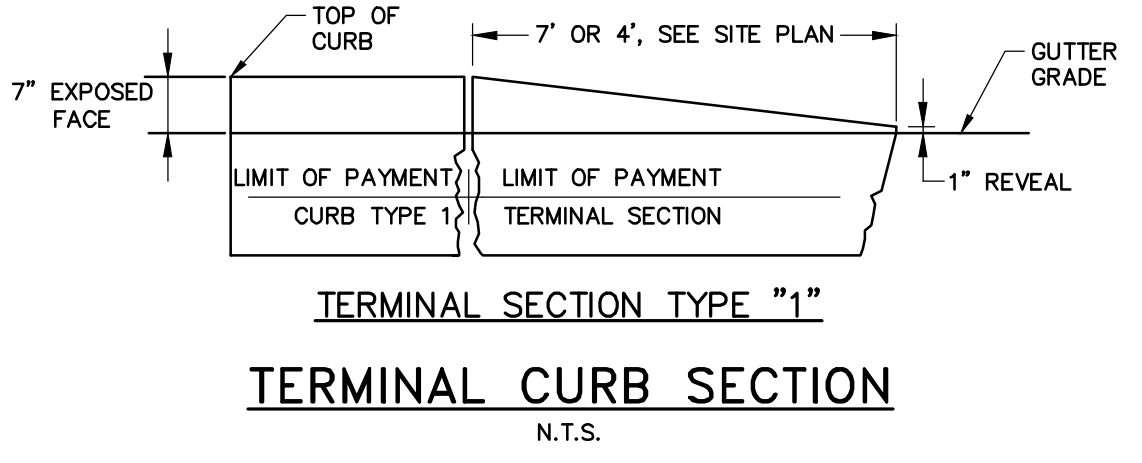
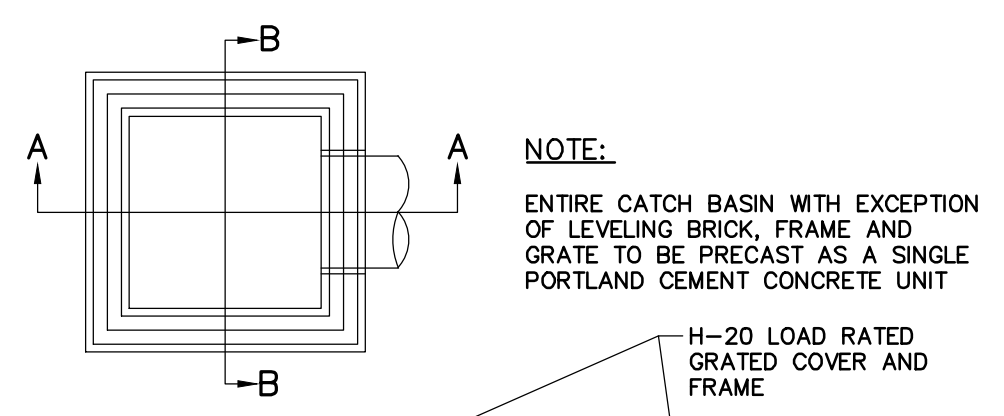


