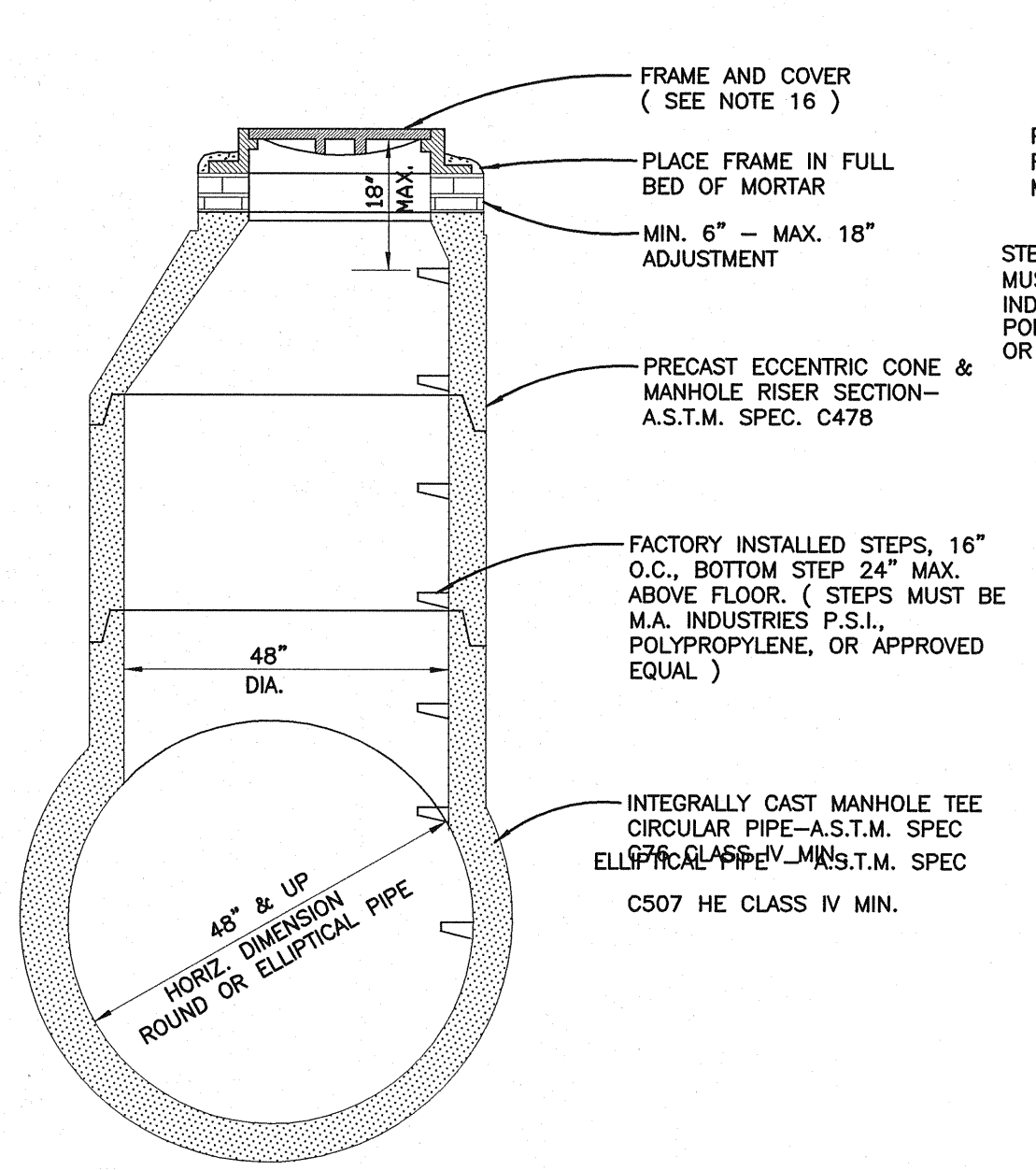
