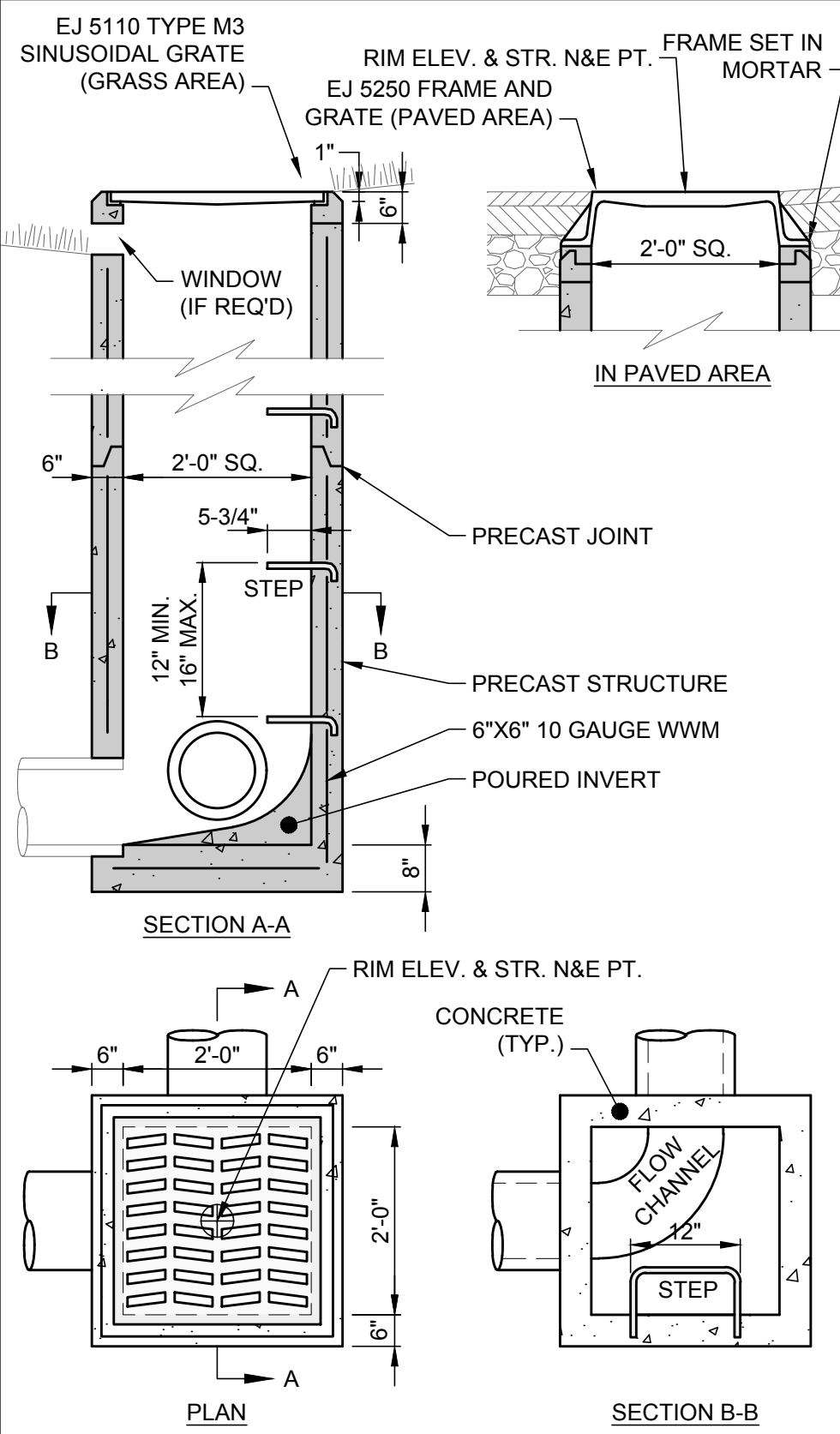
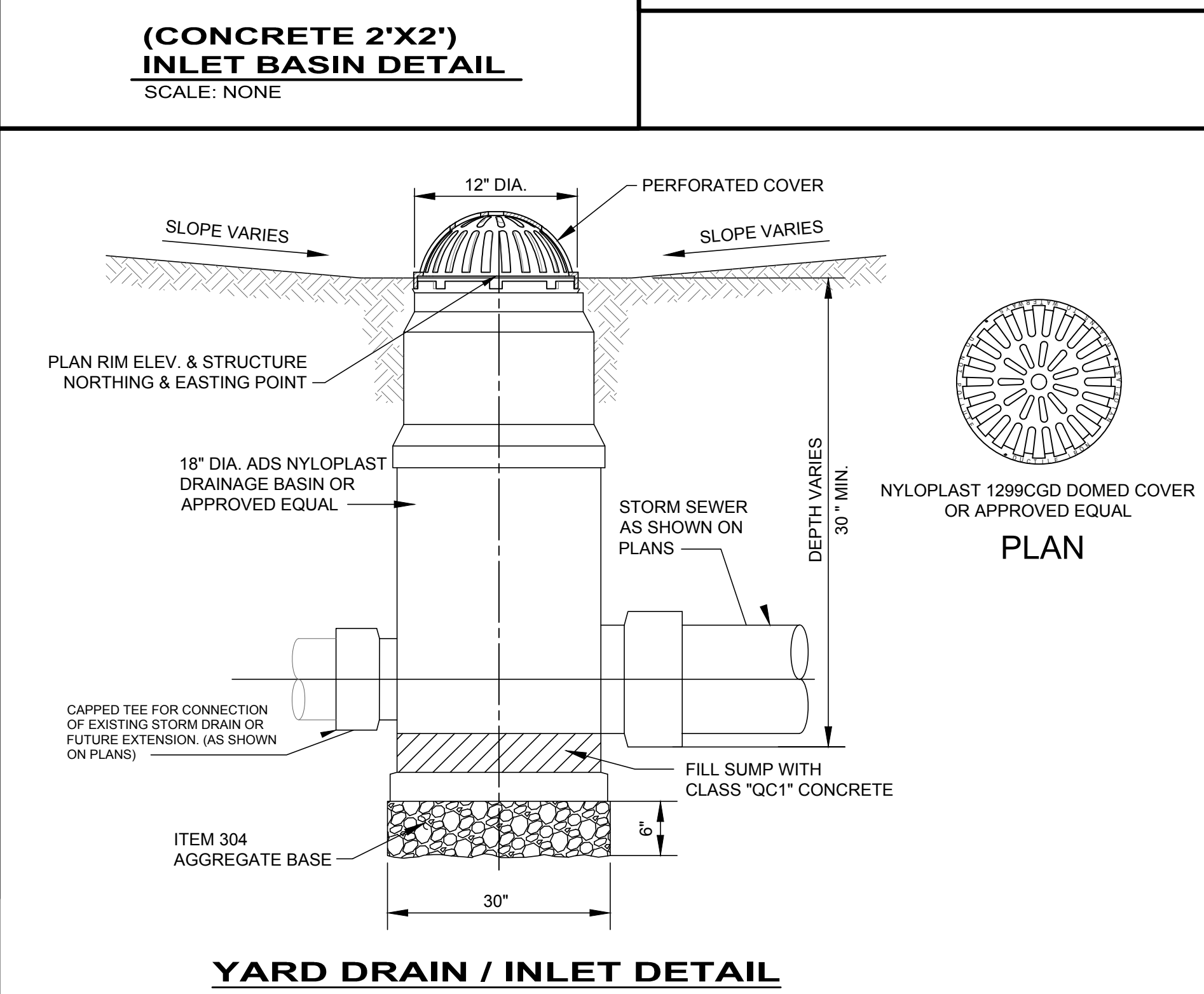


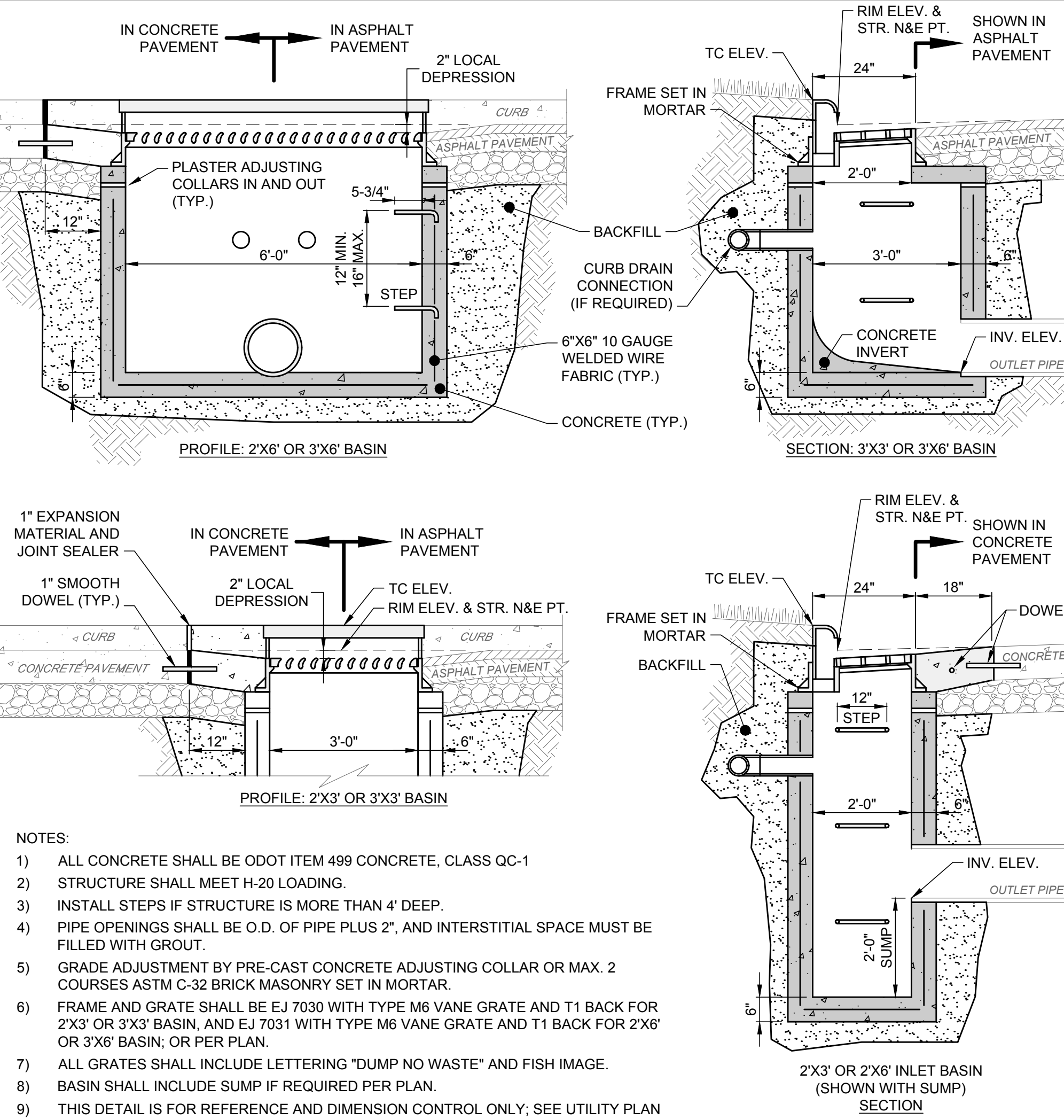
- PRE-CAST CONCRETE MANHOLE (STORM) DETAIL**
SCALE: NONE
- NOTES:
- STRUCTURE TO MEET H-20 LOADING.
 - PRE-CAST CONCRETE SECTIONS SHALL BE MANUFACTURED AND FURNISHED WITH LIFT HOLES.
 - TOP, TRANSITION AND REDUCER SECTIONS MAY BE ECCENTRIC CONE, CONCENTRIC CONE OR FLAT SLAB.
 - BASE FOR MANHOLE IS SHOWN WITH MONOLITHIC FLOOR AND RISER WHICH MAY BE CAST IN ONE OR TWO OPERATIONS. AN ALTERNATE IS TO CAST AND SHIP THE FLOOR AND BARREL SEPARATELY. PROVIDE OPENINGS FOR PIPES WHEN THE UNIT IS CAST. BOTTOM CHANNEL MAY BE PRE-CAST IN THE BASE OR FORMED DURING FIELD CONSTRUCTION.
