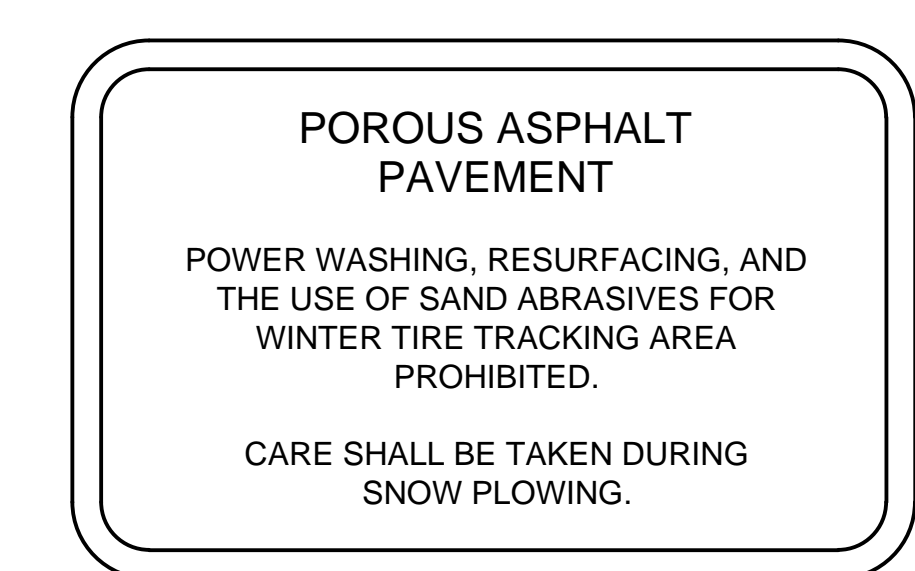


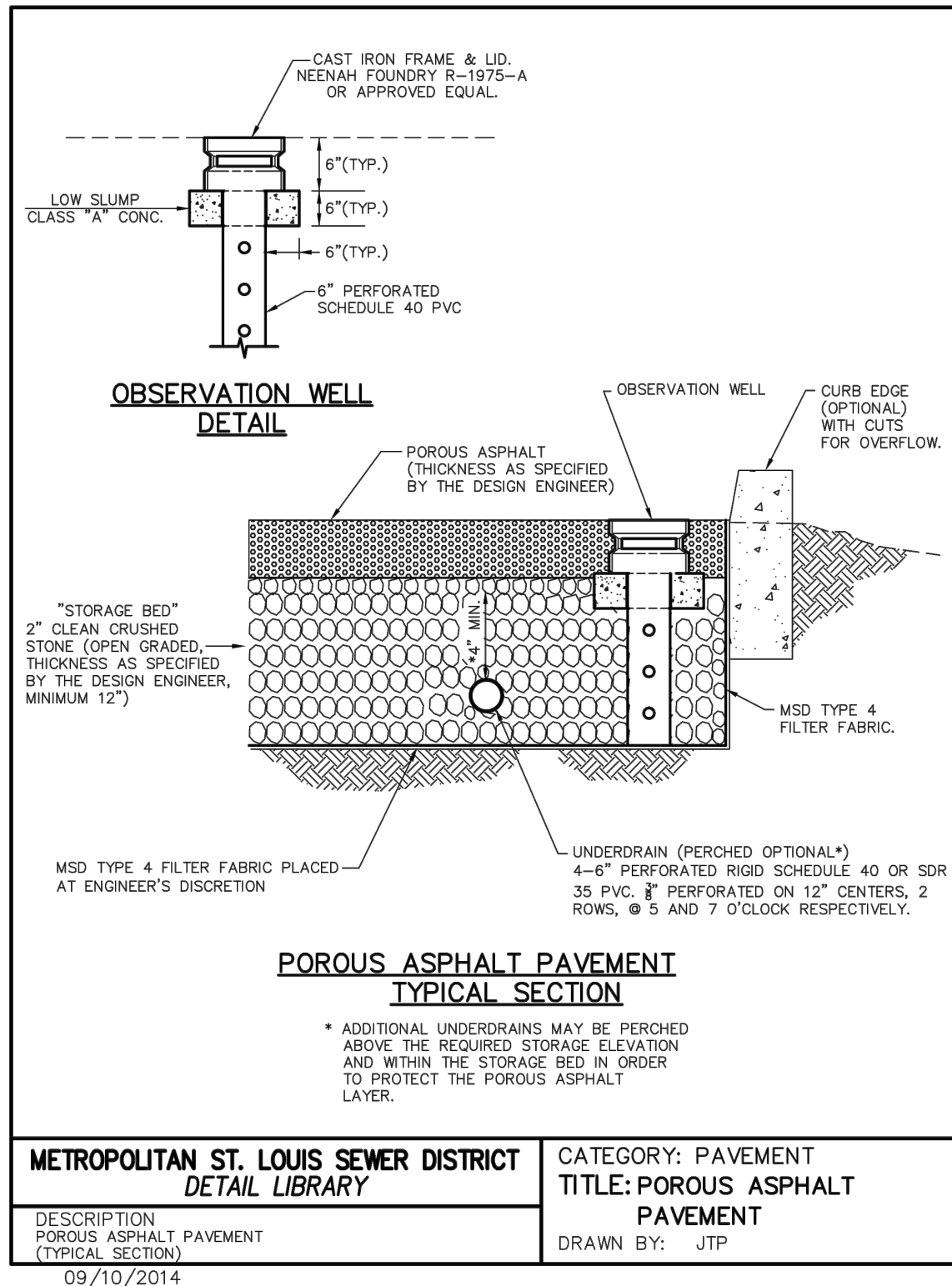
POROUS ASPHALT NOTES:

- REFER TO SITE PLAN FOR AREAS OF POROUS ASPHALT AND LOCATION OF UNDERDRAIN.
- NO RUNOFF SHALL ENTER THE POROUS ASPHALT UNTIL SITE IS STABILIZED AND PAVEMENT CONSTRUCTION IS COMPLETE.
- NON-WOVEN GEOTEXTILE FABRIC SHALL CONSIST OF NEEDLED NON-WOVEN POLYPROPYLENE FIBERS AND MEET THE FOLLOWING PROPERTIES:
GRAB TENSILE STRENGTH (ASTM-D4632) > 120 LBS
MULLEN BURST STRENGTH (ASTM-D3786) > 225 PSI
FLOW RATE (ASTM D44491) > 95 GAL/MIN/SQ.FT.
UV RESISTANCE AFTER 500 HOURS (ASTM-D4355) > 70%
HEAT-SET OR HEAT-CLENDARED FABRICS ARE NOT PERMITTED
ACCEPTABLE TYPES INCLUDE MIRAFI 140N, AMOCO 4547, GEOTEX 451 OR APPROVED EQUAL.
- AASHTO SIZE NUMBER 1, 2, OR 3 AND SHALL HAVE VOIDS 40% AS MEASURED BY ASTM-C29 (AASHTO SPECS. PART 1, 19TH ED. 1998 OR LATER)
- POROUS ASPHALT TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. (SEE NOTE 6 FOR MANUFACTURER'S INFORMATION)
- CONSTRUCTION SPECIFICATIONS AND SEQUENCING SHALL BE PER AN MSD APPROVED PROPRIETARY BMP APPLICATION FOR POROUS ASPHALT, CURRENT APPLICANTS INCLUDE THE FOLLOWING:
* THE FRED WEBER CONSTRUCTION COMPANY, CONTACT: MR. DAVID MARSHALL, 314-344-0070
* PACE CONSTRUCTION, INC., CONTACT: MR. PHIL HOCHER, 314-524-7223
- SURFACE COURSE**
ASPHALT CONTENT OF 5.75% TO 6% BY WEIGHT DRY AGGREGATE
DRAIN DOWN OF BINDER SHALL BE NO GREATER THAN 0.3% (ASTN-D6390)
- POROUS ASPHALT SHALL BE SUPPLIED BY AN MSD PROVISIONS USE LEVEL (PUL) APPROVED ASPHALT SUPPLIER AND MANUFACTURED ACCORDING TO NATIONAL ASPHALT PAVEMENT ASSOCIATION (NAPA) IS 115, "DESIGN, CONSTRUCTION, AND MAINTENANCE OF OPEN-GRADED FRICTION COURSE".
- POROUS ASPHALT SHALL BE CONSTRUCTED ACCORDING TO GUIDELINES PUBLISHED IN NAPA IS 131, "POROUS ASPHALT PAVEMENT FOR STORMWATER MANAGEMENT".
- IF POROUS PAVEMENT AREA IS USED FOR TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION, THE BED SHALL BE EXCAVATED AT LEAST ONE FOOT ABOVE THE FINAL ELEVATION OF THE BED. AFTER THE SEDIMENT IS REMOVED, THE BED SHALL BE EXCAVATED TO FINAL GRADE BEFORE THE INSTALLATION OF THE POROUS PAVEMENT SYSTEM.
- CONSTRUCT POROUS PAVEMENT LATE IN THE PROJECT SCHEDULE SO THAT ALL OF THE DIRT WORK SUCH AS GRADING AND LANDSCAPING IS COMPLETED FIRST. POROUS PAVEMENT AND THE STONE BED SHALL NOT BE INSTALLED UNTIL ALL AREAS TRIBUTARY TO IT ARE ESTABLISHED.
- POROUS PAVEMENT MUST BE PROTECTED FROM SEDIMENT DURING AND AFTER THE PAVING PROCESS. AT NO TIME SHALL SEDIMENT OR OTHER MATERIAL CAPABLE OF CLOGGING THE SURFACE BE ALLOWED TO CONTACT THE PAVEMENT.
- ANY GRADE ADJUSTING REQUIRING FILL SHALL BE DONE USING AN OPEN-GRADED MATERIAL, SUCH AS THE STONE SUBBASE.
- MSD TYPE 4 FILTER FABRIC SHALL BE USED ON THE SIDES OF THE STONE BED.