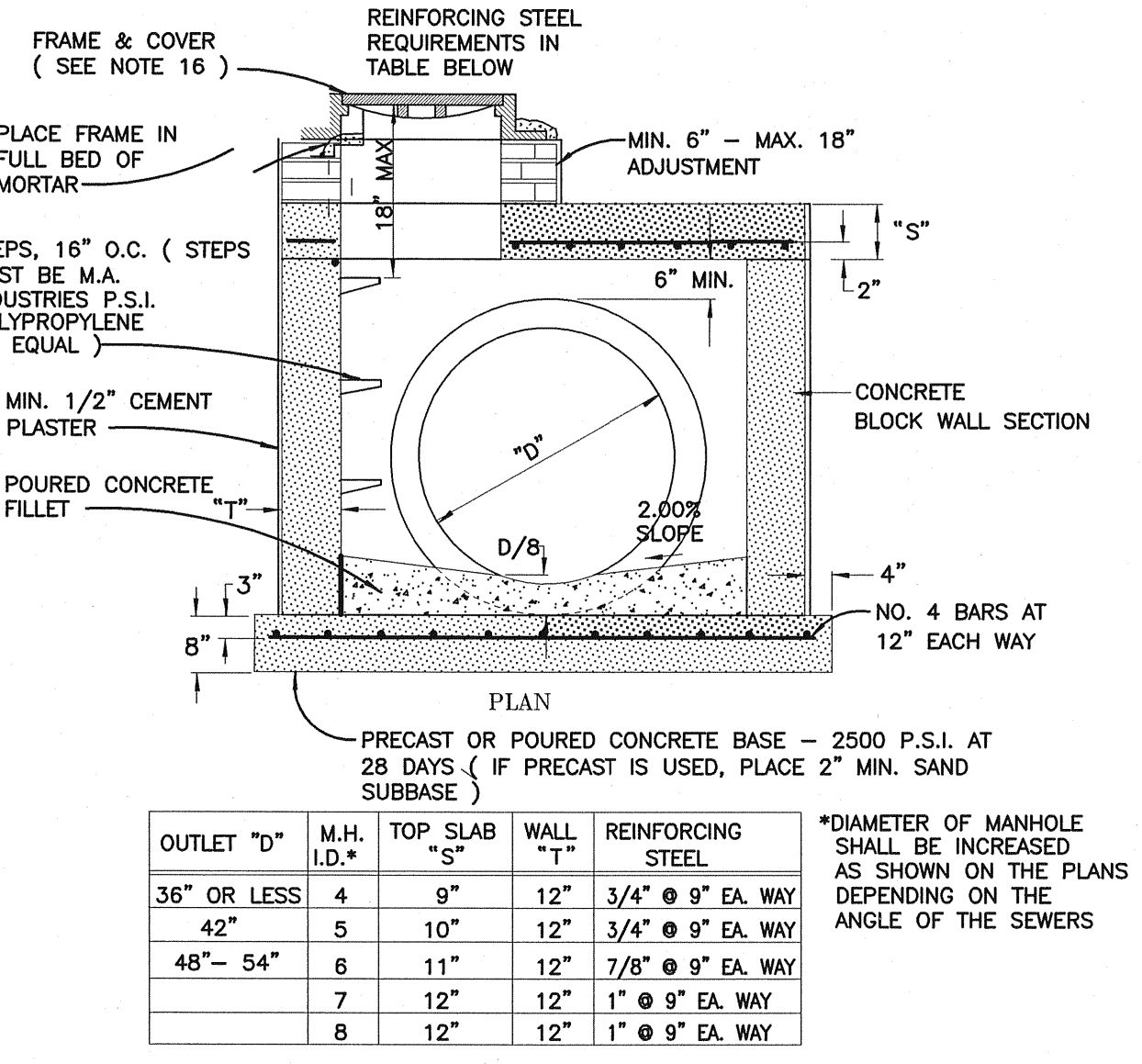