 - OPENINGS IN RISER SECTIONS FOR 18" AND SMALLER PIPES TO BE PREFABRICATED. PROVIDE FLEXIBLE CONNECTIONS ("Z" LOCK, INSERT A-TEE, OR APPROVED EQUAL) FOR ALL PIPES.
 - JOINT SEAL BETWEEN PRE-CAST MANHOLE SECTIONS TO BE RESILIENT AND FLEXIBLE GASKET JOINTS PER ODOT ITEM 706.11.
 - PRE-CAST CONCRETE SHALL BE REINFORCED PER ASTM C-478.
 - USE REINFORCED PLASTIC MANHOLE STEPS.
 - FIRST STEP SHALL NOT BE THAN 2'-0" BELOW TOP OF FRAME. MAKE PROJECTION 3-1/2" IF IN 24" DIA. SECTION.
 - USE FRAME AND GRATE EJ 1040 W/TYPE N OVAL GRATE IN GRASS, EJ 7000 W/TYPE M2 SINUSOIDAL GRATE AND T1 BACK IN PAVEMENT ADJACENT TO CURB, OR PER PLAN.



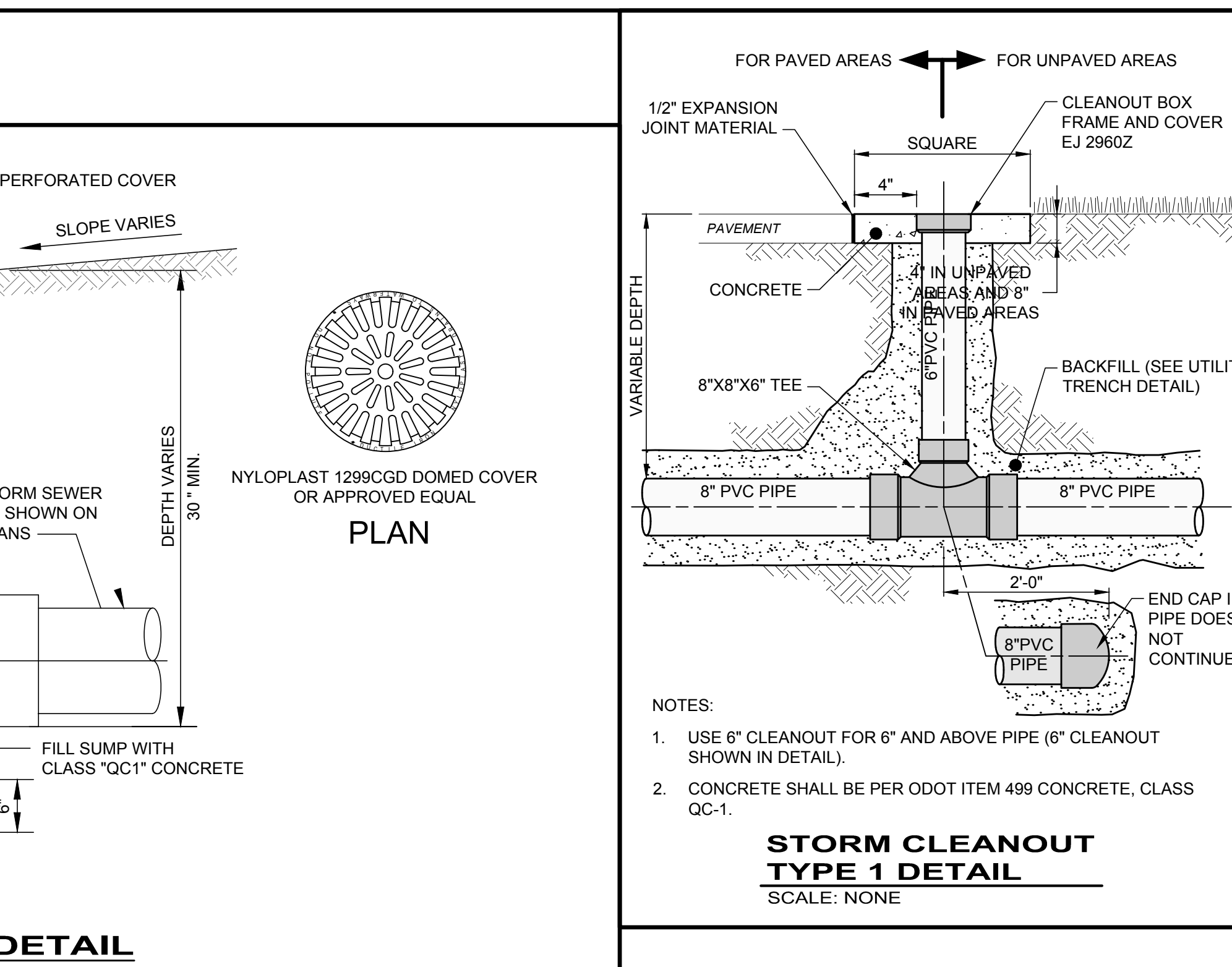
- (CONCRETE 2'X2') INLET BASIN DETAIL**
SCALE: NONE
- NOTES:
- ALL CONCRETE SHALL BE ODOT ITEM 499 CONCRETE, CLASS QC-1
 - STRUCTURE SHALL MEET H-20 LOADING.