- FILTER CLOTH AND FILTER FABRIC SHALL NOT BE USED BETWEEN LAYERS OF THE STONE BED. IF NEEDED, A 12 INCH LAYER OF SAND OR PEA GRAVEL MAY BE USED AS A BRIDGING LAYER BETWEEN SUBBASE AND SUBGRADE.
- PLACE AGGREGATE FOR THE STONE RECHARGE BED WITH CARE (NOT TO DAMAGE THE FILTER FABRIC). AGGREGATE SHOULD BE DUMPED AT THE EDGE OF THE BED AND PLACED IN LAYERS OF 8 TO 12 INCHES USING TRACK EQUIPMENT. COMPACT EACH LIFT WITH A SINGLE PASS OF A LIGHT ROLLER OR VIBRATORY PLATE COMPACTOR.
- A THIN CHOKER COURSE LAYER EVENLY PLACED OVER THE STORAGE BED IS OPTIONAL. THE GRADATION OF THE CHOKER COURSE SHOULD BE SELECTED BASED ON THE GRADATION OF THE STORAGE BED. IF AASHTO NO. 3 IS USED FOR THE STORAGE BED, THEN AASHTO NO. 57 IS ACCEPTABLE FOR THE CHOKER COURSE.
- POROUS ASPHALT SHALL BE TRANSPORTED IN COVERED, CLEAN DUMP BEDS THAT HAVE BEEN SPRAYED WITH A NON-PETROLEUM RELEASE AGENT OR SOAP SOLUTION TO PREVENT THE MIXTURE FROM ADHERING TO THE DUMP BEDS. MINERAL FILLER, FINE AGGREGATE, SLAG DUST, ETC., SHALL NOT BE USED TO DUST THE TRUCK BEDS.
- EXCESSIVELY LONG HAULS MAY RESULT IN MIX SEPARATION AND ITS REJECTION. THE MIXTURE SHALL BE WITHIN 10° F OF THE COMPACTION TEMPERATURE FOR THE APPROVED MIX DESIGN.
- THE POROUS ASPHALT IS PLACED IN 2-INCH TO 4-INCH THICK LIFTS USING TRACK PAVERS AND NORMALLY COMPACTED WITH ONLY FEW (1-4) PASSES OF A 10-TON STATIC ROLLER.
- SEAL ALL GOLD LONGITUDINAL JOINTS BY COATING THE FACE OF THE COLD JOINT WITH A CERTIFIED PG BINDER AND OVERLAP THE JOINT EDGES BY AT LEAST 1 INCH.
- TRAFFIC SHALL BE RESTRICTED FOR THE FIRST 48 HOURS OR UNTIL THE PLACED MATERIAL HAS BEEN ALLOWED TO COOL BELOW 100° F. USE OF WATER TO COOL THE PAVEMENT IS NOT PERMITTED.
- POROUS ASPHALT SHALL NOT BE PLACED WHEN THE AMBIENT AIR TEMPERATURE OF THE PAVEMENT SITE IN THE SHADE AWAY FROM ARTIFICIAL HEAT IS BELOW 60° F OR WHEN THE ACTUAL GROUND TEMPERATURE IS BELOW 50° F. THE CONTRACTOR SHALL NOT PAVE ON DAYS WHEN RAIN IS FORECAST.
- THE FULL PERMEABILITY OF THE PAVEMENT SURFACE SHALL BE TESTED BY APPLICATION OF CLEAN WATER AT THE RATE OF 5 GPM OVER THE SURFACE, USING A HOSE OR OTHER DISTRIBUTION DEVICE. ALL APPLIED WATER SHALL INFILTRATE DIRECTLY WITHOUT LARGE PUDDLE FORMATION OR SURFACE RUNOFF AND SHALL BE OBSERVED BY THE CERTIFYING ENGINEER OR HIS REPRESENTATIVE.
- SURFACE SMOOTHNESS SHALL BE TESTED USING A 10 FOOT STRAIGHTEDGE APPLIED PARALLEL WITH AND AT RIGHT ANGLES TO THE CENTERLINE OF THE PAVED AREA. SURFACE WILL NOT BE ACCEPTED IF CAPS OR RIDGES EXCEED 3/16-INCH.
- DO NOT USE SAND OR ASH FOR CONTROL OF SNOW AND ICE.
- DO NOT STORE OIL OR OTHER MATERIAL CAPABLE OF CLOGGING THE SURFACE ON OR ADJACENT TO POROUS PAVEMENT.

