGNMENT WITH ALL JOINTS IN THE BASE COURSE PAVEMENT. THE JOINT MATERIAL SHALL BE PRECUT SO AS TO CONFORM TO THE GEOMETRIC SHAPE AND CROSS SECTIONAL AREA OF THE CURB.

THE EDGES OF ALL TRANSVERSE JOINTS IN THE INTEGRAL CURB SHALL BE ROUNDED WITH AN APPROVED FINISHING TOOL HAVING A RADIUS OF 1/4 INCH.



Rev. 4-10-78

TYPICAL CONCRETE PAVEMENT JOINT LAYOUT AT RESIDENTIAL STREET INTERSECTION

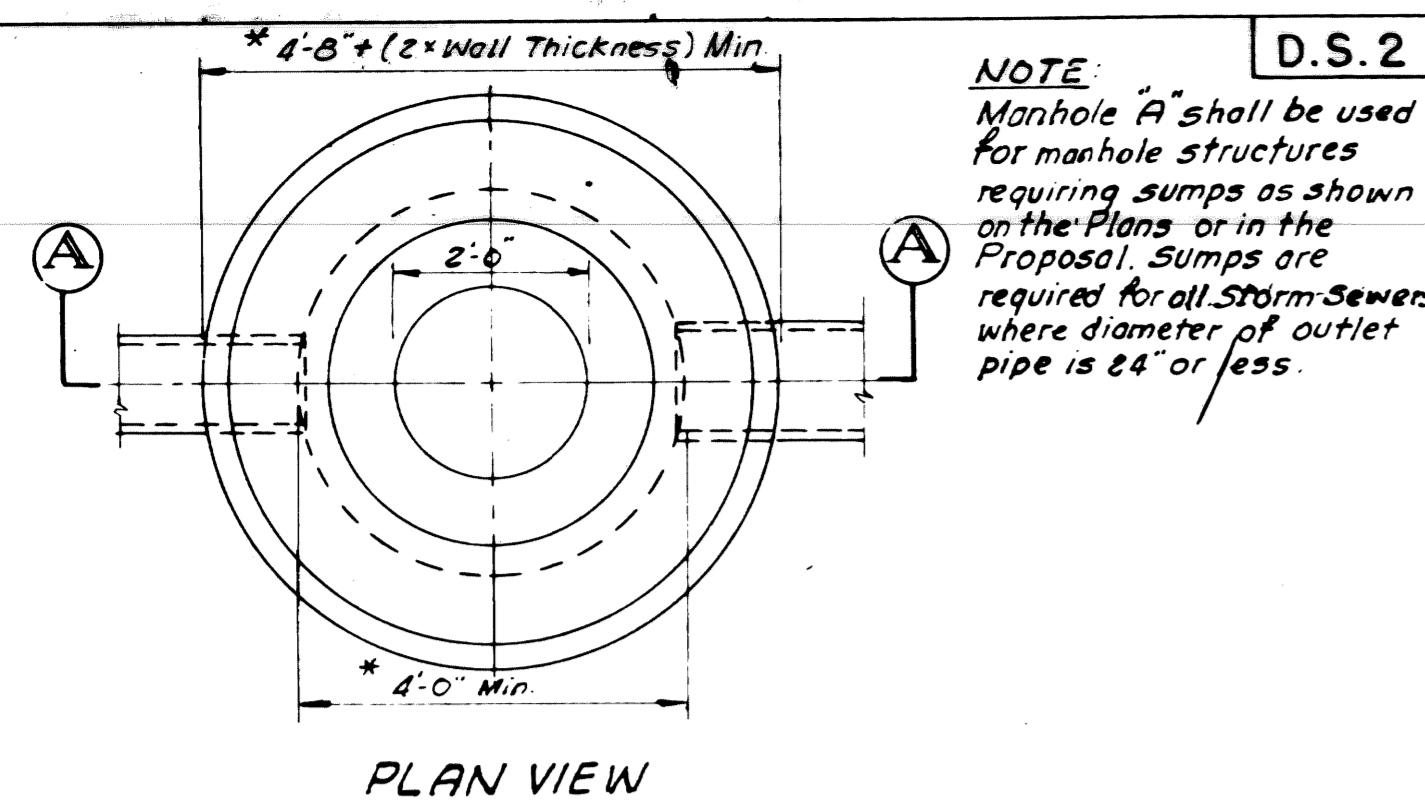
BOARD OF WAYNE COUNTY ROAD COMMISSIONERS
DETROIT MICHIGAN
DESIGN DIVISION

SCALE: NO SCALE
DATE: 2-7-78
DRAWN BY: E.M.B.
CHECKED BY: A.E.S.

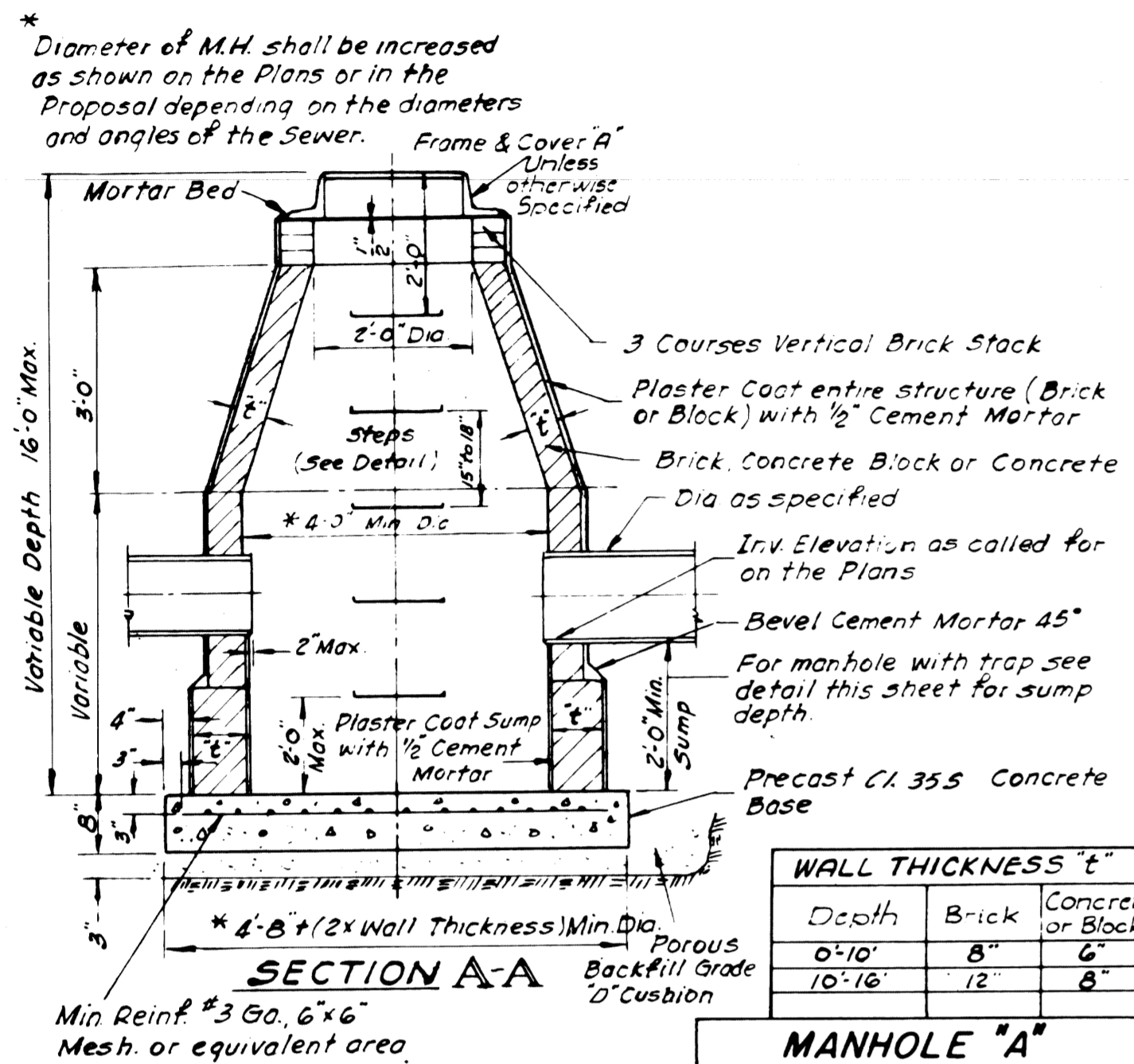
PRIMARY ROAD STANDARDS

REG. PRO. ENG. [Signature]
REG. PRO. ENG. [Signature]

Rev. 11-26-85
Type 1



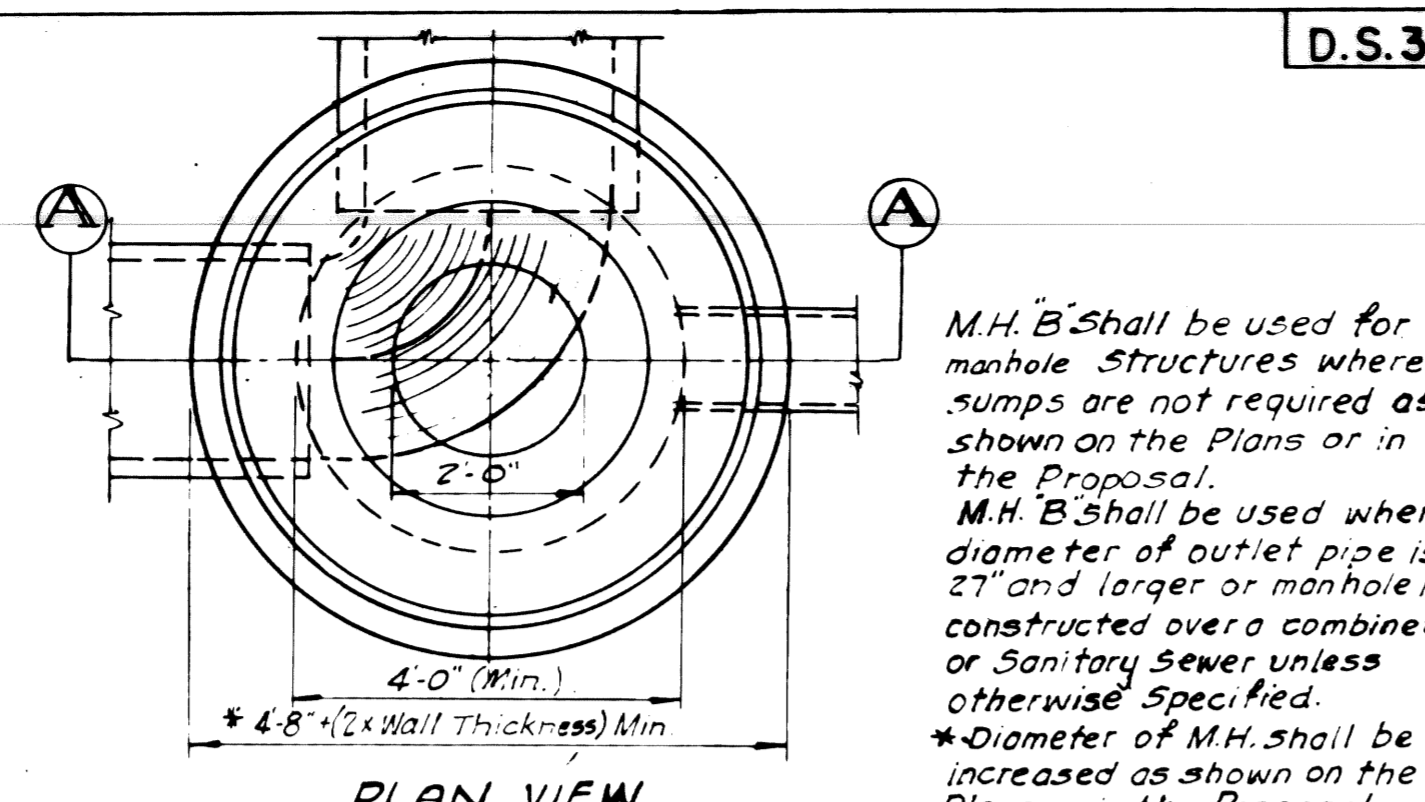
D.S.2
NOTE: Manhole "A" shall be used for manhole structures requiring sumps as shown on the Plans or in the Proposal. Sumps are required for all Storm Sewers where diameter of outlet pipe is 24" or less.



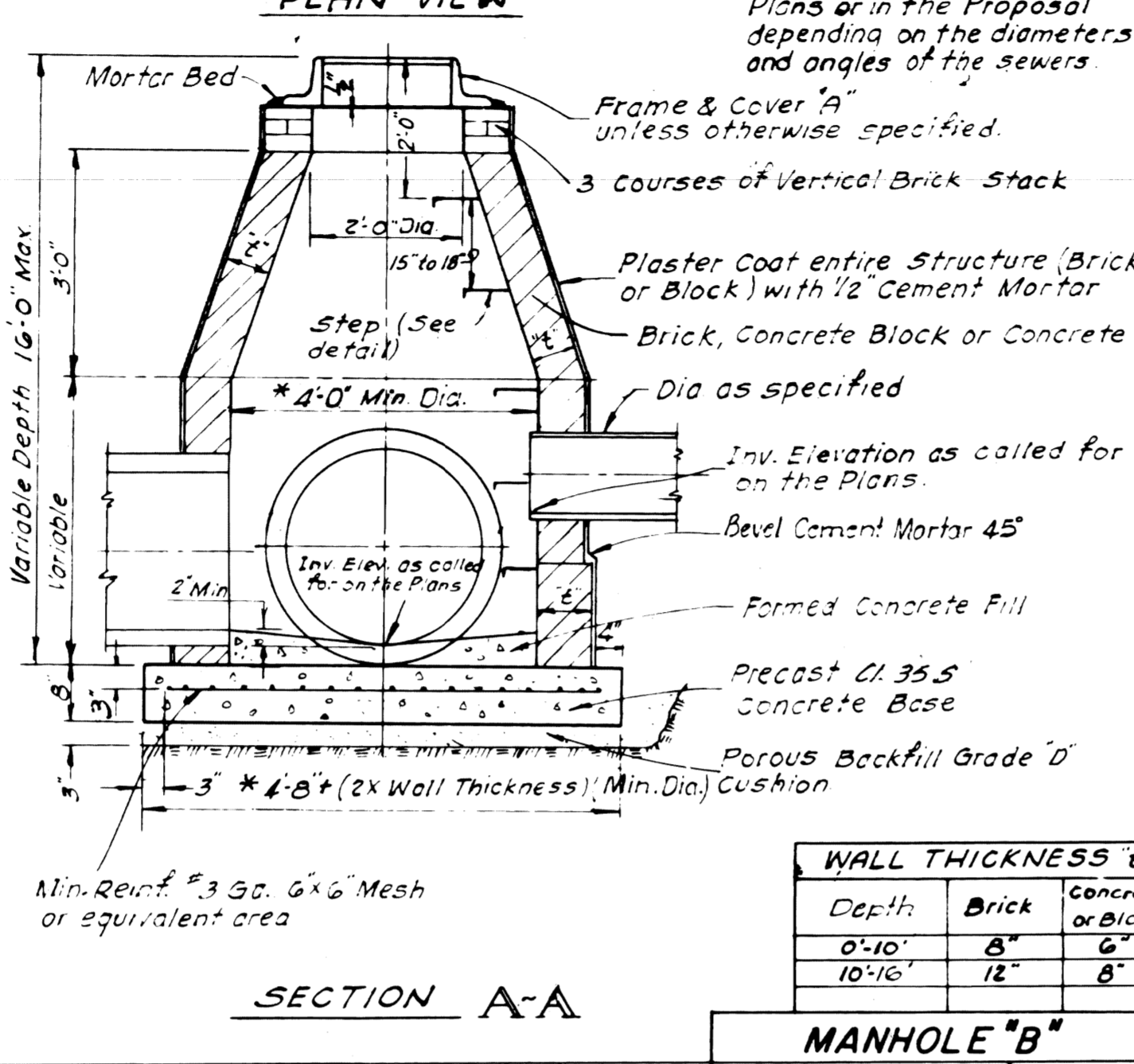
WALL THICKNESS "t"

Depth	Brick	Concrete or Block
0'-10"	8"	6"
10'-16"	12"	8"

MANHOLE "A"



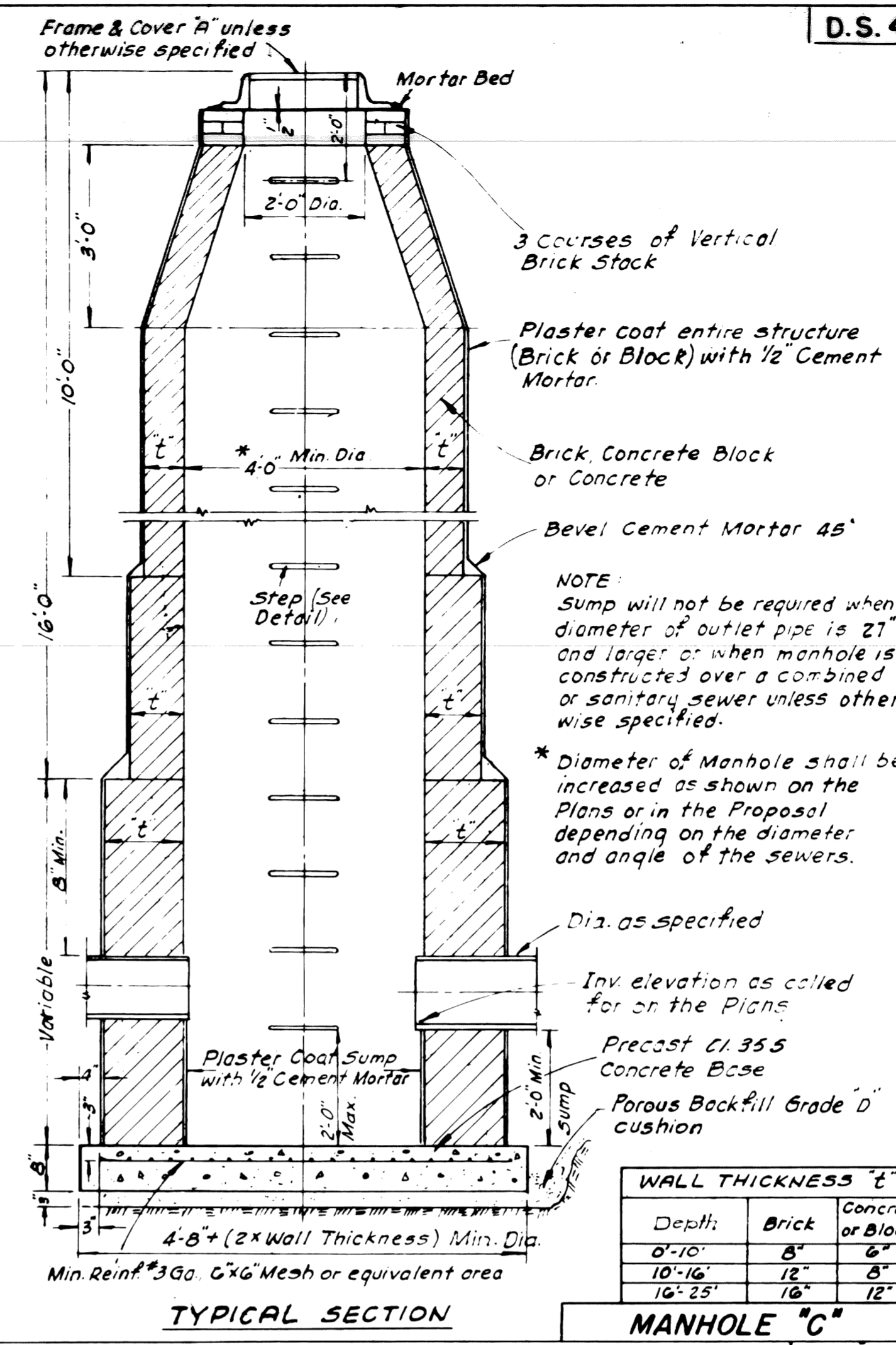
D.S.3
M.H. "B" shall be used for manhole structures where sumps are not required as shown on the Plans or in the Proposal. M.H. "B" shall be used when diameter of outlet pipe is 27" and larger or manhole is constructed over a combined or Sanitary Sewer unless otherwise specified. *Diameter of M.H. shall be increased as shown on the Plans or in the Proposal depending on the diameters and angles of the sewers.



