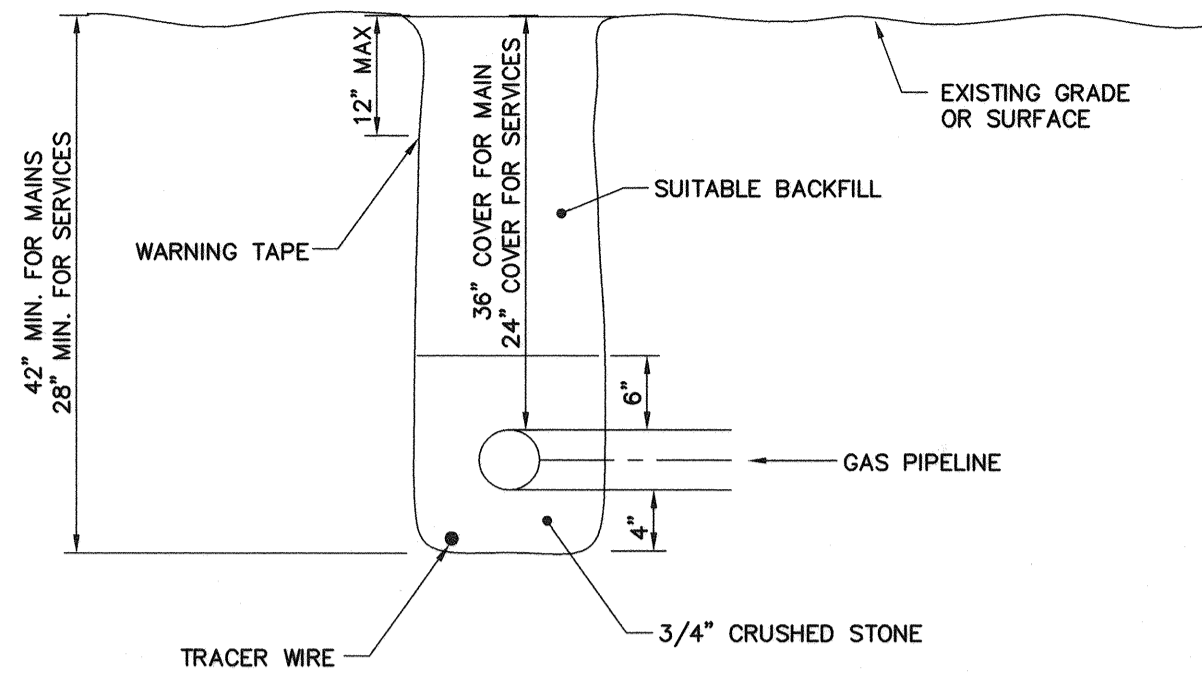


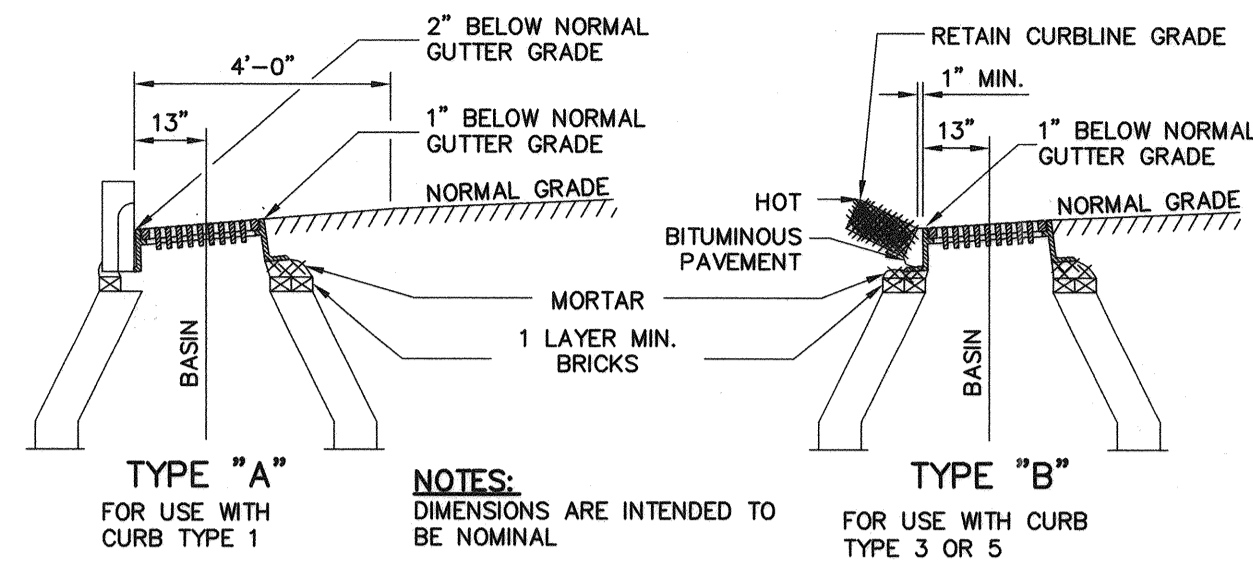
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