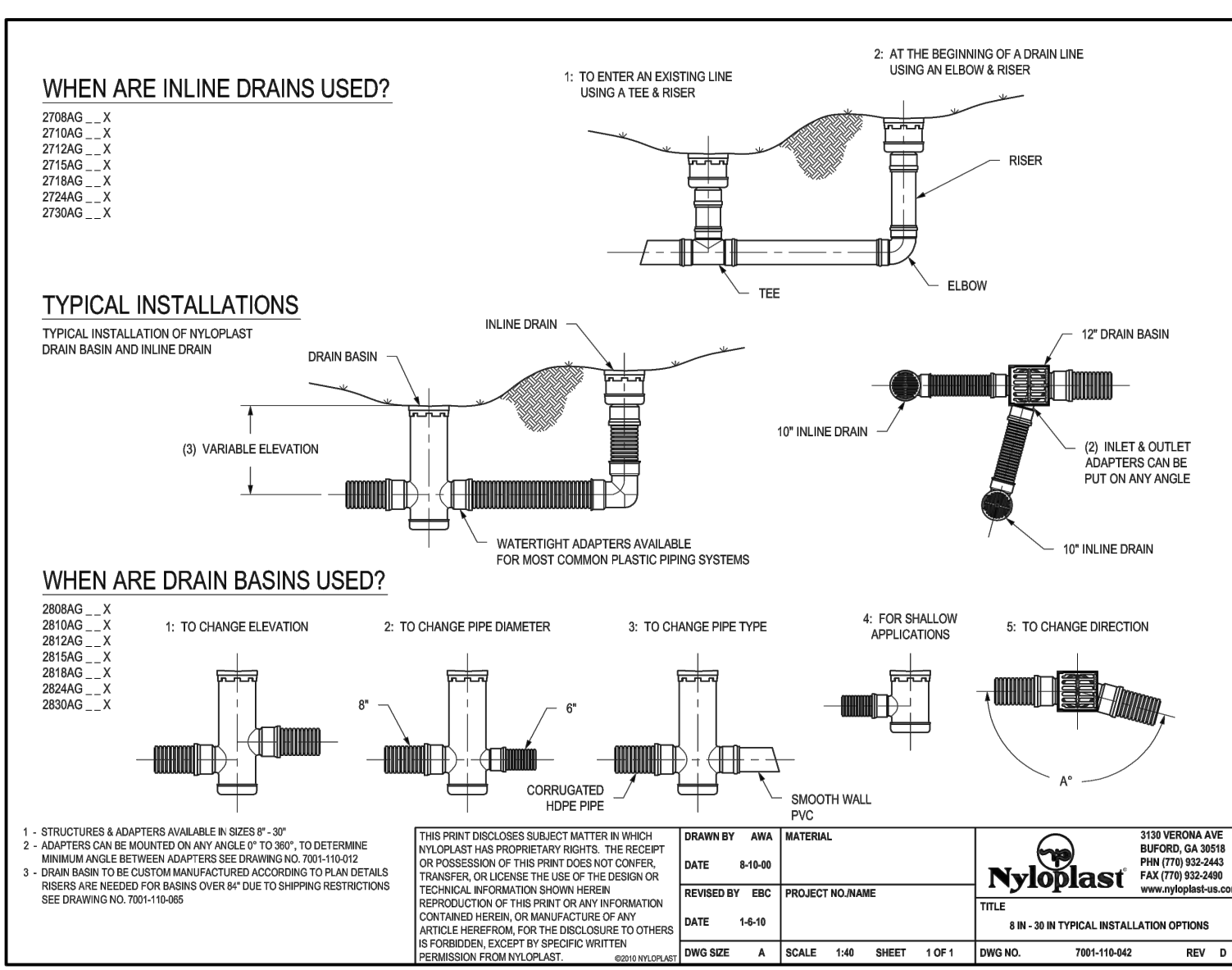


POROUS ASPHALT INFORMATION SIGN
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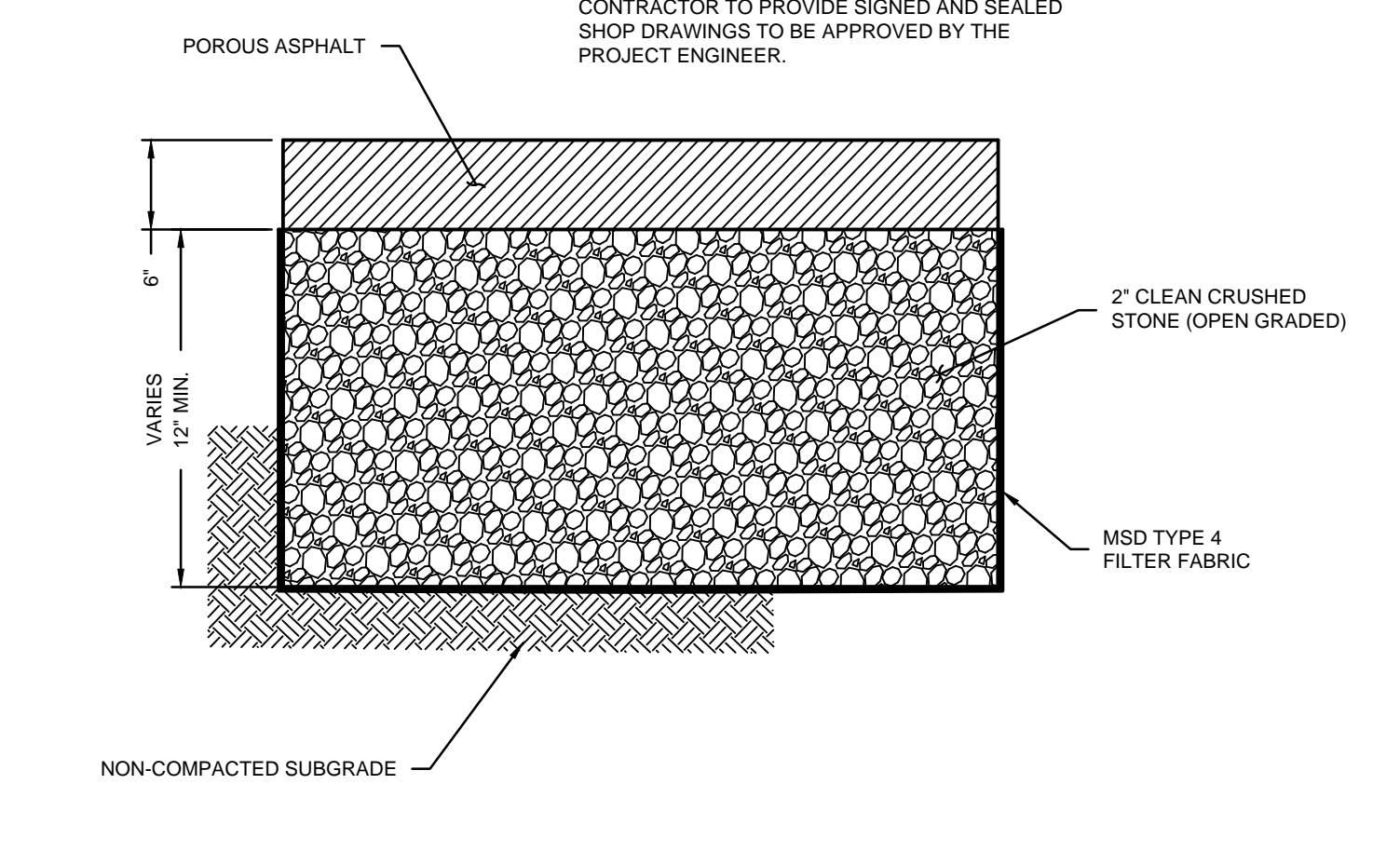
- NOTES:
- STANDARD 18"X12"X0.080" ALUMINUM SIGN FACE WITH BLACK TEXT ON WHITE BACKGROUND.
 - GALVANIZED STEEL POST 9'-6" LONG.