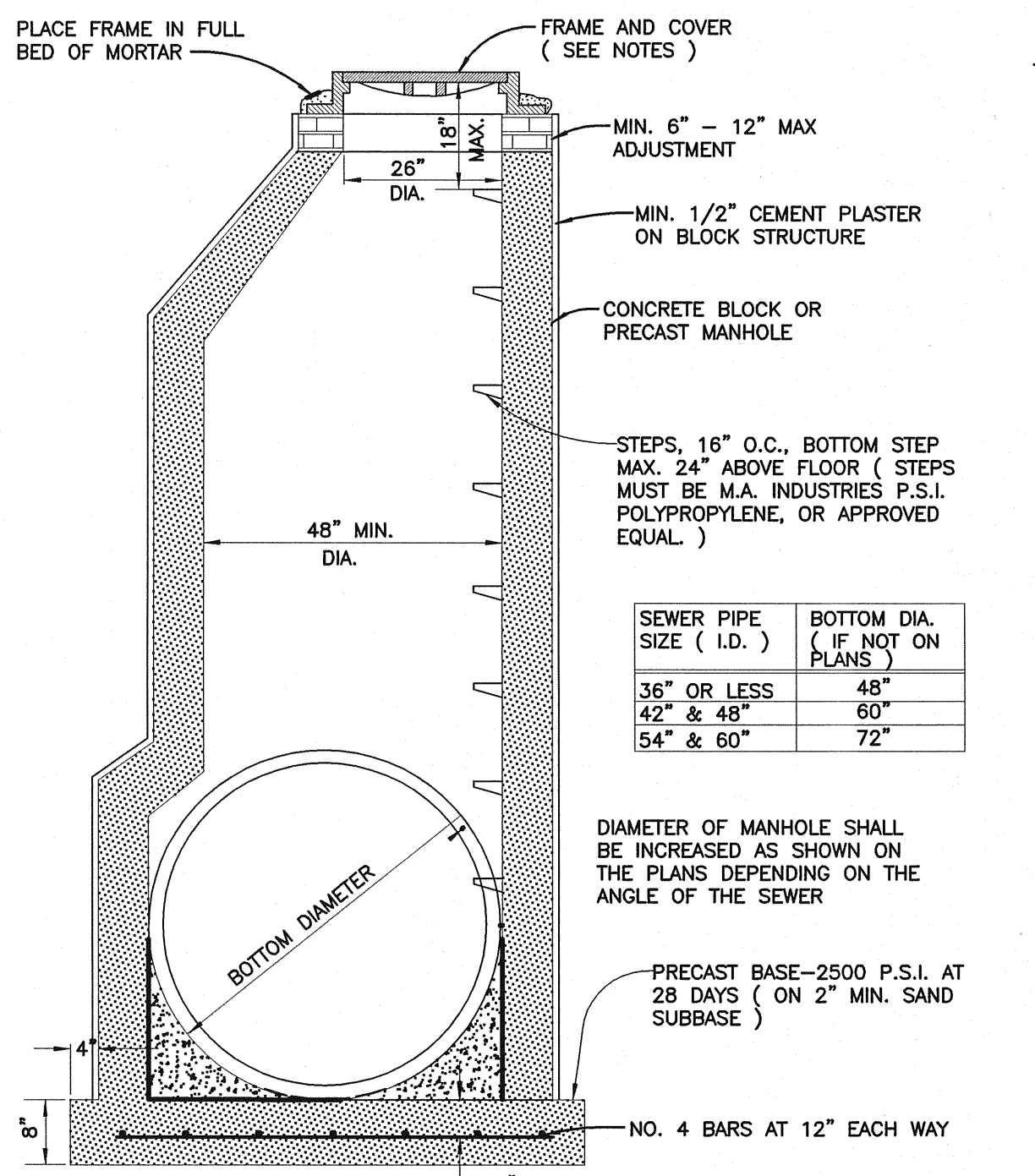
4 FT. DIAMETER CATCH BASIN WITH SUMP



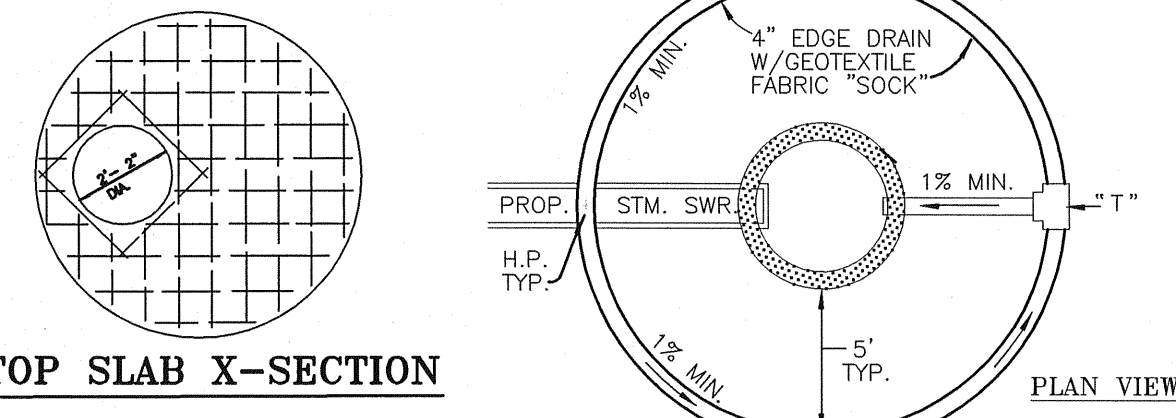
STORM SEWER TEE MANHOLE "B"