 - INSTALL STEPS IF STRUCTURE IS MORE THAN 4' DEEP.
 - PRECAST KNOCKOUT SIDES FOR CURB DRAIN, PIPE CONNECTION HOLES AND WINDOWS, AS REQUIRED. PIPE OPENINGS SHALL BE O.D. OF PIPE PLUS 2", AND INTERSTITIAL SPACE FILLED WITH GROUT.
 - GRADE ADJUSTMENT BY PRE-CAST CONCRETE ADJUSTING COLLAR OR MAX. 2 COURSES ASTM C-32 BRICK MASONRY SET IN MORTAR.
 - ALL GRATES SHALL INCLUDE LETTERING "DUMP NO WASTE" AND FISH IMAGE.
 - BASIN SHALL INCLUDE SUMP IF REQUIRED PER PLAN.
 - THIS DETAIL IS FOR REFERENCE AND DIMENSION CONTROL ONLY; SEE UTILITY PLAN FOR ACTUAL SIZES.



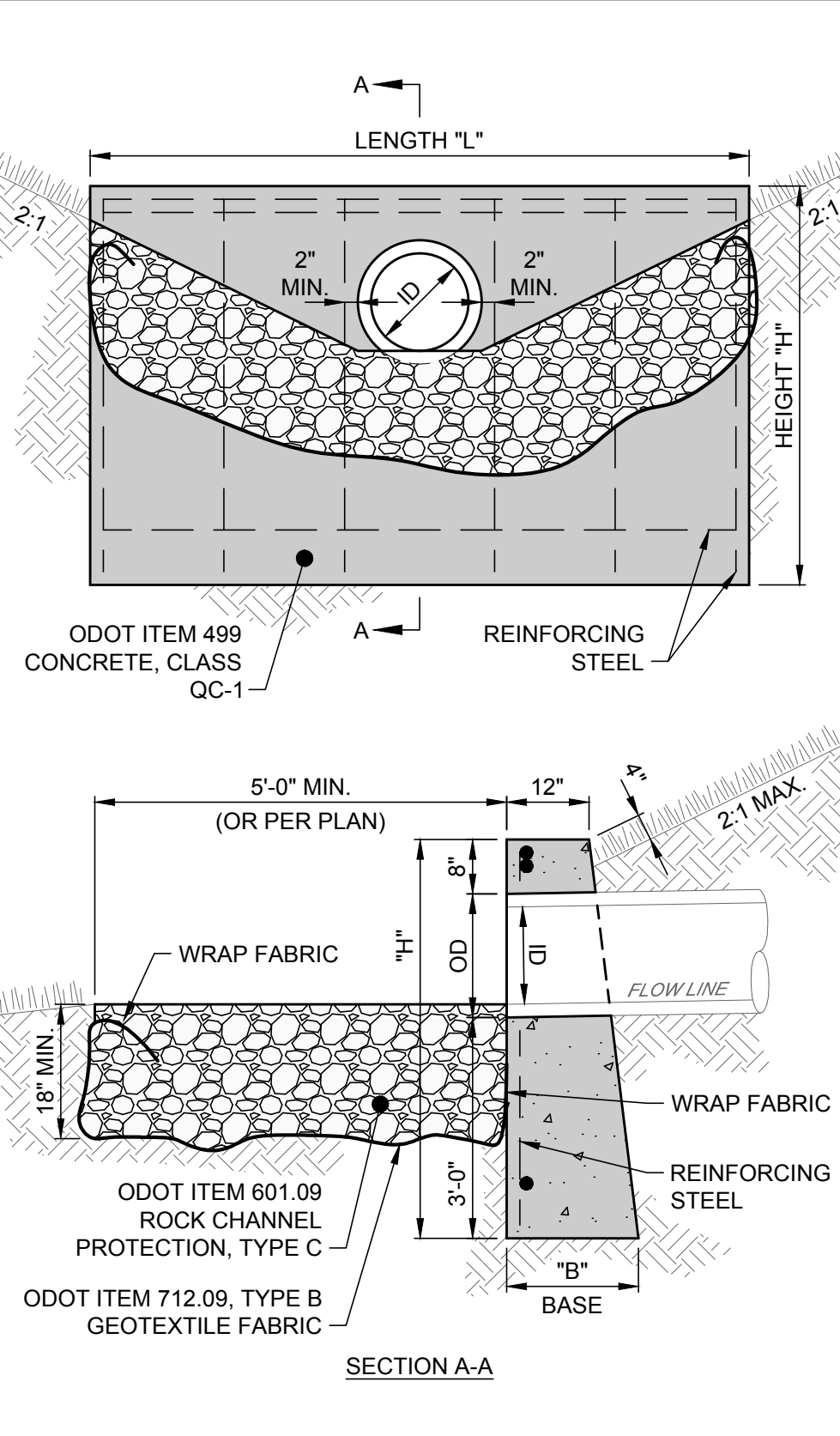
YARD DRAIN / INLET DETAIL



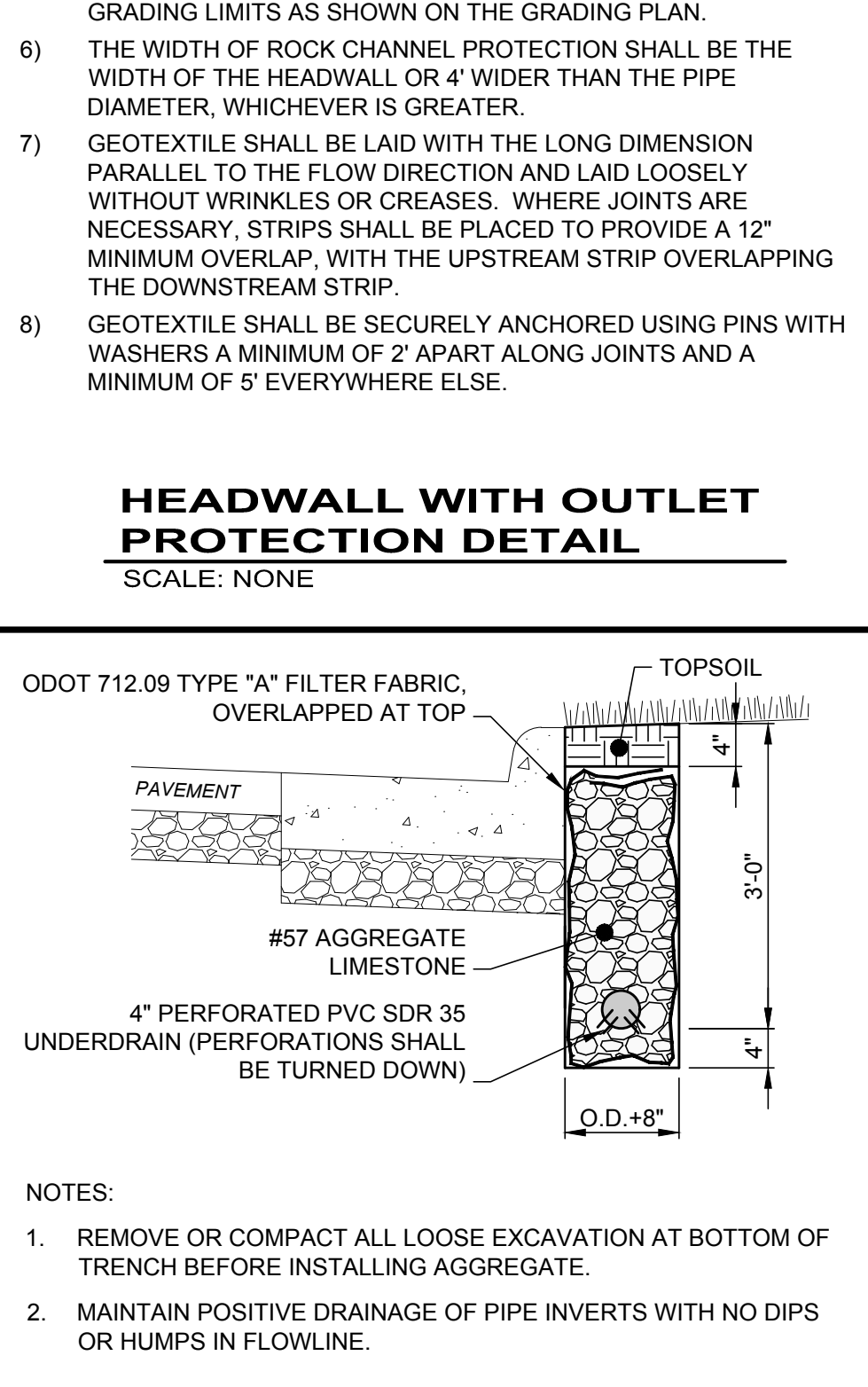
(CONCRETE 2'X3', 3'X3', 2'X6' AND 3'X6') CURB INLET BASIN DETAIL
