



CITY OF CLEVELAND HEIGHTS

OFFICE OF CAPITAL PROJECTS

STANDARD CONSTRUCTION DRAWINGS

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CONTACTS:

OFFICE OF CAPITAL PROJECTS
ATTN: JOE KICKEL
40 SEVERANCE CIRCLE
CLEVELAND HEIGHTS, OHIO 44118

CAPITAL PROJECTS MANAGER - JOE KICKEL - 216-291-2470 EMAIL
JKICKEL@CLVHTS.COM

CONSTRUCTION INSPECTOR - GIOVANNI MALTESE - 216-407-4181 EMAIL
GMALTESE@CLVHTS.COM

POLICE DEPARTMENT - CAPTAIN IN CHARGE OF SCHEDULING -
216-291-4766

PRE-CONSTRUCTION VIDEO DOCUMENTATION

1. IT IS RECOMMENDED THAT FOR ALL WORK IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR PERFORM A PRE-CONSTRUCTION VIDEO OF THE WORK AREA AND ANY ADJACENT AREAS. A COPY OF THE PRE-CONSTRUCTION VIDEO SHOULD BE PROVIDED TO THE OFFICE OF CAPITAL PROJECTS. THE CITY SHALL HAVE FULL DISCRETION OVER THE CONTRACTOR'S LIABILITY FOR ANY DAMAGES TO BOTH PUBLIC AND PRIVATE PROPERTY THAT CANNOT BE VERIFIED THROUGH VIDEO DOCUMENTATION.

2. IT IS RECOMMENDED THAT FOR ALL SUB-SURFACE UTILITY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR PERFORM BOTH PRE AND POST CONSTRUCTION VIDEO DOCUMENTATION OF ALL OF THE STORM AND SANITARY SEWER MAINS AND ALL LATERALS WITHIN THE WORK AREA AND ANY ADJACENT AREAS. COPIES OF BOTH THE PRE AND POST CONSTRUCTION VIDEOS SHOULD BE PROVIDED TO THE OFFICE OF CAPITAL PROJECTS. THE CITY SHALL HAVE FULL DISCRETION OVER THE CONTRACTOR'S LIABILITY FOR ANY DAMAGES TO ANY SEWERS BOTH WITHIN AND OUTSIDE OF THE PUBLIC RIGHT-OF-WAY THAT CANNOT BE VERIFIED THROUGH VIDEO DOCUMENTATION.

NOTICE OF WORK

1. ALL CONTRACTORS WORKING IN THE PUBLIC RIGHT-OF-WAY WITHIN CLEVELAND HEIGHTS SHALL PROVIDE 48-HOURS ADVANCE NOTICE TO THE OFFICE OF CAPITAL PROJECTS BEFORE COMMENCING WORK.

WORKING HOURS

1. WORKING HOURS ARE MONDAY THROUGH FRIDAY 7:00 A.M. TO 7:00 P.M.. NO WORK SHALL BE PERMITTED ON WEEKENDS OR LEGAL HOLIDAYS WITHOUT FIRST OBTAINING PERMISSION IN WRITING FROM THE CAPITAL PROJECTS MANAGER.

MAINTENANCE OF TRAFFIC

1. ALL MAINTENANCE OF TRAFFIC (MOT) SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) (LATEST EDITION). MOT PLANS REQUIRING LANE CLOSURES SHALL BE SUBMITTED TO THE OFFICE OF CAPITAL PROJECTS FOR REVIEW PRIOR TO COMMENCING ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY. ANY WORK OCCURRING WITHIN TWO HUNDRED (200) FEET OF A SIGNALIZED INTERSECTION SHALL REQUIRE THE PRESENCE OF A CLEVELAND HEIGHTS LAW ENFORCEMENT OFFICER WITH CAR.

2. STEEL PLATES SHALL BE USED TO MAINTAIN VEHICLE ACCESS AT ALL TIMES DURING DRIVE APRON REPLACEMENT AND TO PROTECT EXCAVATIONS, OPENINGS, TRENCHES, AND UTILITY CUTS IN THE ROADWAY.

ALL STEEL PLATES USED IN THE ROAD AND ON DRIVEWAY APRONS SHALL BE HOT ROLLED STEEL CONFORMING TO ASTM-A36, THEY SHALL BE A MINIMUM OF ONE (1) INCH THICK, AND SHALL BE ABLE TO PROPERLY BRIDGE THE OPENING AGAINST ALL TYPES OF TRAFFIC AND VEHICLES BOTH LIGHT AND HEAVY WITHOUT BENDING, BOWING, DEFLECTING, BREAKING, OR ANY OTHER TYPE OF PHYSICAL DISTORTION. THE PLATES SHALL BE FLAT AND STRAIGHT, AND FREE FROM ANY BENDS, BOWS, OR WARPING. ALL SHARP EDGES SHALL BE GROUND TO A BEVEL SMOOTH TO THE TOUCH.

STEEL PLATES SHALL BE PINNED IN THE ROAD, AND TEMPORARILY RAMPED WITH COLD PATCH OR BITUMINOUS MATERIAL.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN STEEL PLATES IN THE ROAD, AND TO PROMPTLY ADDRESS AND MITIGATE ANY NOISE COMPLAINTS FORWARDED BY THE CITY.

STEEL PLATES SHALL BE PROPERLY BARRICADED IN ADVANCE WITH APPROVED TRAFFIC CONTROL DEVICES AND ON ALL FOUR CORNERS WITH APPROVED TRAFFIC CONTROL DEVICES DURING WINTER WORK TO PREVENT DAMAGE TO AND FROM SNOW PLOWS.

PEDESTRIAN ACCESS

1. PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION IN ACCORDANCE WITH THE OMUTCD (LATEST EDITION), AND THE AMERICANS WITH DISABILITIES ACT (LATEST EDITION).

CURB RAMPS

DETECTABLE WARNING PLATES FOR ALL CURB RAMPS SHALL BE EAST JORDAN "DURALAST" DETECTABLE WARNING PLATES OR APPROVED EQUAL. THE PLATES SHALL BE UNCOATED (NATURAL FINISH) GRAY IRON INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

INSPECTION

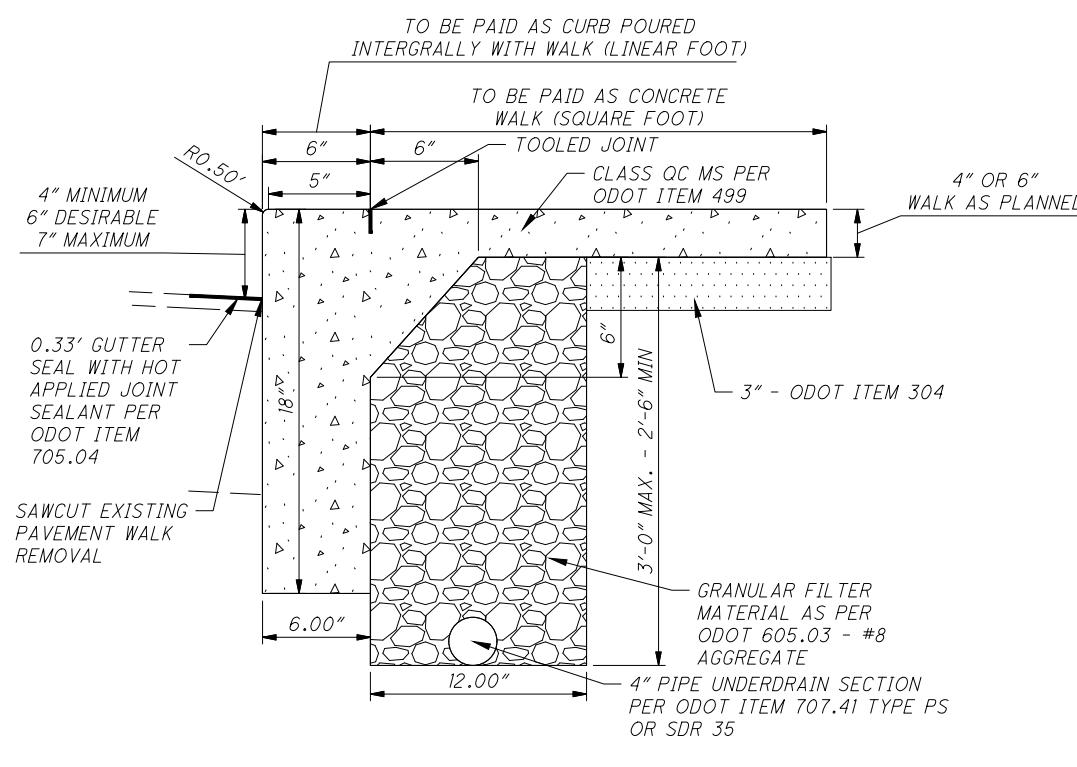
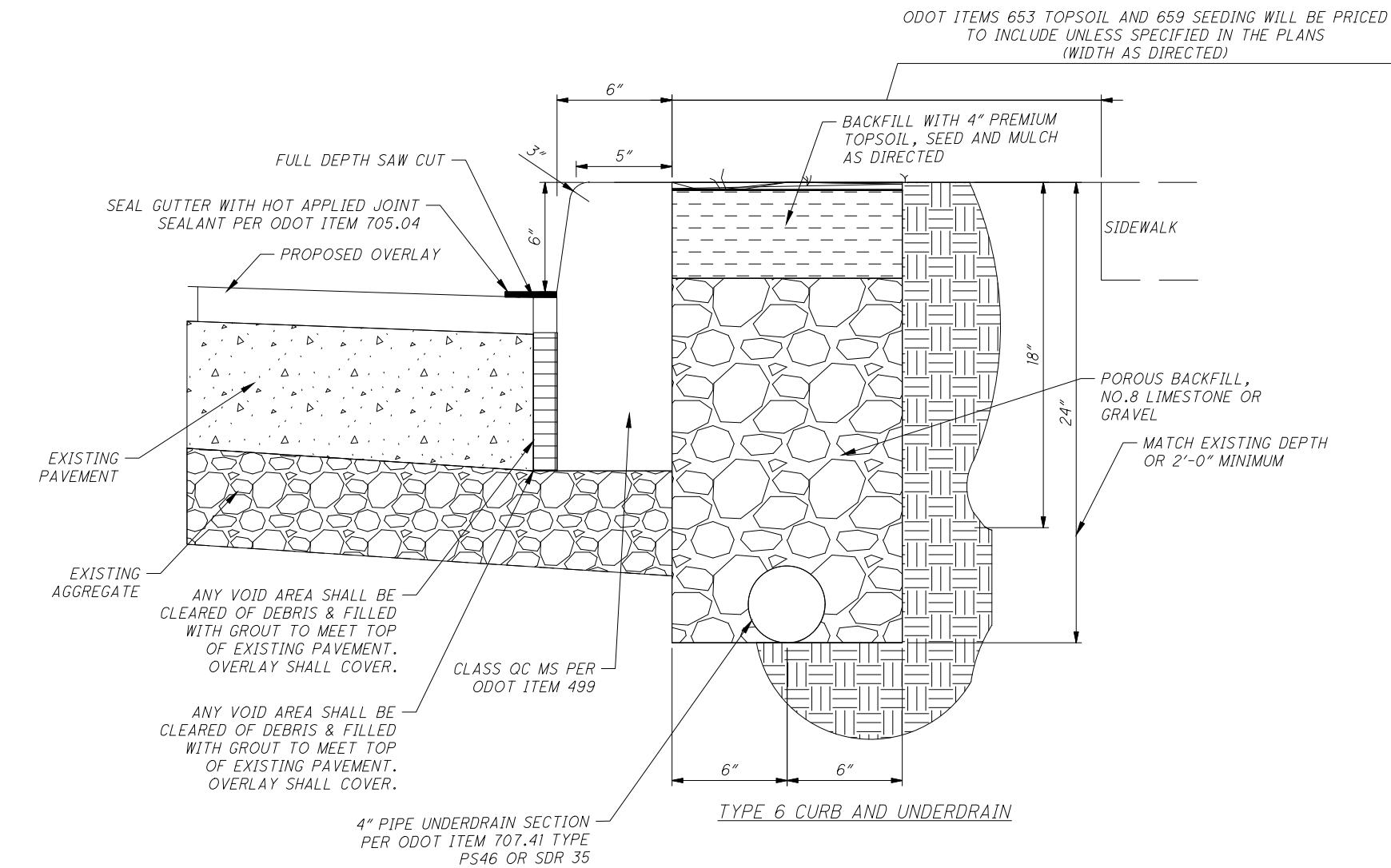
1. BEFORE BACKFILLING ANY EXCAVATIONS IN THE PUBLIC RIGHT-OF-WAY, THE CITY'S CONSTRUCTION INSPECTOR SHALL INSPECT AND APPROVE THE WORK. FAILURE TO NOTIFY THE INSPECTOR PRIOR TO BACKFILLING MAY RESULT IN THE CONTRACTOR HAVING TO RE-OPEN HIS WORK AT THE CONTRACTOR'S OWN EXPENSE IN ORDER TO INSPECT.

2. WORK INVOLVING FINAL PAVEMENT RESTORATION (INCLUDING ALL RAMPS, WALKS, DRIVES, AND APRONS) SHALL BE INSPECTED AND APPROVED BY THE CONSTRUCTION INSPECTOR. FAILURE TO NOTIFY THE INSPECTOR AND HAVE HIM PRESENT MAY RESULT IN THE CONTRACTOR HAVING TO REMOVE AND REPLACE HIS WORK AT THE CONTRACTOR'S OWN EXPENSE IN ORDER TO PROPERLY INSPECT.