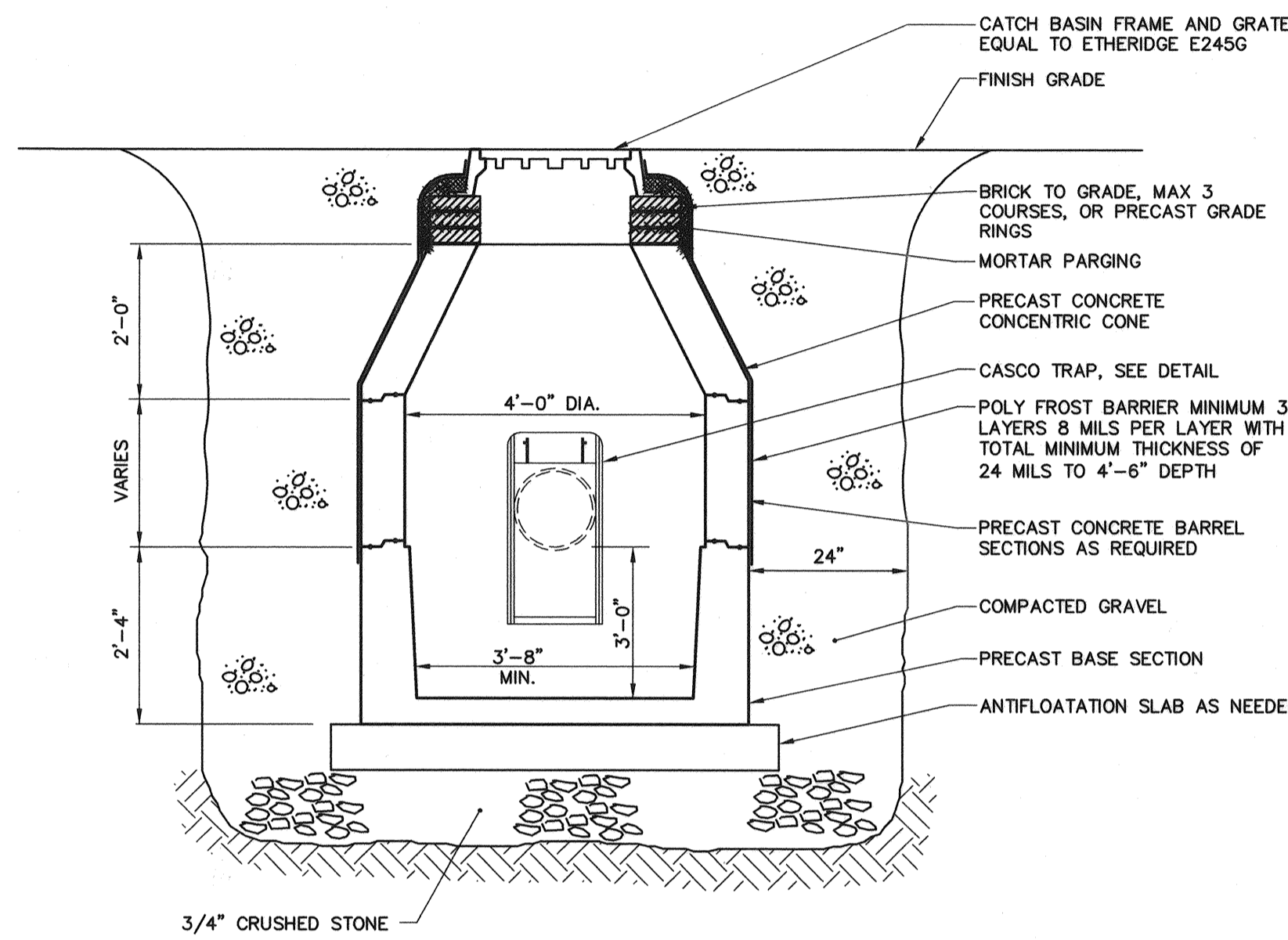
TRENCH PADDING AND BACKFILLING PROCEDURE FOR GAS MAINS AND SERVICES
N.T.S.