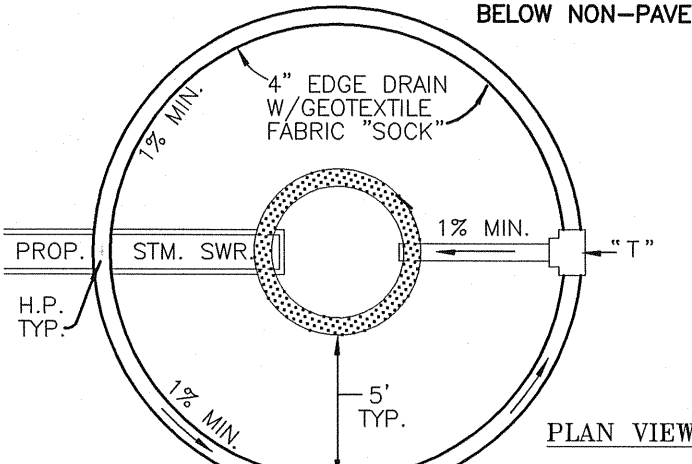
STORM SEWER MANHOLE "A" WITH FLAT SLAB



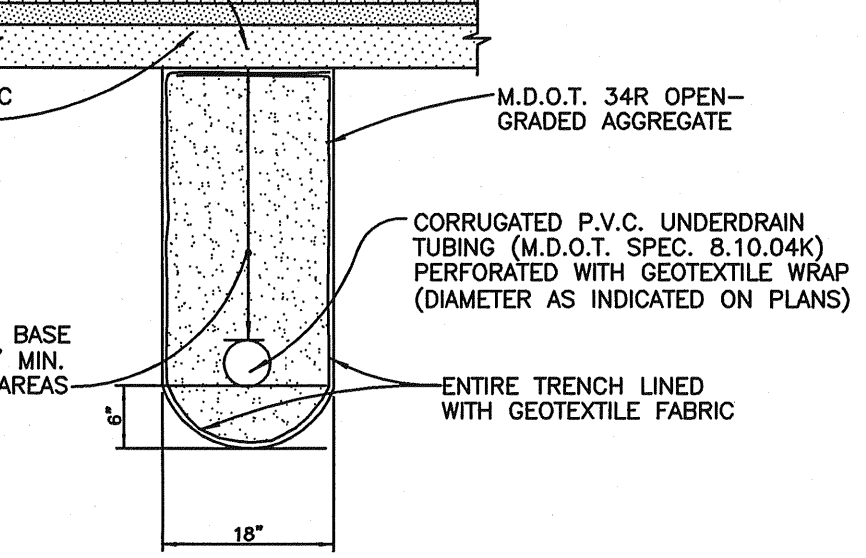
STORM SEWER MANHOLE "A"



TOP SLAB X-SECTION



CATCH BASIN EDGE DRAIN DETAIL

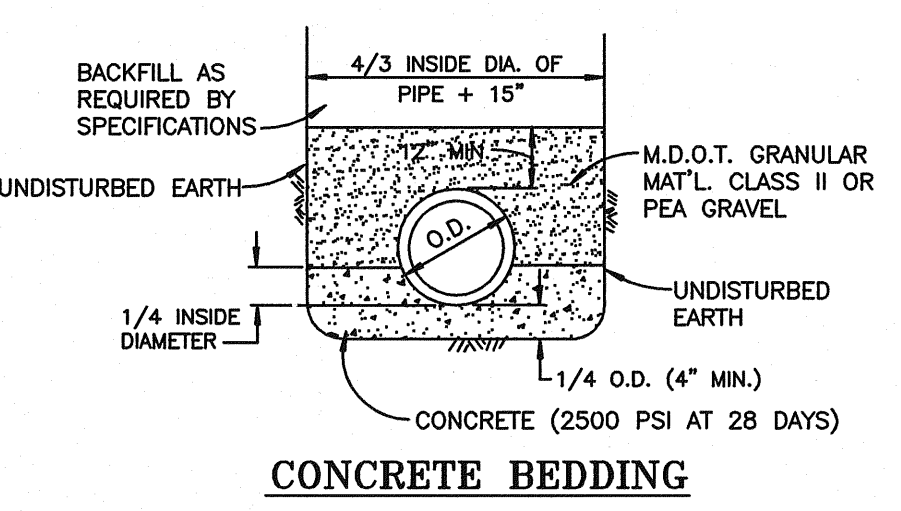


UNDERDRAIN DETAIL

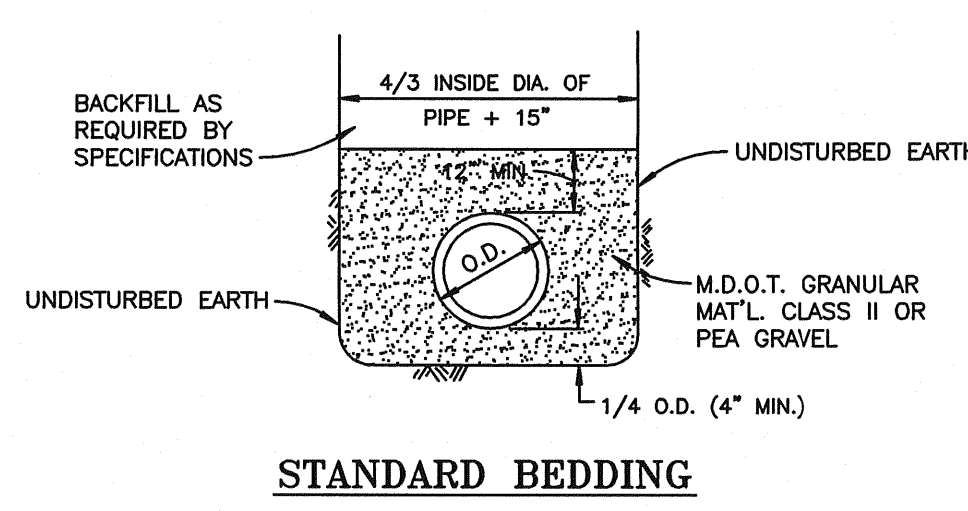
CONCRETE BLOCKS

* HEIGHT OF BLOCKS MAY VARY FROM 6" TO 1 5/8"