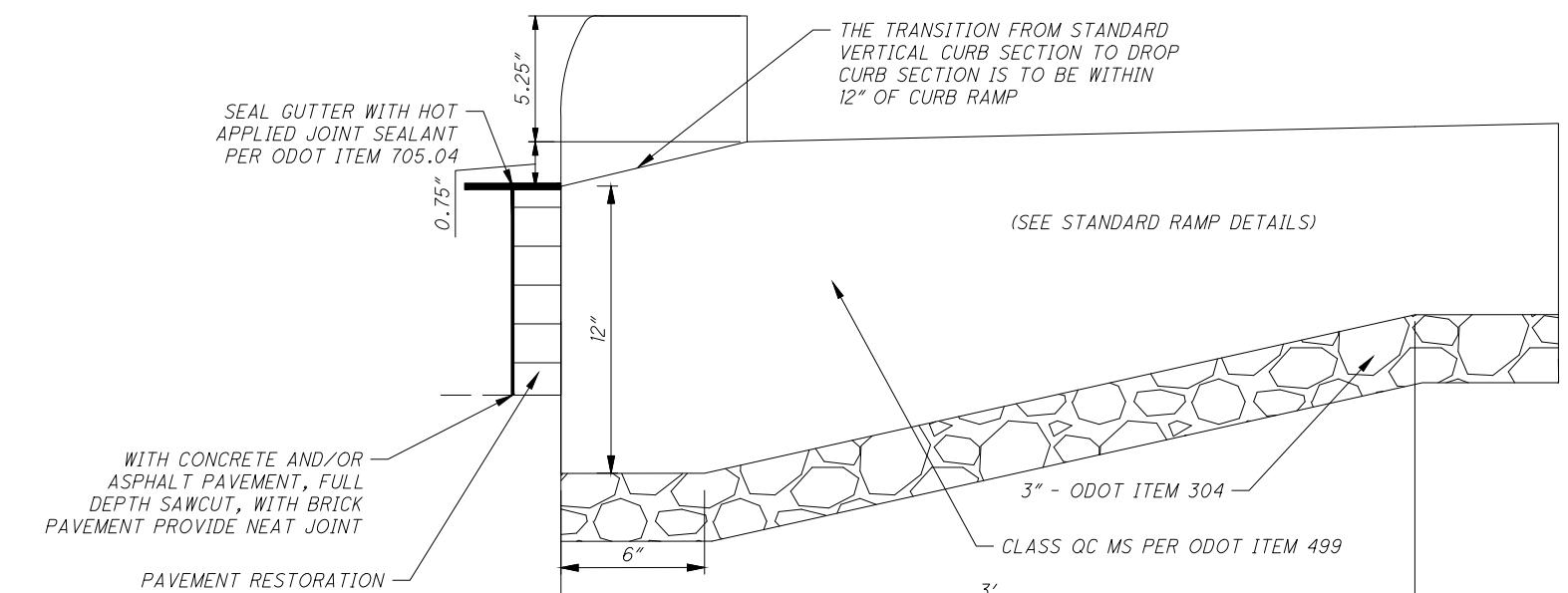
CURB DETAILS

CLEVELAND HEIGHTS

CALCULATED
JMB
CHECKED
DEN



CONCRETE WALK WITH INTEGRAL CURB



ALL COSTS NECESSARY W/CURB REMOVAL AND REPLACEMENT ASSOCIATED WITH CURB RAMPS SHALL BE PAID SEPARATELY UNDER THE APPROPRIATE CURB REPLACEMENT ITEM.
ALL COSTS FOR THE THICKENED EDGE SHALL BE INCLUDED IN THE SQ FT FOR 6" WALK OR CURB RAMPS

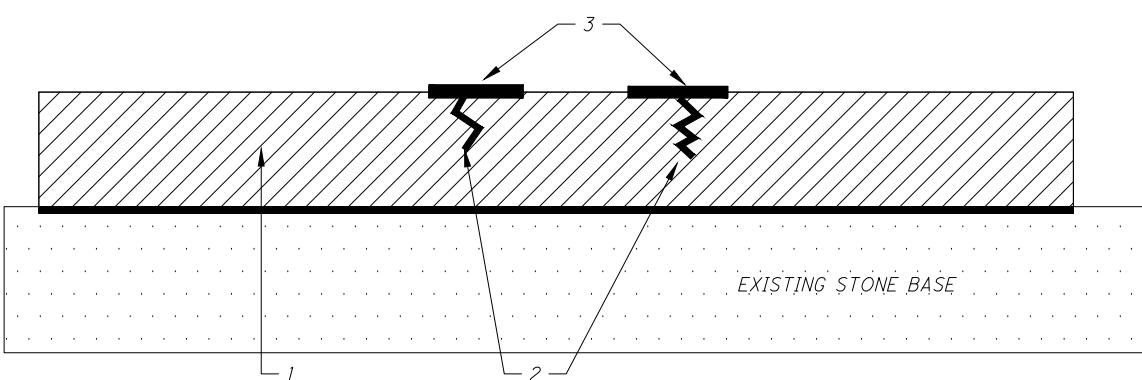
DROP CURB DETAIL

NOTE:
DURING CURB REPLACEMENT OPERATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTIONS OR RECONNECTION OF EXISTING OR PROPOSED UNDERDRAINS TO THE CATCH BASIN. THE COST OF THIS WORK SHALL BE INCLUDED IN UNIT PRICE BID FOR CURB REMOVAL AND REPLACEMENT.
THE CONTRACTOR SHALL PROVIDE POSITIVE FLOW FOR THE CURB DRAINS EXTENDING BEYOND AREAS WHERE CURB REPLACEMENT IS NOT PERFORMED AS DIRECTED BY THE CITY. THIS WORK SHALL BE PAID PER LINEAL FOOT UNDER THE CURB DRAIN REPLACEMENT ITEM.

PAVEMENT AND WALK DETAILS

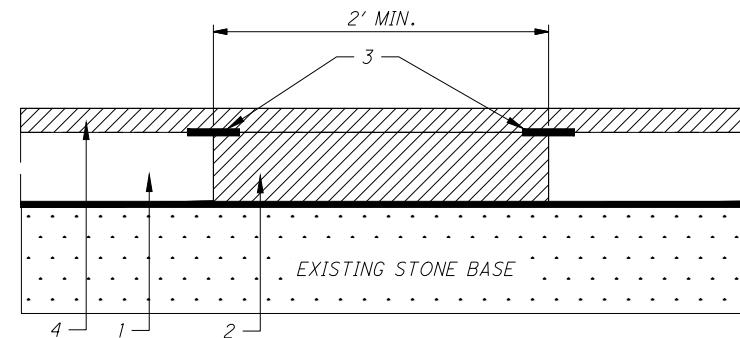
CLEVELAND HEIGHTS

CALCULATED
JMB
CHECKED
DEN



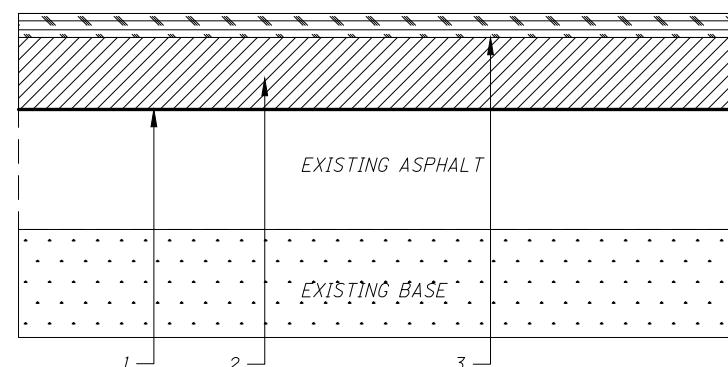
1. EXISTING PAVEMENT
2. CLEAN ALL CRACKS THOROUGHLY BY BLOWING OUT WITH COMPRESSED AIR OR BY SWEEPING WITH POWER DRIVEN WIRE BRUSH SWEEPER
3. HOT APPLIED BLENDED MIXTURE OF PG64-22 ASPHALT CEMENT WITH SHORT LENGTHS OF POLYPROPYLENE FIBER BLEND SHALL CONSIST OF 93% ASPHALT CEMENT/7% FIBER

CRACK SEAL, TYPE III
(INCLUDING CLEANING OF JOINTS AND CRACKS)



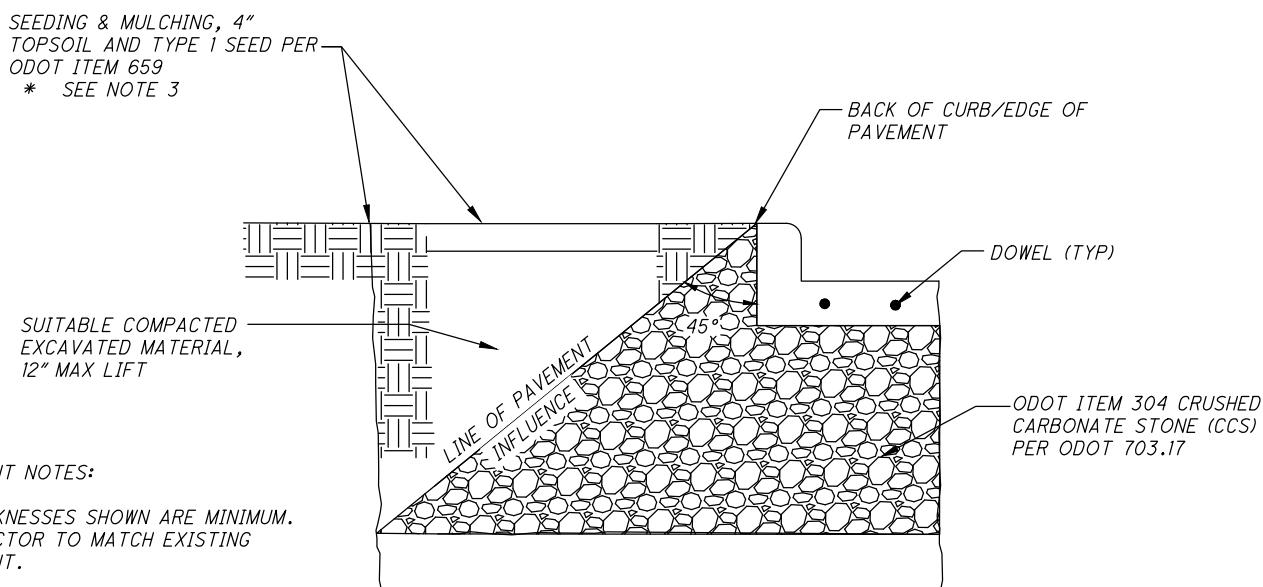
1. EXISTING PAVEMENT
2. ODOT ITEM 253 - PAVEMENT REPAIR AS DIRECTED - MINIMUM 4" GRIND OF EXISTING PAVEMENT AND REPLACE W/COMPACTED FILL OF ODOT ITEM 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) PG64-22
3. HOT APPLIED JOINT SEALER - PER ODOT ITEM 705.04 RESURFACING (IF REQUIRED)

SPOT REPAIR DETAIL

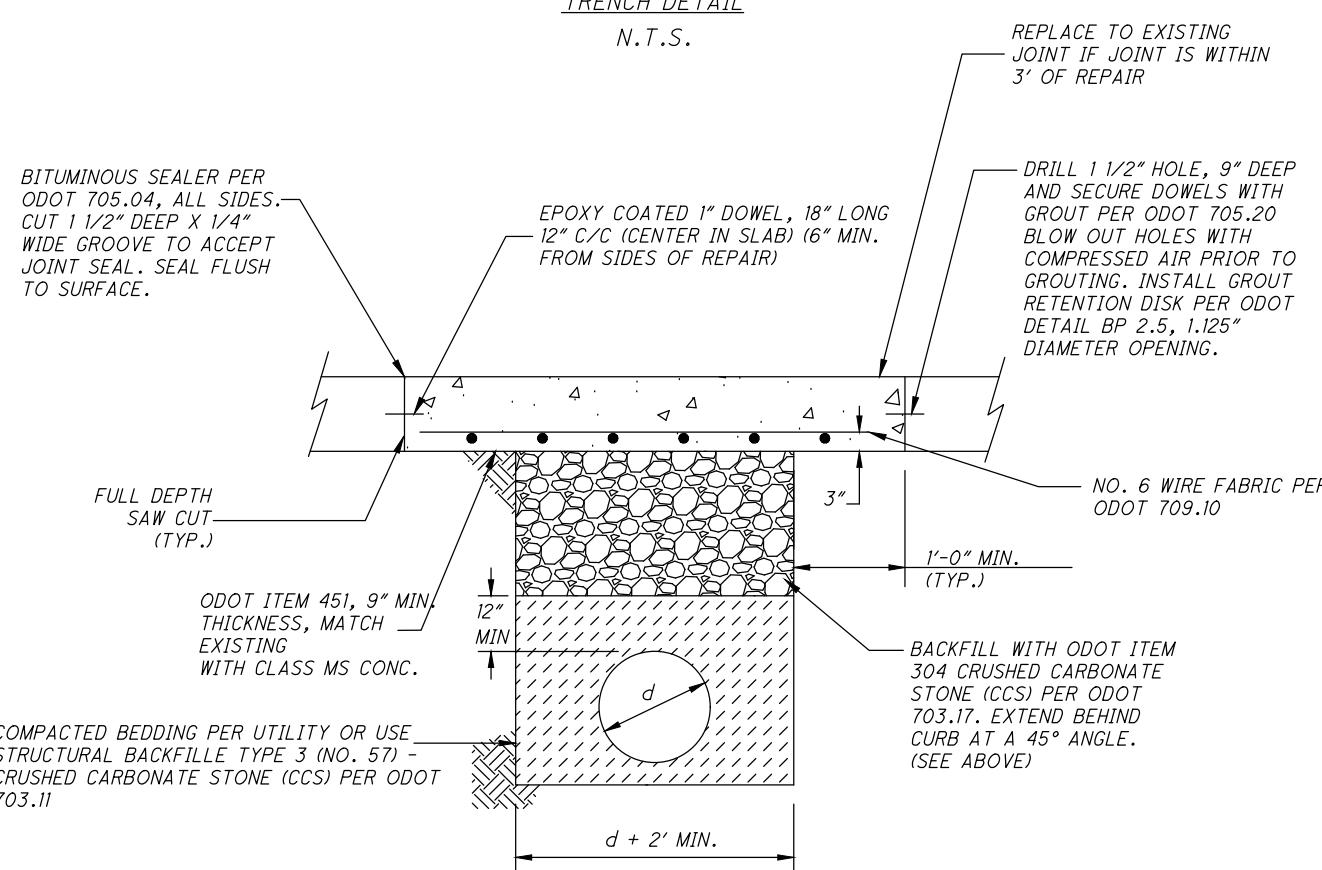


1. REFINED COAL TAR EMULSION GRADE RT-9 OR RT-10
2. CRUSHED AIR COOLED BLAST FURNACE SLAG (ACBFS) PER ODOT ITEM 703.05
3. POLYMER FOG SEAL EMULSION - TRACKLESS FOG SEAL (LD-7 MANUFACTURED BY BLACKLIDGE EMULSIONS OR APPROVED EQUAL)