 - SET BOTTOM OF SIGN 5'-0" ABOVE GRADE.
 - SET BOTTOM OF POST 3'-0" BELOW GRADE.



METROPOLITAN ST. LOUIS SEWER DISTRICT DETAIL LIBRARY	CATEGORY: PAVEMENT TITLE: POROUS ASPHALT PAVEMENT DRAWN BY: JTP
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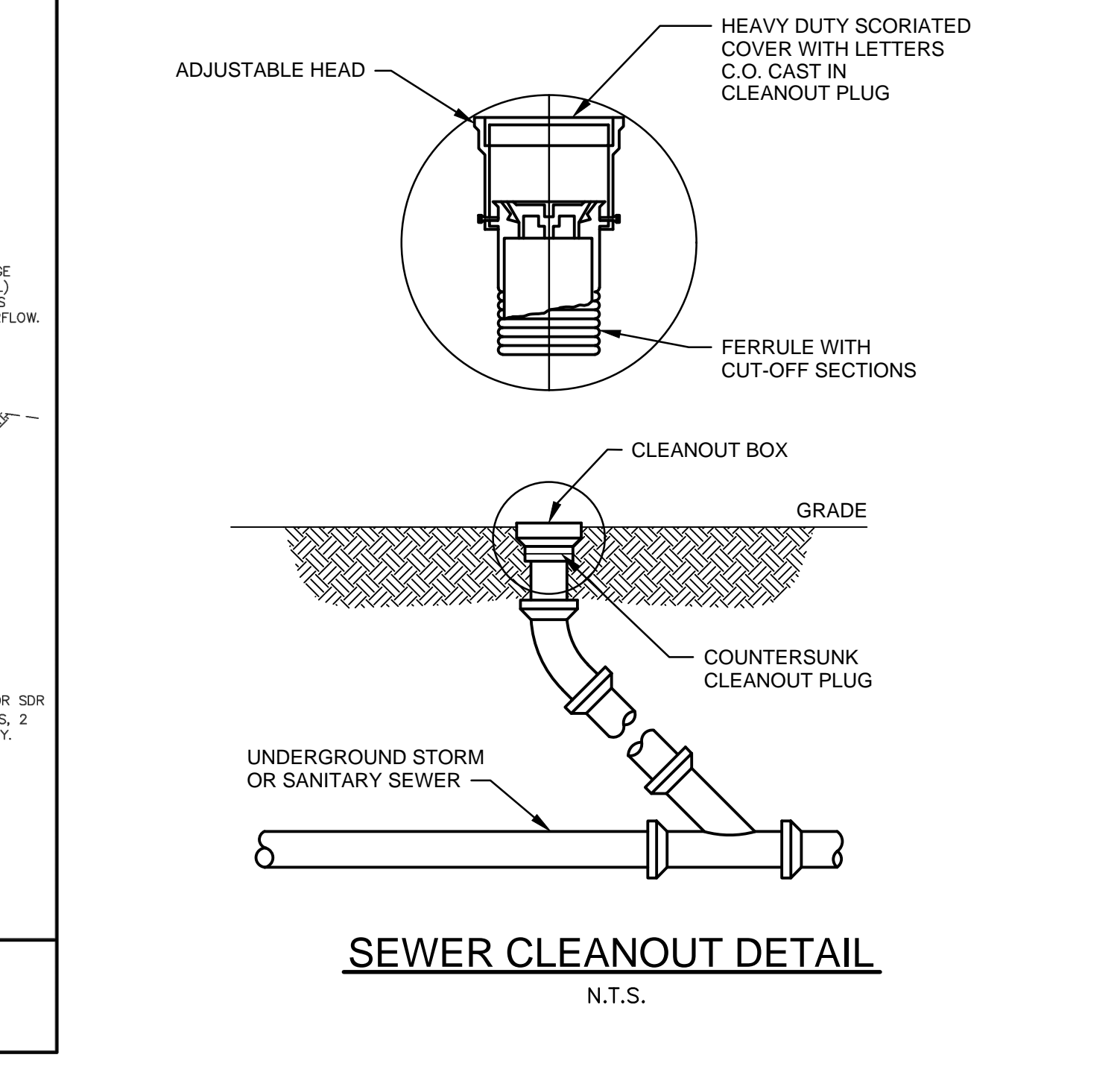