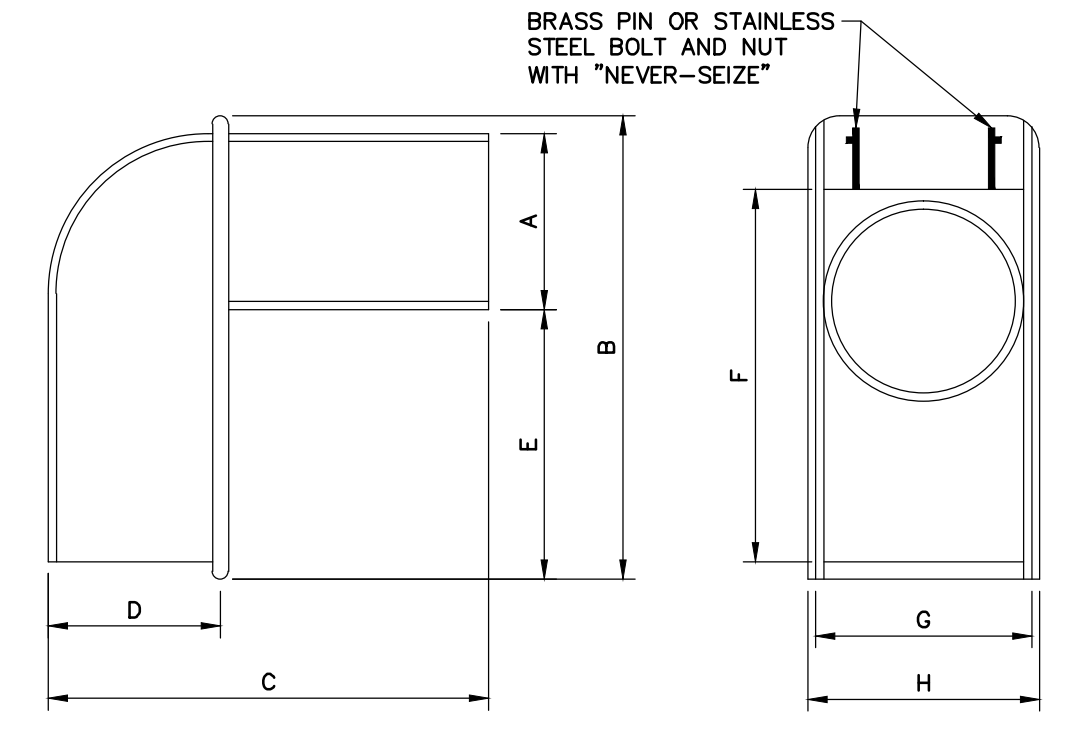
TYPE 1 GRANITE CURB INLET
N.T.S.



TERMINAL CURB SECTION
N.T.S.



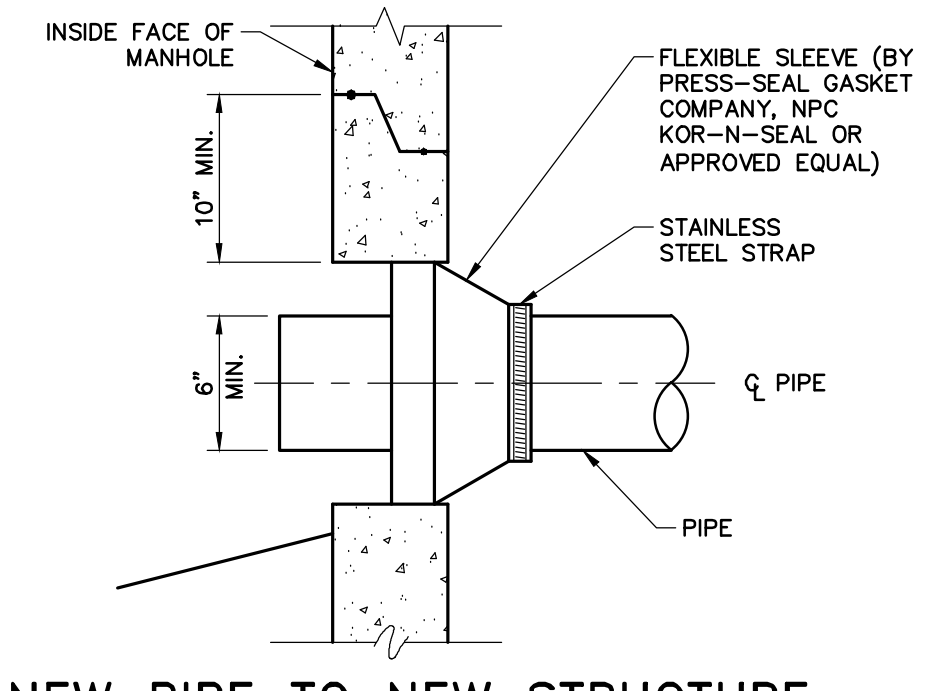
CATCH BASIN TYPE "F"
N.T.S.