SINGLE CHIP SEAL

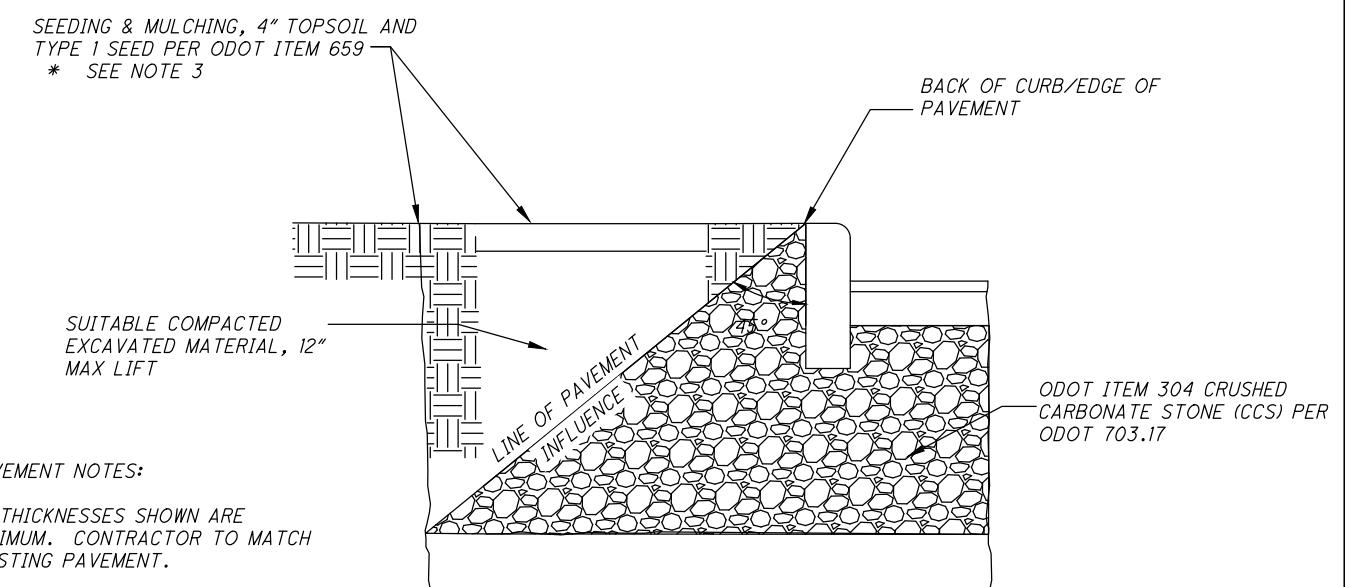


TRENCH DETAIL
N.T.S.

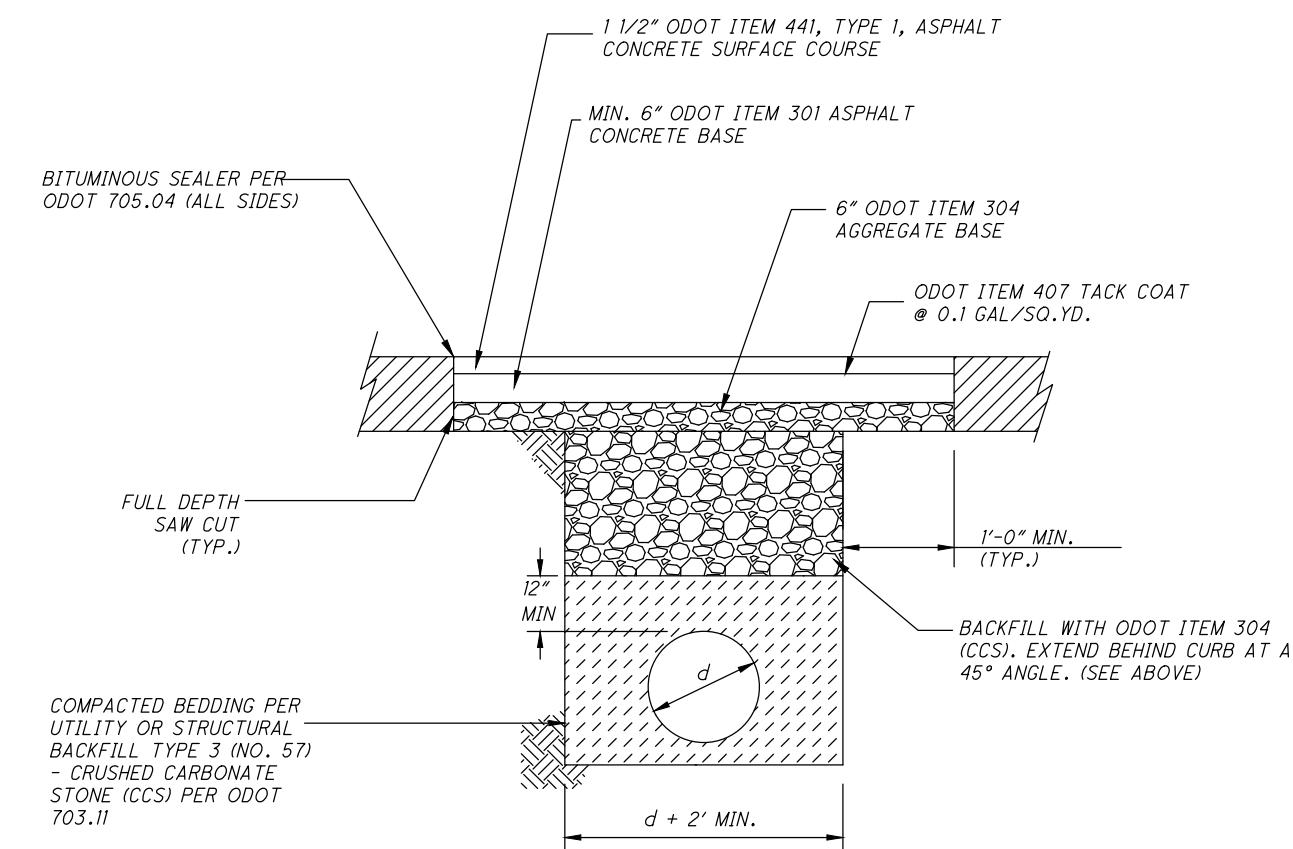


NOTE: IF THE REPAIR IMPACTS AN EXISTING EXPANSION JOINT, THE JOINT MUST BE RE-ESTABLISHED PER ODOT STANDARD DETAILS.

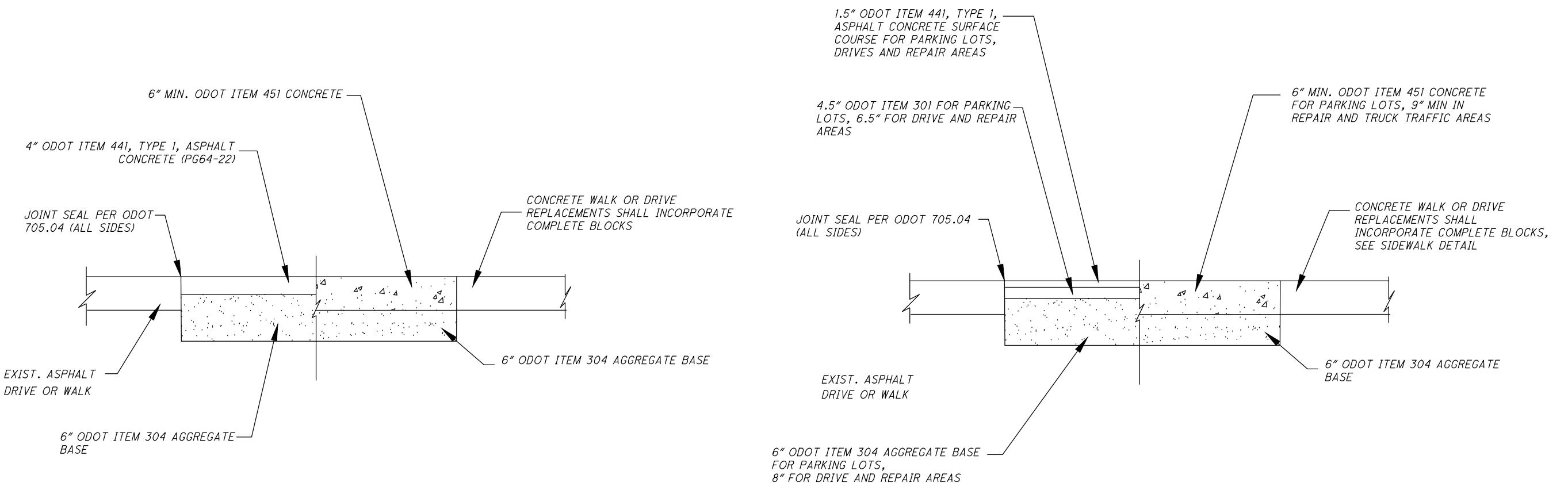
TYPICAL SECTION FOR REPAIRING CONCRETE ROADS
N.T.S.



TRENCH DETAIL
N.T.S.



TYPICAL SECTION FOR REPAIRING ASPHALT SURFACE AND ASPHALT BASE ROADS
N.T.S.

GENERAL PAVEMENT NOTE:

1. WHERE EDGES OF REPLACED SECTION EXTENDS WITHIN 2'-0" OF DRIVEWAY EDGE, PAVEMENT IS TO BE REPLACED TO DRIVEWAY EDGE.
2. THICKNESSES SHOWN ARE MINIMUM. CONTRACTOR TO MATCH EXISTING PAVEMENT.
3. ALL AGGREGATES SHALL BE CRUSHED, CARBONATE STONE (CCS) PER ODOT 703.17.

RESIDENTIAL DRIVEWAY

N.T.S

GENERAL PAVEMENT NOTE:

1. THICKNESSES SHOWN ARE MINIMUM. CONTRACTOR TO MATCH EXISTING PAVEMENT IN REPAIR AREAS.
2. ALL AGGREGATES SHALL BE CRUSHED, CARBONATE STONE (CCS) PER ODOT 703.17.
3. ALL PAVEMENT INSTALLATION/REPAIR SHALL BE WITNESSED BY THE LOCAL INSPECTOR. A PROOFROLL USING A TRI-AXLE TRUCK LOADED WITH 15 TONS OF STONE WILL BE REQUIRED FOR AREAS LARGER THAN 300 S.F.