WALL THICKNESS "t"

Depth	Brick	Concrete or Block
0'-10"	8"	6"
10'-16"	12"	8"

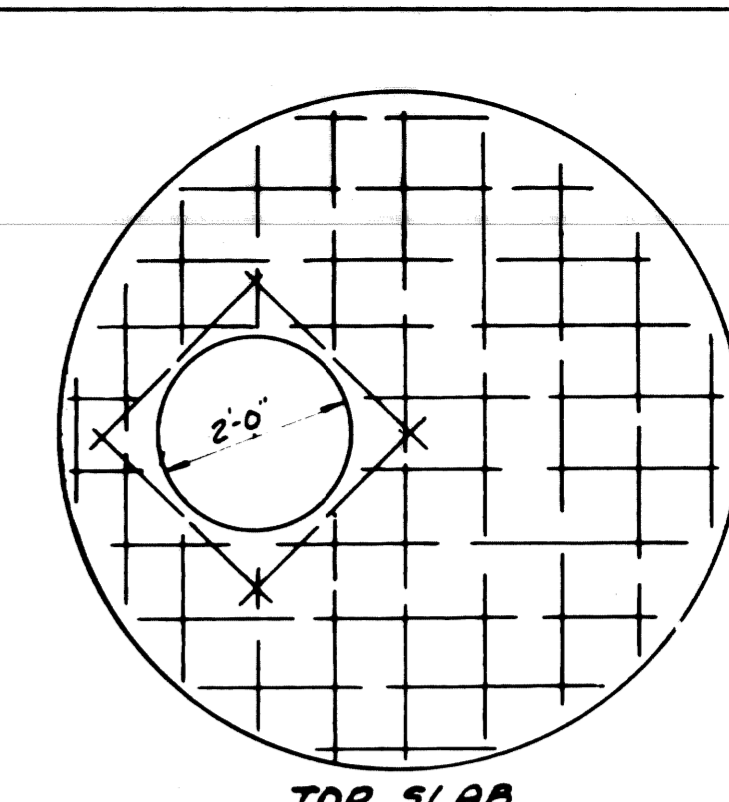
MANHOLE "B"



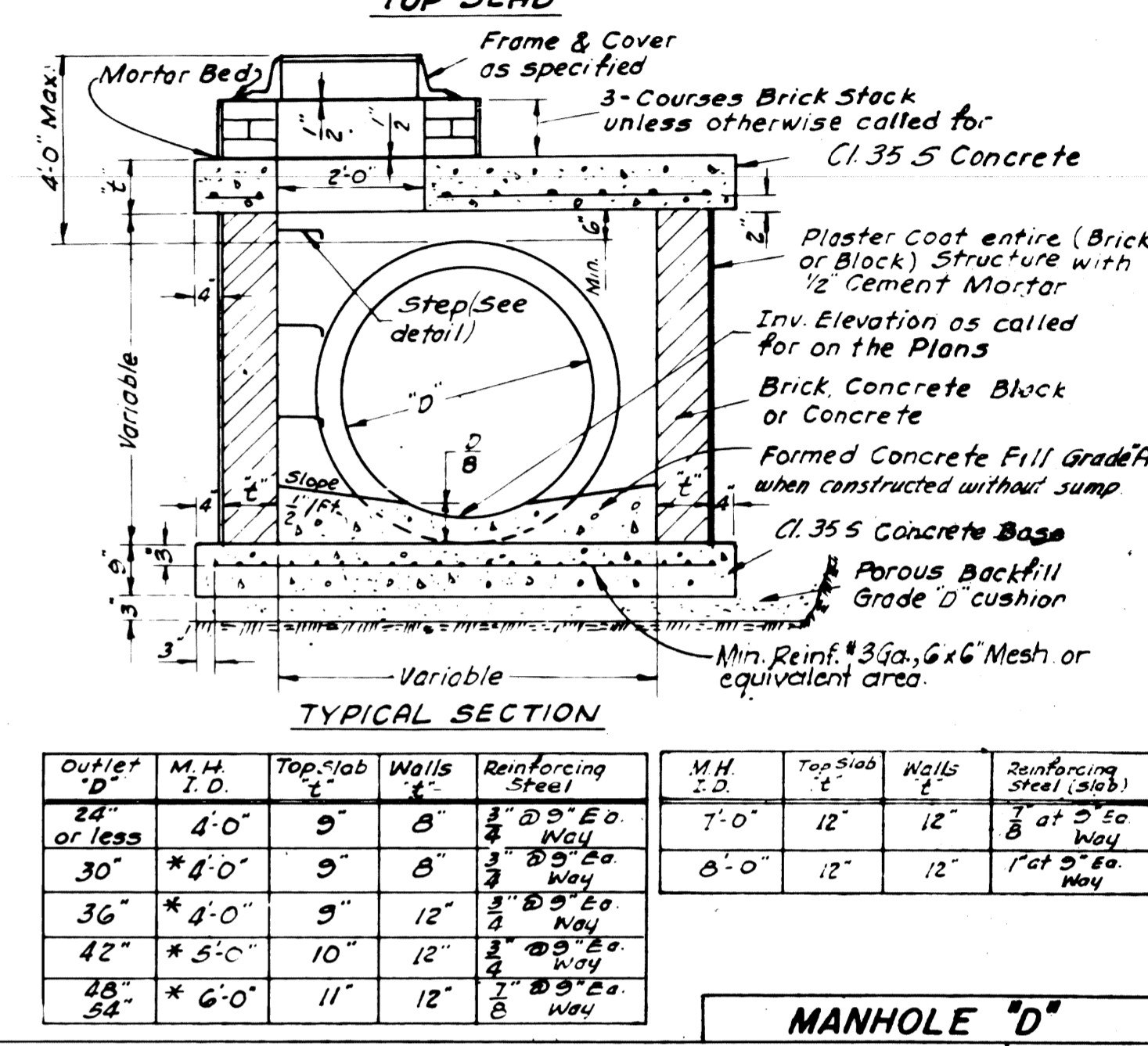
WALL THICKNESS "t"

Depth	Brick	Concrete or Block
0'-10"	8"	6"
10'-16"	12"	8"
10'-25"	16"	12"

MANHOLE "C"

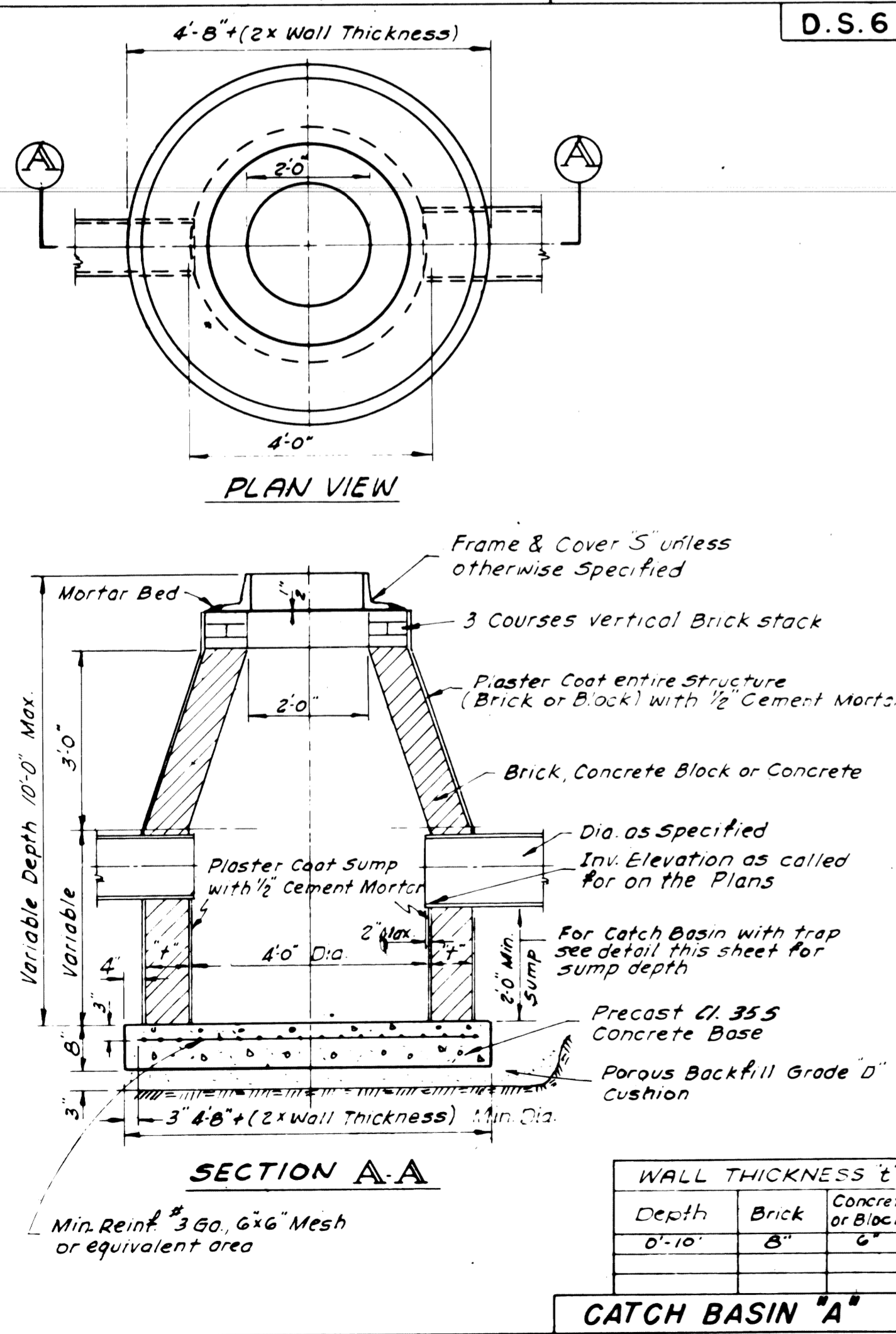


D.S.5
NOTE: M.H. "D" shall be used where the depth of cover from the top of casting to the top of sewer is less than 4'-0". M.H. "D" shall be constructed with a 2' sump where diameter of outlet sewer is 24" or less. *Diameter of M.H. shall be increased as shown on the Plans or in the Proposal depending on the angle of the sewers.



Outlet "D"	M.H. I.D.	Top Slab "t"	Walls "t"	Reinforcing Steel	M.H. I.D.	Top Slab "t"	Walls "t"	Reinforcing Steel (slab)
24" or less	4'-0"	9"	8"	3" @ 5" Ea Way	7'-0"	12"	12"	3" at 5" Ea Way
30"	4'-0"	9"	8"	3" @ 5" Ea Way	8'-0"	12"	12"	3" at 5" Ea Way
36"	4'-0"	9"	12"	3" @ 5" Ea Way				
42"	5'-0"	10"	12"	3" @ 5" Ea Way				
48"-54"	6'-0"	11"	12"	3" @ 5" Ea Way				

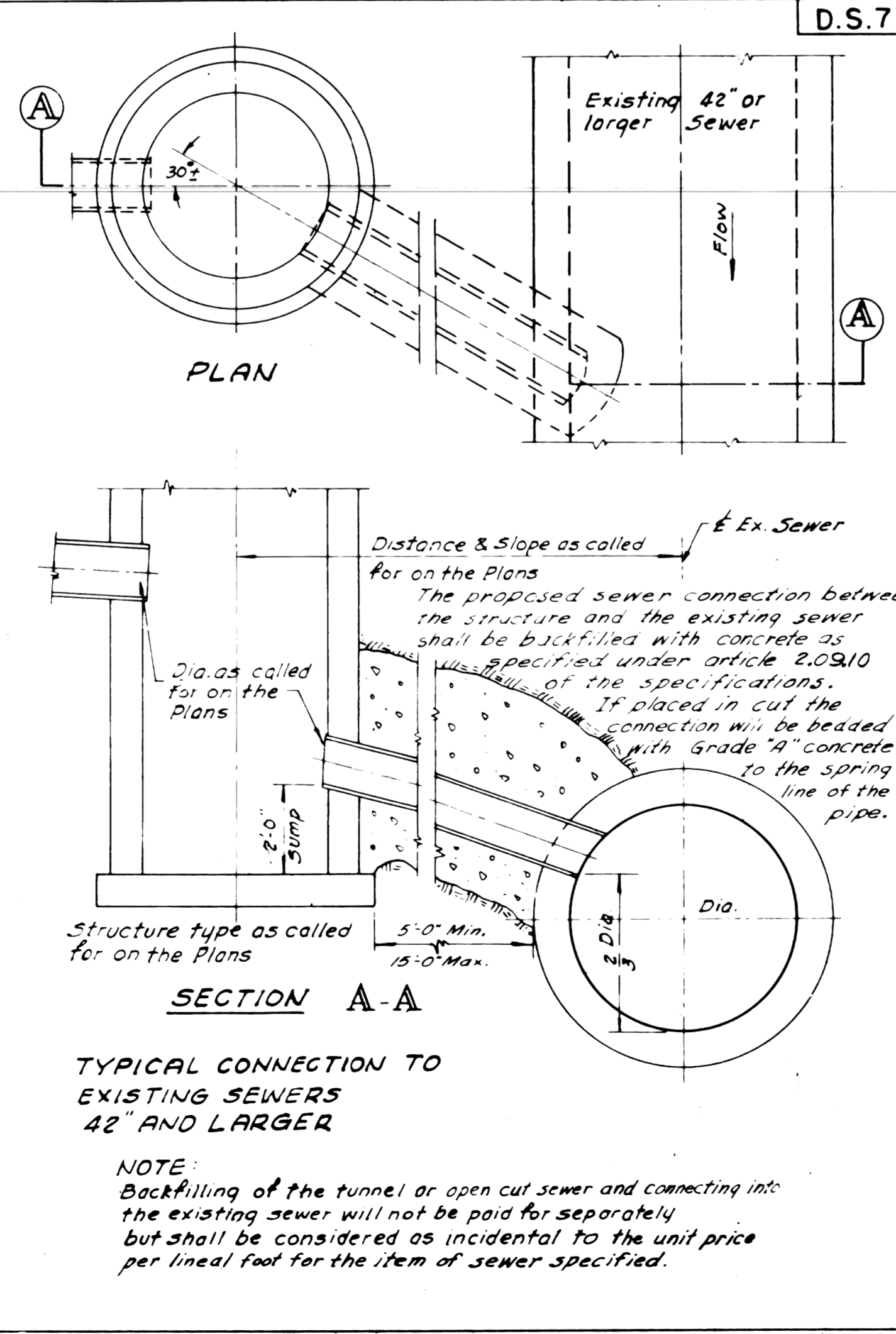
MANHOLE "D"



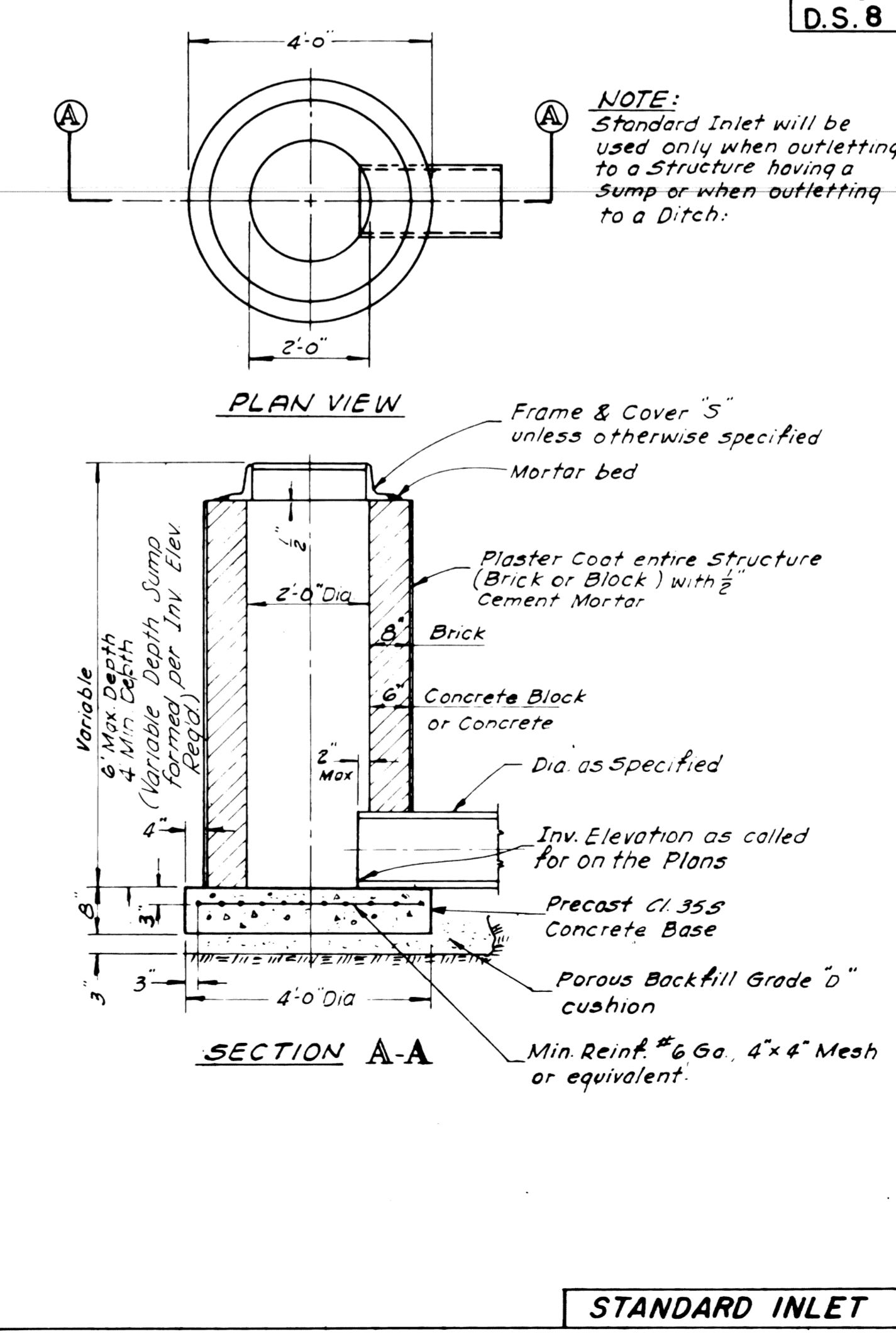
WALL THICKNESS "t"

Depth	Brick	Concrete or Block
0'-10"	8"	6"

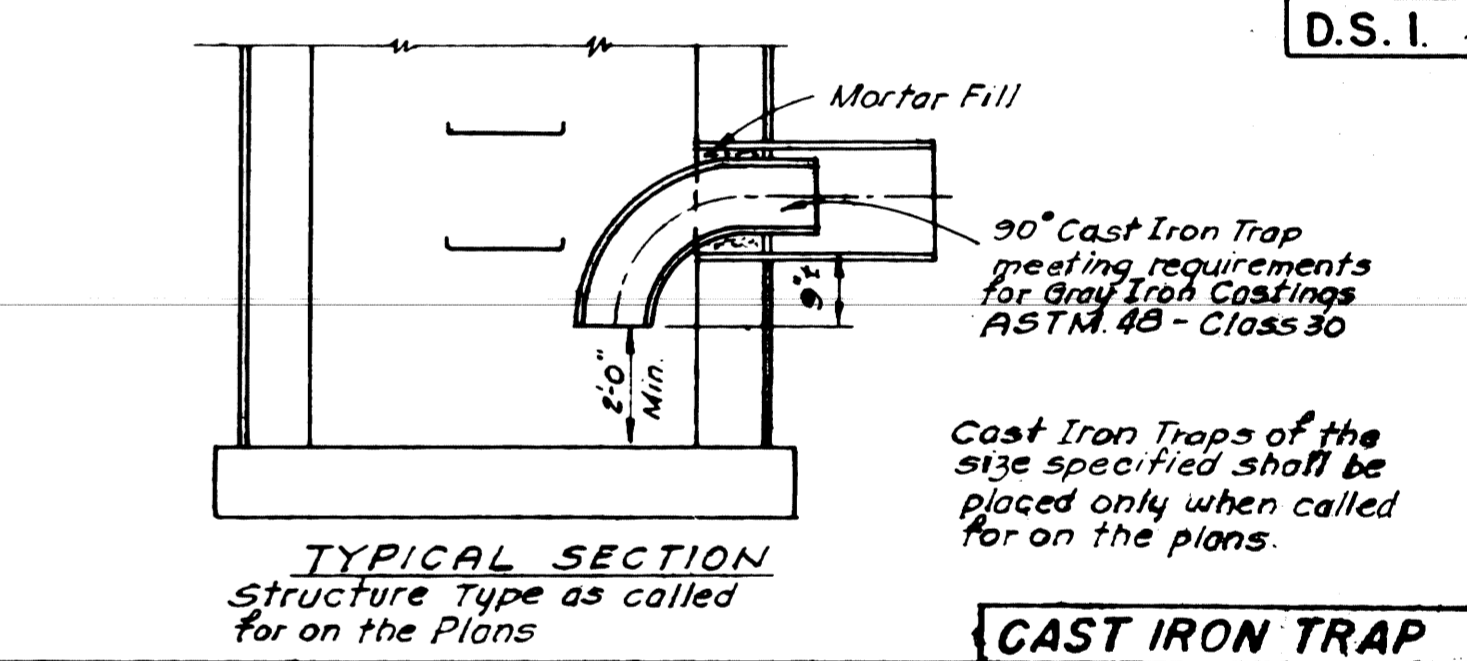
CATCH BASIN "A"



TYPICAL CONNECTION TO EXISTING SEWERS 42" AND LARGER
NOTE: Backfilling of the tunnel or open cut sewer and connecting into the existing sewer will not be paid for separately but shall be considered as incidental to the unit price per lineal foot for the item of sewer specified.