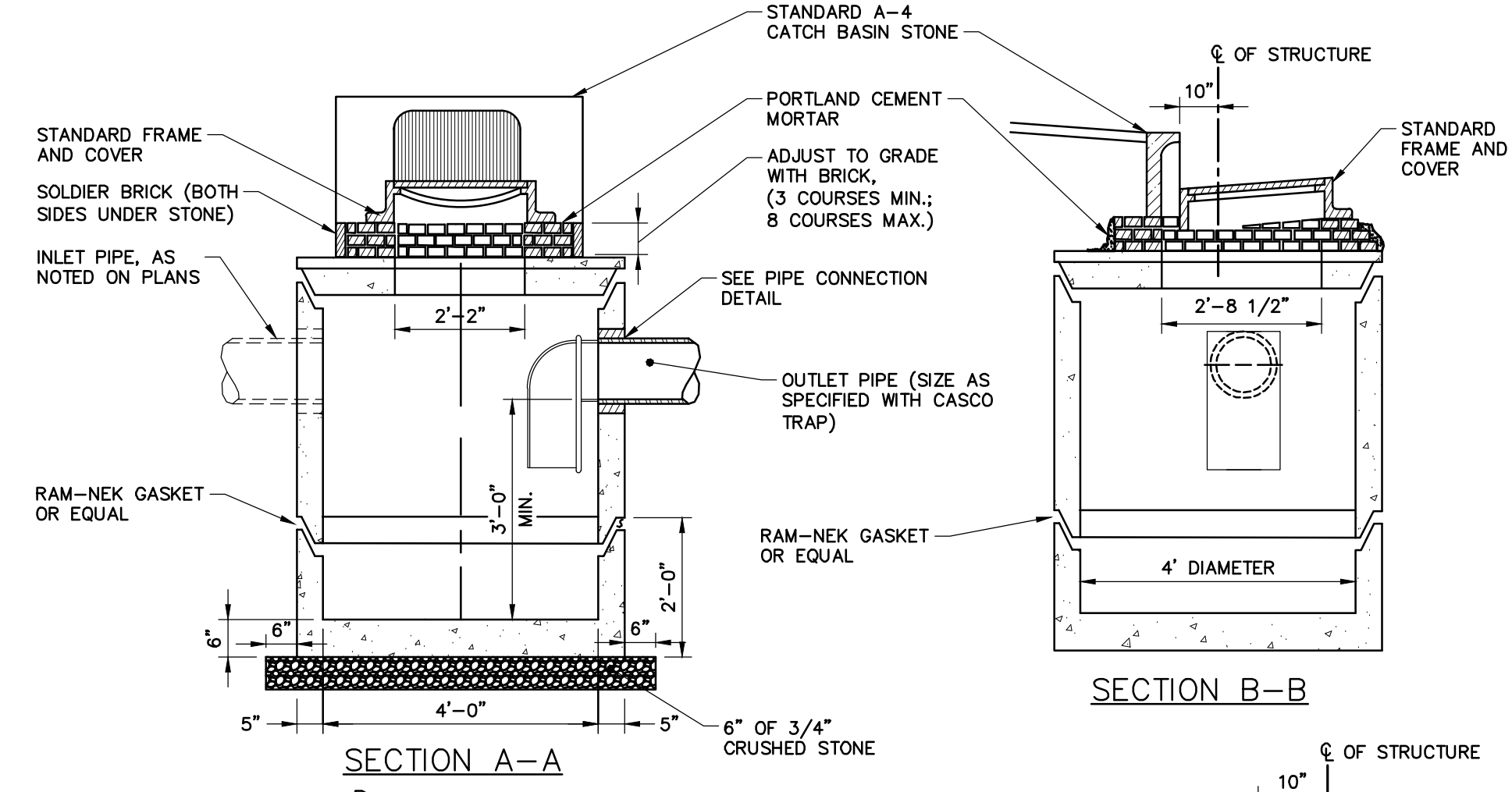
SIZE	A	B	C	D	E	F	G	H
10"	9 1/2"	16"	16 1/4"	6"	4 1/2"	14 1/8"	11 1/2"	12 3/8"

- NOTE:**
- CASCO TRAP SHALL BE CAST IRON CASCO TRAP BY ETHERIDGE FOUNDRY OR APPROVED EQUAL.
 - BOLT AND NUT REQUIRED WHERE HOOD WILL NOT OPEN COMPLETELY.
 - CASCO TRAP SHALL BE INSTALLED ON ALL CATCH BASIN OUTLET PIPES, INCIDENTAL TO COST OF CATCH BASIN.

CASCO TRAP DETAIL
N.T.S.