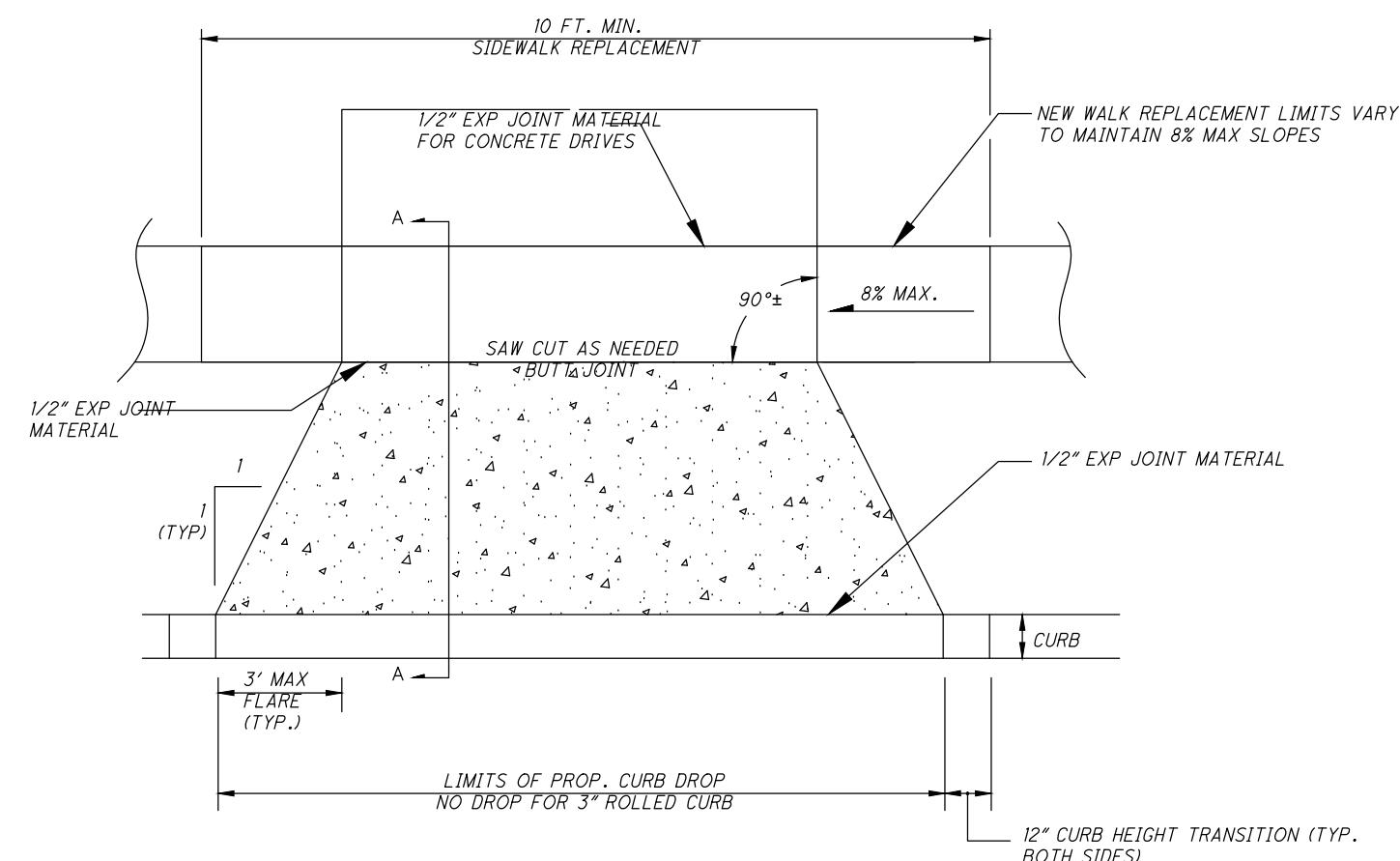
COMMERCIAL DRIVEWAY

N.T.S

DRIVEWAY DETAILS

CLEVELAND HEIGHTS

CALCULATED
JMB
CHECKED
DEN

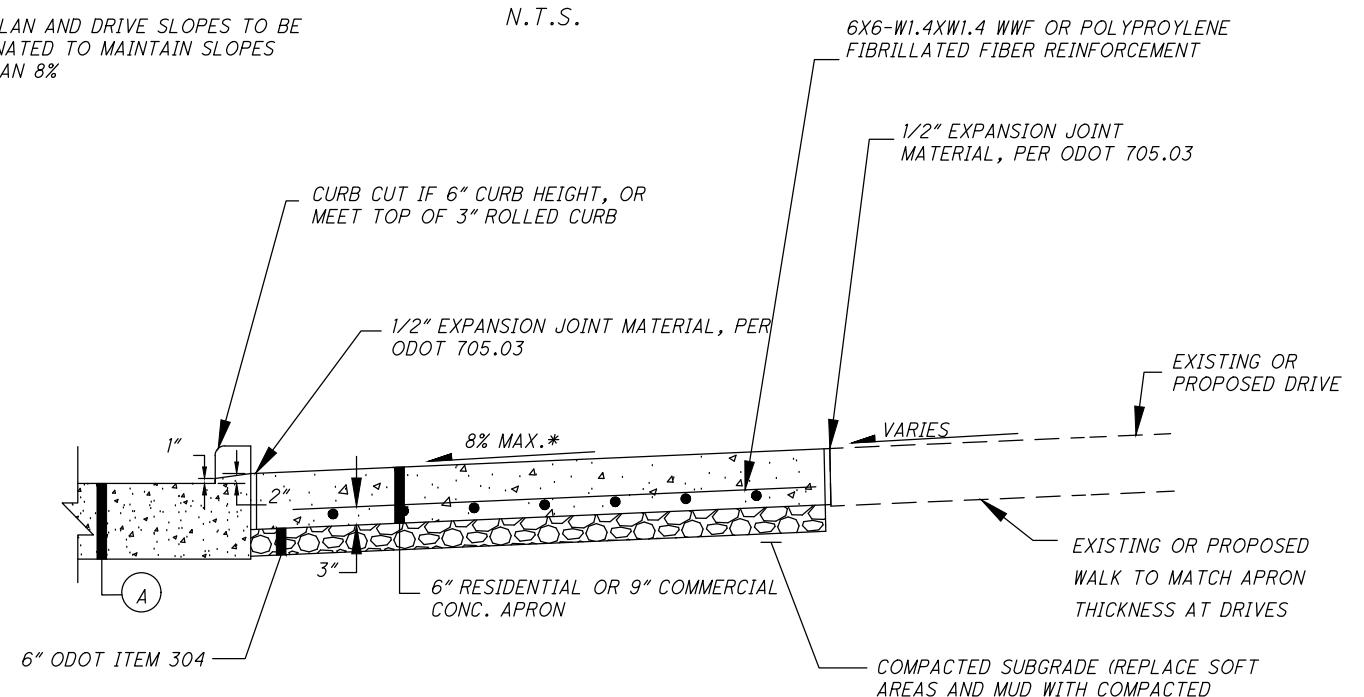


DRIVEWAY APRON FOR CURBED ROADS

*SITE PLAN AND DRIVE SLOPES TO BE COORDINATED TO MAINTAIN SLOPES LESS THAN 8%

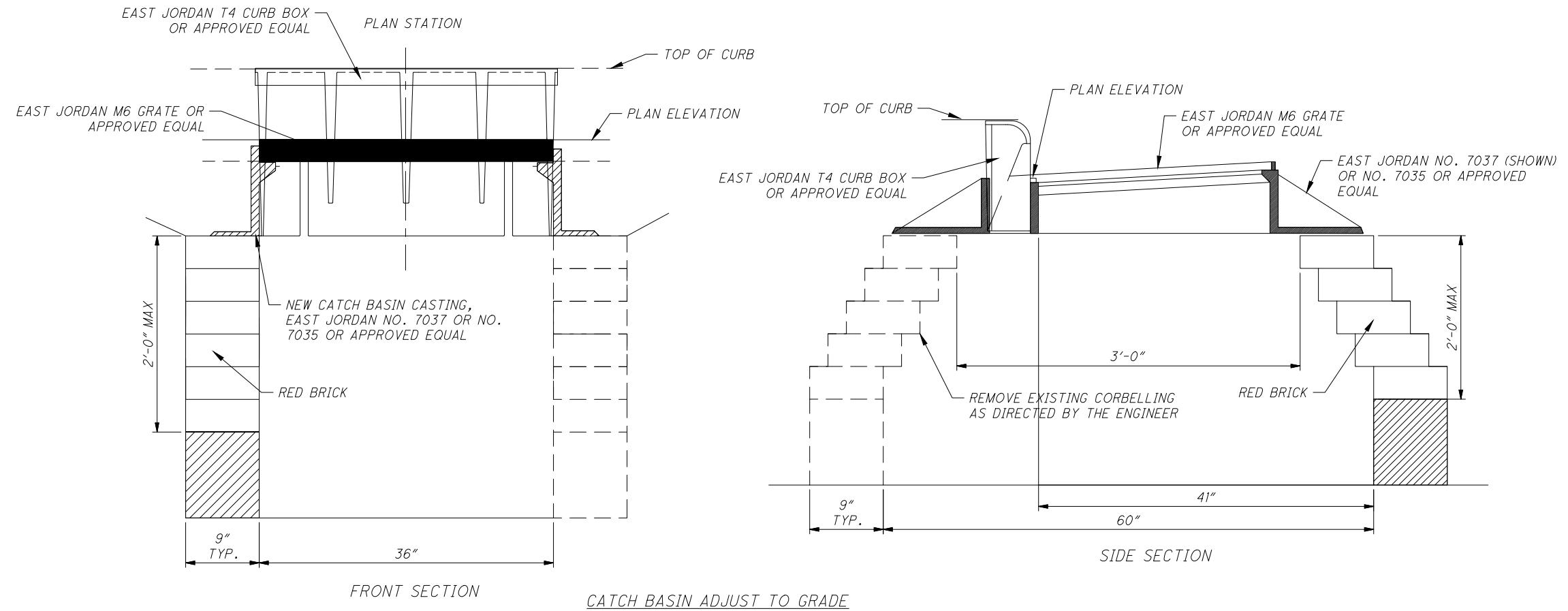
N.T.S.

6X6-WI.4XWI.4 WWF OR POLYPROPYLENE FIBRILLATED FIBER REINFORCEMENT



CURB DROP DETAIL, A-A

N.T.S.

NOTE:

BEARING AREAS OF THE FRAME AND GRATE SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT FOR ALL PORTIONS OF THE GRATE IN THE FRAME. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING AND THE GRATE SHALL SEAT IN ITS FRAME WITHOUT ROCKING. THE FRAME AND GRATE SHALL BE FITTED, MATCHED, AND MARKED BEFORE DELIVERY TO THE PROJECT.

ALL PAVEMENT, CURB, SUBBASE, SUBGRADE AND BACKFILL MATERIALS FURNISHED AND PLACED WITHIN THE BOX-OUT AREAS, IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SHALL BE INCLUDED IN THE UNIT PRICE BID, PER EACH CATCH BASIN.

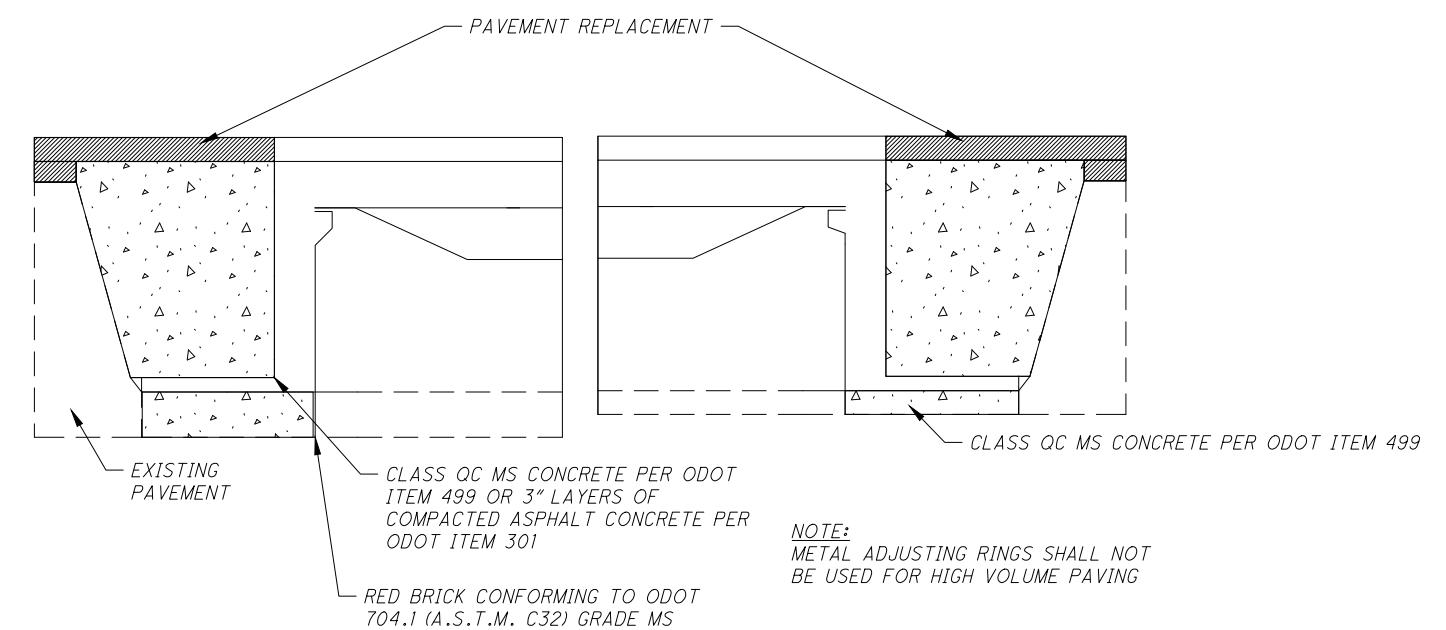
EXPANSION JOINT - EXPANSION JOINTS AND DOWELS SHALL BE OMITTED WHERE THE BOX-OUTS ABUT FULL DEPTH FLEXIBLE PAVEMENT WITHOUT COMBINATION CURB & GUTTER. WHEN BOX-OUTS ARE LOCATED TO ABUT TRANSVERSE PAVEMENT JOINTS (NORMALLY DESIRED), THE ABUTTING PAVEMENT JOINT SHALL BE THICKENED AND BUILT THROUGH THE BOX-OUT IN LIEU OF THE EXPANSION JOINT SHOWN. IN ALL OTHER CASES THEY SHALL BE LOCATED NO CLOSER THAN 5'-0" FROM THE TRANSVERSE PAVEMENT JOINTS. IN ANY CASE, DOWELS SHALL BE PROVIDED AS SHOWN. AVOID PLACING BOX-OUTS ADJACENT TO DRIVE APRONS.