STANDARD INLET

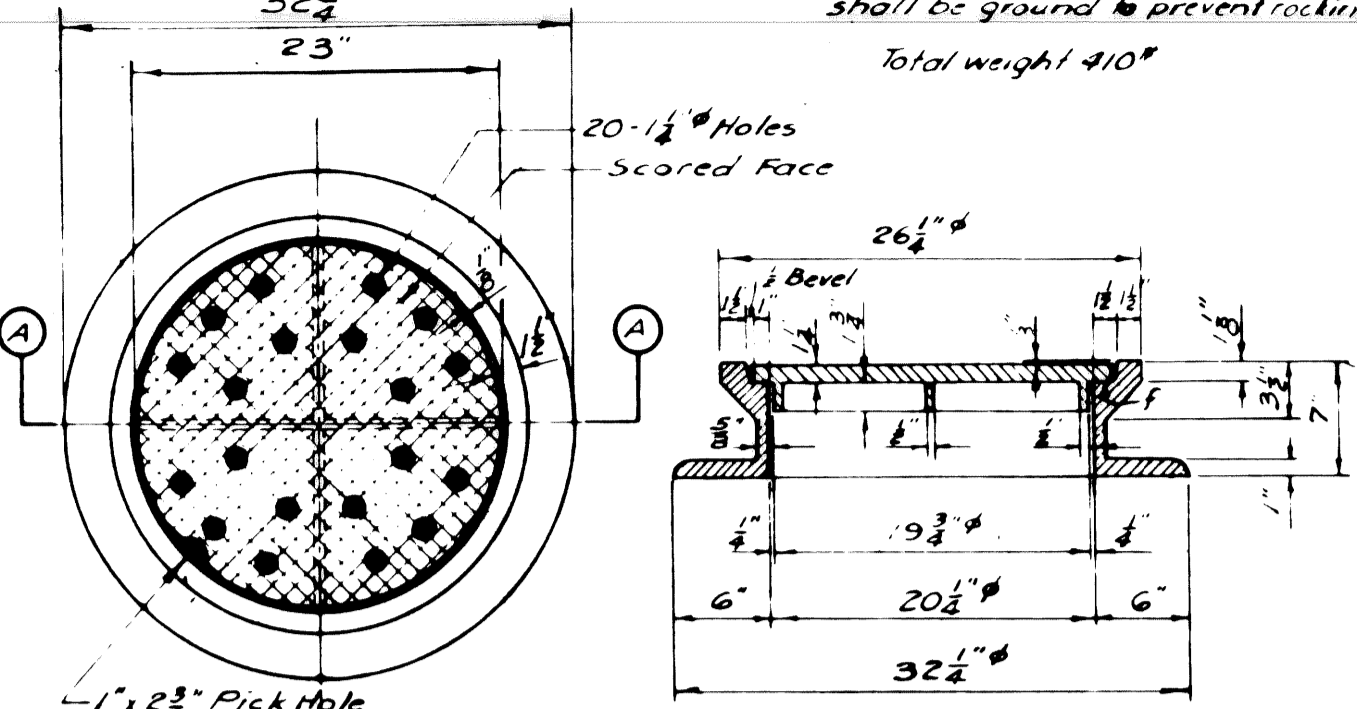


CAST IRON TRAP

GENERAL NOTES
ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT MICHIGAN DEPARTMENT OF STATE HIGHWAYS STANDARD SPECIFICATIONS AND AS FOLLOWS:
- THE CONTRACT UNIT PRICE BID FOR CONSTRUCTING EACH MANHOLE, CATCH BASIN, OR INLET SHALL INCLUDE EXCAVATION AND BACKFILLING WITH POROUS MATERIAL, GRADE "D", AS REQUIRED.
ALL VERTICAL HOLES IN CONCRETE BLOCK STRUCTURES SHALL BE COMPLETELY FILLED WITH MORTAR. VERTICAL JOINTS SHALL BE "BUTTERED".
THE FIRST PIPE LENGTH ENTERING OR LEAVING ANY STRUCTURE SHALL BE TEMPORARILY SUPPORTED BY SUITABLE MEANS UNTIL THE STRUCTURE IS COMPLETED AND BACKFILLED.
A "POURED C1355 CONCRETE BASE", WITHOUT STEEL REINFORCEMENT, MAY BE SUBSTITUTED FOR A PRECAST BASE WHEN APPROVED BY THE ENGINEER. THE POROUS BACKFILL CUSHION WILL NOT BE REQUIRED UNDER THE POURED BASE, UNLESS THE CONTRACTOR HAS EXCAVATED BELOW THE REQUIRED ELEVATION, AT WHICH TIME THE ENGINEER WILL DECIDE AS TO THE MERITS OF INCREASING THE THICKNESS OF THE CONCRETE BASE OR THE USE OF A POROUS BACKFILL CUSHION.

BOARD OF WAYNE COUNTY ROAD COMMISSIONERS DESIGN DIVISION	NO. SCALE	PRIMARY ROAD STANDARDS
	DATE 12-1-72	DESIGNED BY [Signature]
DRAWN BY E.M.B. CHECKED BY A.E.S.	CORRECT	REGISTERED PROFESSIONAL ENGINEER
	APPROVED [Signature]	REGISTERED PROFESSIONAL ENGINEER

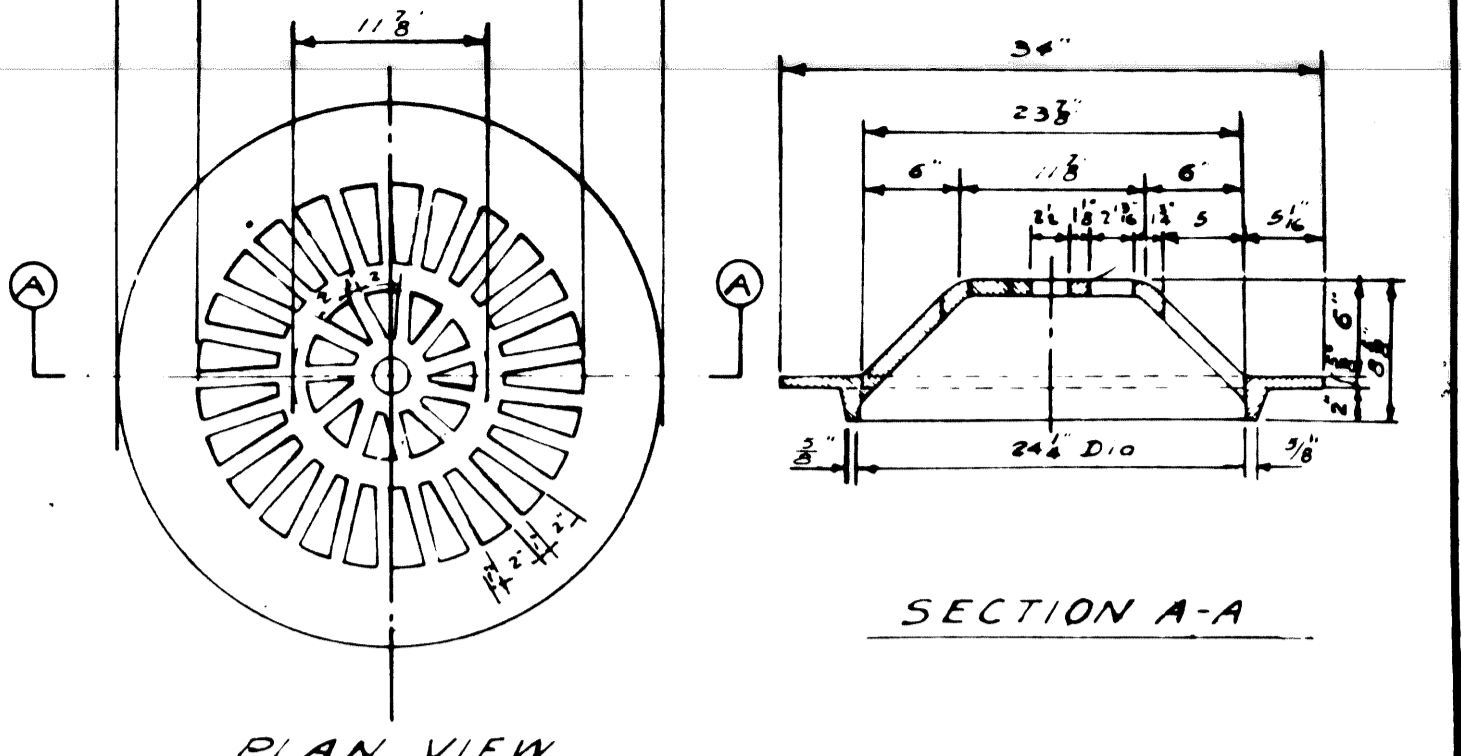
D.S. 11
 Note: A solid cover shall be provided in lieu of the perforated cover shown, when the cover is to be used on a structure which will be constructed over either a combined or a sanitary sewer.
 Material: Gray Iron, A.S.T.M. Std. Spec. A-48, Class 30. Bearing Surfaces shall be ground to prevent rocking.
 Total weight 410#



PLAN VIEW SECTION A-A

FRAME & COVER "A"

D.S. 12
 Material: Gray Iron A.S.T.M. Std. Spec. A-48, Class 30

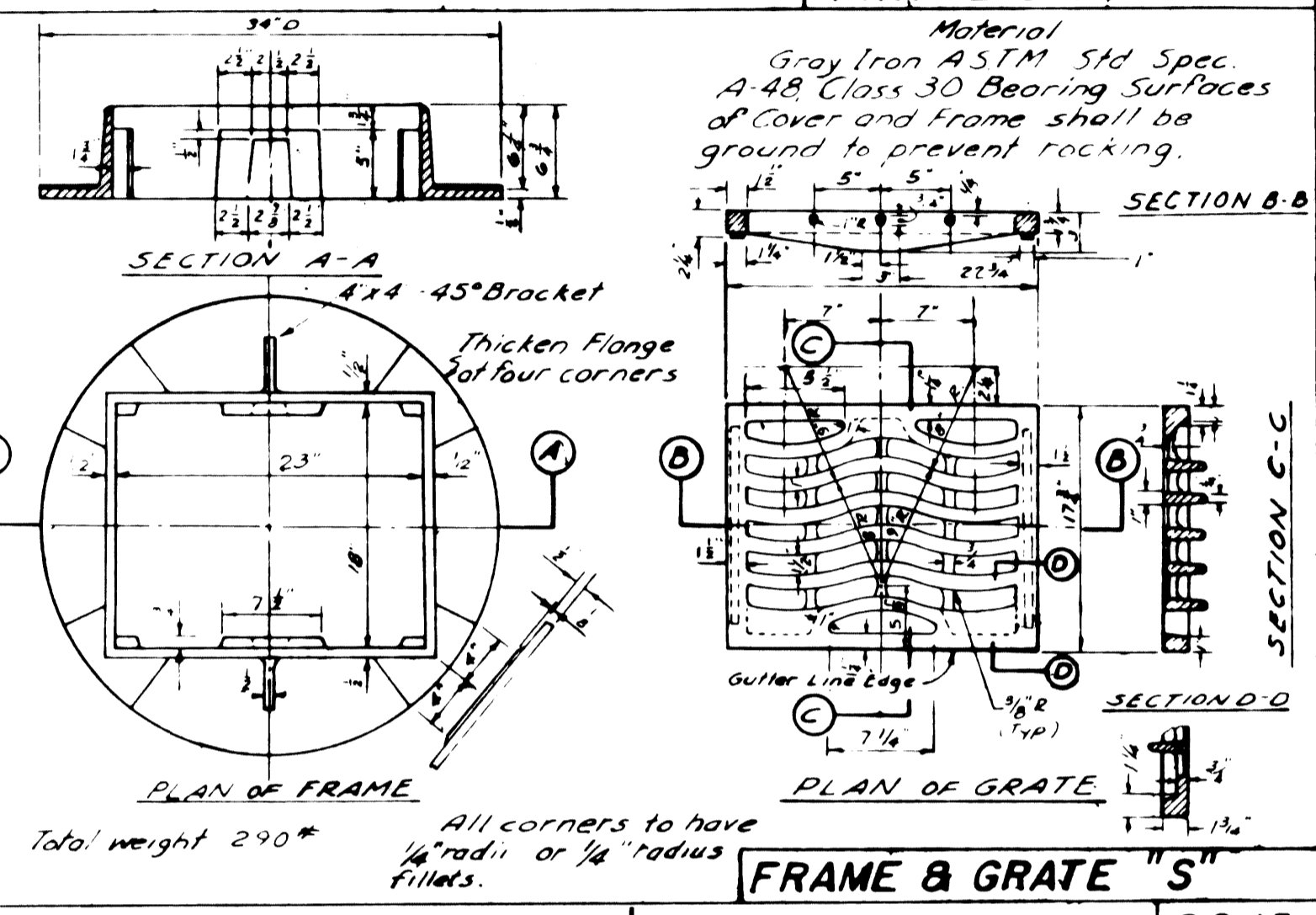


PLAN VIEW

SECTION A-A

Total Weight 200#

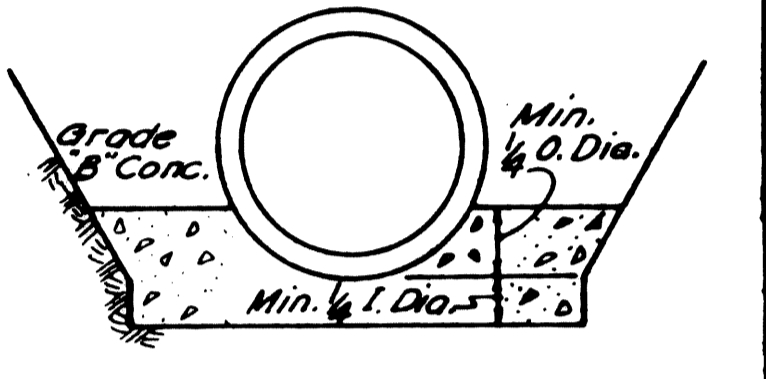
COVER "C"



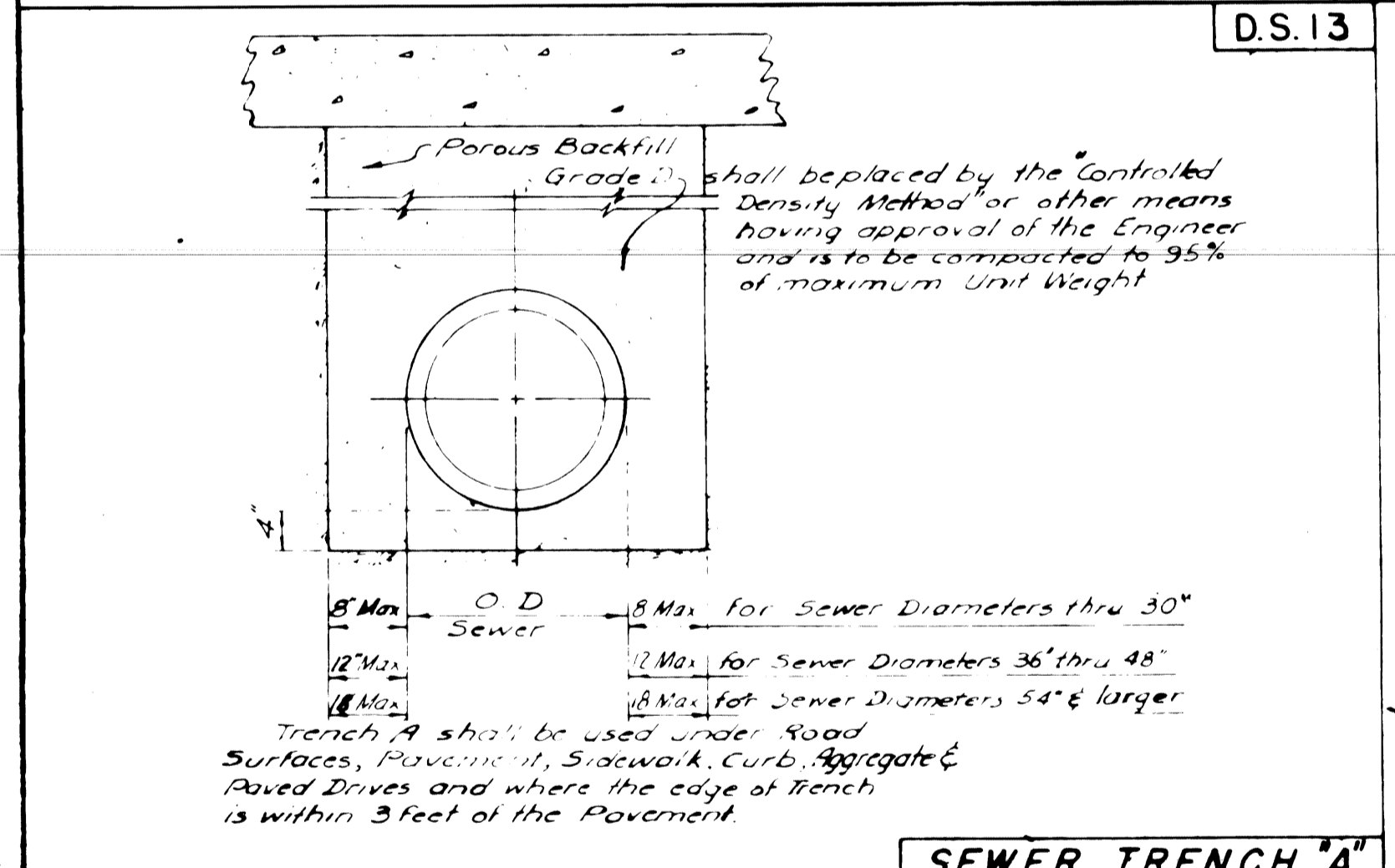
PLAN OF FRAME

PLAN OF GRATE

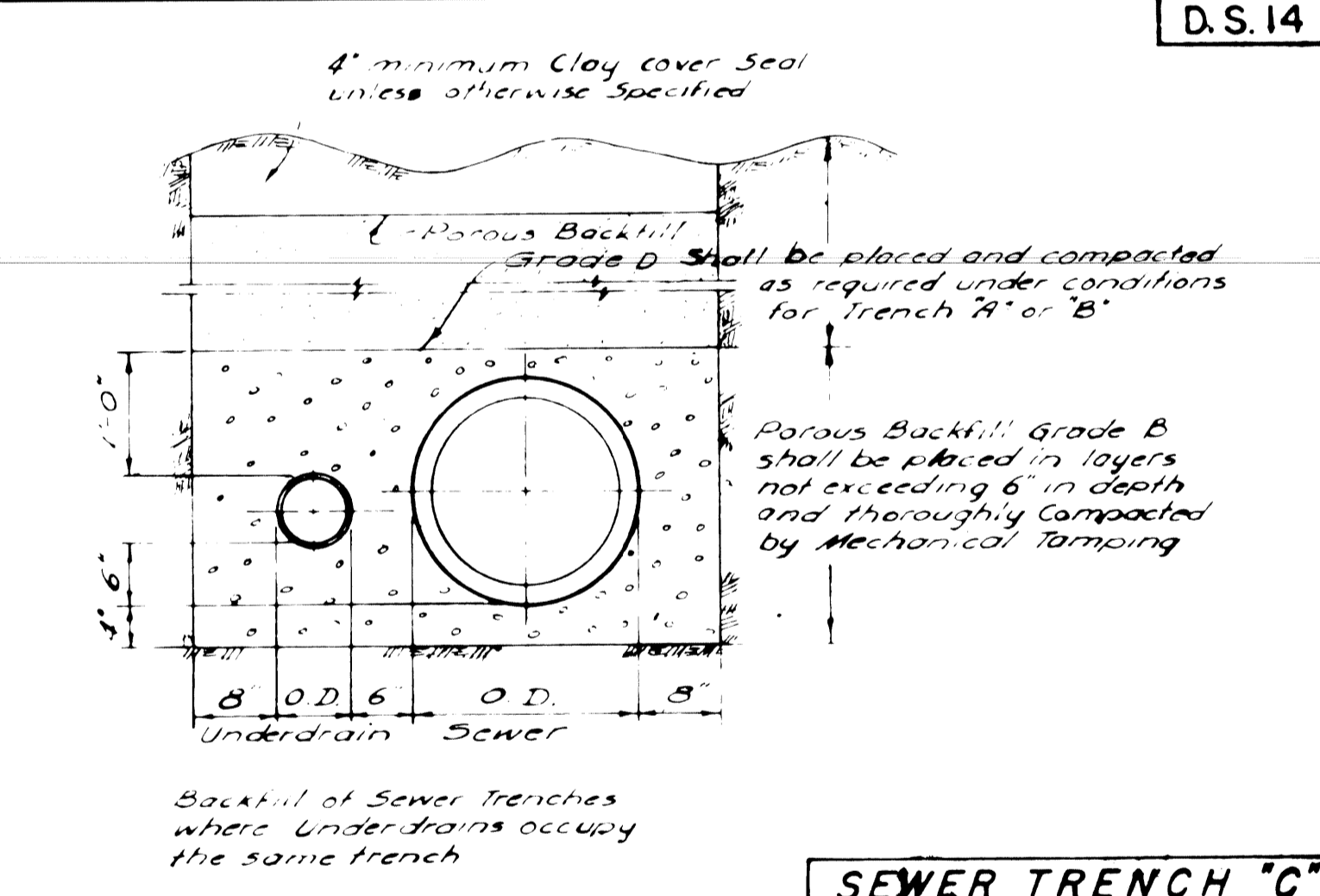
FRAME & GRATE "S"