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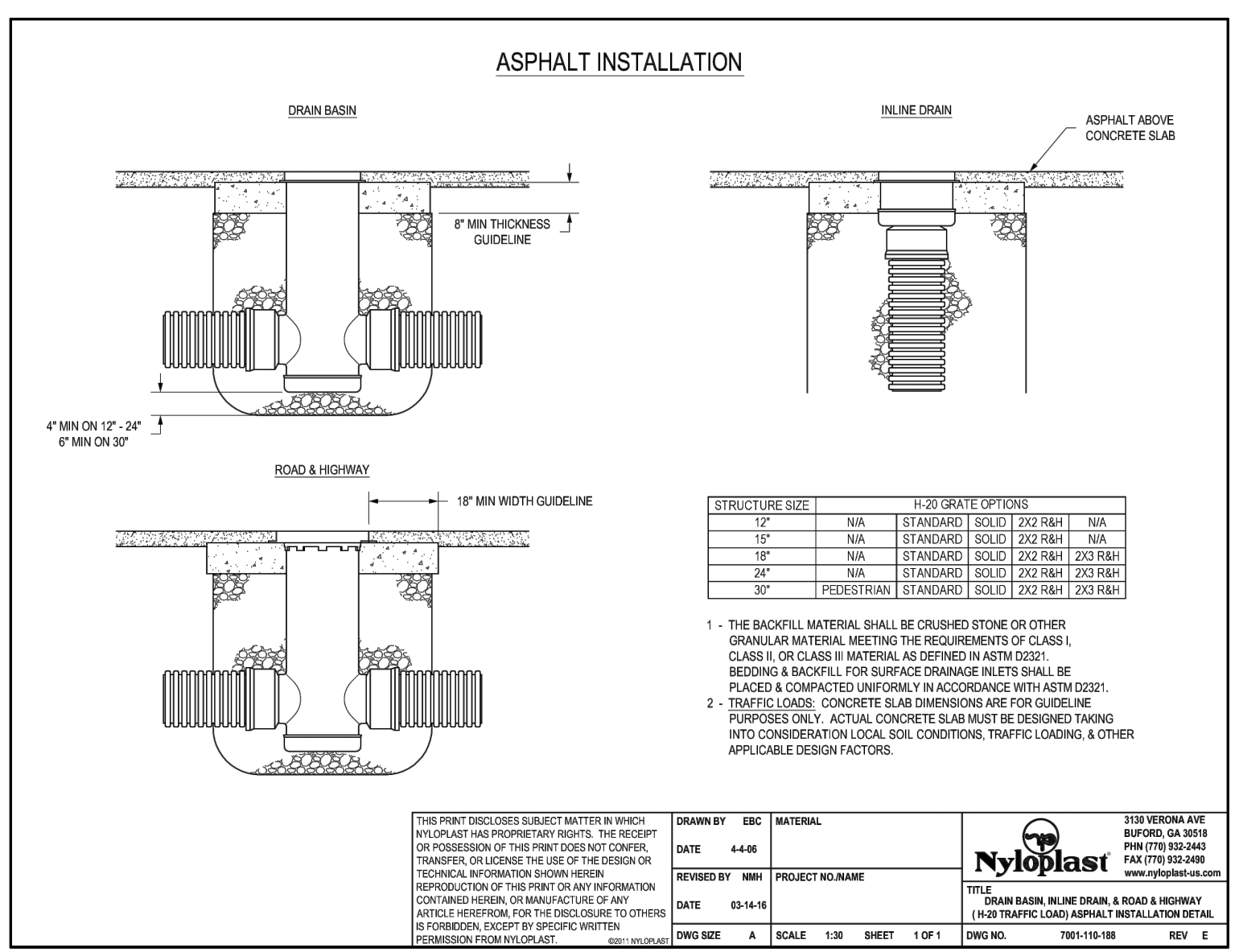