CASTING REPLACEMENT - WHERE ANY CASTING REPLACEMENT IS CALLED FOR, PRIOR TO ACTUAL REPLACEMENT, THE PROJECT INSPECTOR SHALL FIELD VERIFY THE INTEGRITY OF THE EXISTING CASTING AND DIRECT THE CONTRACTOR OF WHETHER OR NOT TO REPLACE THE CASTING.

CONCRETE - ALL CONCRETE SHALL BE CLASS QC MS (4000 PSI)

BRICK

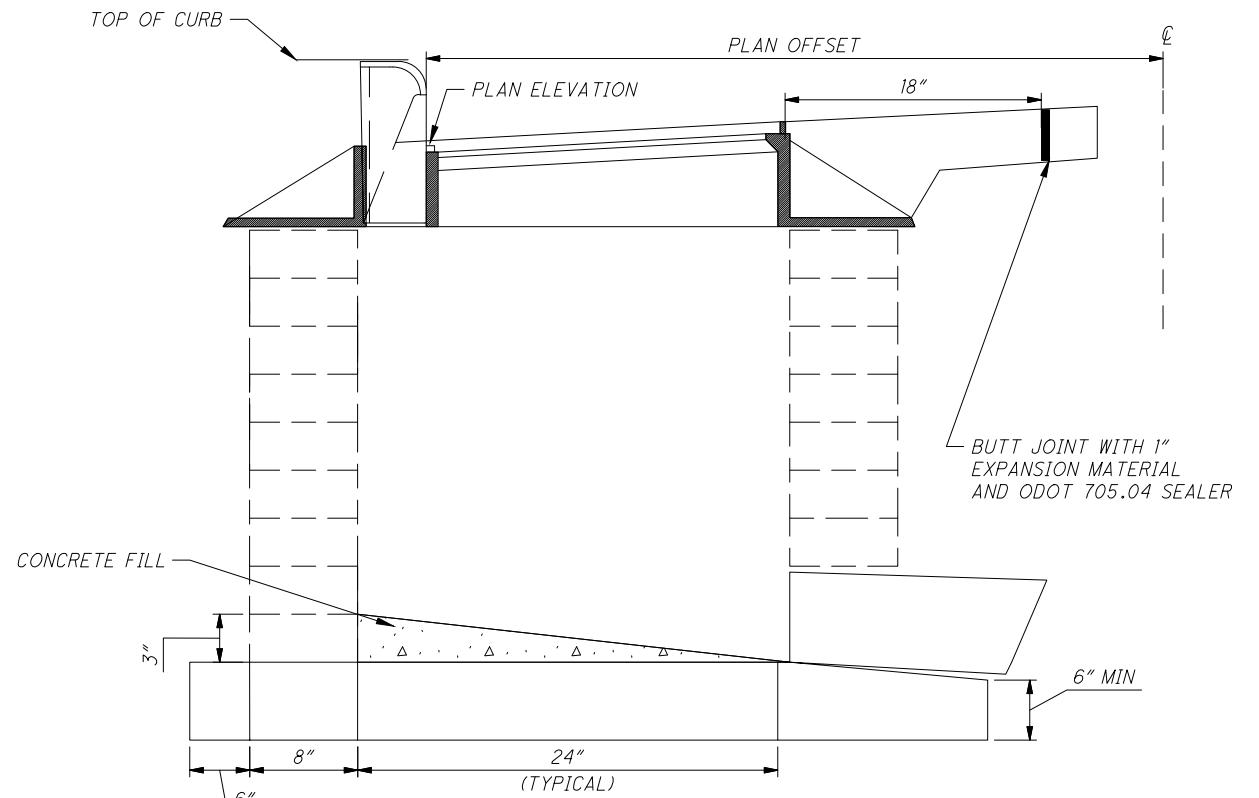
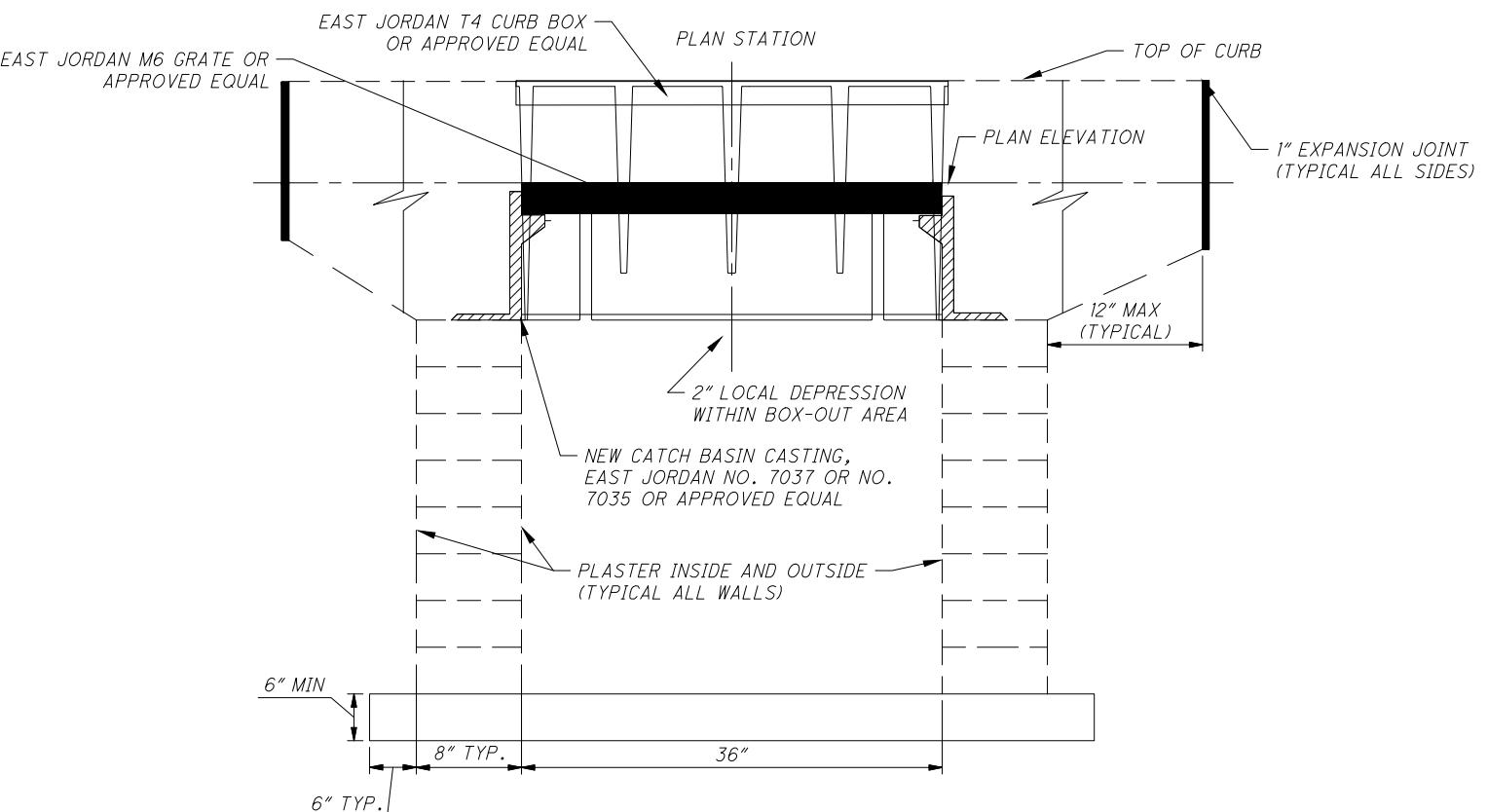
ALL BRICK SHALL BE RED CLAY OR SHALE BRICK CONFORMING TO ODOT ITEM 704.1 (A.S.T.M. C 32) GRADE MS

NOTE:

METAL ADJUSTING RINGS SHALL NOT BE USED FOR HIGH VOLUME PAVING

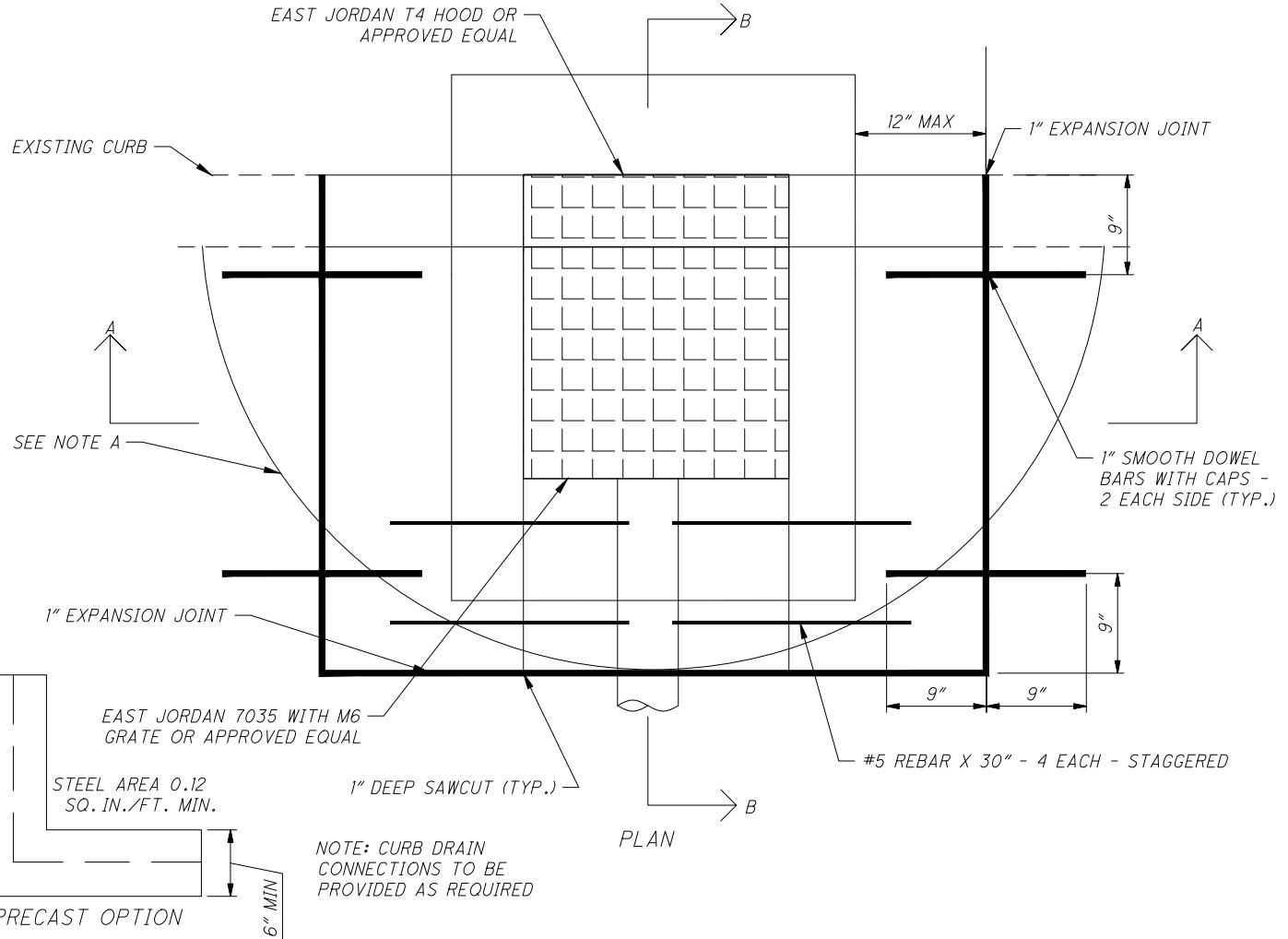
NOTE:
WHEN MANHOLE CASTING REPLACEMENT IS CALLED FOR: CONTRACTOR TO USE E.J.I.W. 1710 CASTING WITH SOLID COVER OR APPROVED EQUAL