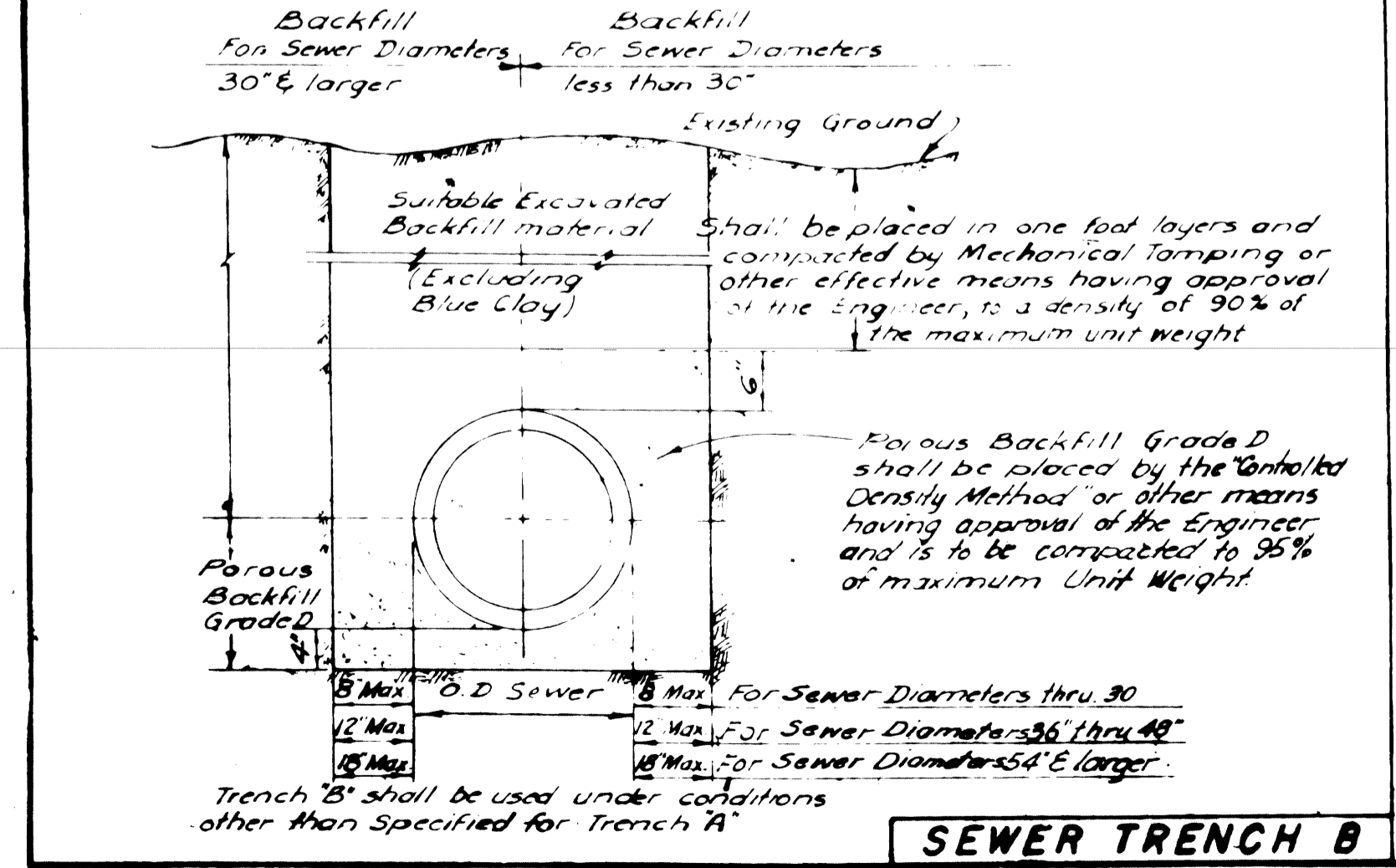
CONCRETE CRADLE



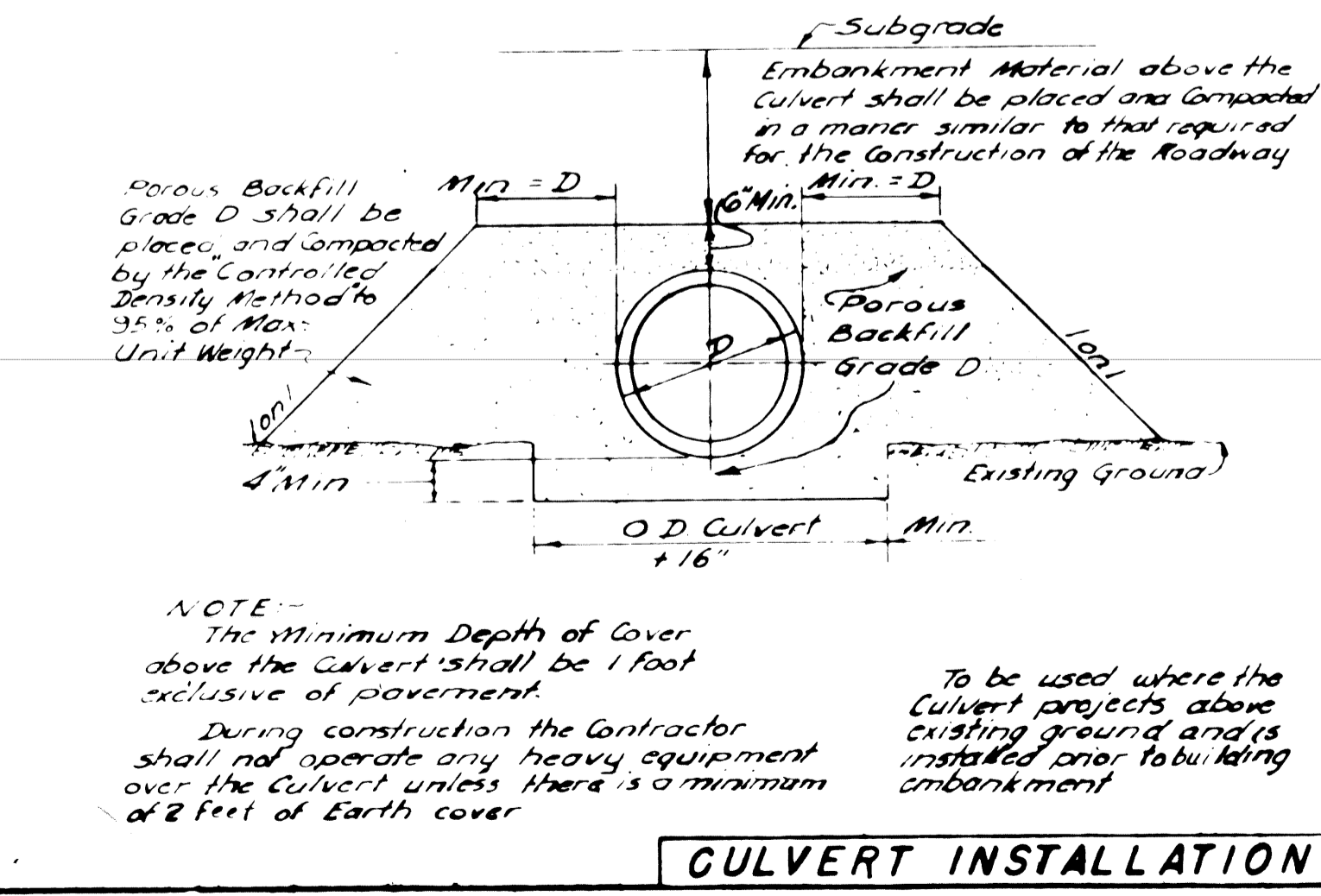
SEWER TRENCH "A"



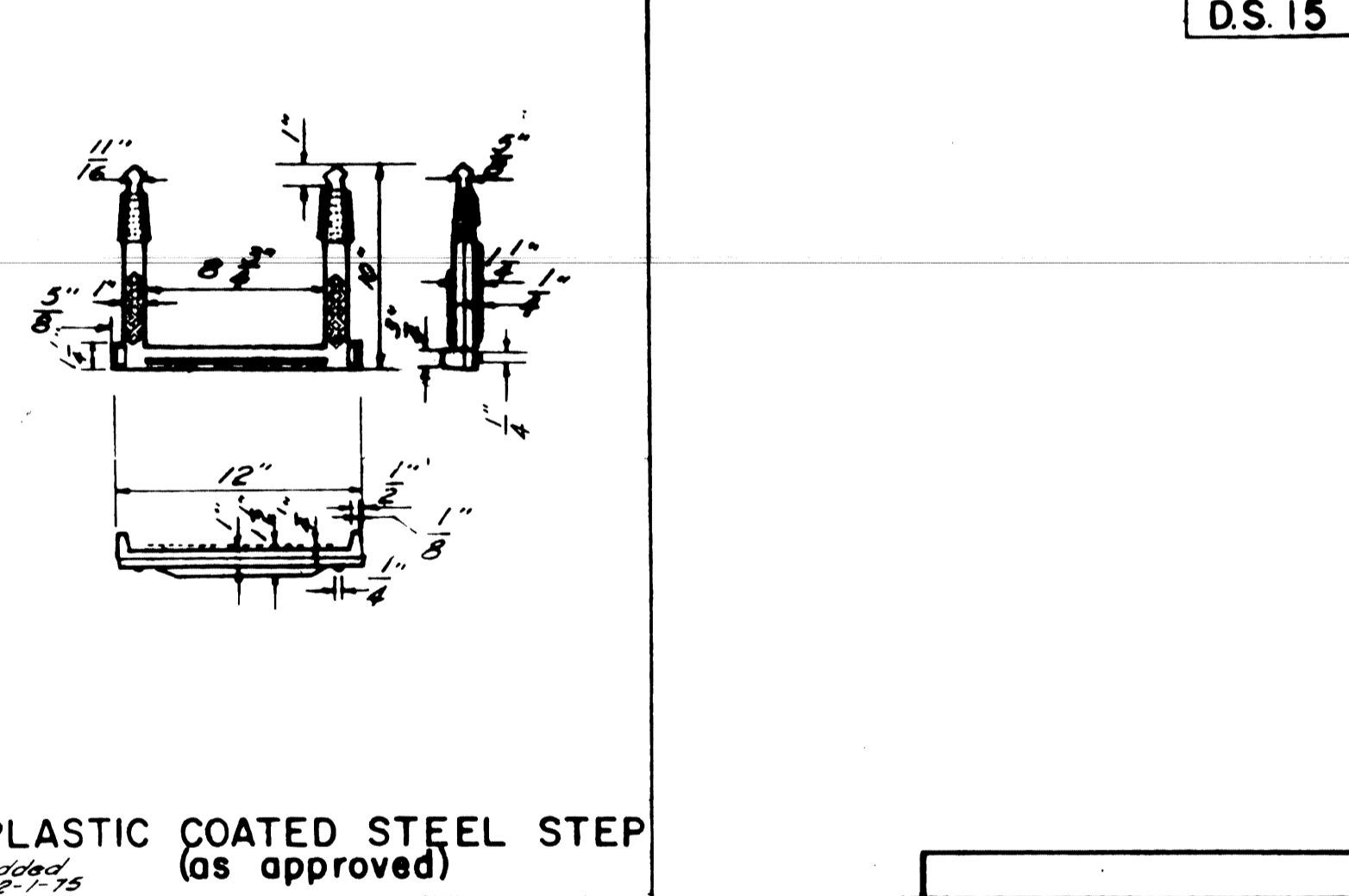
SEWER TRENCH "C"



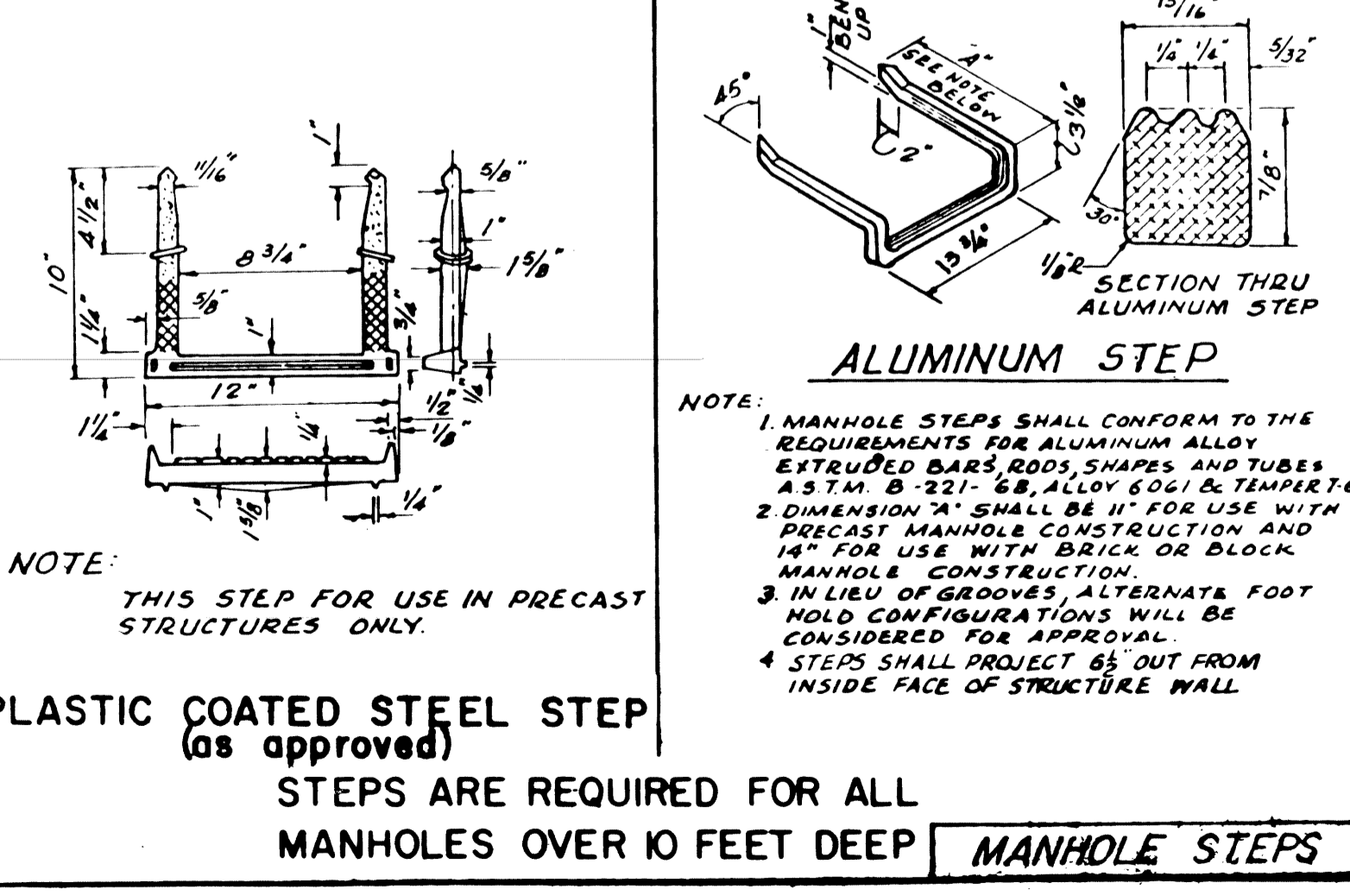
SEWER TRENCH "B"



CULVERT INSTALLATION

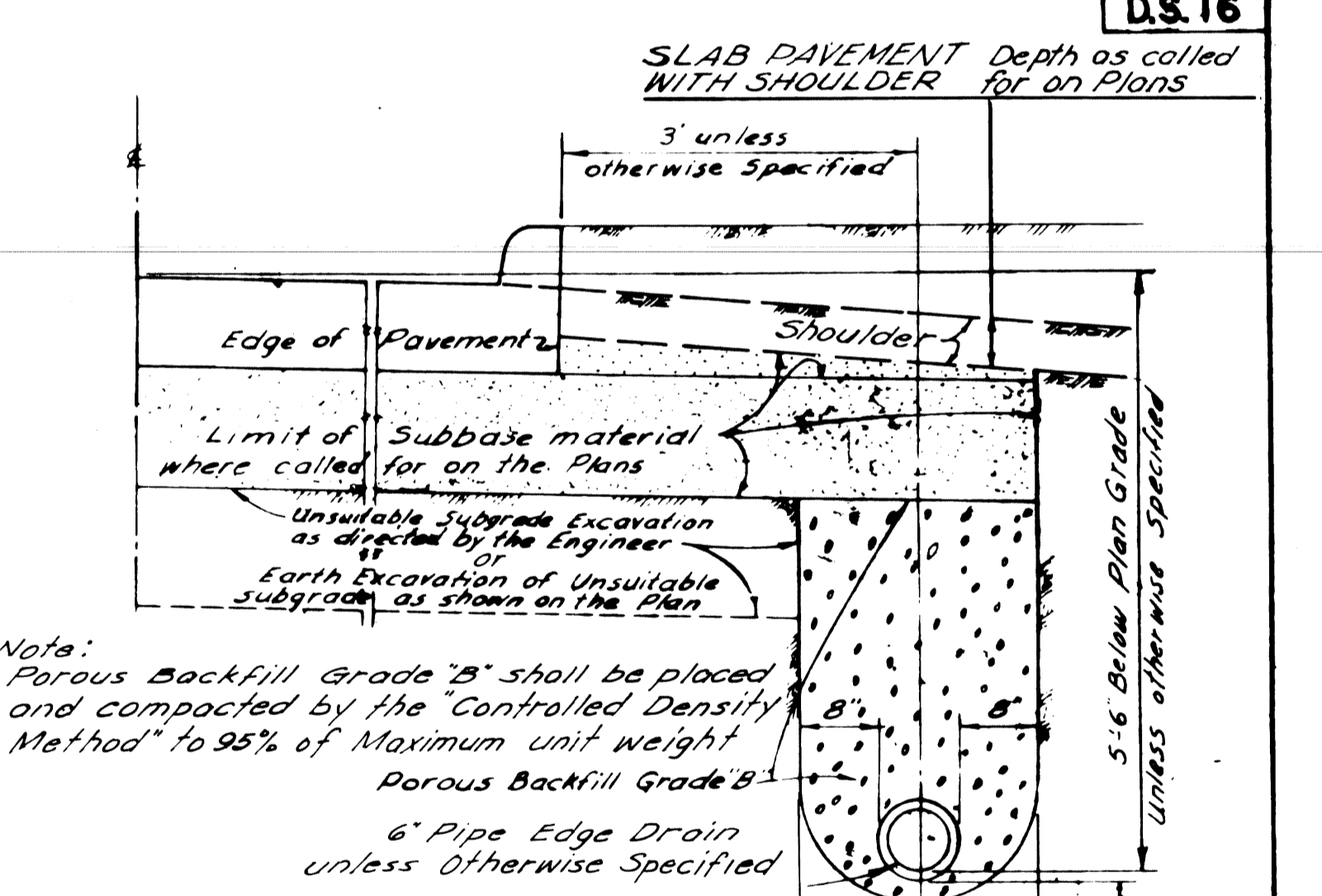


PLASTIC COATED STEEL STEP (as approved)



PLASTIC COATED STEEL STEP (as approved)

STEPS ARE REQUIRED FOR ALL MANHOLES OVER 10 FEET DEEP



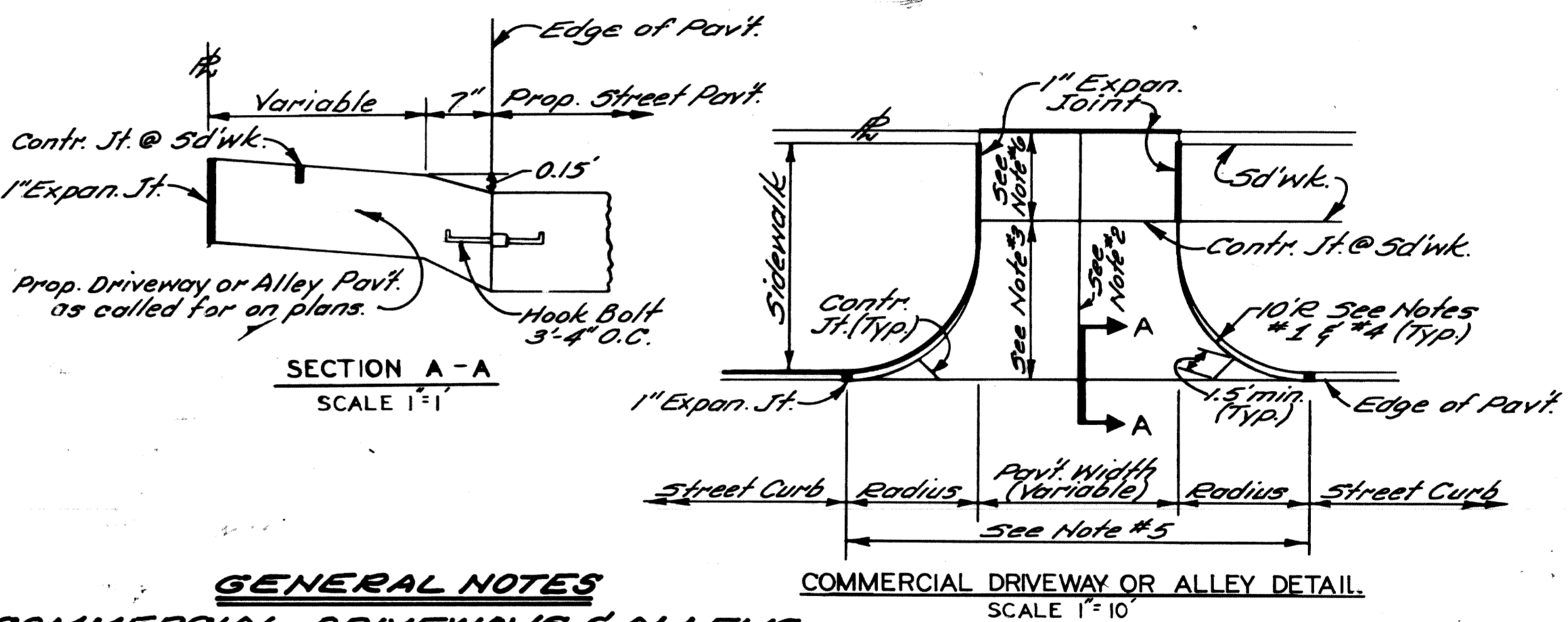
EDGE DRAIN

Subgrade undercutting will not include the area of the Pipe Edge Drain Trench.
 Replacement of Edge Drain backfill in areas of subgrade undercutting is incidental to the undercut backfill. When Porous Material for backfill of subgrade undercutting is used, it will be allowed over the Edge Drain Trench.