CITY OF PORTLAND MANHOLE AND CATCH BASIN GENERAL NOTES

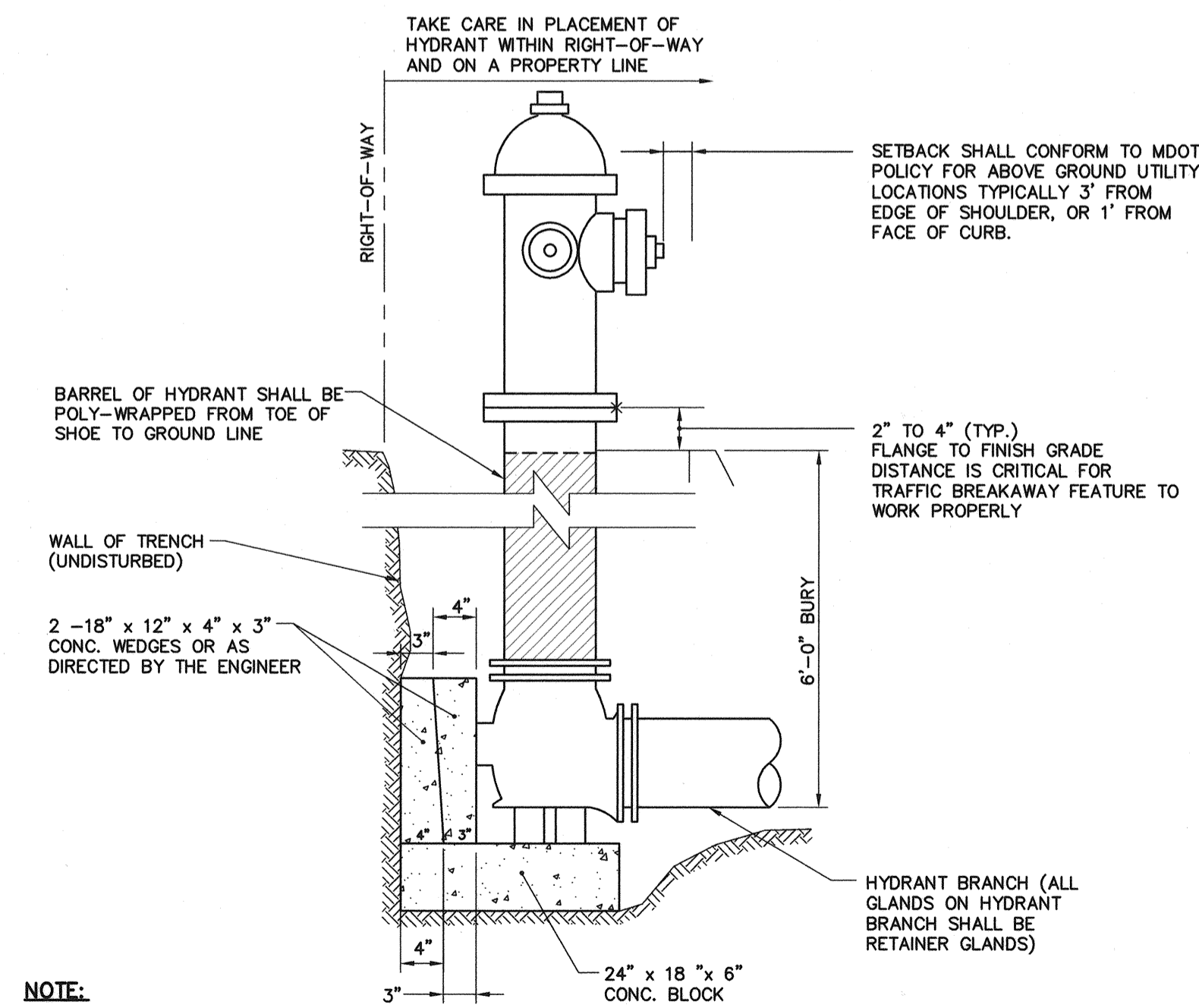
- ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE STRENGTH OF 4,000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
- PRECAST REINFORCED CONE BARREL MANUFACTURE PER ASTM SPEC. C-478-67.
- SEWER BRICK TO CONFORM TO ASTM SPECIFICATION DESIGNATION C-32-63, GRADE MA AND SA.
- ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTION OF BRICK MASONRY, THE SMOOTH MORTAR 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 CITY OF PORTLAND DESIGN STANDARDS.
- 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 BRICK MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
- ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY STATION AND OFFSET PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
- STORM AND SEWER MANHOLES SHALL HAVE SOLID COVERS WITH ONE DRILLED HOLE.
- EXISTING MANHOLE AND CATCH BASIN FRAMES AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND REMAIN THE PROPERTY OF THE CITY OF PORTLAND.