STRUCTURE DIAMETER	R	X
2'-0"	1'-0"	6"
3'-0"	1'-6"	6" OR 8"
4'-0"	2'-0"	6", 8" OR 12"



CONCRETE BEDDING



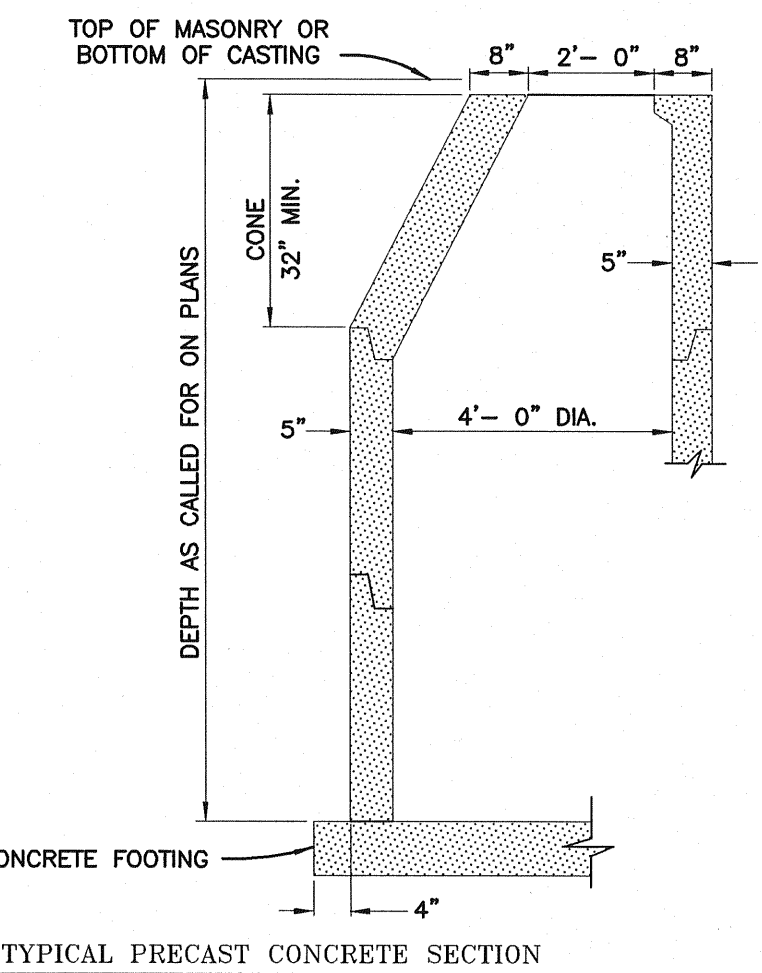
STANDARD BEDDING

GENERAL NOTES

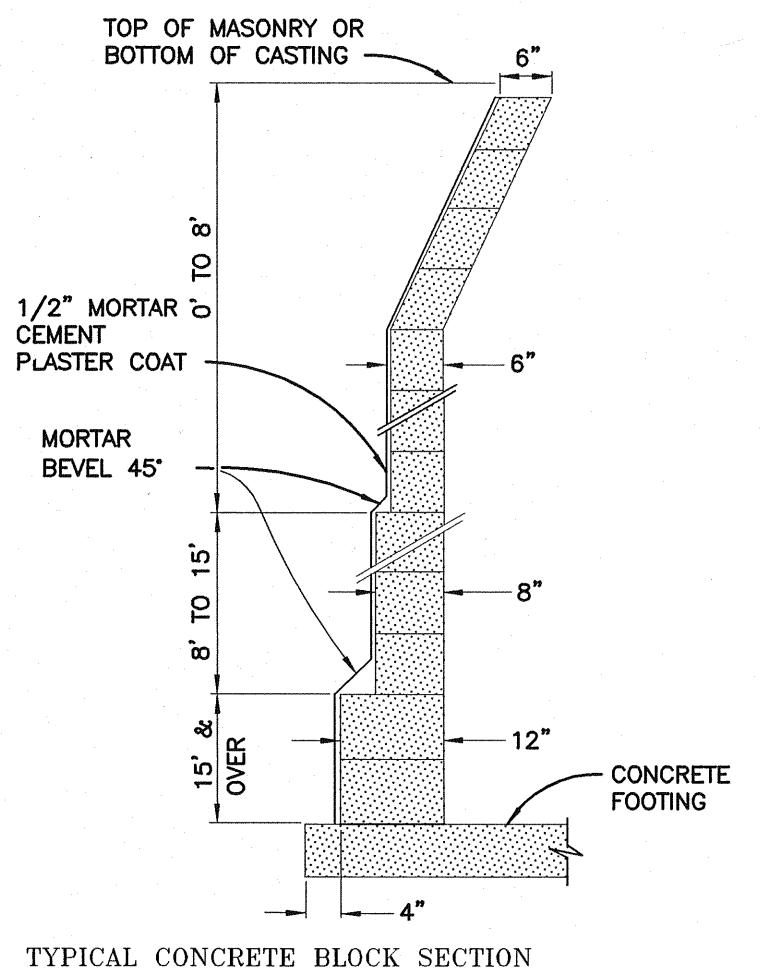
- PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST HAVE IN HIS POSSESSION A COPY OF A VALID PERMIT TO CONSTRUCT A CONNECTION TO, OR AN EXTENSION OF, THE STORM WATER DRAINAGE SYSTEM.
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING, AT A TIME AND PLACE AS ARRANGED BY THE VILLAGE ENGINEER, AT WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVES WILL BE PRESENT. THE OWNER'S ENGINEER SHALL SUBMIT APPROVED PLANS TO ALL UTILITY COMPANIES AND GOVERNMENTAL AGENCIES 10 DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. CONSTRUCTION SHALL START WITHIN 3 WEEKS OF THE MEETING.
 - AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL GIVE NOTIFICATION OF HIS INTENTION TO BEGIN CONSTRUCTION TO THE VILLAGE OF NEW HAVEN CLERK, (586) 749-5301, THE COUNTY DRAIN COMMISSIONERS' OFFICE, (586) 463-5325, AND THE COUNTY ROAD COMMISSIONER, (586) 463-8671.