MANHOLE ADJUST TO GRADE



SECTION A-A

SECTION B - B

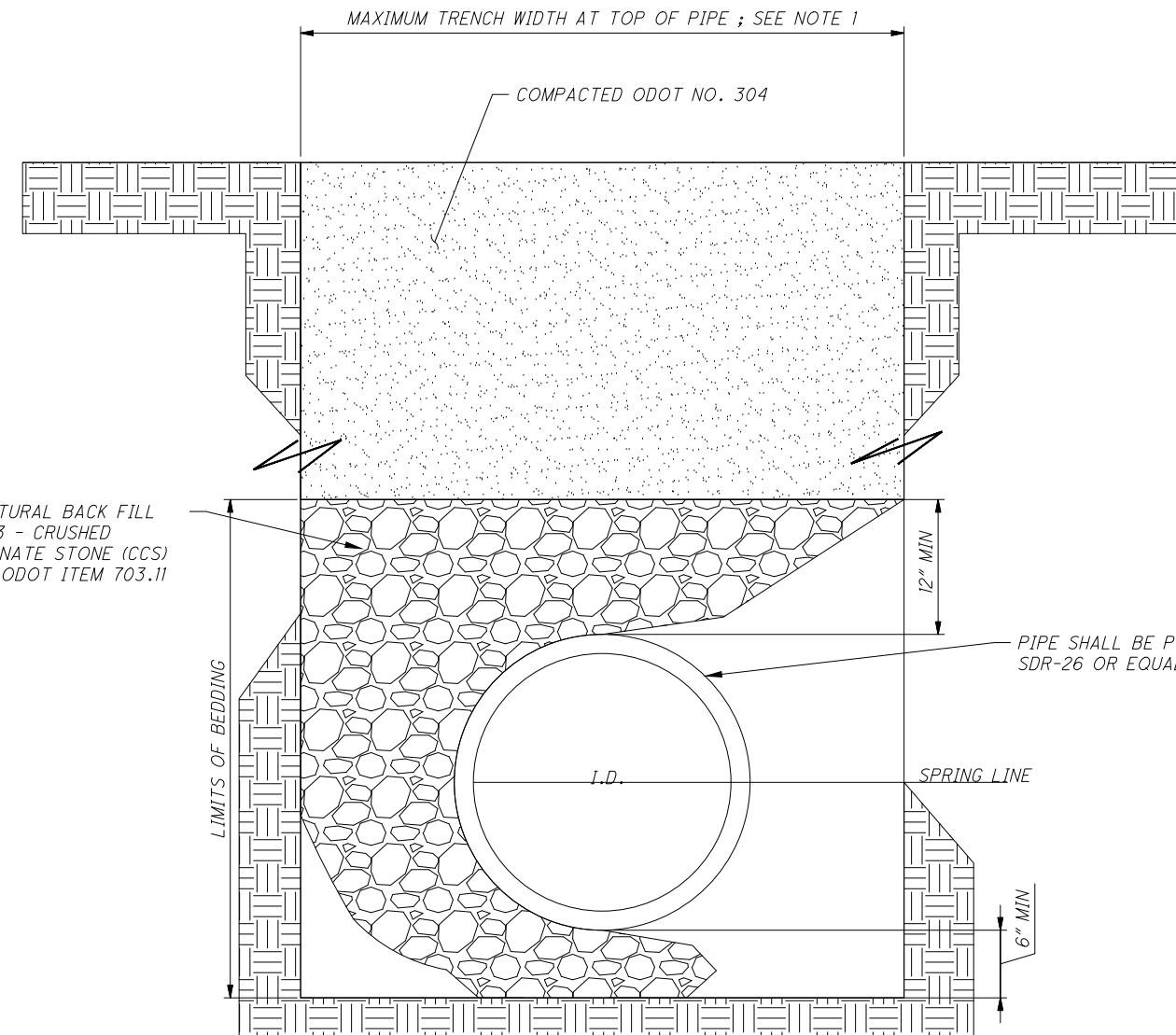


NOTE A:

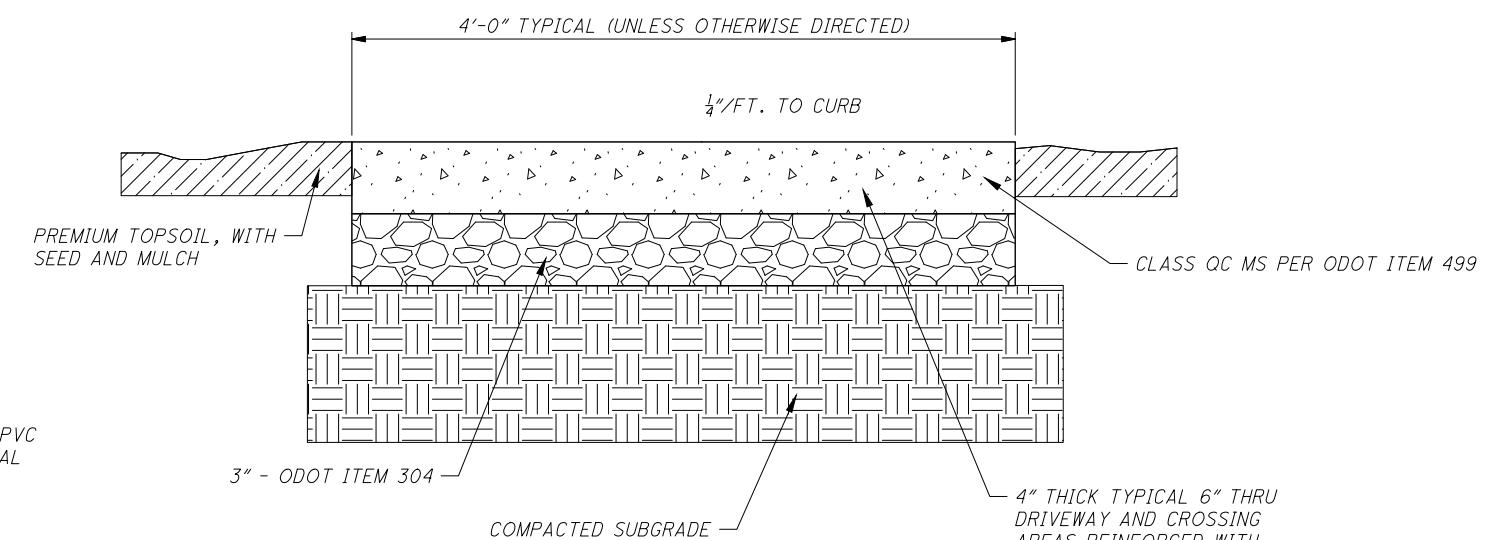
ALTERNATE INLET BOX-OUT TO BE USED WHERE RECTANGULAR BOX-OUT DOES NOT FIT PAVEMENT JOINT PATTERN OR WHERE DIRECTED BY ENGINEER. JOINT TO BE A SMOOTH BUTT JOINT WITH $1\frac{1}{2}$ EXPANSION MATERIAL. DELETE SMOOTH DOWEL BARS AND CAPS. DOWEL BARS SHALL BE $12\frac{1}{2}$ TO $24\frac{1}{2}$, AS DIRECTED BY THE ENGINEER

GENERAL NOTES

1. ALL WORK TO CONFORM TO ODOT ITEM 611
2. ALL BRICK SHALL BE CLAY OR SHALE BRICK CONFORMING TO ODOT ITEM 704.01 (ASTM C32, GRADE MS), UNLESS APPROVED IN WRITING BY THE ENGINEER
3. IF PRECAST UNITS ARE USED, THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL, PRECAST UNITS SHALL CONFORM TO ODOT ITEM 706.13
4. ALL CONCRETE SHALL CONFORM TO ODOT 499, CLASS QC MS (4000 PSI)
5. THE ENTIRE AREA AROUND THE BASIN SHALL BE BACKFILLED WITH ODOT ITEM 304.02, MECHANICALLY COMPAKTED IN 4" LIFTS
6. PRECAST UNITS SHALL BE SET ON A 6" STONE BASE



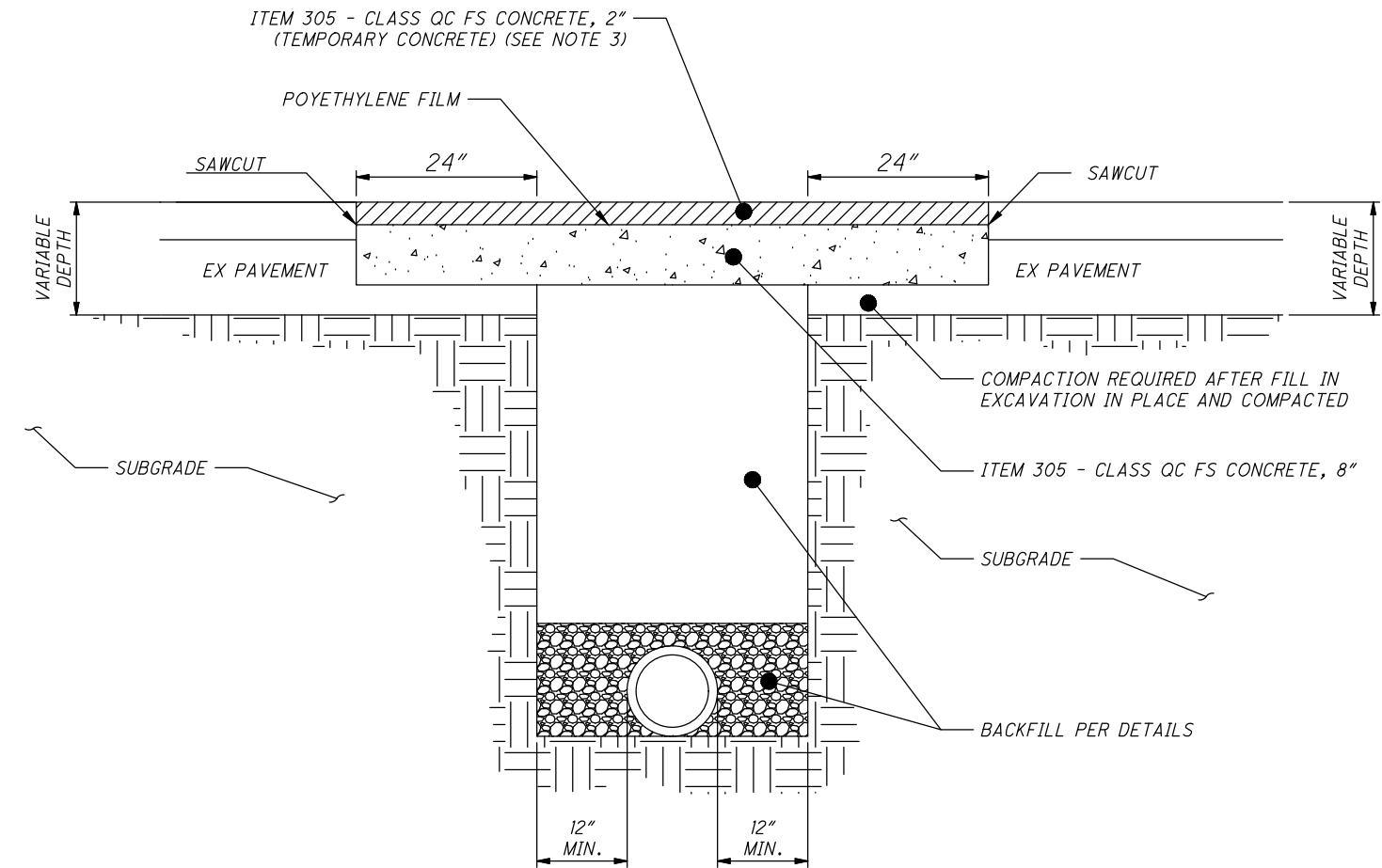
TRENCH AND BEDDING DETAIL
TYPE "B"



TYPICAL SIDEWALK DETAIL

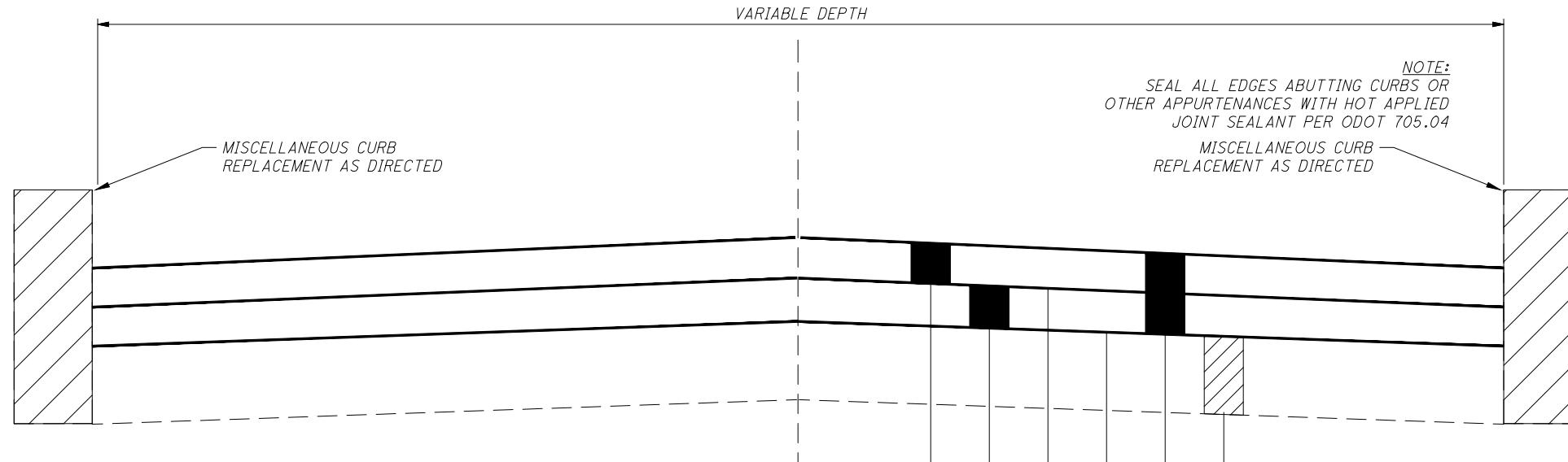
NOTES:

1. MAXIMUM TRENCH AT TOP OF PIPE SHALL BE O.D.+24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D.; O.D.+30" FOR PIPE LARGER THAN 24" I.D. TO 54" I.D.; AND O.D.+48" FOR PIPE SIZES 60" AND OVER.
2. ALL TRENCH EXCAVATION SHALL CONFORM TO THE RULES AND REGULATIONS OF THE OHIO STATE INDUSTRIAL COMMISSION (OSIC) AND THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