GENERAL NOTES		PRIMARY ROAD STANDARDS	
ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT MICHIGAN DEPARTMENT OF STATE HIGHWAYS STANDARD SPECIFICATIONS AND AS FOLLOWS:-			
THE CONTRACT UNIT PRICE BID PER LINEAL FOOT FOR INSTALLING CULVERT, SEWER, EDGE DRAIN OR BANK DRAIN SHALL INCLUDE EXCAVATION AND FURNISHING AND BACKFILLING WITH SAND-GRAVEL MATERIAL OR POROUS MATERIAL, GRADE "B" AND "D" AS REQUIRED.			
BOARD OF WAYNE COUNTY ROAD COMMISSIONERS	SCALE NO SCALE	DATE 12-1-72	
DESIGN DIVISION	DATE 12-1-72	DRAWN BY E.M.B.	
	CHECKED BY A.E.S.	APPROVED BY [Signature] CHIEF ENGINEER DESIGN DIVISION	

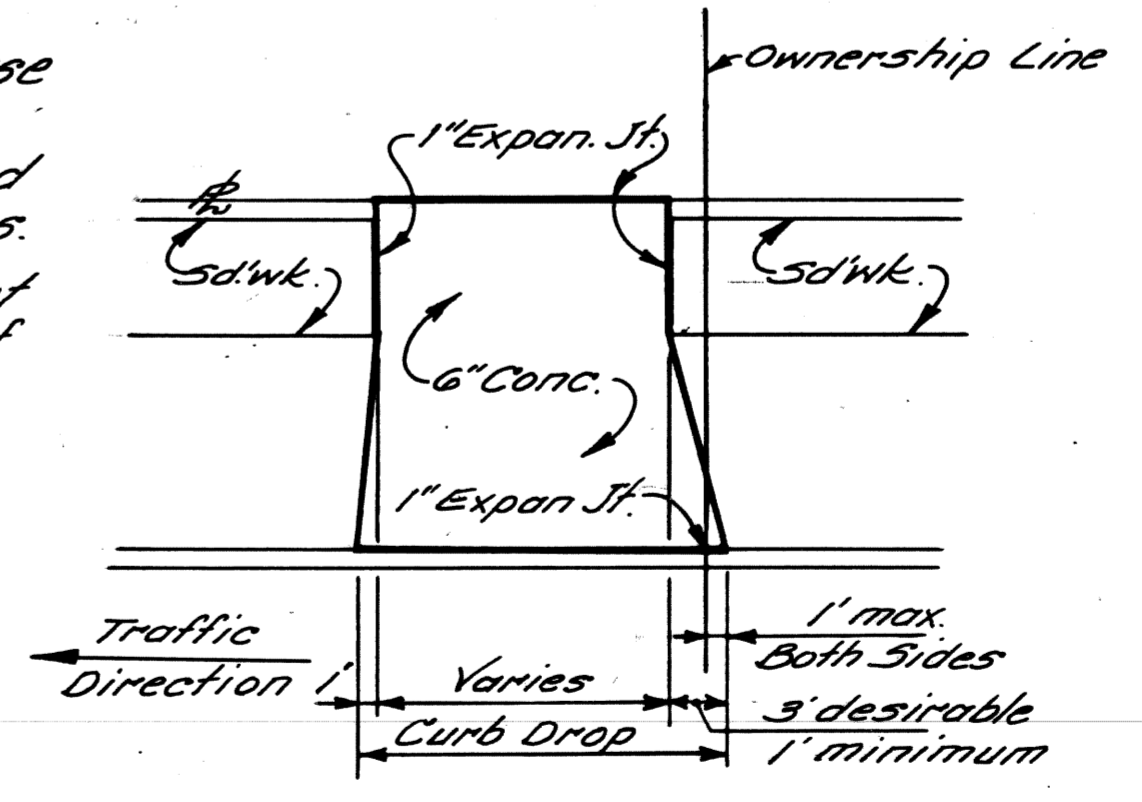
COLOR	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
BLACK	---	PROPERTY AND LOT LINES	■	GUARD RAIL	○	PARKING METER
---	---	PROPOSED CURB LINES AND HEADERS AT RETURNS	○	FENCE	□	STREET SIGN POST
---	---	EXISTING CURB LINES OR EDGE OF PAVEMENT	○	SEWER MANHOLE	□	CATCH BASIN
---	---	PROPOSED CURB OR PAVING ON INTERSECTING STREET	○	P.L.C. MANHOLE	(W)	WATER METER
---	---	PROPOSED SEWER TO CATCH BASINS	⊕	PLC. MANHOLE	(-)	WATER SHUT-OFF
---	---	EXISTING LATERAL SEWERS	⊕	WATER MANHOLE OR GRATE	(+)	GAS SHUT-OFF
---	---	EXISTING PUBLIC SEWERS	⊕	GAS MANHOLE OR GRATE	⊠	GAS DRIP
---	---	EXISTING GAS LINES	⊕	WESTERN UNION MANHOLE	□	DRAIN OR VENT
---	---	EXISTING WATER LINES	⊕	MICHIGAN BELL MANHOLE	☏	GUY POLE
---	---	ELEV OF SEWER INVERT	⊕	EDISON STEAM MANHOLE	☐	MAIL BOX
---	---	PROPOSED C.B. M.H. & INLET SEWER	⊕	EDISON ELECTRIC MANHOLE	☐	AREAWAY OR COAL CHUTE
---	---	EXISTING C.B. M.H. & INLET SEWERS	⊕	FIRE DEPT MANHOLE	○	FLAG POLE
---	---	PROPOSED C.B. M.H. & INLET SEWERS ON INTERSECTING STREETS	⊕	POLICE DEPT MANHOLE	○	SPRINKLER BOX
			⊕	D.S.R. MANHOLE	☐	DEAD MANHOLE
			⊕	FIRE DEPT STANDARD HYDRANT	♠	TREE
			⊕	FIRE DEPT HIGH PRESSURE HYDRANT	⊠	PLC & FD MANHOLE FILLED WITH SAND
			⊕	FIRE DEPT CALL BOX	⊠	TRACK DRAIN
			⊕	FIRE DEPT HIGH PRESSURE MANHOLE	⊠	TRAFFIC SIGN POST
			⊕	POLICE DEPT CALL BOX	(2)	TRAFFIC SIGNAL LIGHT
			⊕	P.L.C. LIGHT POLE	☐	TRAFFIC SIGNAL CONTROL BOX
			⊕	P.L.C. POLE	⊠	D.S.R. DANGER PLATE
			⊕	TELEPHONE POLE	☐	TRASH CONTAINER
			⊕	EDISON POLE	☐	DESCRIPTION
			⊕	TREE PLANTER	---	DETROIT EDISON ELECTRIC CONDUIT
					---	DETROIT EDISON STEAM CONDUIT
					---	WESTERN UNION DUCTS
					---	MICHIGAN BELL TELEPHONE DUCTS
					---	P.L.C. CONDUITS
					---	DETROIT FIRE OR POLICE DEPT CONDUITS (P.L.C. COMMUNICATIONS)

DESIGNED BY	CITY OF DETROIT	STANDARD SYMBOLS FOR UTILITIES
DRAWN BY T. RANDO	DEPARTMENT OF PUBLIC WORKS	
TRACED BY T.R.	CITY ENGINEER'S OFFICE	
CHECKED BY J. J. HANCOCK	BUREAU OF DESIGN	
	PAVING	
	DETAIL NO. 25	
		DWG. NO. C-902-A

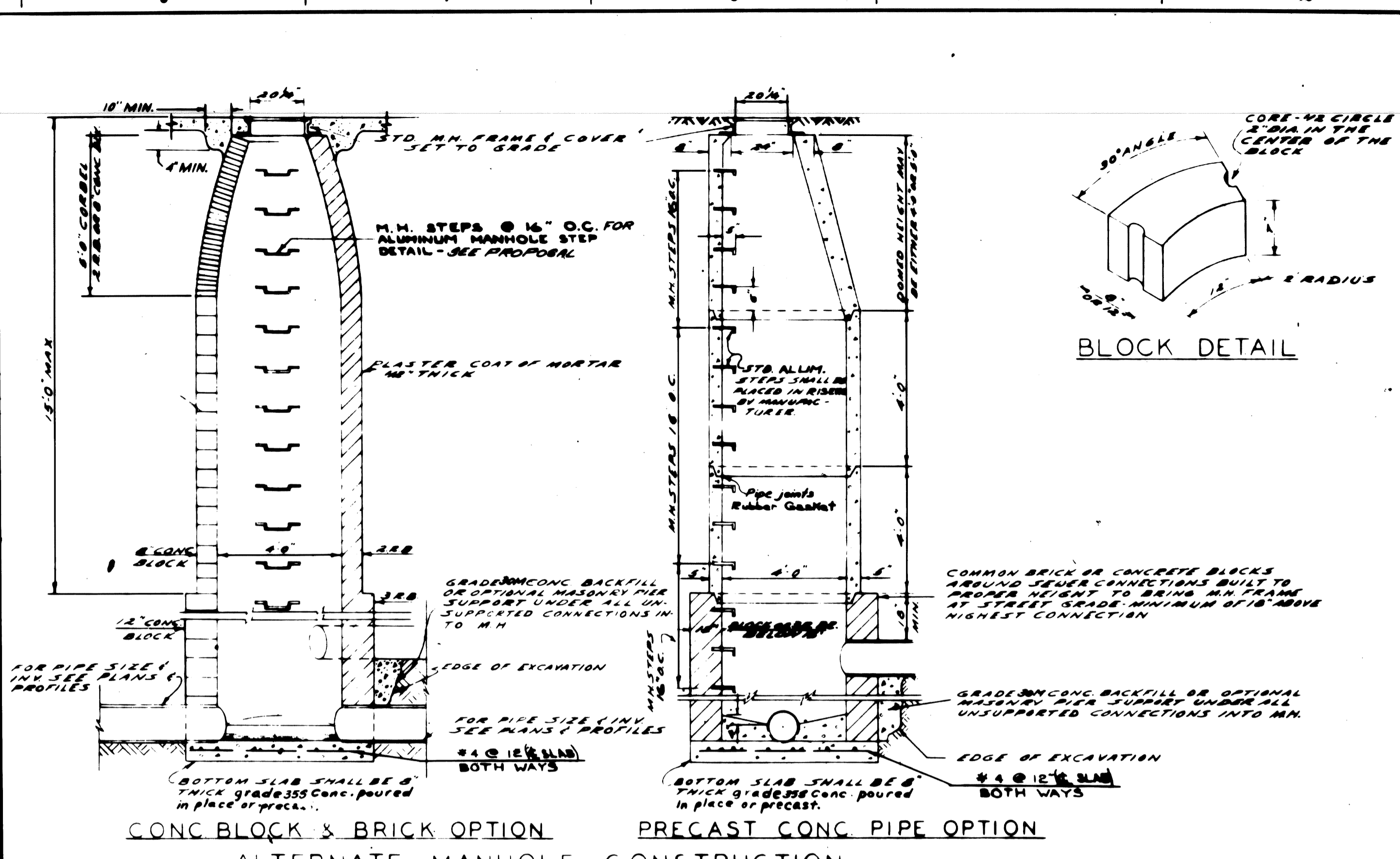
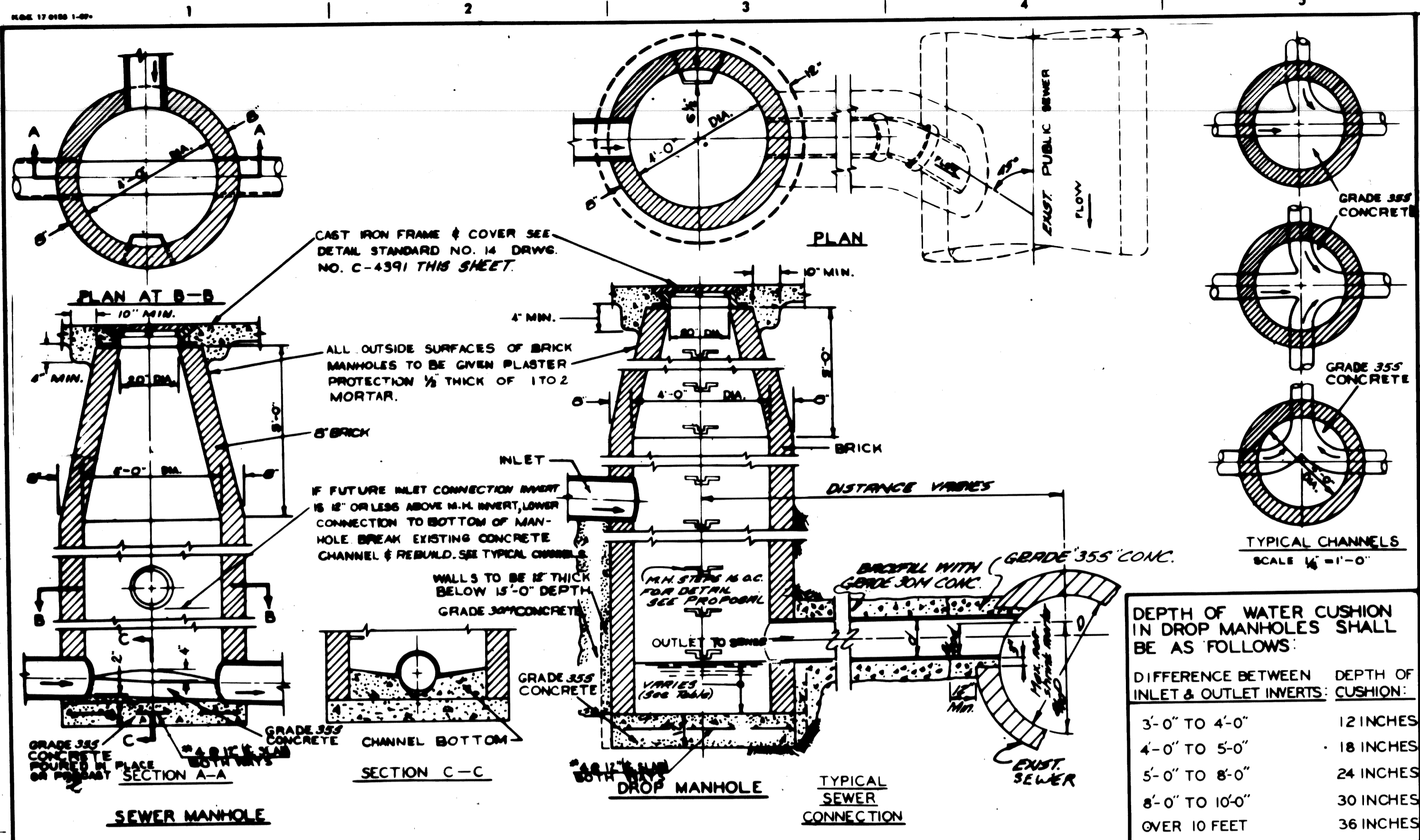


**GENERAL NOTES
COMMERCIAL DRIVEWAYS & ALLEYS**

1. Transition edge of driveway or alley from curb at the street to no curb at the end of the driveway or alley radius.
2. Where driveway or alley exceeds 15' in width a contraction joint shall be placed longitudinally along &.
3. When distance exceeds 15', a transverse contraction joint will be required.
4. Radius 10' unless otherwise directed by the Engineer, or as shown on plans.
5. All work & materials req'd to construct the driveway or alley between the end of returns will be paid for as "Concrete Pavement" of the specified thickness.
6. Minimum & Maximum Slopes of 1/4" ft. & 3/4" ft. shall be used in the sidewalk area.

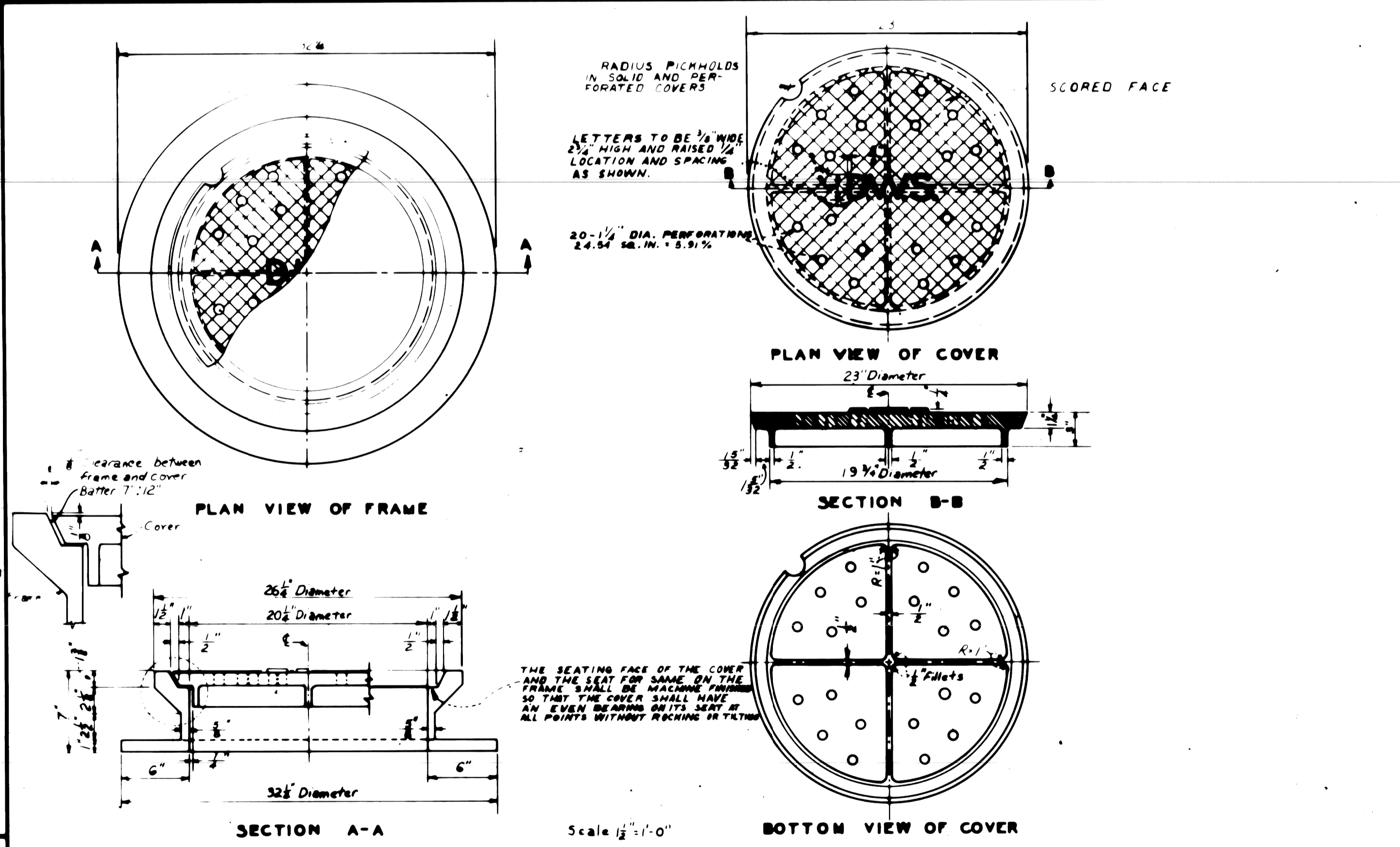
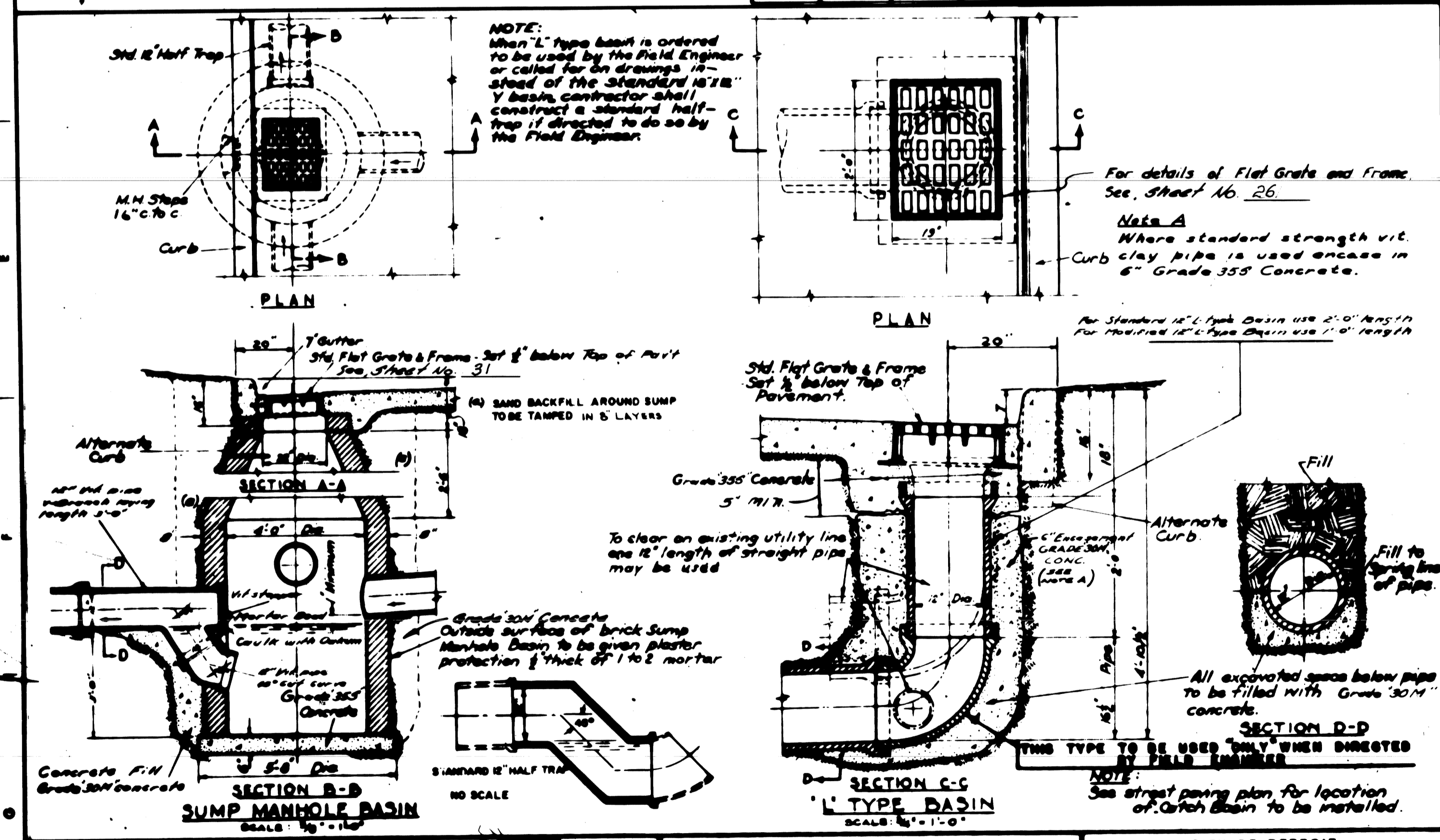


REVISIONS INDICATED BY COORDINATES ON SHEET	DESIGNED BY	APPROVED	CITY OF DETROIT	SHEET 24 OF 52 SHEETS
	DRAWN BY J.R.D.	ENGINEER OF EXPRESSWAYS	CITY ENGINEERING DEPARTMENT	CONTRACT NO.
	TRACED BY			ASSIGNMENT No.
	CHECKED BY K.B.H.			3-89
			SPECIAL STANDARDS & SPECIAL DETAILS	