 - THE CONTRACTOR SHALL SECURE PERMITS FROM THE DEPARTMENT OF PUBLIC WORKS FOR ALL TAPS AND CROSSINGS OF COUNTY DRAINS AND SHALL PAY THE COST OF SAID PERMITS AND THE COST OF ANY INSPECTION CHARGES BY THAT AGENCY FOR WORK DONE UNDER THE PERMITS.
 - SEVENTY TWO (72) HOURS PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (1-800-482-7171) FOR THE LOCATION OF UNDERGROUND FACILITIES, AND SHALL ALSO NOTIFY REPRESENTATIVES OF ANY OTHER FACILITIES, LOCATED IN THE VICINITY OF THE WORK, WHICH MAY NOT BE HANDLED BY MISS DIG.
 - ALL STORM WATER DRAINAGE SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE VILLAGE, COUNTY ROAD COMMISSION, AND/OR COUNTY DRAIN COMMISSION AS APPLICABLE.
 - STORM SEWER PIPE SHALL BE REINFORCED CONCRETE, ASTM C-76 CLASS III OR HIGHER UNLESS OTHERWISE APPROVED BY THE VILLAGE ENGINEER. THE FOLLOWING STORM SEWER PIPE MATERIALS MAY BE USED ONLY WITH APPROVAL OF THE VILLAGE ENGINEER:

OUTLET "D"	M.H. I.D.*	TOP SLAB "S"	WALL "T"	REINFORCING STEEL
36" OR LESS	4	9"	12"	3/4" @ 9" EA. WAY
42"	5	10"	12"	3/4" @ 9" EA. WAY
48"- 54"	6	11"	12"	7/8" @ 9" EA. WAY
	7	12"	12"	1" @ 9" EA. WAY
	8	12"	12"	1" @ 9" EA. WAY