SCALE: NONE



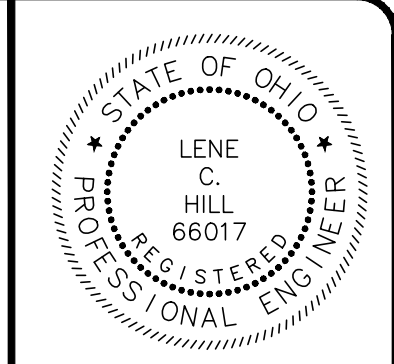
STORM CLEANOUT TYPE 1 DETAIL
SCALE: NONE



- HEADWALL WITH OUTLET PROTECTION DETAIL**
SCALE: NONE
- NOTES:
- THE HEADWALL BASE SHALL BE INCREASED BY 12" IF SOIL BEARING CAPACITY IS LESS THAN 2,600 PSF.
 - IF THE HEADWALL IS PRECAST, THE PIPE OPENING SHALL BE THE PIPE OD PLUS 2", AND INTERSTITIAL SPACE FILLED WITH GROUT.
 - REINFORCING TO BE NO. 5 BARS 18" O.C., MAX OF 24".
 - ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
 - ROCK CHANNEL PROTECTION SHALL CONFORM TO THE GRADING LIMITS AS SHOWN ON THE GRADING PLAN.
 - THE WIDTH OF ROCK CHANNEL PROTECTION SHALL BE THE WIDTH OF THE HEADWALL OR 4' WIDER THAN THE PIPE DIAMETER, WHICHEVER IS GREATER.
 - GEOTEXTILE SHALL BE LAID WITH THE LONG DIMENSION PARALLEL TO THE FLOW DIRECTION AND LAID LOOSELY WITHOUT WRINKLES OR CREASES. WHERE JOINTS ARE NECESSARY, STRIPS SHALL BE PLACED TO PROVIDE A 12" MINIMUM OVERLAP, WITH THE UPSTREAM STRIP OVERLAPPING THE DOWNSTREAM STRIP.
 - GEOTEXTILE SHALL BE SECURELY ANCHORED USING PINS WITH WASHERS A MINIMUM OF 2' APART ALONG JOINTS AND A MINIMUM OF 5' EVERYWHERE ELSE.



UNDERDRAIN DETAIL
SCALE: NONE



DATE	REVISION	NO	CD	ISSUED FOR:	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
			8/5/2019	AS SHOWN	8/5/2019	LCH / GMS	LCH	GMS	LCH

LAKELAND TRANSFER CENTER
LAKELAND COMMUNITY COLLEGE
7601 CLOCKTOWER DR., KIRTLAND, OH 44094

CONSTRUCTION DETAILS
STORM SEWER

PROJECT NO.	18050002
DISCIPLINE	CIVIL
SHEET NAME	DT_4
SHEET	OF
20	55