DESIGNED BY	APPROVED BY	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF DESIGN
DRAWN BY	ENGINEER OF STREETS	
TRACED BY	ASST. CITY ENGINEER	DETAILS OF STANDARD SEWER & DROP MANHOLES
CHECKED BY	CITY ENGINEER	
BOOK NO.	PG.	SCALE 3/8" = 1'-0" DATE: 8-27-66 DETAIL STANDARD NO. 10 DWG. NO. C-4387

DESIGNED BY	APPROVED BY	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF DESIGN
DRAWN BY	ENGINEER OF STREETS	
TRACED BY	ASST. CITY ENGINEER	STD SEWER MANHOLES CONSTRUCTION ALTERNATES
CHECKED BY	CITY ENGINEER	
BOOK NO.	PG.	SCALE NONE DATE: 8-28-66 DETAIL STANDARD NO. 10 DWG. NO. C-4395A



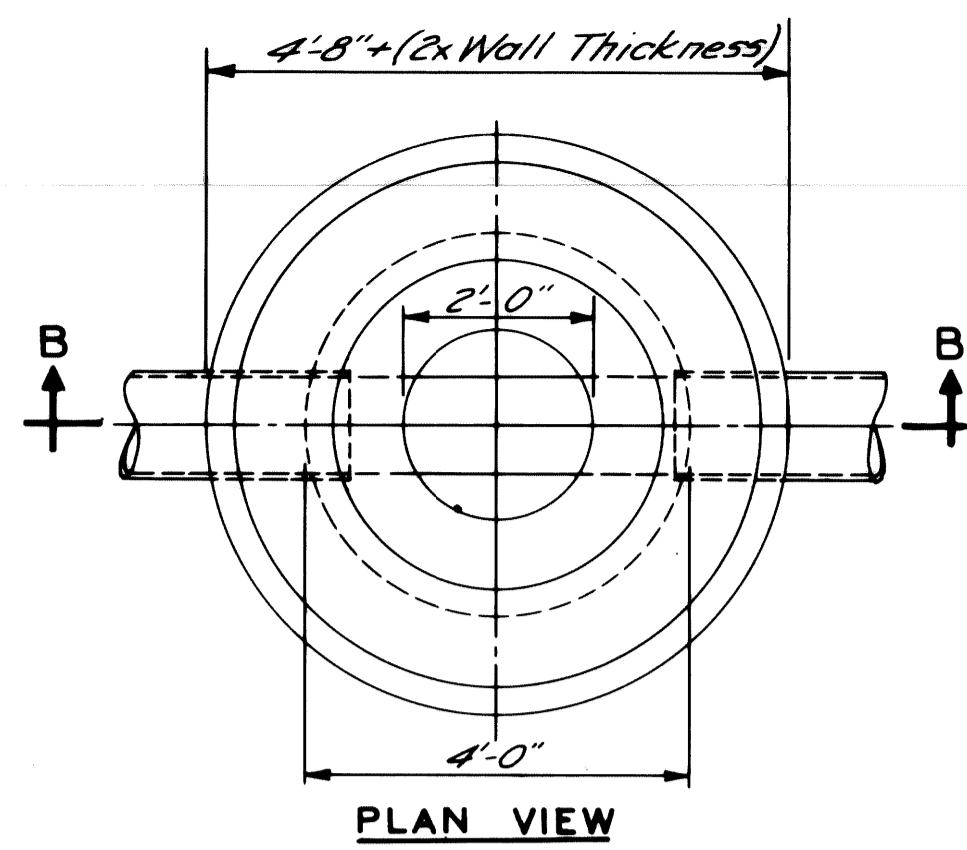
DESIGNED BY	APPROVED BY	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF DESIGN
DRAWN BY	ENGINEER OF STREETS	
TRACED BY	ASST. CITY ENGINEER	TYPICAL SUMP MANHOLE & 'L' TYPE CATCH BASINS
CHECKED BY	CITY ENGINEER	
BOOK NO.	PG.	SCALE AS SHOWN DATE: 8-27-66 DETAIL STANDARD NO. 11 DWG. NO. C-4388

DESIGNED BY	APPROVED BY	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF DESIGN
DRAWN BY	ENGINEER OF STREETS	
TRACED BY	ASST. CITY ENGINEER	DETAILS OF STANDARD - MANHOLE FRAME AND COVER -
CHECKED BY	CITY ENGINEER	
BOOK NO.	PG.	SCALE AS SHOWN DATE: 8-27-66 DETAIL STANDARD NO. 11 DWG. NO. C-43

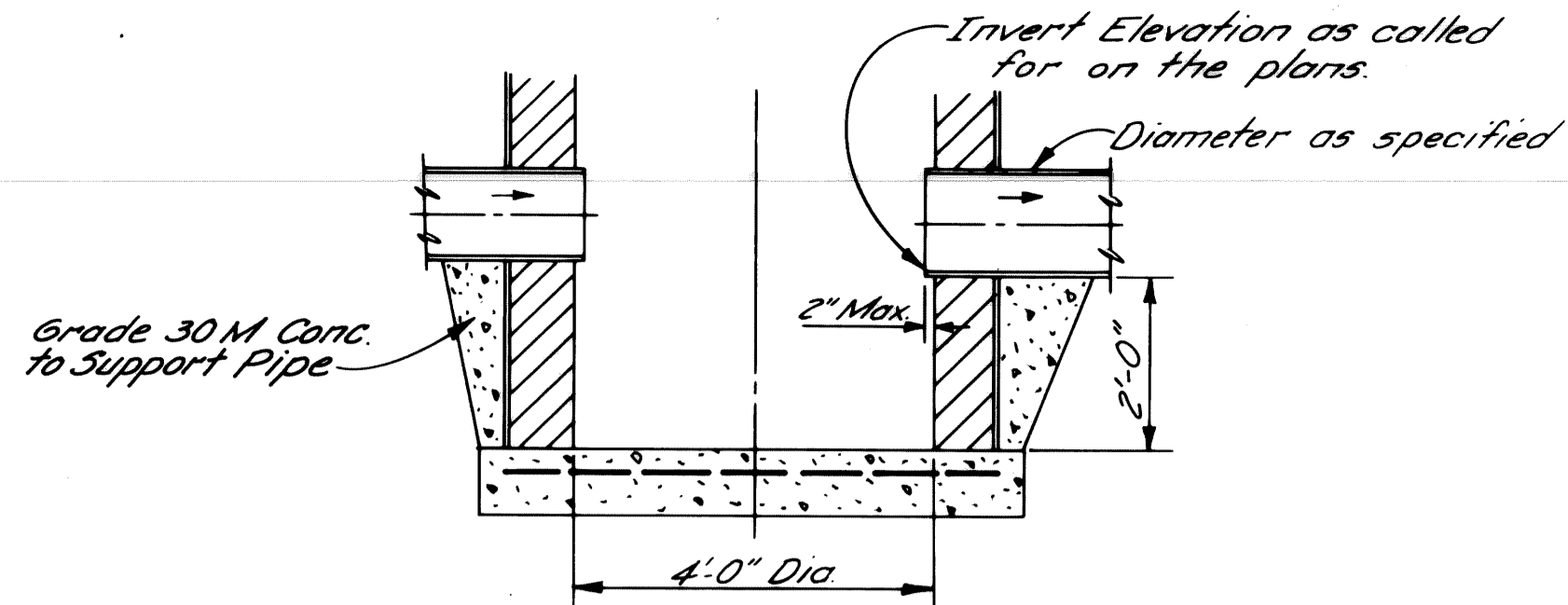
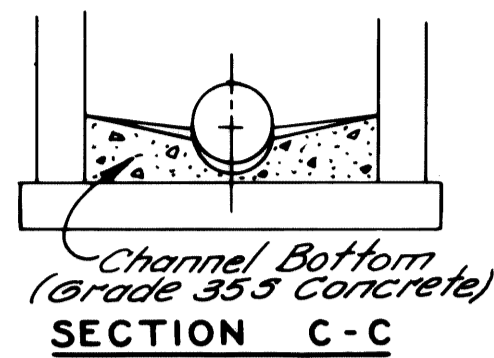
DESIGNED BY	APPROVED BY
DRAWN BY	
TRACED BY	
CHECKED BY	

CITY OF DETROIT CITY ENGINEERING DEPARTMENT		SEVEN MILE - MEYERS: INTERSECTION	SEVEN MILE - WYOMING IMPROVEMENTS
		SPECIAL DETAILS	

SHEET 25 OF 52 SHEETS
CONTRACT No. 11418A
ASSIG.
DATE 3-89

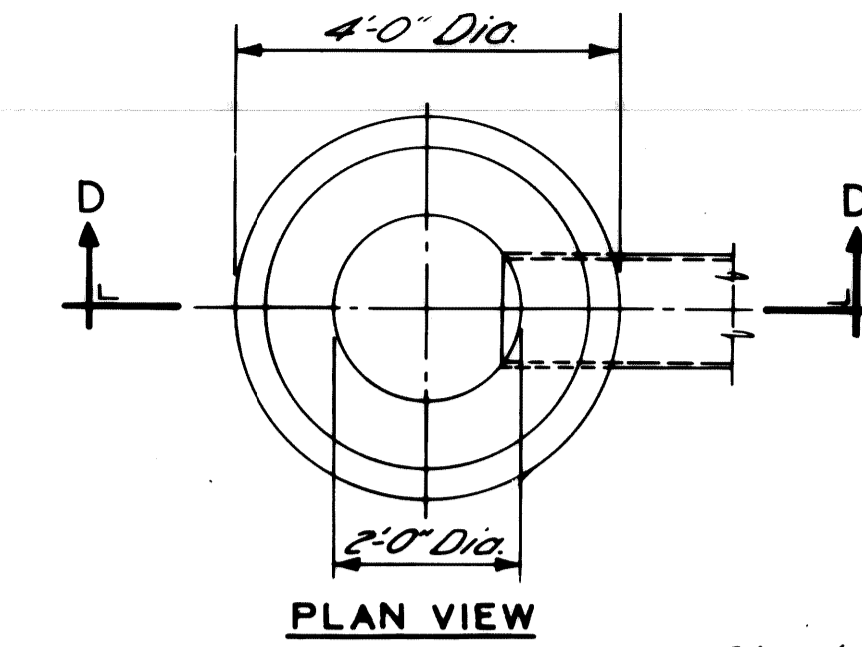


NOTE "A"
Wall thickness below a depth of 15 feet shall be 12 inches.

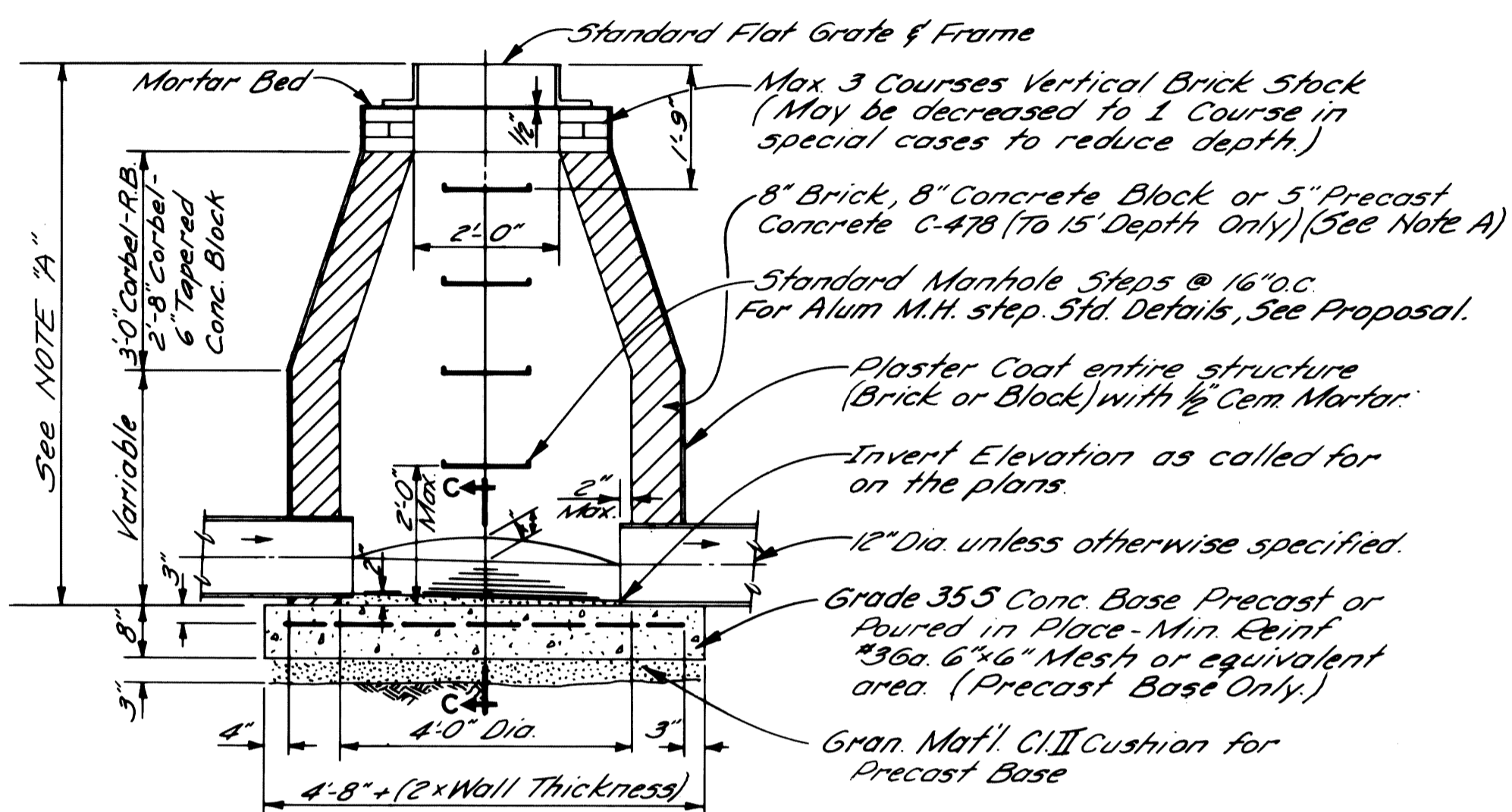


DETAIL OF SUMP FOR CATCH BASIN "B"

NO SCALE

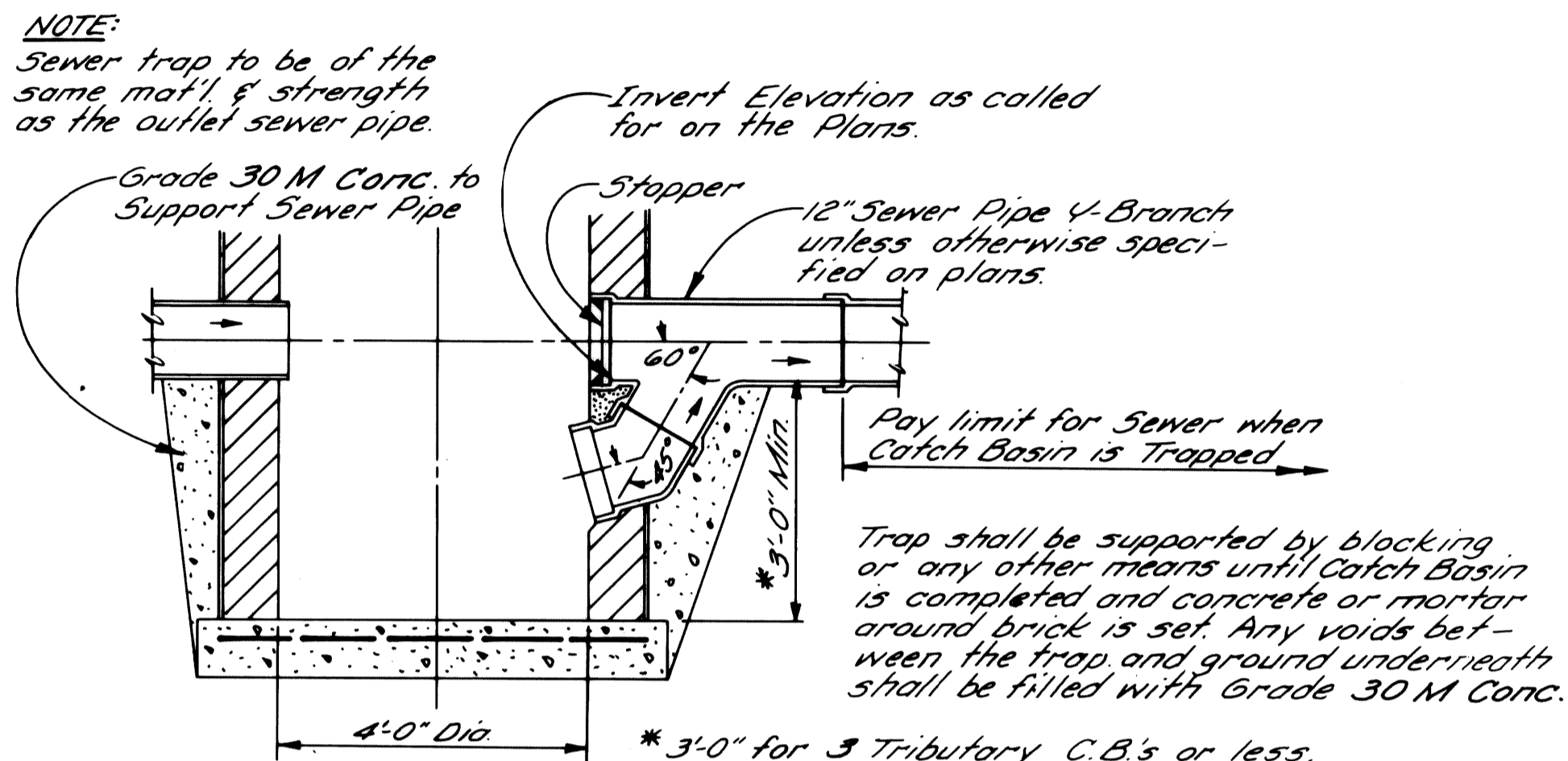


NOTE:
Catch Basin "A" will be used only when outfalling to a Catch Basin "B"



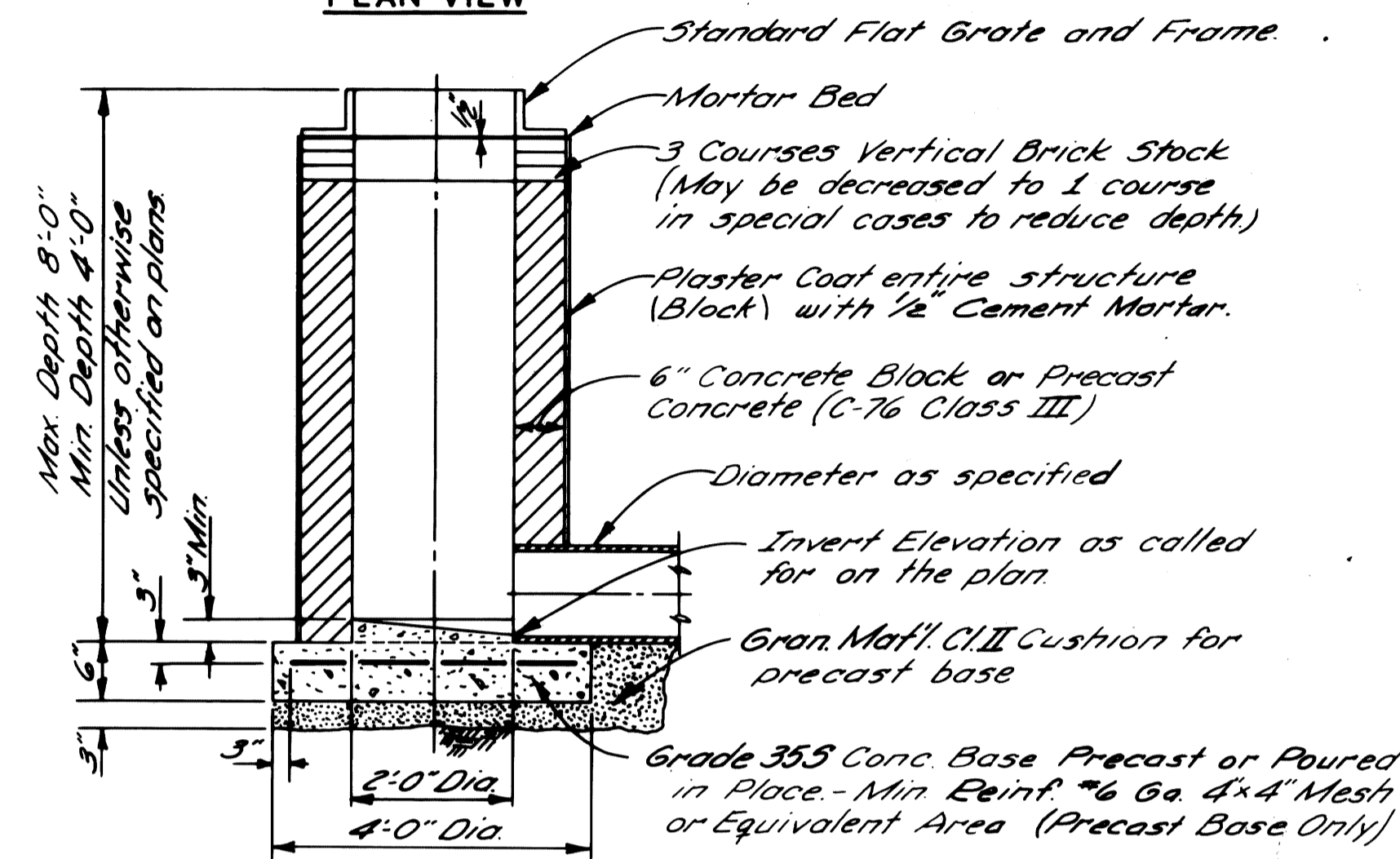
CATCH BASIN "B"