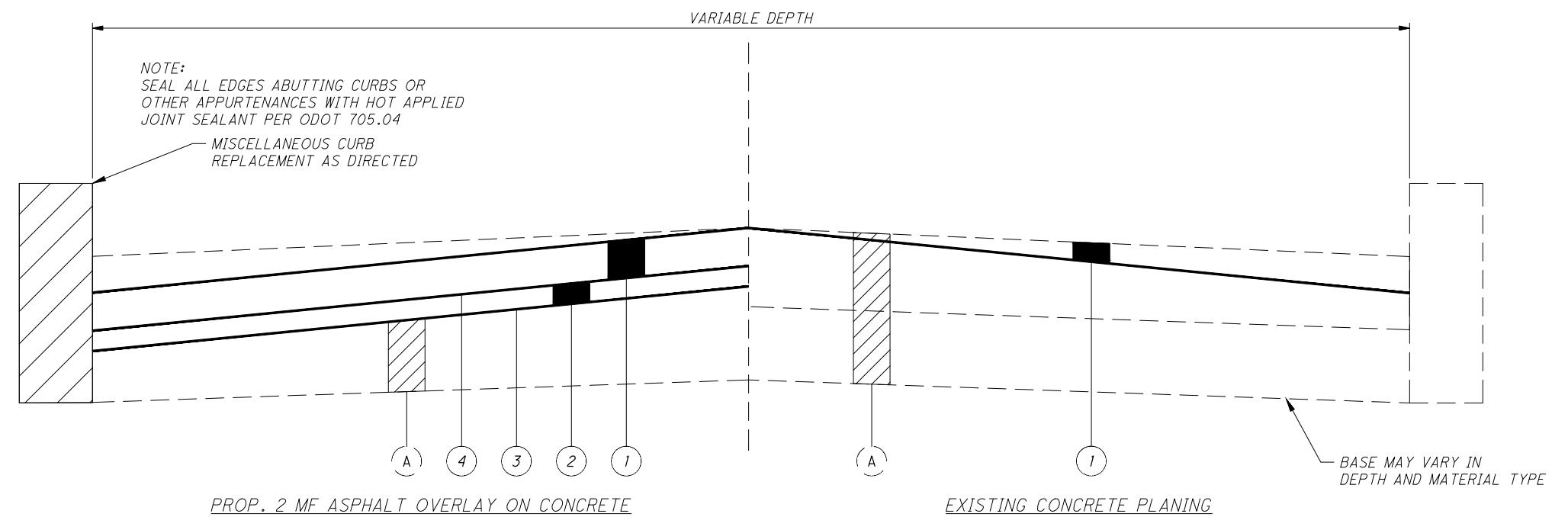


1. WHEN WEATHER PERMITS, REMOVE TEMPORARY CONCRETE AND POLYETHYLENE FILM AND PLACE ITEM 441, TYPE 1, SURFACE COURSE.
2. SEAL ALL FINAL PAVEMENT JOINTS WITH HOT APPLIED JOINT SEALANT PER ODOT 705.04
3. PATCH SMOOTHNESS SHALL CONFORM WITH 401.19 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION). THE REQUIRED SMOOTHNESS OF ASPHALT SURFACE COURSE CANNOT EXCEED $\frac{1}{8}$ INCH FROM THE TESTING EDGE OF A 10 FOOT STRAIGHTEDGE. THE CONTRACTOR IS REQUIRED TO PROVIDE A STRAIGHT EDGE THAT IS SATISFACTORY TO THE ENGINEER.

COLD WEATHER SURFACE RESTORATION DETAIL
N.T.S.

LEGEND

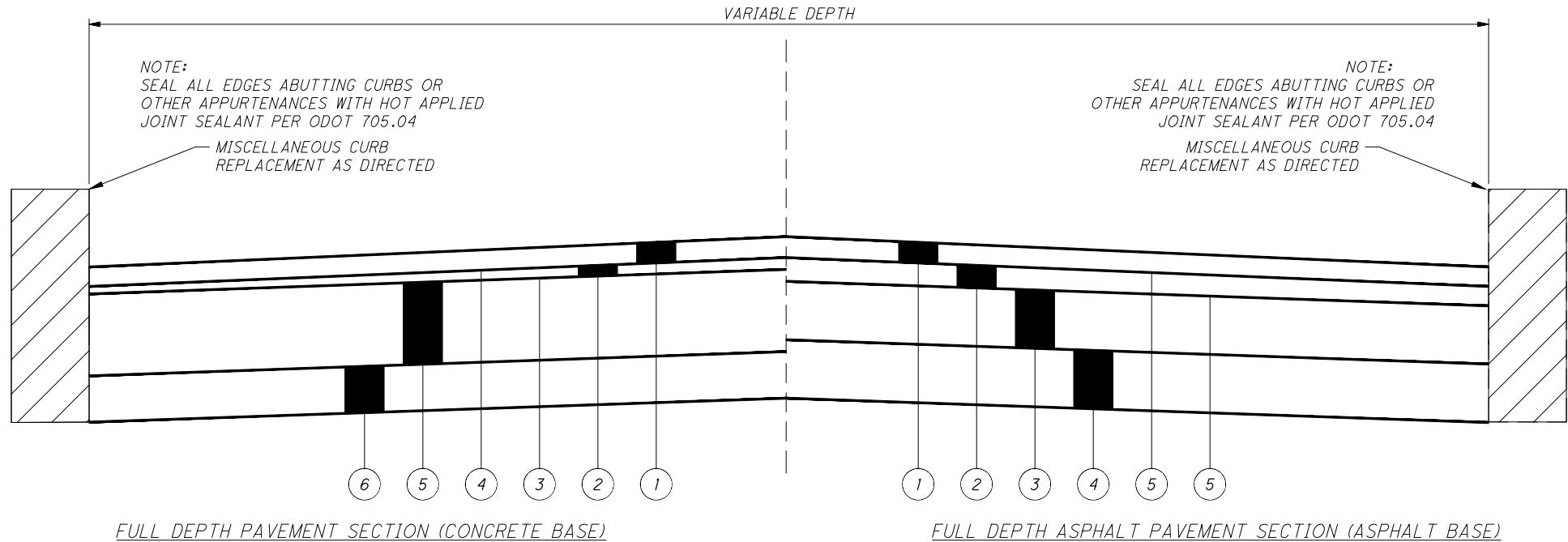
- (1) ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
- (2) ITEM 441 - 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22
- (3) ITEM 407 - TACK COAT
- (4) ITEM 254 - 3" PAVEMENT PLANING, ASPHALT CONCRETE
- (A) EXISTING ASPHALT ROAD

LEGEND

- ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (1)
- ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22, AS DIRECTED (2)
- ITEM 407 - TACK COAT (3)
- FULL WIDTH PAVEMENT REINFORCING FABRIC, FIBERGLASS/POLYESTER BLEND, AND A.C. TACK (4)
- EXISTING CONCRETE ROAD (A)

LEGEND

- (1) ITEM 254 - RIGID PAVEMENT PLANING 0" AT CROWN TO 2" AT THE GUTTER, AS DIRECTED
- (A) EXISTING CONCRETE ROAD



LEGEND

ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 1

ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22, AS DIRECTED 2

ITEM 407 - TACK COAT 3

FULL WIDTH PAVEMENT REINFORCING FABRIC, FIBERGLASS/POLYESTER BLEND, AND A.C. TACK 4

ITEM 305 - 8" CONCRETE BASE 5

ITEM 304 - 3" AGGREGATE BASE 6

LEGEND

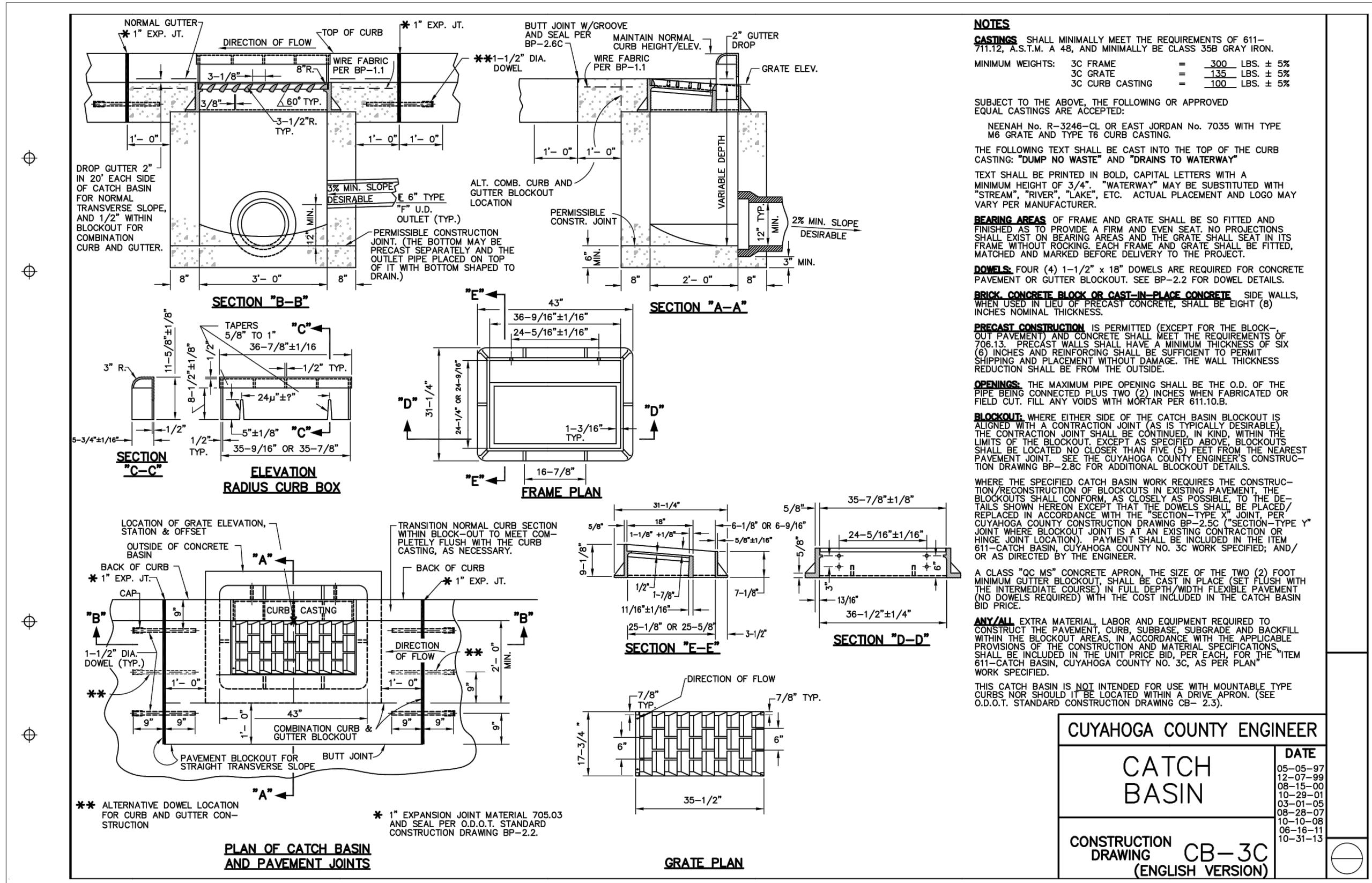
1 ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22

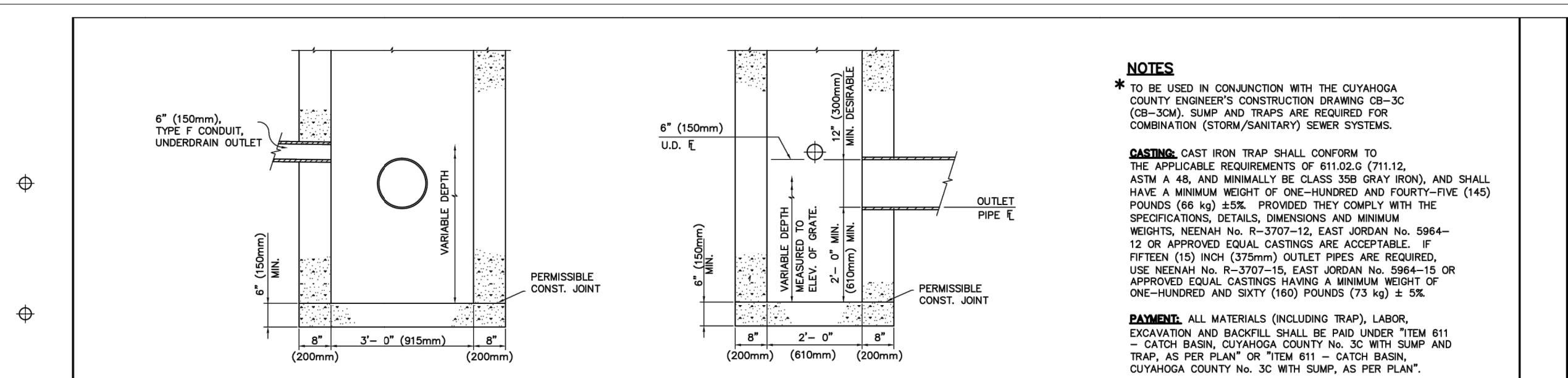
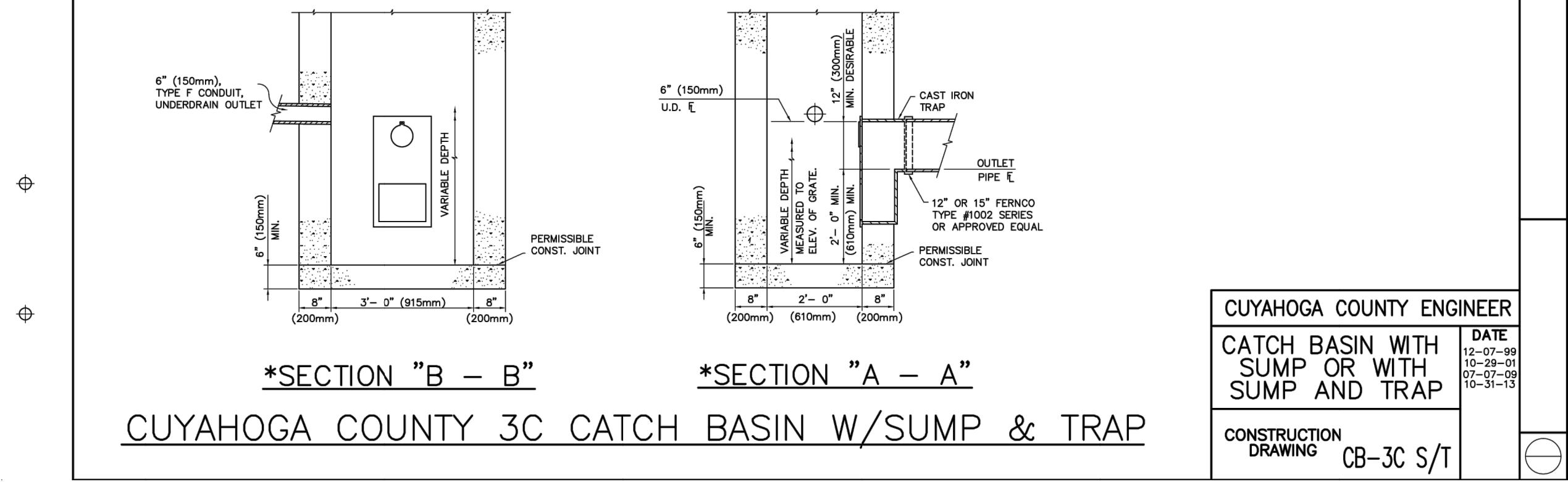
2 ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22