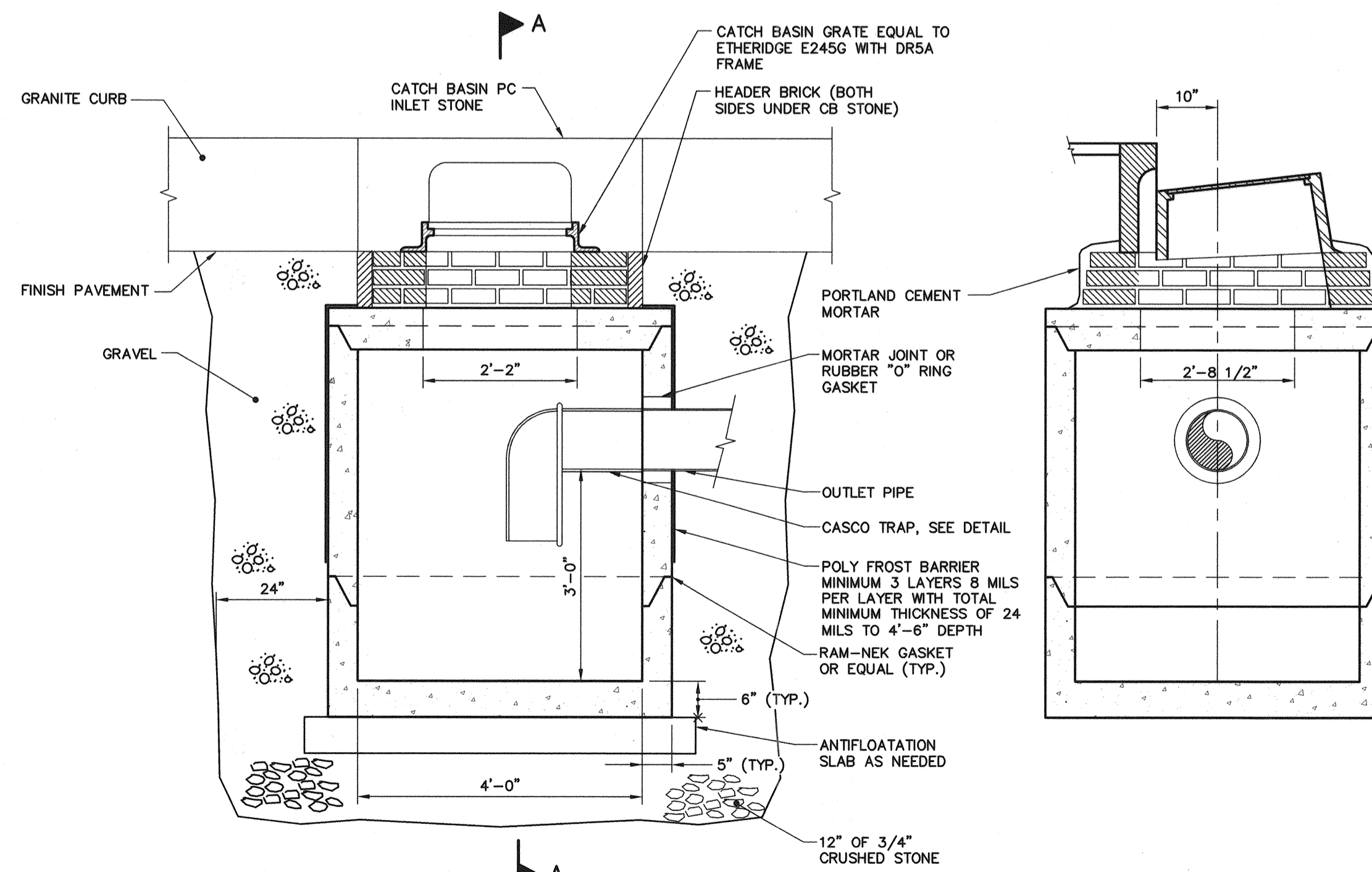
CATCH BASIN TOP INSTALLATION
N.T.S.