NO SCALE



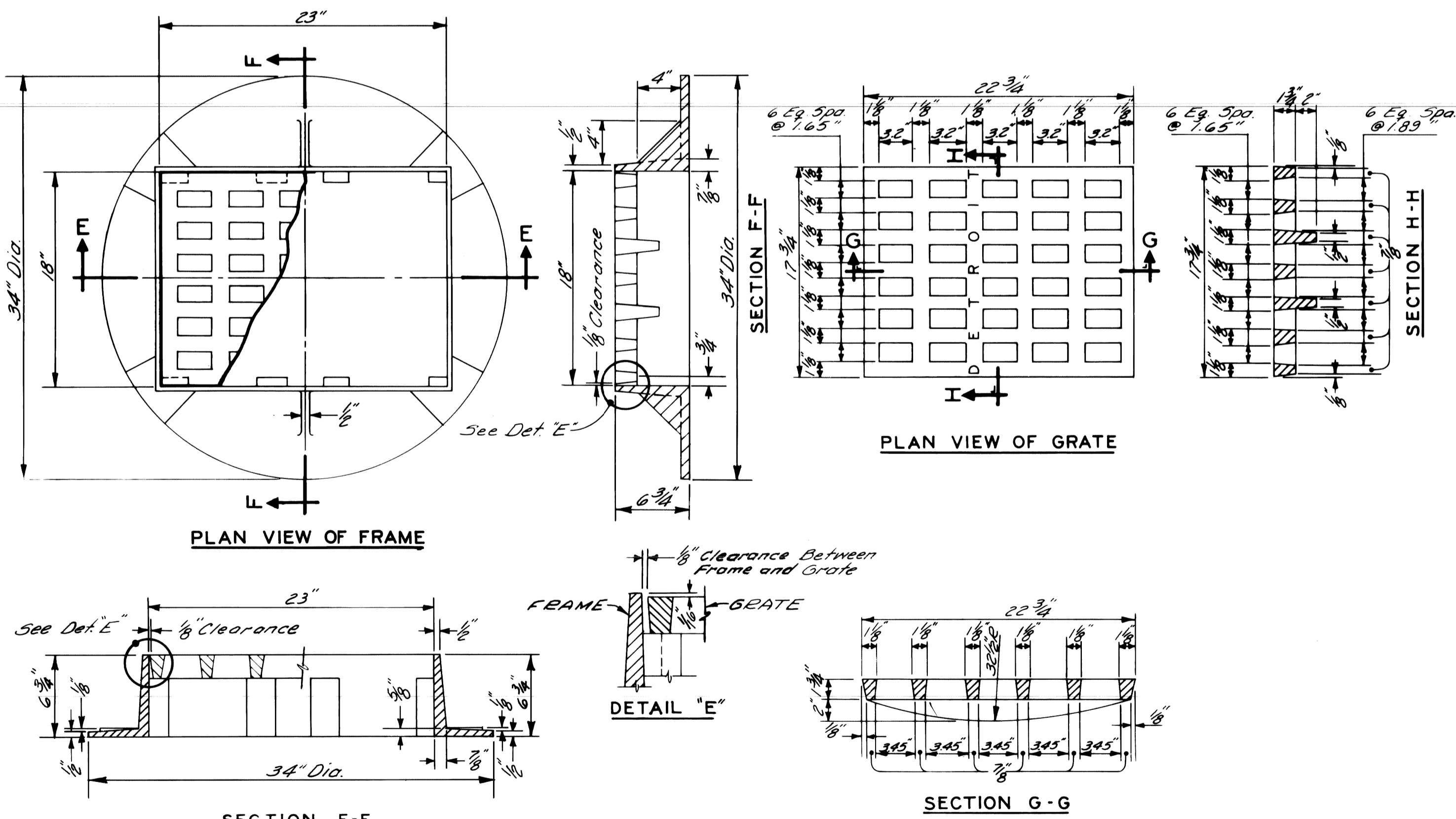
DETAIL OF TRAP FOR CATCH BASIN "B"

NO SCALE



CATCH BASIN "A"

NO SCALE



STANDARD FLAT GRATE AND FRAME

NO SCALE

GENERAL NOTES

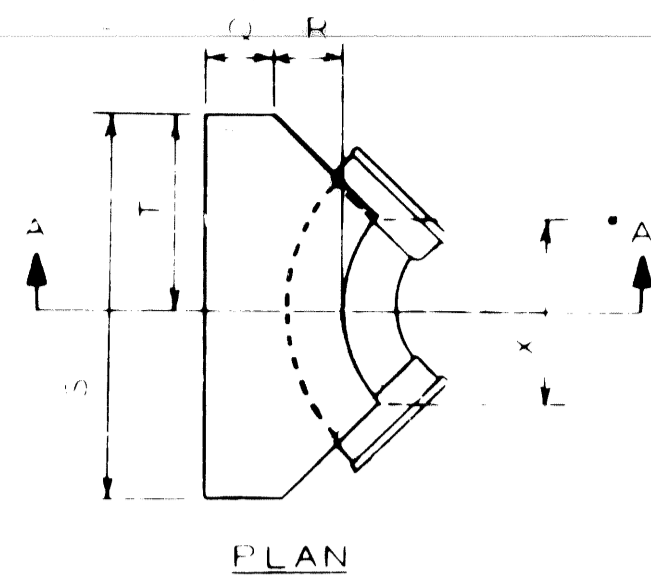
- The materials & workmanship shall be in accordance with the current standard specifications.
- Center of Catch Basin shall be 20 inches from back of curb.
- All sizes & flow lines of pipe, and elevations for top & bottom of structures shall be determined from the plans or construction requirements.
The bell shall be removed from the first length of outlet pipe projecting through the wall of the structures.
When any structure is constructed of precast concrete or concrete block, the top of the masonry shall be left sufficiently low to permit proper adjustment of cover to grade by the use of mortar or bricks as directed by the Engineer.
- A Trap, as detailed on this sheet, shall be placed where called for in the outlet sewer line of Catch Basins "B".
This trap shall be set into the masonry wall as shown on the detail. The space between the faces of the wall & the trap shall be completely filled with cement, mortar or concrete, so as to hold Trap securely in place.
The Traps will be paid for separately at the Contract Unit Price each, which price shall include the extra catch basin construction required and for furnishing and installing the trap.
- A plaster coat of mortar 1/2 inch in thickness shall be applied to the outer surface of the structure as shown. A 1/2 inch cement plaster coat shall be placed on the inside of all sumps.
- Contractor shall verify elevations of existing utilities to enable construction to indicated elevations shown on drawings. If necessary, invert elevations shown on the drawings may be altered in the field to clear existing utilities. Such alterations, upward or downward, shall be at no charge in contract price.
- When precast concrete pipe sections are used for catch basins, either a section of the inlet and outlet pipes or an opening or eye for the inlet & outlet pipes shall be cast into the wall of the catch basin pipe when it is being manufactured. Eyes in precast pipe sections shall be furnished to accommodate a flexible joint connection such as Press-Wedge by Press Seal Gasket Corp. or Res-Seal by Scales Mfg. Corp. or approved equal.
- Pay limit for sewers shall be inside faces of structures unless otherwise noted.

DESIGNED BY	M. POLITO	APPROVED:	
DRAWN BY		ENGINEER OF STREETS	
TRACED BY			
CHECKED BY	D. MILZ		

CITY OF DETROIT
CITY ENGINEERING DEPARTMENT

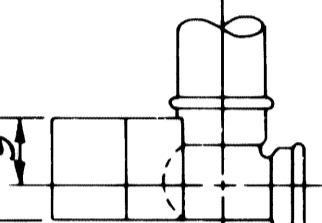
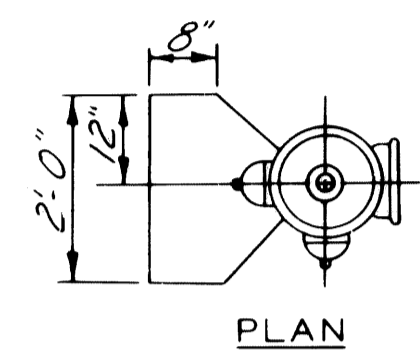
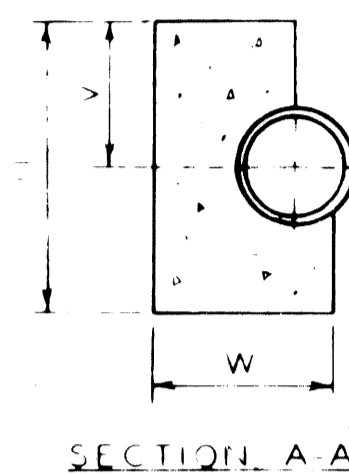
DETAILS OF STANDARD
CATCH BASINS "A" & "B"
AND FLAT GRATE & FRAME

SHEET 26 OF 52 SHEETS
CONTRACT No. 11418A
ASSIGN. NO.
DATE 3-89

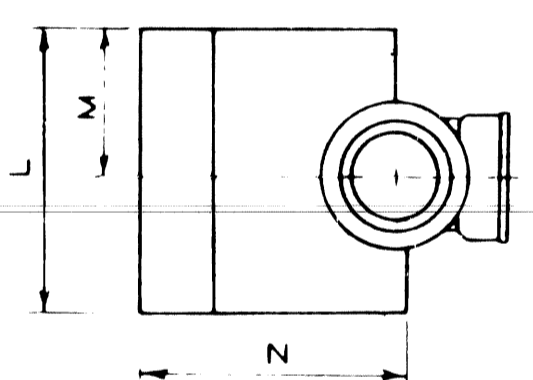
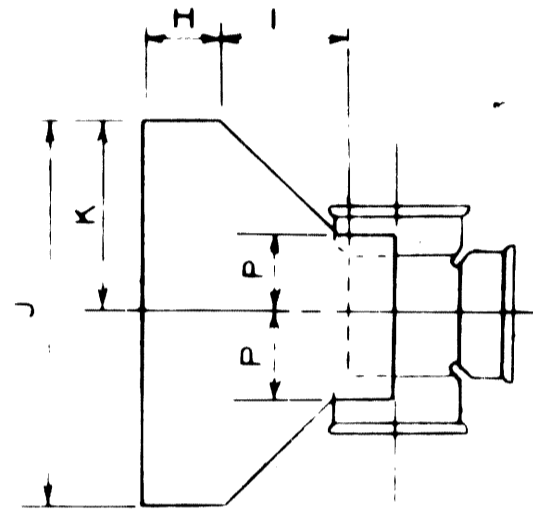


BEND SIZE	CODE									
	G	R	S	T	U	V	W	X		
6" x 8" 90°	0' 9"	1' 0"	3' 4"	1' 8"	2' 6"	1' 3"	1' 11"	1' 2"		
12" 90°	0' 9"	1' 4"	5' 6"	2' 9"	3' 0"	1' 6"	2' 4"	1' 8"		
16" 90°	1' 0"	1' 8"	6' 0"	3' 0"	5' 0"	2' 6"	3' 0"	2' 8"		
6" x 8" 45°	0' 9"	1' 0"	2' 4"	1' 2"	2' 0"	1' 0"	1' 11"	1' 4"		
12" 45°	0' 9"	1' 4"	3' 6"	1' 9"	2' 6"	1' 3"	2' 4"	1' 4"		
16" 45°	1' 0"	1' 8"	5' 4"	2' 8"	3' 0"	1' 6"	3' 0"	2' 6"		
6" x 8" 22 1/2°	0' 9"	1' 0"	2' 6"	1' 3"	2' 0"	1' 0"	2' 0"	1' 4"		
16" 22 1/2°	1' 0"	1' 8"	3' 4"	1' 8"	2' 6"	1' 3"	3' 0"	1' 2"		

DETAIL OF STANDARD THRUST BLOCKS FOR BENDS
No Scale



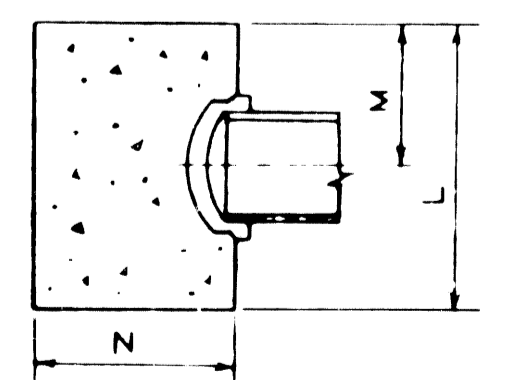
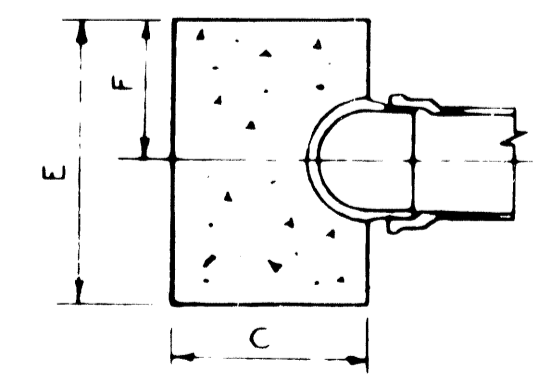
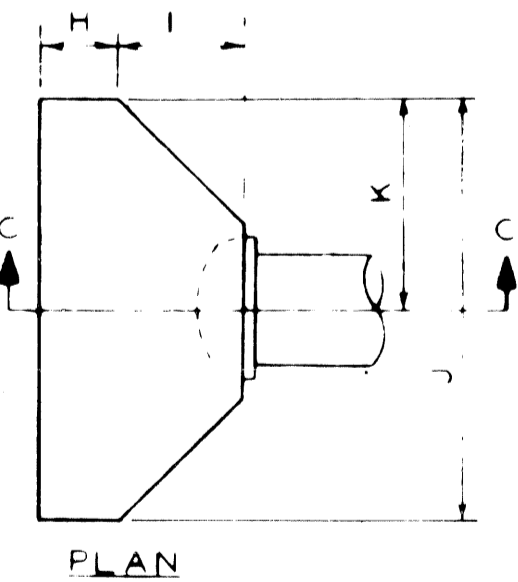
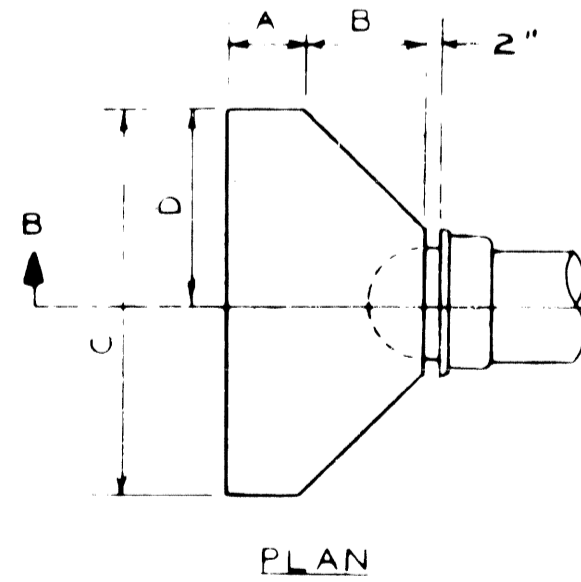
THRUST BLOCK FOR 6" HYDRANT
No Scale



TEE SIZE	CODE							
	H	I	J	K	L	M	N	P
8" x 8"							8' 2 3/8"	8' 0 6/8"
12" x 8"	0' 9"	1' 0"	3' 0"	1' 6"	2' 0"	1' 0"	12' 2 5/8"	12' 0 8/8"
16" x 8"							16' 2 9/8"	16' 0 6/8"
12" x 12"	0' 9"	1' 4"	4' 0"	2' 0"	3' 0"	1' 6"	12' 2 9/8"	8' 0 8/8"
16" x 12"	0' 9"	1' 4"	4' 0"	2' 0"	3' 0"	1' 6"	16' 3 1/8"	16' 0 8/8"
16" x 16"	1' 0"	1' 8"	5' 0"	2' 6"	4' 0"	2' 0"	16' 3 8/8"	16' 0 11/8"

DETAIL OF STANDARD THRUST BLOCKS FOR TEES
No Scale

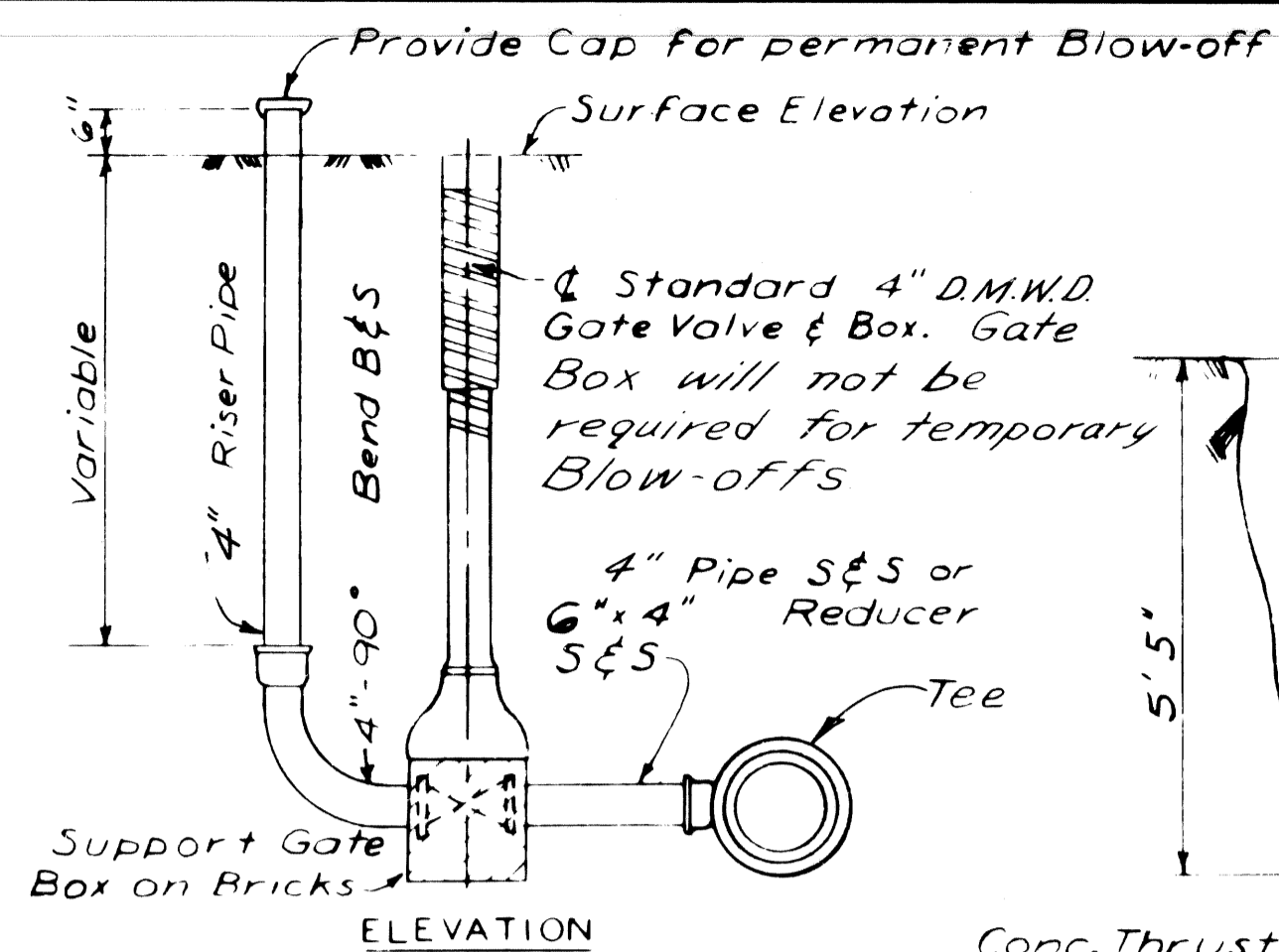
NOTES
The bearing face of all thrust blocks shall be poured against undisturbed earth. Thrust Blocks will be required on all bends 6 inches in diameter or larger and greater than 1 1/4".