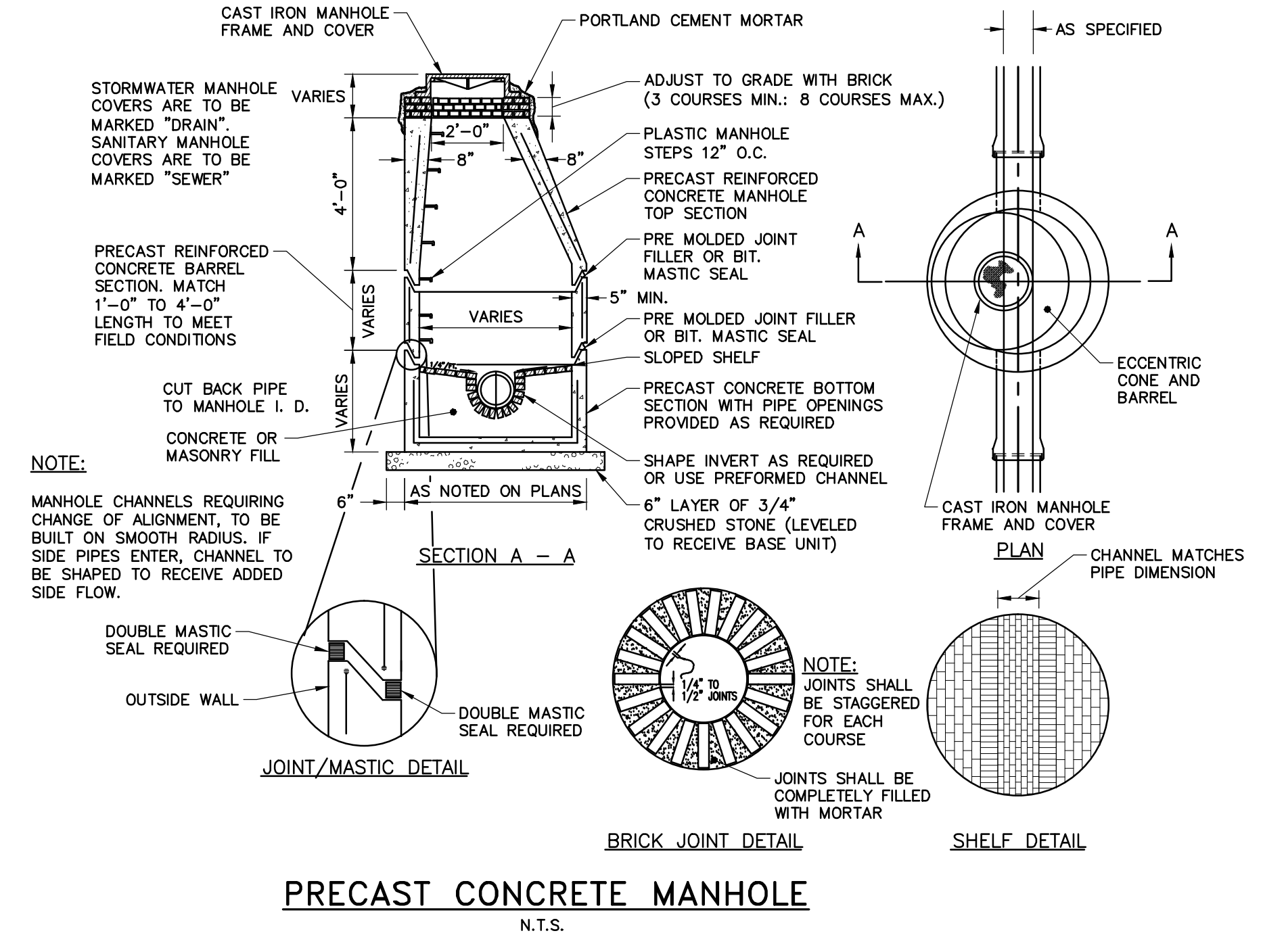
NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL
N.T.S.