TYPICAL CATCH BASIN
N.T.S.

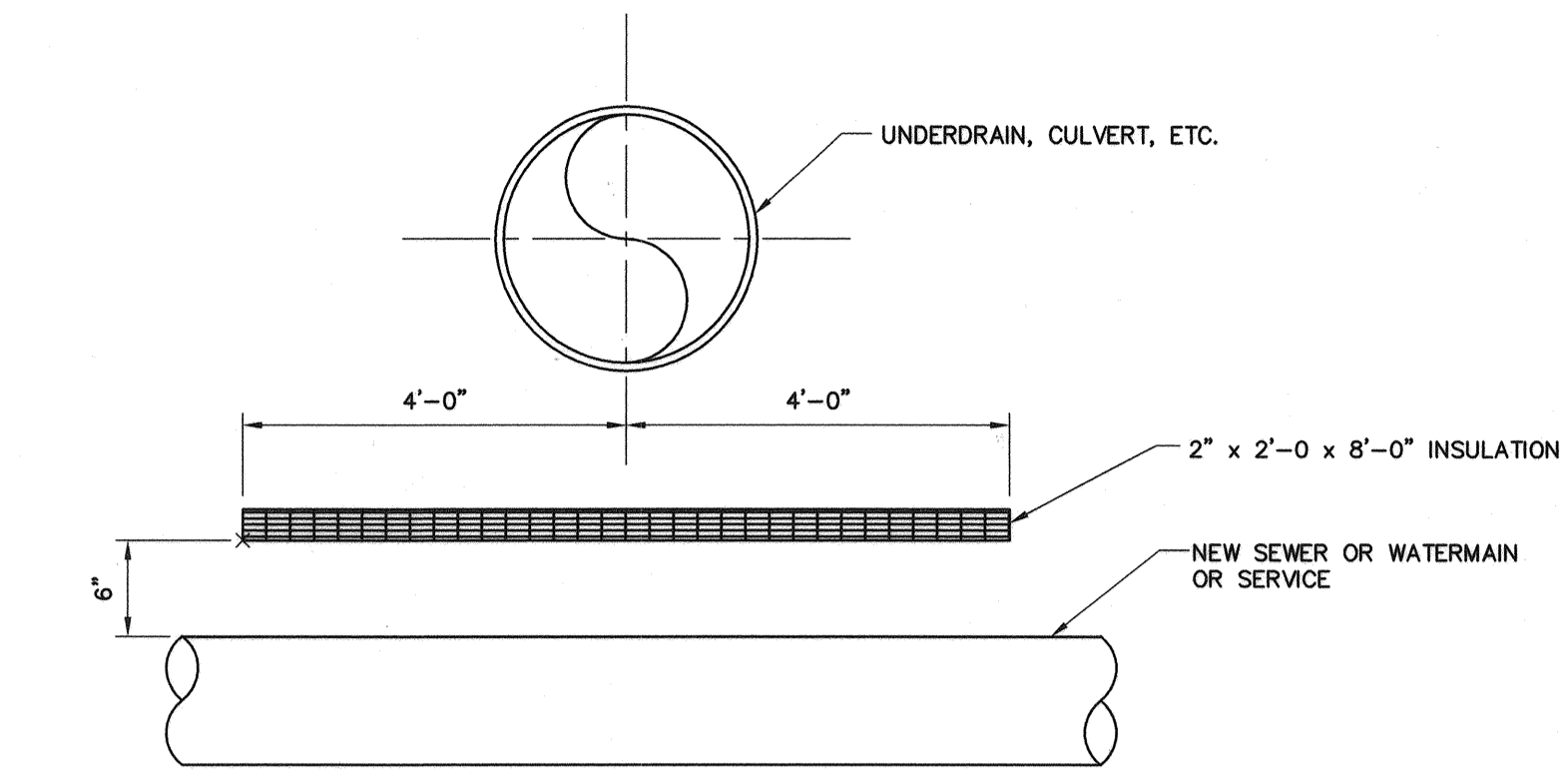


TYPICAL HYDRANT INSTALLATION DETAIL
N.T.S.