POROUS ASPHALT PAVEMENT SECTION
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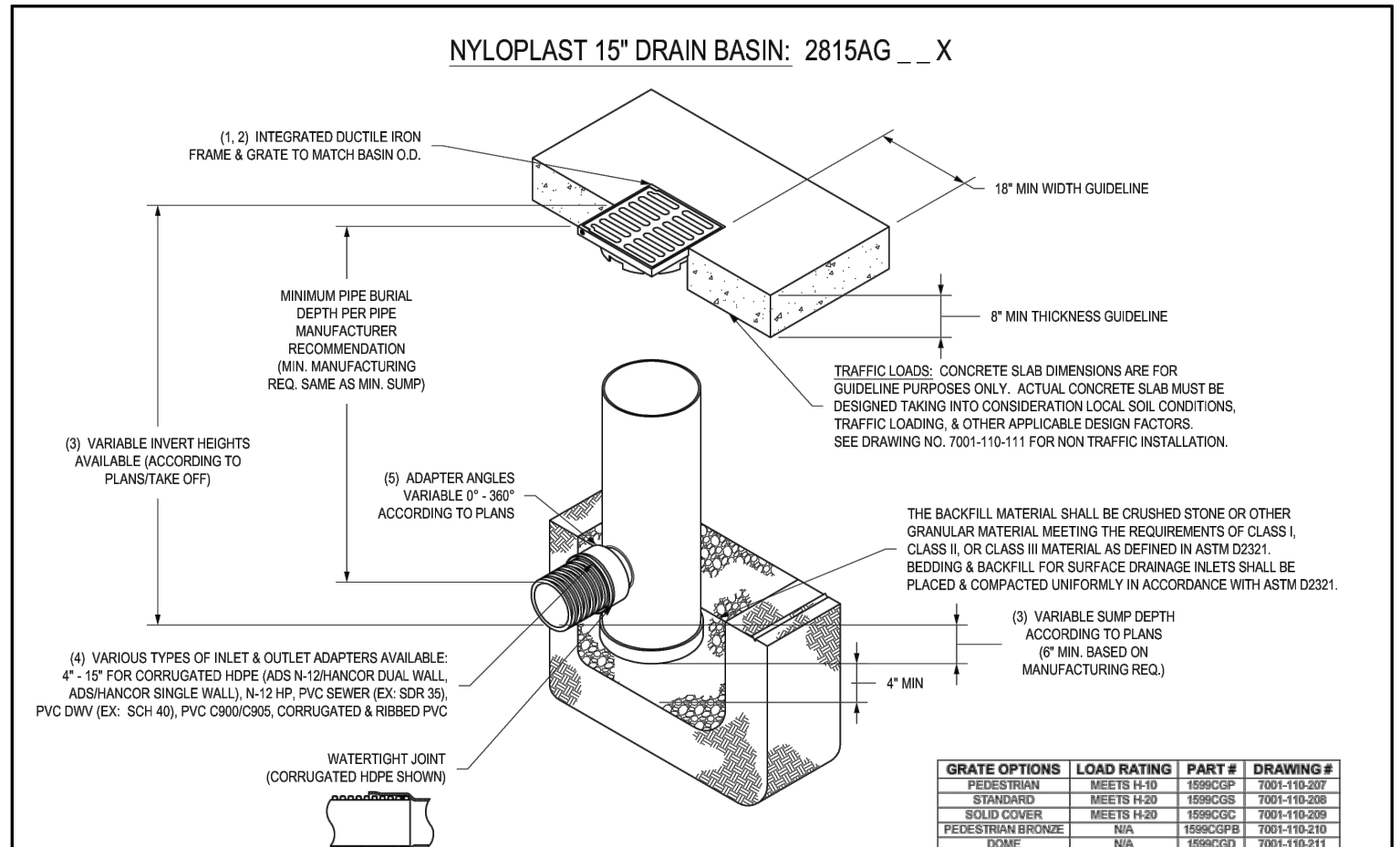
NOTE: THE ASPHALT SURFACE SHALL BE COMPACTED TO 98% MAX. DENSITY.