 IF SOILS PH & RESISTIVITY TESTS DEMONSTRATE A PH OF 5.0 TO 9.0 AND AN ELECTRICAL RESISTANCE OF 2000 OHM/CM/CU OR HIGHER, THEN HELICALLY CORRUGATED, FULL WELDED SEAM, AASHTO M-218 STEEL PIPE, GAUGE AS APPROVED BY THE VILLAGE ENGINEER, MANUFACTURED ACCORDING TO AASHTO M-36 WITH 2 1/2" X 1/2" OR 125MM X 25 MM CORRUGATIONS, ALLUMINIZED AT 1.00 OZ. PER SQ. FT. PER AASHTO M-274 MAY BE USED, THE C.S.P. DIAMETER MUST HAVE THE SAME HYDRAULIC CAPACITY AS THE CONCRETE PIPE.
 WHEN THE PIPE IS NOT SUBJECT TO CRUSHING FROM CONSTRUCTION OPERATIONS AND PROPERTY MAINTENANCE AND A MIN. 3' OF COVER CAN BE MAINTAINED, ABS COMPOSITE (TRUSS) PIPE AND PVC PIPE SCHEDULE 40 (OR APPROVED EQUAL) MAY BE USED OUTSIDE PUBLIC ROAD R.O.W.'S, WITH APPROVAL OF VILLAGE ENGINEER.
 - REINFORCED CONCRETE PIPE JOINTS SHALL BE MODIFIED TONGUE & GROOVE WITH RUBBER "O" RING GASKET. CORRUGATED STEEL PIPE SHALL HAVE TWO CIRCUMFERENTIAL CORRUGATIONS ROLLED ON EACH END OF EACH SECTION. STEEL COUPLING BANDS OF THE SAME MATERIAL AS THE PIPE, FITTING THE PIPE CONFIGURATION WITH TWO "O" RING RUBBER GASKETS SHALL PRODUCE A WATER-TIGHT JOINT ("HUGGER BANDS"). PVC & TRUSS PIPE JOINTS SHALL BE CHEMICALLY FUSED IN ACCORDANCE WITH THE MANUFACTURERS' INSTRUCTIONS.
 - UNLESS OTHERWISE INDICATED ON THE PLANS, ALL STORM SEWER BEDDING SHALL BE STANDARD BEDDING. CONCRETE BEDDING SHALL BE PLACED, IF THE INSPECTOR DEEMS THAT THE INSTALLATION WARRANTS IT.
 - PERFORATED PIPE MAY NOT BE UTILIZED WITHOUT THE VILLAGE ENGINEERS' SPECIFIC APPROVAL.
 - ALL SUMP PUMP DISCHARGE LEADS AND BUILDING SERVICE CONNECTIONS SHALL CONNECT TO A CATCH BASIN OR MANHOLE. NO BLIND TAPS ARE ALLOWED. ALL SUMP CONNECTIONS TO PRECAST STRUCTURES SHALL BE CORED OR STAR DRILLED.
- NOTE: UNLESS OTHERWISE AUTHORIZED BY THE VILLAGE ENGINEER, EACH STRUCTURE SHALL BE CONSTRUCTED TOTALLY OF EITHER PRECAST SEGMENTS OR BUILT - UP MORTAR AND BLOCK.