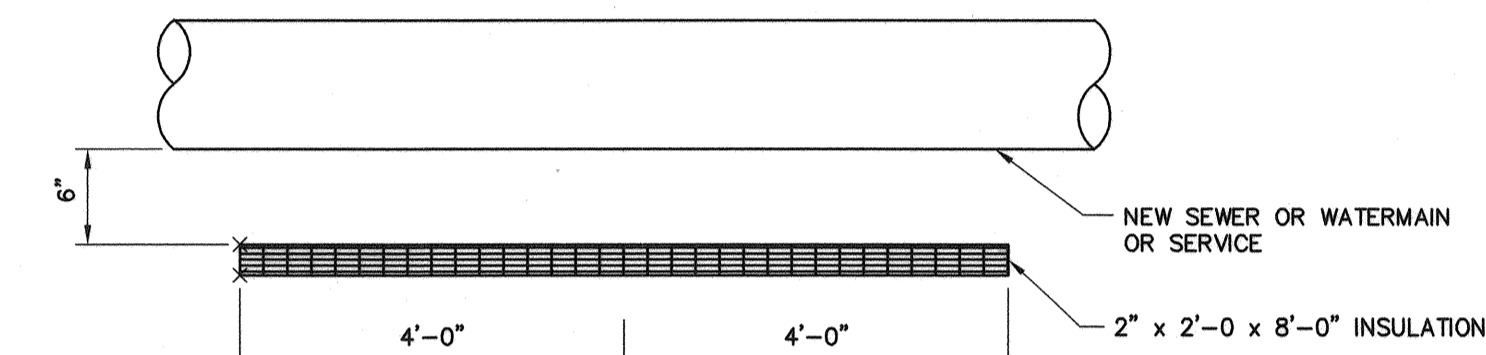


CROSS SECTION

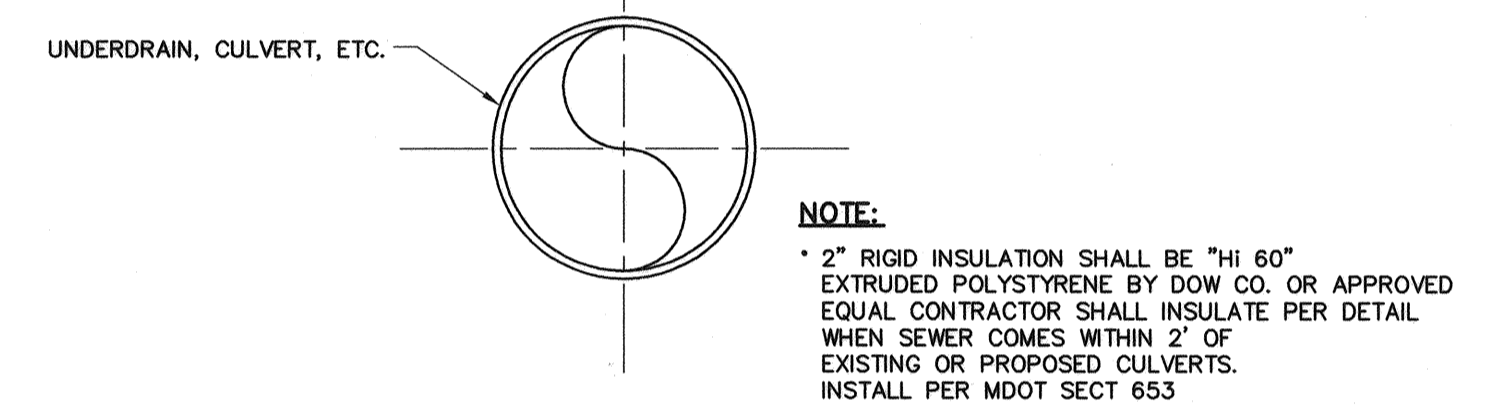
CURBSIDE CATCH BASIN
N.T.S.