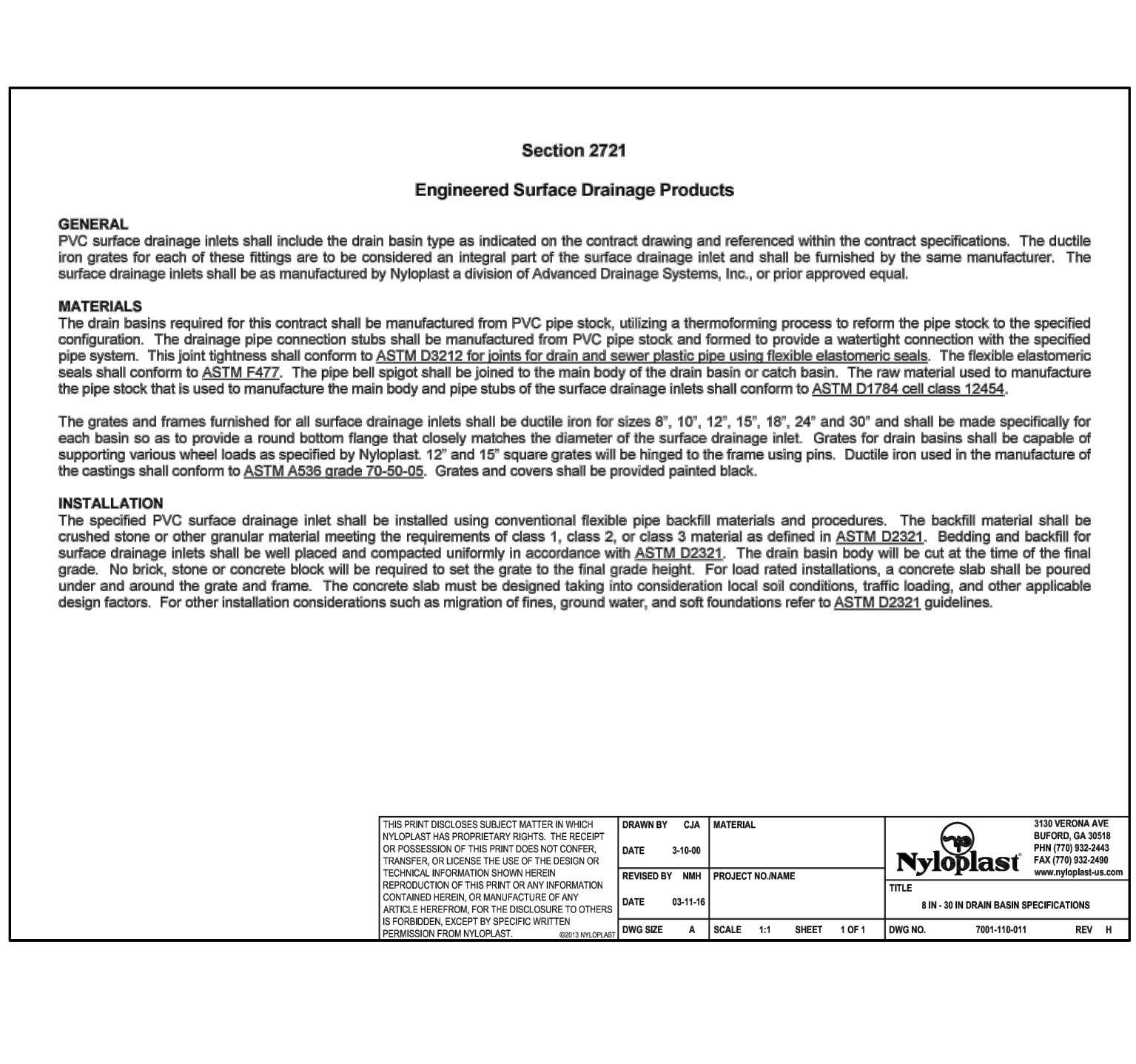
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STATE OF MISSOURI
APRIL M. GIESMANN
PROFESSIONAL ENGINEER
LICENSE NO. E-2001004592
EXPIRATION DATE: 5/24/18

HORNER SHIFRIN
101 LAURA K DRIVE, STE. 101 OTTAWA, MO 65366-9891
636-329-9296 • FAX 636-329-2910 • WWW.HORNERSHIFRIN.COM
DISCIPLINE: PROFESSIONAL ENGINEERING
CERTIFICATE OF AUTHORITY: 000159
EXPIRATION DATE: DECEMBER 31, 2018

ALPHA & OMEGA ROASTING
111 N. MAIN STREET

DATE: 05/24/2018

DESIGNED: AMH
DRAWN: AMH
CHECKED: AMG

JOB NO. 1803000
REF. NO. N/A

C5.2

DWG: C:\projects\jstang\alpha\alpha\dms\077\Details.dwg
 PLOT DATE: 5/24/2018 2:15:28 PM
 OPERATOR: JAATAGANA
 SAVE DATE: 5/24/2018 2:10:01 PM

REVISION
DATE
NO.
APRIL Giesmann
E-2001004592
12-31-19
Name: Giesmann
License No. E-2001004592
Expiration Date: 12-31-19

BMP AND ENTRANCE DETAILS