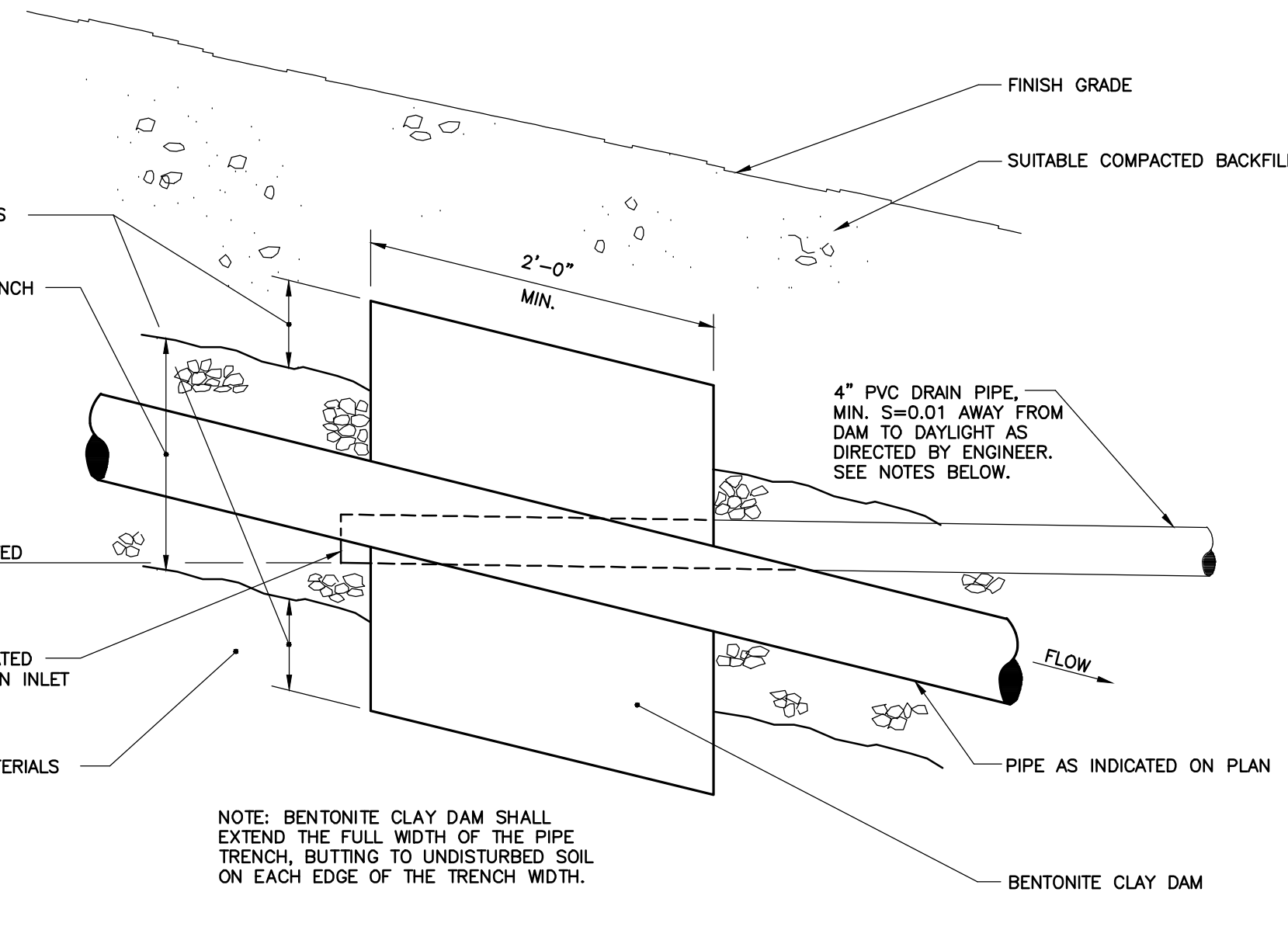
PRECAST CONCRETE CATCH BASIN
N.T.S.