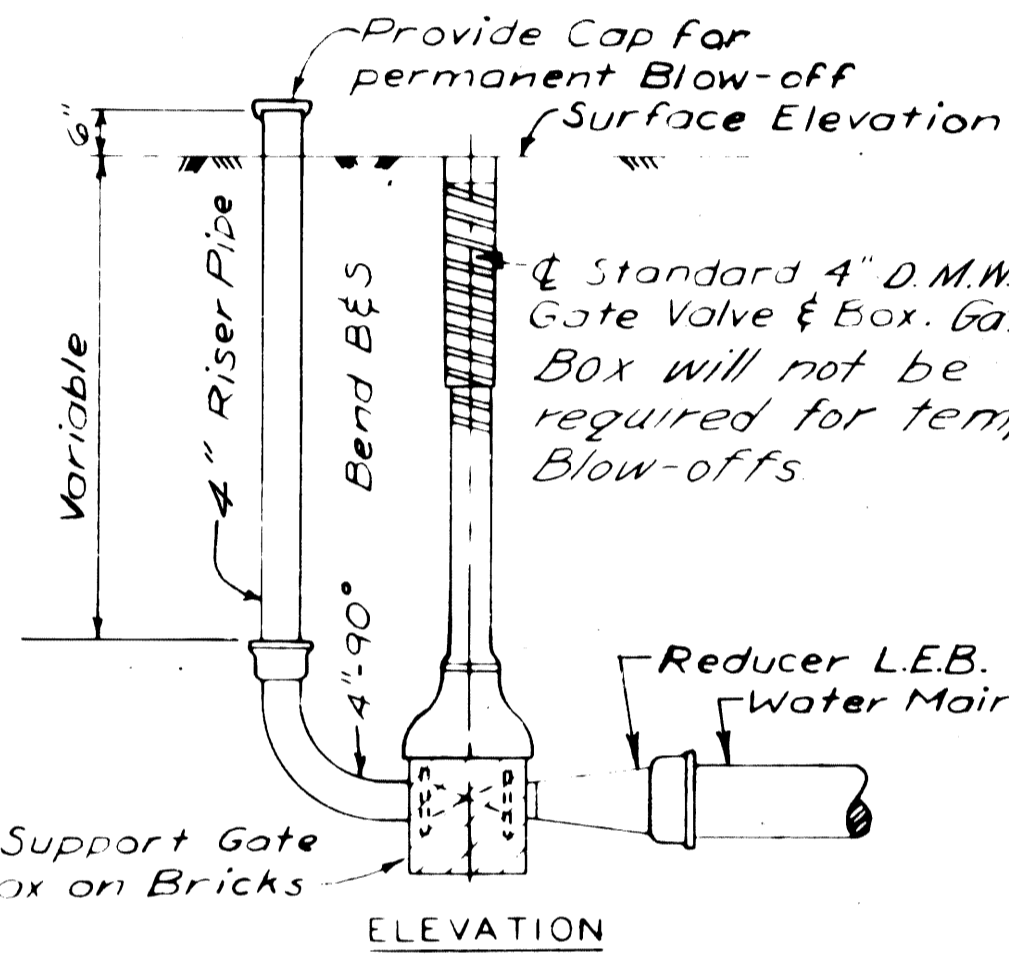
PLUG SIZE	CODE							
	A	B	C	D	E	F	G	
6" x 8"	0' 9"	1' 2"	3' 0"	1' 6"	2' 0"	1' 0"	1' 11"	
12"	0' 9"	1' 4"	4' 0"	2' 0"	3' 0"	1' 6"	2' 1"	
16"	1' 0"	1' 8"	5' 0"	2' 6"	4' 0"	2' 0"	2' 8"	

CAP SIZE	CODE							
	H	I	J	K	L	M	N	
6" x 8"	0' 9"	1' 2"	3' 0"	1' 6"	2' 0"	1' 0"	1' 11"	
12"	0' 9"	1' 4"	4' 0"	2' 0"	3' 0"	1' 6"	2' 1"	
16"	1' 0"	1' 8"	5' 0"	2' 6"	4' 0"	2' 0"	2' 8"	

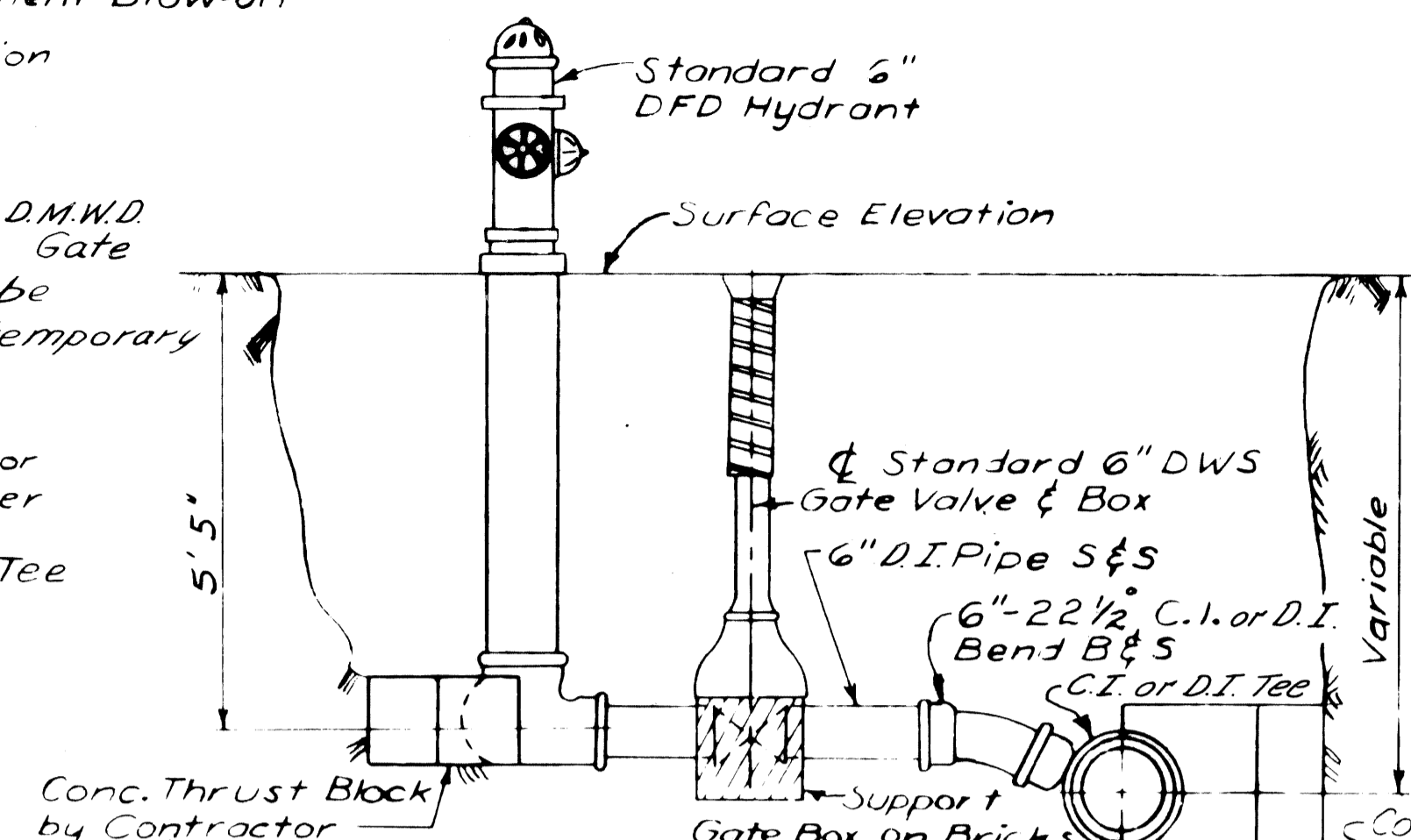
DETAIL OF STANDARD THRUST BLOCKS FOR PLUGS & CAPS
No Scale



DETAIL OF 4" BLOW OFF
No Scale



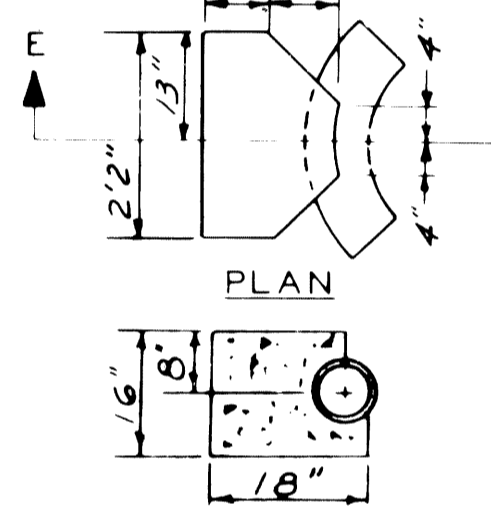
DETAIL OF 4" BLOW OFF
No Scale



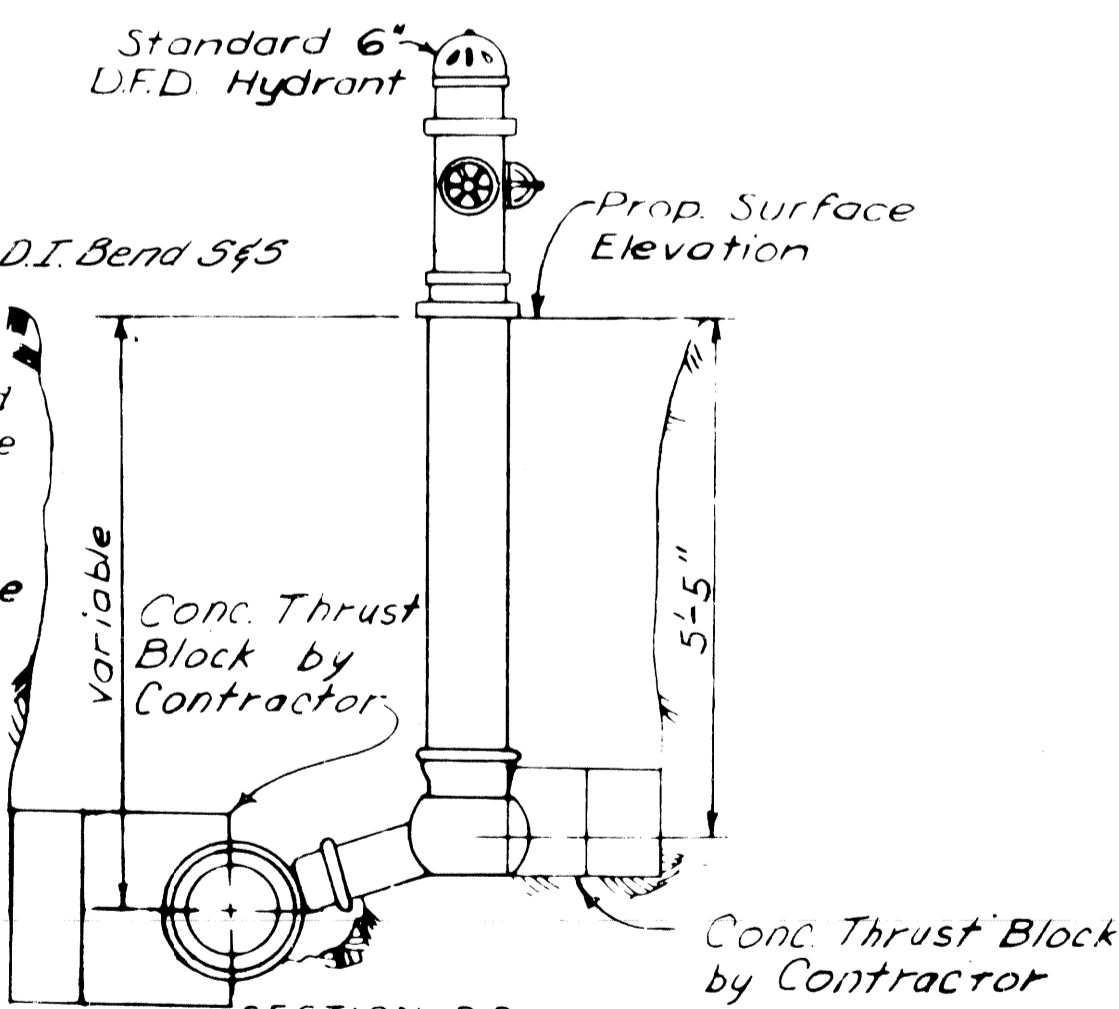
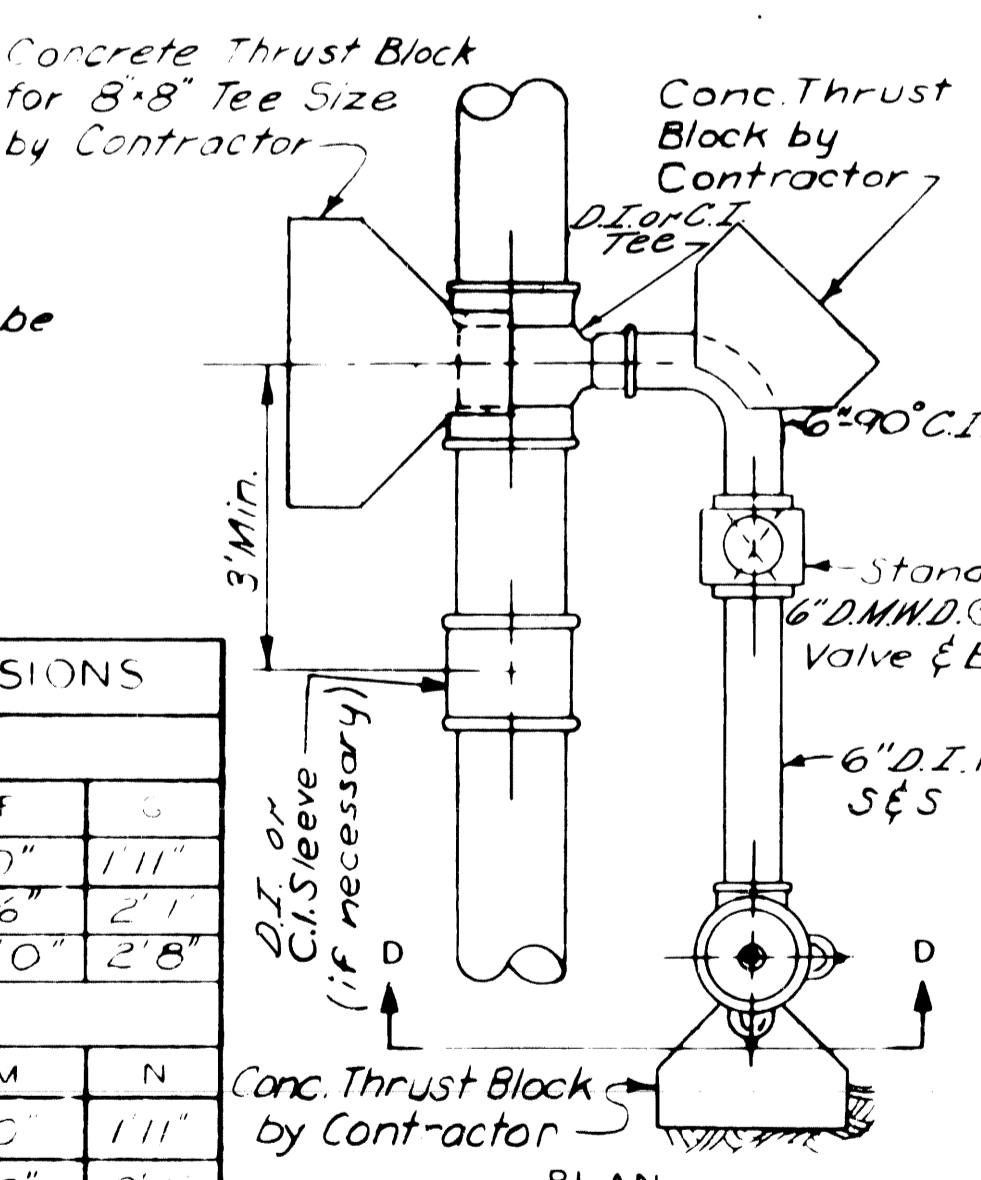
From the new main the Contractor shall install the Tee, 6"-22 1/2" Bend B&S, 6" Pipe, 6" DMND Gate Valve & Box, 6" Pipe, Concrete Thrust Blocks, and Hydrant. From any existing main the complete Hydrant installation shall be done by the Contractor.

Hydrants to be a minimum of 6' behind Curb, unless otherwise noted on the drawings. Dimensions given from the Curb are from Pavement Joint line which is at face of Curb.

DETAIL OF 6" HYDRANT INSTALLATION
No Scale



THRUST BLOCK FOR 6" HYDRANT BEND
No Scale



From the new main the Contractor shall install the Tee, 6"-90° Bend S&S, 6" Pipe, 6" DMND Gate Valve & Box, 6" Pipe Concrete Thrust Blocks and Hydrant. From any existing main the complete Hydrant installation shall be done by the Contractor.

Hydrants to be a minimum of 6' behind the Curb, unless otherwise shown on the drawings. Dimensions given from Curb are from Pavement Joint line which is at face of Curb.

DETAIL OF 6" HYDRANT INSTALLATION
No Scale

GENERAL NOTES
"Ductile Iron Pipe in sizes 3" through 16" is permitted as a part of the Cast Iron Pipe Specifications."

PROJECT NO.		ASSIGN No.	
FIRE HYDRANT MISCELLANEOUS DETAILS.			
REVISIONS			
NO.	DESCRIPTION	DATE	BY
DRAWN BY: RBP		CHECKED BY: J.D.	
DATE: MP		SCALE: IN	
11418A			

QUANTITY SHEET - E

SEVEN MILE - MEYERS ROAD

SEVEN MILE - WYOMING ROAD

ITEMS	AS PER PLANS																	TOTAL (7 MILE - MEYERS)	TOTAL (7 MILE - WYOMING)
	SHEET NO'S.		2, 3	5	6	9	PAVEMENT MARKING (SEE PROPOSAL)	TYPICAL CROSS SECTIONS	10	13	14	15	16	19	20	PAVEMENT MARKING (SEE PROPOSAL)	TOTAL (7 MILE - WYOMING)		
	CONTRACT TOTALS	UNITS	TYPICAL CROSS SECTIONS	7 MILE REMOVALS	7 MILE PLAN	7 MILE UTILITIES			7 MILE REMOVALS	WYOMING REMOVALS	7 MILE PLAN	WYOMING PLAN	7 MILE UTILITIES	WYOMING UTILITIES					
Removing Trees 8" - 18" Dia.	3	EA		3			3										1300		
Removing Pavement	2100	SYD		800			800										2200		
Removing Curb	3450	LFT		1250			1250										2530		
Removing Sidewalk	4530	SYD	75	1925			2000	60	1590	880							3		
Abandoning Drainage Structures	7	EA		4			4		1	2							1310		
Earth Excavation	2680	CYD			1370		1370				880	430					100		
Subgrade Undercutting	150	CYD	50				50	100									330		
Special Subbase	850	CYD	520				520	330									100		
Special Backfill CIP	150	CY	50				50	100									90		
Removing Pavement (Repair)	112	SYD	15	7			22	20	40	30							560		
Removing Bituminous Surface	1530	SYD			970		970	20			540						650		
Cold-Milling Bituminous Surface	1000	CYD			350		350				545	105					900		
Bituminous Aggregate Leveling Course (Allowing R.A.P.)	1850	TON			950		950				720	180					650		
Bituminous Aggregate Wearing Course (F)	1320	TON			670		670				546	104					90		
Conditioning Existing Pavement	180	TON	5		85		90	5			67	18					72		
Bituminous Approaches	252	TON			180		180				72						2400		
Saved Longitudinal Plans of Weakness Joints	4250	LFT	1850				1850	2400			550	230					780		
Concrete Pavement - NonReinf. - 8"	1020	SYD			240		240					70					70		
Concrete Pavement - NonReinf. - 9"	70	SYD									1205	815					2020		
Concrete Base Course - Reinf. 9" With Type 2 Int. Straight Curb	3720	SYD			1700		1700				6	3					9		
Cement	12	TON			3		3				360	360					720		
Expansion - Anchored Lane - Ties	1280	EA			560		560				40	30					90		
Concrete Pavement Repair, 10 in, NonReinf.	112	SYD	15	7			22	20			210						210		
12" Sewer C-76 - IV, Trench Detail A	280	LFT			70		70					170					170		
12" Sewer C-76 - III, Trench Detail 9	172	LFT			2		2				4						4		
12" Sewer Top	6	EA			2		2				7						18		
Adjusting Structure Covers	33	EA			5	10	15				7		10				18		
Reconstructing Drainage Structures	33	EA			5	10	15				7		10				1		
12" Sewer Traps	2	EA			1		1										150		
Cleaning Catch Basin Leads (NON FEDERAL)	300	LFT	150				150	150	5								5		
Cleaning Catch Basin (NON FEDERAL)	8	EA	3				3				3						3		
Catch Basin "A" with 8" Cast Iron Trap (V.C.D.P.S.)	6	EA			3		3										1		
Catch Basin "B"	2	EA			1		1										1		
Catch Basin "L"	1	EA			2		2				2						2		
Standard Inlet	4	EA			2		2				2						2		
Frame and Cover "A"	4	EA			2		2				850						850		
Edge Drains - 6" (C.S.P. or Bituminous Fiber Pipe)	2500	LFT			1650		1650										1		
Manhole - Standard	1	EA									1						1		
Manhole "A" with steps	10	CY					5		5								5		
Rem. Masonry & Conc. Structures				5							350	4150					350		
Concrete Curb, Straight Type 1	350	LFT						350			3460						7900		
4" Concrete Sidewalk	19980	SFT	720		11300		12020	350			4535	465					5000		
6" Concrete Sidewalk	7900	SFT			2900		2900				500						500		
Sidewalk Ramps - Type 1	1300	SFT			800		800				320						320		
Sidewalk Ramps - Type 3	320	SFT									300						300		
Integral Curb and Walk	400	LFT	40		60		100										4		
Lighted Arrow Type A - Furnished	8	EA	4				4				4						4		
Lighted Arrow Type A - Operated	8	EA	4				4				4						4		
Barricade, Type II Lighted Furnished	285	EA	165				165				120						120		
Barricade, Type II Lighted Operated	190	EA	110				110				80						80		
Barricade, Type III Lighted Furnished	18	EA	9				9				9						9		
Barricade, Type III Lighted Operated	12	EA	6				6				6						6		
Sign, Type B Temporary	402	SFT	134				134				268						268		
Temporary Pavement Marking, Type R	240	LFT					120								120		120		
Temporary Pavement Marking, Type NR	240	LFT					120								120		120		
Fast Dry Pavement Marking, 4" White	1450	LFT					650				650				650		650		
Fast Dry Pavement Marking, 4" Yellow	2400	LFT					2750				2750				2750		2650		
Preformed Thermoplastic Pavement Marking, 6" Crosswalk Line	1100	LFT					550								550		550		
Preformed Thermoplastic Pavement Marking, 24" Stop Bar	300	LFT					150								150		150		
Preformed Thermoplastic Pavement Marking, Legend (ONLY)	8	EA					4								4		4		
Preformed Thermoplastic Pavement Marking, Symbol (LEFT-TURN ARROW)	8	EA					4								4		4		
Preformed Thermoplastic Pavement Marking, 12" Yellow	320	LFT					200								120		120		
Minor Traffic Devices	1	L.S.	0.5				0.5				0.5						0.5		
Flag Control	1	L.S.	0.5				0.5				0.5						0.5		
Mobilization	1	L.S.	0.5				0.5				0.5						0.5		
Class A Sodding	815	SYD			560		560				98	157					255		
Water	3	UNIT			1		1				1	1					2		
Top Soil Surface, 3 inches	815	SYD			560		560				98	157					255		
Fire Hydrant	3	EA					2										1		
Remove Hydrant - Method I	2	EA					1										1		
Remove Hydrant - Method II	1	EA					1										1		
Relocate Hydrant - Method I	2	EA					1						2				2		
Relocate Hydrant - Method II	1	EA					1						1				1		