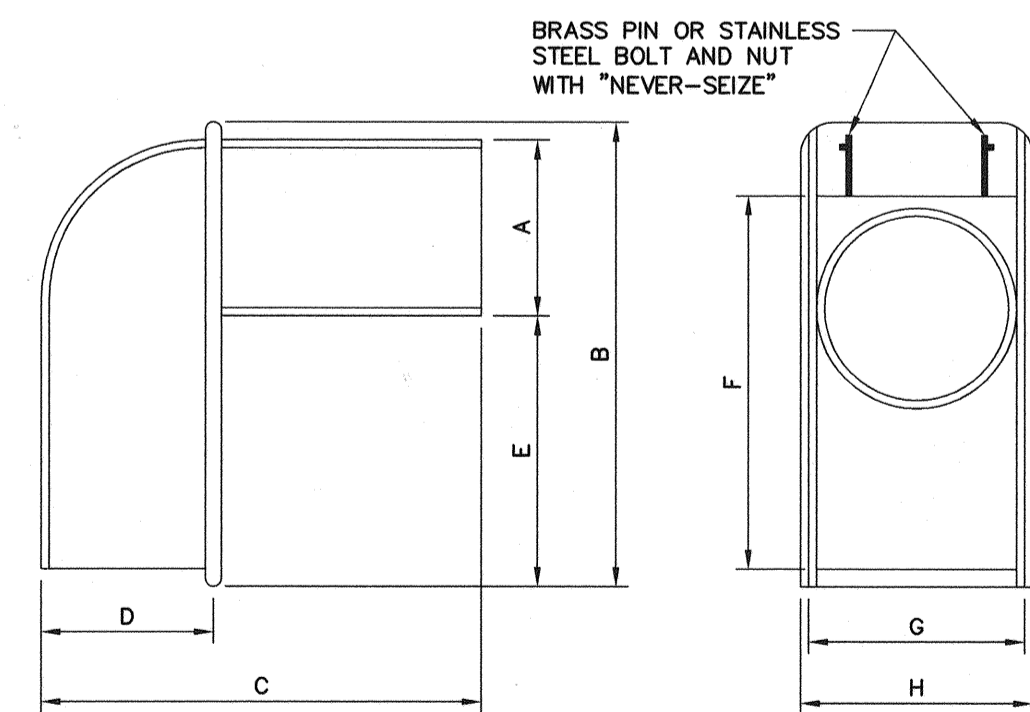
INSULATION DETAIL "A"
N.T.S.



INSULATION DETAIL "B"
N.T.S.



NOTE:
• 2" RIGID INSULATION SHALL BE "HI 60" EXTRUDED POLYSTYRENE BY DOW CO. OR APPROVED EQUAL. CONTRACTOR SHALL INSULATE PER DETAIL WHEN SEWER COMES WITHIN 2' OF EXISTING OR PROPOSED CULVERTS. INSTALL PER MDOT SECT 653



SIZE	A	B	C	D	E	F	G	H
12"	11 1/2"	17"	22"	8"	3 1/2"	17"	12 1/2"	13 3/8"

- NOTE:**
- BOLT AND NUT REQUIRED WHERE HOOD WILL NOT OPEN COMPLETELY.
 - FOR OUTLET PIPES GREATER THAN 12" USE "SNOUT" TRAP BY BEST MANAGEMENT PRODUCTS, INC. OR APPROVED EQUAL.

CASCO TRAP DETAIL
N.T.S.

WOODARD & CURRAN
Engineering • Science • Operations
41 Hutchins Drive - Portland, Maine 04102

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER 009215.00

PIN
009215.00

PAUL POTTLE
PROJ. MANAGER
PAUL POTTLE
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

DATE	BY
10/17/04	UBC
10/17/04	BSS
9/7/08	DAS
9/7/08	DAS
10/11/04	PAUL POTTLE

CITY OF PORTLAND
OCEAN GATEWAY PHASE 1

CIVIL DETAILS - 5

C404