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

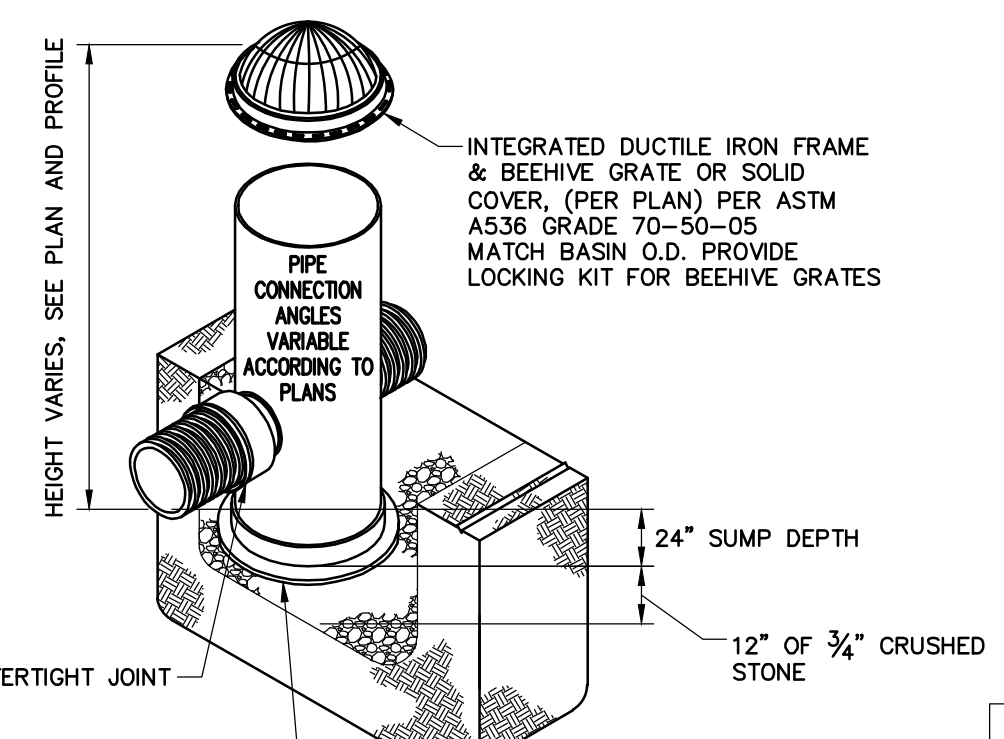
- ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
- PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
- ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTED OF BRICK MASONRY, SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
- CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35. ALL PARTS OF CASTINGS, EXCEPT FINISHED SURFACE, SHALL RECEIVE A COAT OF COAL TAR PITCH VARNISH OR ASPHALTUM PAINT WHICH SHALL BE SMOOTH AND TOUGH BUT NOT BRITTLE.
- MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
- CONTRACTOR SHALL SUBMIT ANTI-FLOATATION CALCULATIONS FOR ALL MANHOLE AND CATCH BASIN STRUCTURES.
- ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY STATION, OFFSET, AND STRUCTURE ID PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
- STORM AND SEWER MANHOLES SHALL HAVE SOLID COVERS WITH ONE DRILLED PICK HOLE.
- EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
- WHEN THE FLOW CHANGES DIRECTION IN A MANHOLE, THE CHANNEL ALIGNMENT SHALL FOLLOW A SMOOTH RADIUS. CHANNELS SHALL BE FORMED TO ACCEPT ALL INLET PIPES.
- ON STORM AND SEWER MANHOLES, THE SHELF AND CHANNEL SHALL BE FORMED BY BRICK SET IN GEMENT MORTAR OR BY FACTORY PRE-CAST CONCRETE. SUCH PRE-CAST CONCRETE SHALL BE EPOXY COATED AND THE SHELF SHALL HAVE A PERMANENT NON-SKID SURFACE.



PRECAST CONCRETE MANHOLE
N.T.S.