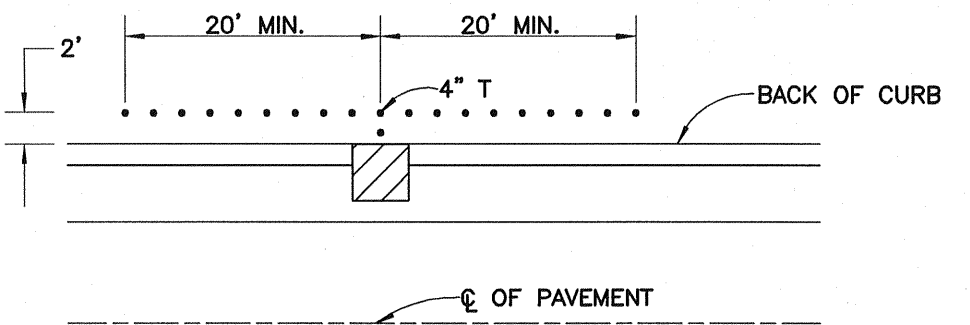


TYPICAL PRECAST CONCRETE SECTION

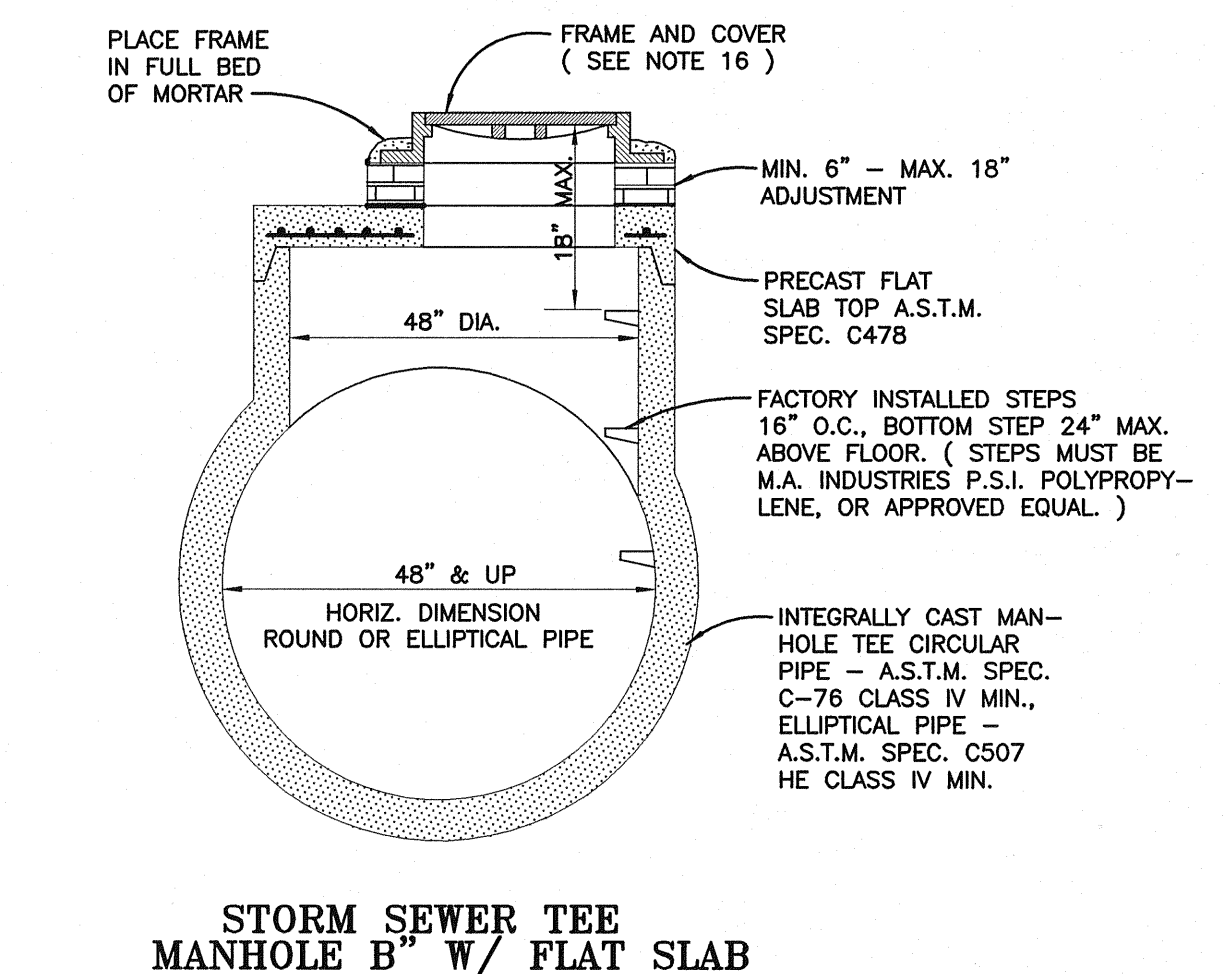


TYPICAL CONCRETE BLOCK SECTION

TYPICAL WALL SECTION FOR 4'-0" DIAMETER DRAINAGE STRUCTURE

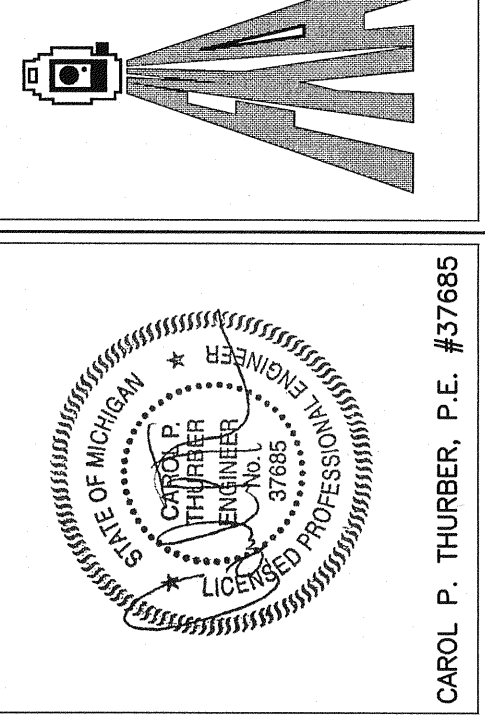


UNDERDRAIN DETAIL FOR CATCH BASIN IN CURB FOR PAVEMENT NOT WITHIN R.C.M.C. R.O.W.



STORM SEWER TEE MANHOLE B' W/ FLAT SLAB

FAZAL KHAN & ASSOCIATES, INC.
 CIVIL ENGINEERS & LAND SURVEYORS
 43279 SCHOENHERR STERLING HEIGHTS, MI 48313
 PHONE (586) 739-8007 FAX (586) 739-6994
 www.fazalkhan.com



DEPARTMENT OF PUBLIC WORKS
 APPROVED BY: *Michael J. ...*
 DIRECTOR OF PUBLIC WORKS
 DATE: 8-1-07

VILLAGE OF NEW HAVEN
 STANDARD DETAILS FOR STORM SEWER