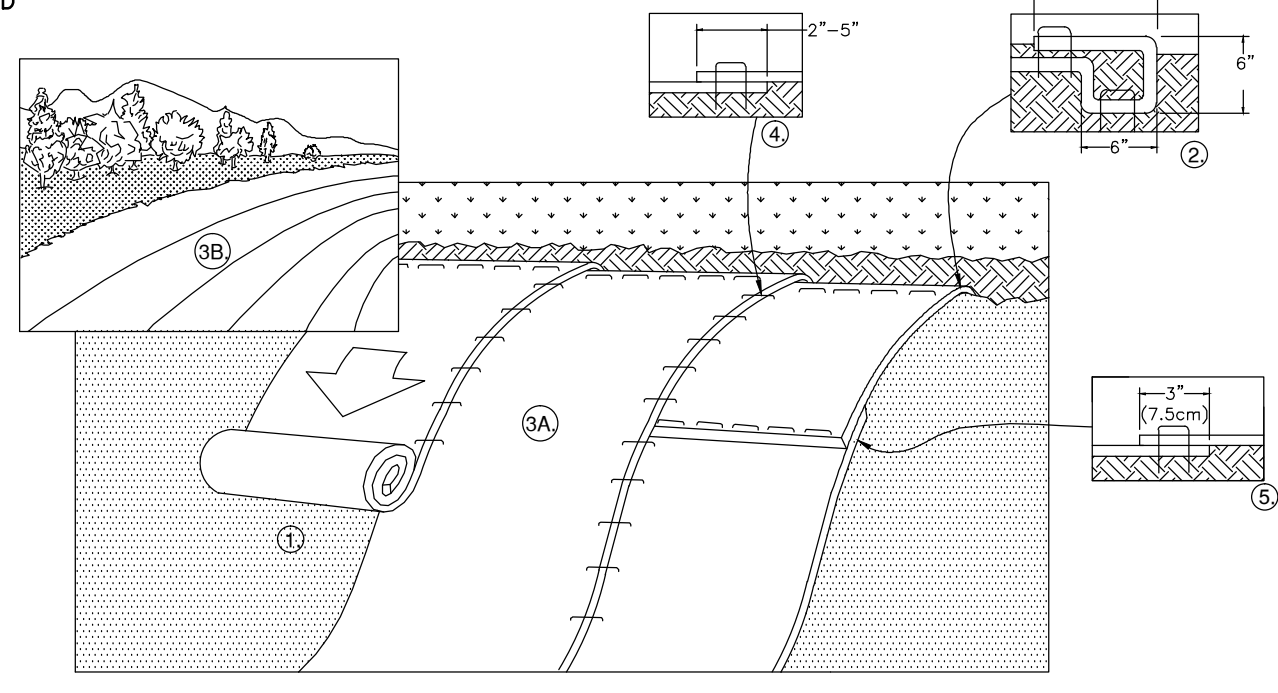


CLAY DAM AND DRAIN DETAIL
N.T.S.



2' DIA. AREA DRAIN
N.T.S.

- NOTES:**
- AREA DRAIN TO BE NYLOPLAST 24" DIA. CUSTOM DRAIN BASIN OR APPROVED EQUAL.
 - PROVIDE ANTI-FLOATATION CONCRETE FOOTING SIZED BY THE CONTRACTOR.



ROLLED EROSION CONTROL MATTING
N.T.S.

- ROLLED EROSION CONTROL MATTING NOTES:**
- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED AS WELL AS REMOVING ANY PROTRUDING ROCKS, STUMPS OR ROOTS. DURING THE GROWING SEASON (APRIL 15- SEPTEMBER 15) USE RECP'S ON THE BASE OF GRASSED WATERWAYS, SOIL SLOPES HAVING A GRADE GREATER THAN 15%, OR ANYWHERE WHERE HAY MULCH HAS PROVEN TO BE INEFFECTIVE AT CONTROLLING SHEET EROSION. RECP'S ARE A MANUFACTURED COMBINATION OF MULCH AND NETTING DESIGNED TO PREVENT EROSION AND RETAIN SOIL MOISTURE.
 - FOR OVER WINTER PROTECTION, APPLY RECP'S ON THE BASE AND SIDE SLOPES OF GRASSED WATERWAYS AND ON SLOPES STEEPER THAN AN 8% GRADE.
 - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
 - ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 - THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON RECP'S TYPE.
 - CONSECUTIVE RECP'S SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.
 - UNTIL GRASS IS ABUNDANT, INSPECT PERIODICALLY AND AFTER EACH RAINFALL TO CHECK FOR EROSION. IMMEDIATELY REPAIR AND ADD MORE MULCH UNTIL GRASSES ARE FIRMLY ESTABLISHED.
 - DO NOT MOW THE FIRST YEAR.
 - DETAIL SHALL BE CONSIDERED GENERAL GUIDANCE FOR RECP INSTALLATION; CONTRACTOR SHALL INSTALL RECP IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

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PROFESSIONAL ENGINEER
DAVID M. CURRAN
10781
JUNE 19, 2012

REV	DESCRIPTION	DATE
1	DESIGNED BY: DAS	
2	CHECKED BY: DAS	
3	DESIGNED BY: DAS	
4	DESIGNED BY: DAS	
5	DESIGNED BY: DAS	
6	DESIGNED BY: DAS	
7	DESIGNED BY: DAS	
8	DESIGNED BY: DAS	
9	DESIGNED BY: DAS	
10	DESIGNED BY: DAS	

DETAILS - 2

CITY OF PORTLAND
PORTLAND, MAINE

WINDING WAY
DRAINAGE IMPROVEMENTS

JOB NO.: 222804.85
DATE: JUNE 2012
SCALE: AS NOTED
SHEET: 3 OF 3

C-03