3 ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22

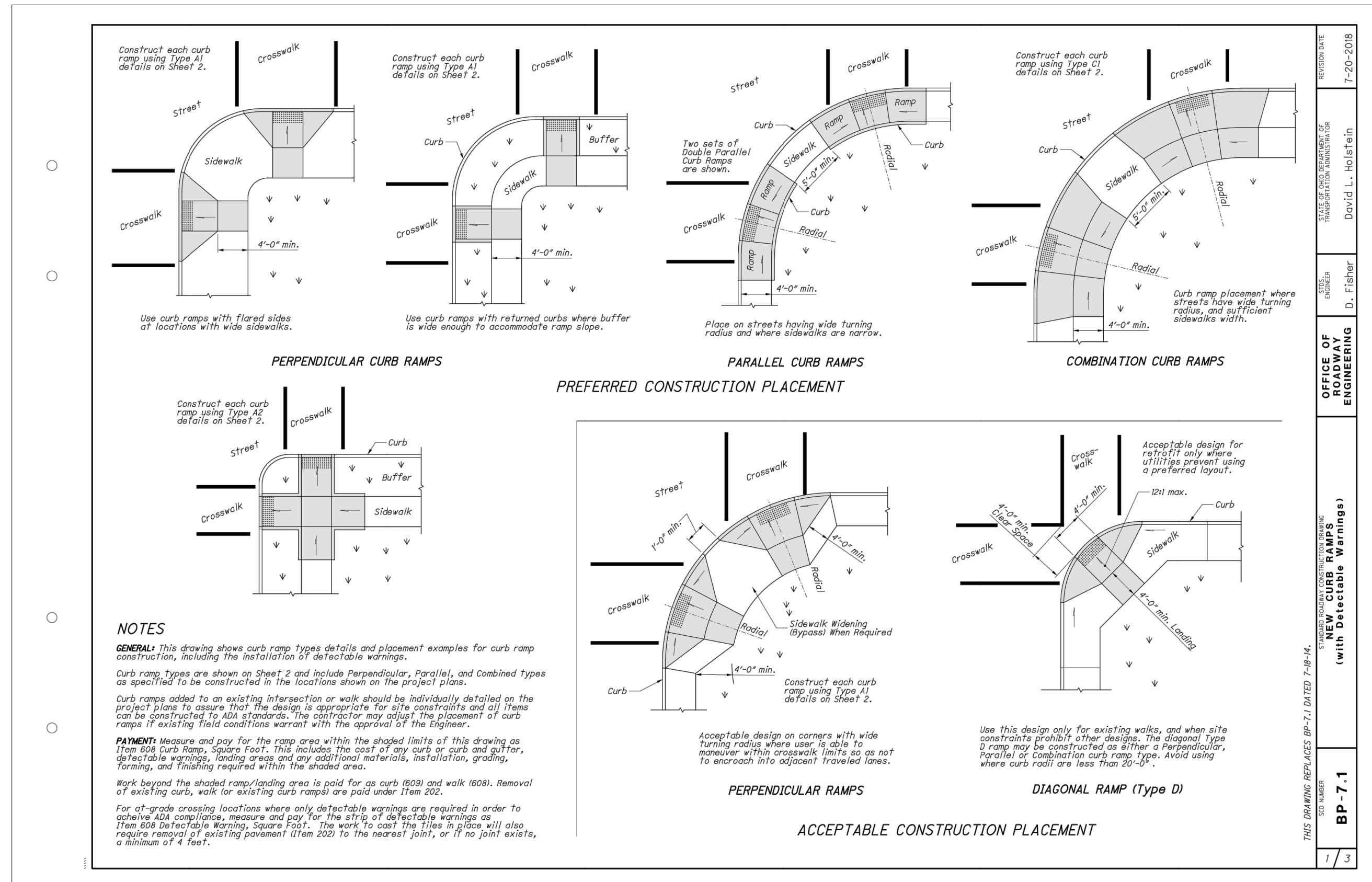
4 ITEM 304 - 3" AGGREGATE BASE

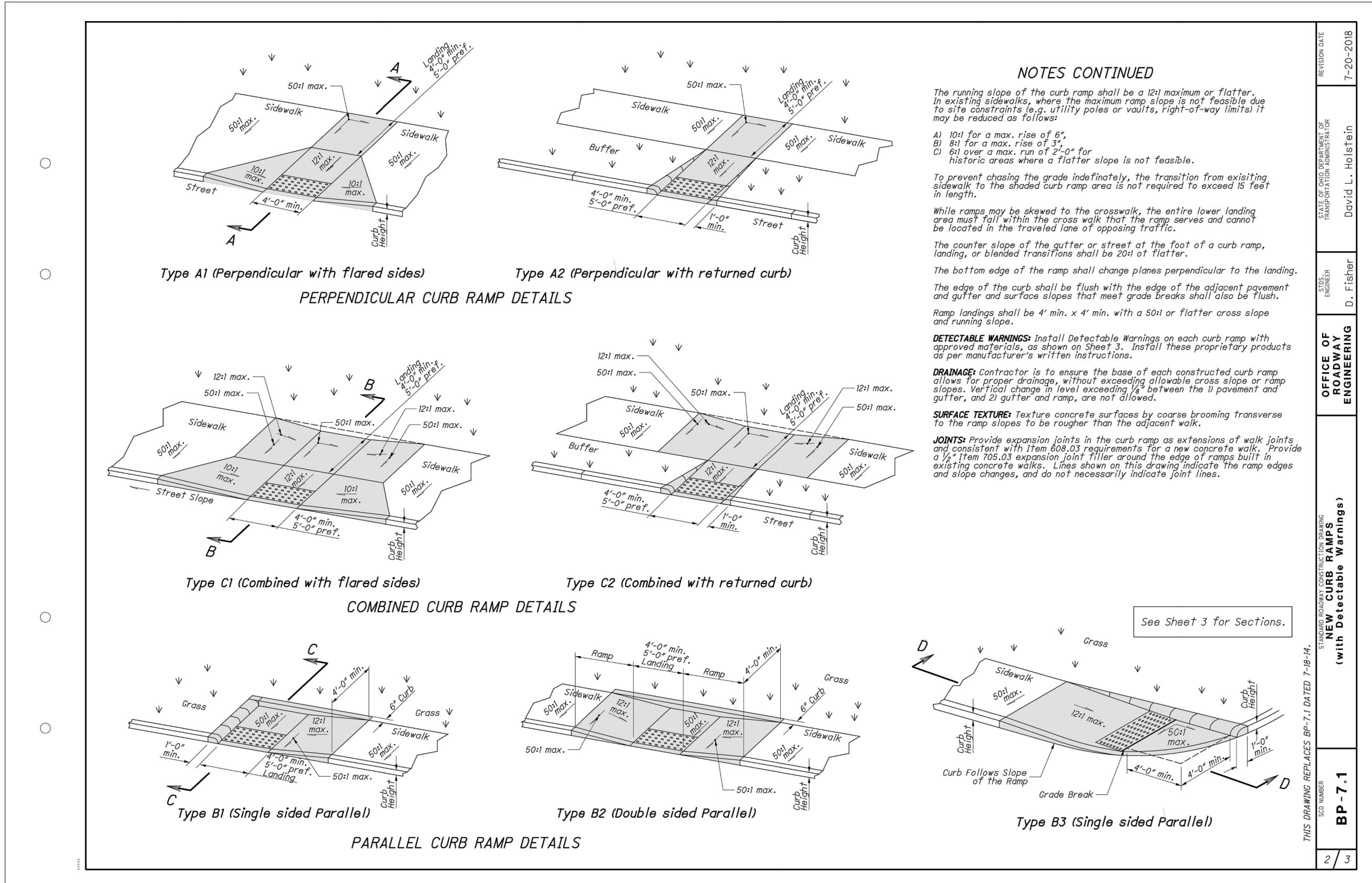
5 ITEM 407 - TACK COAT

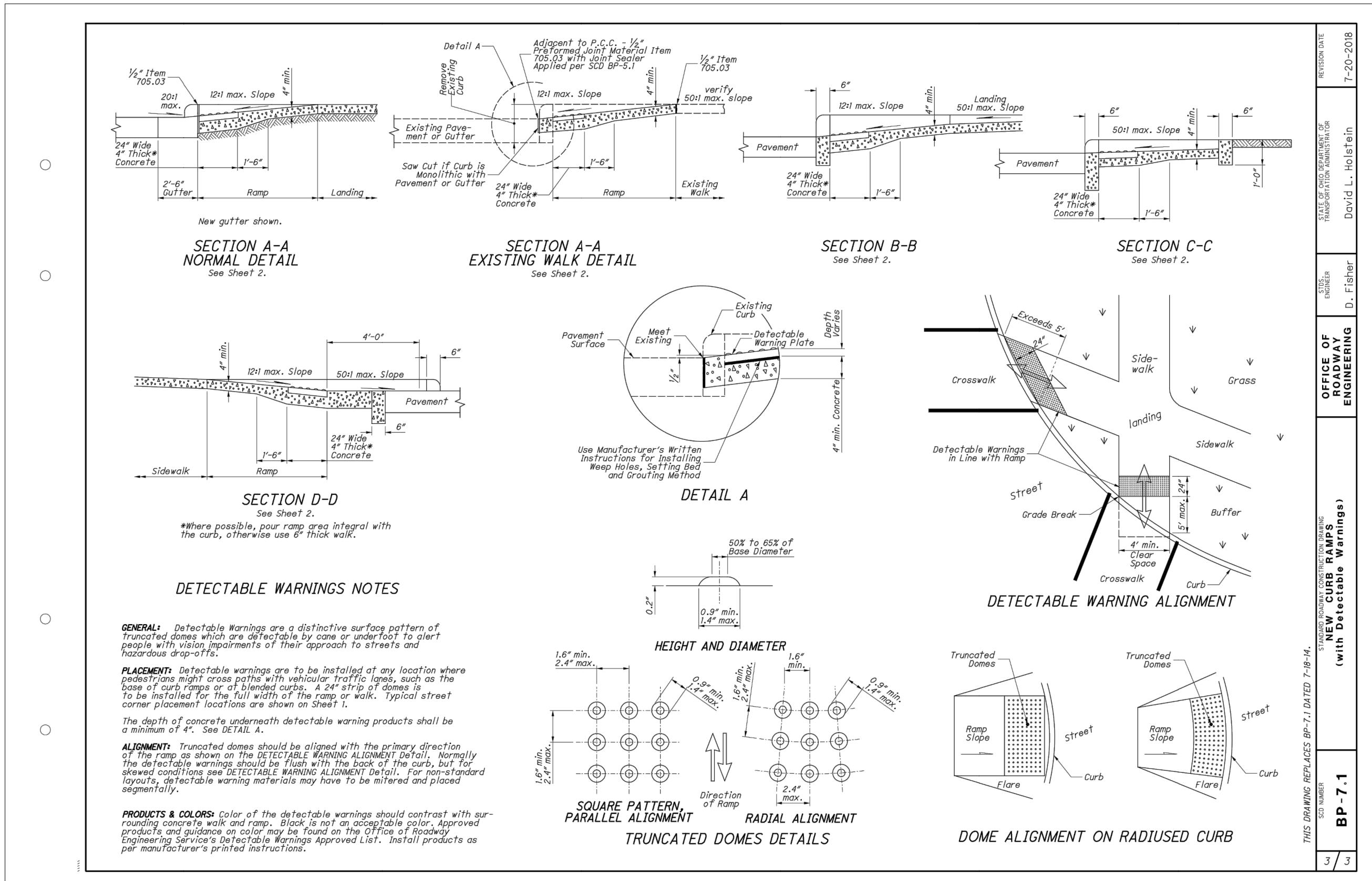


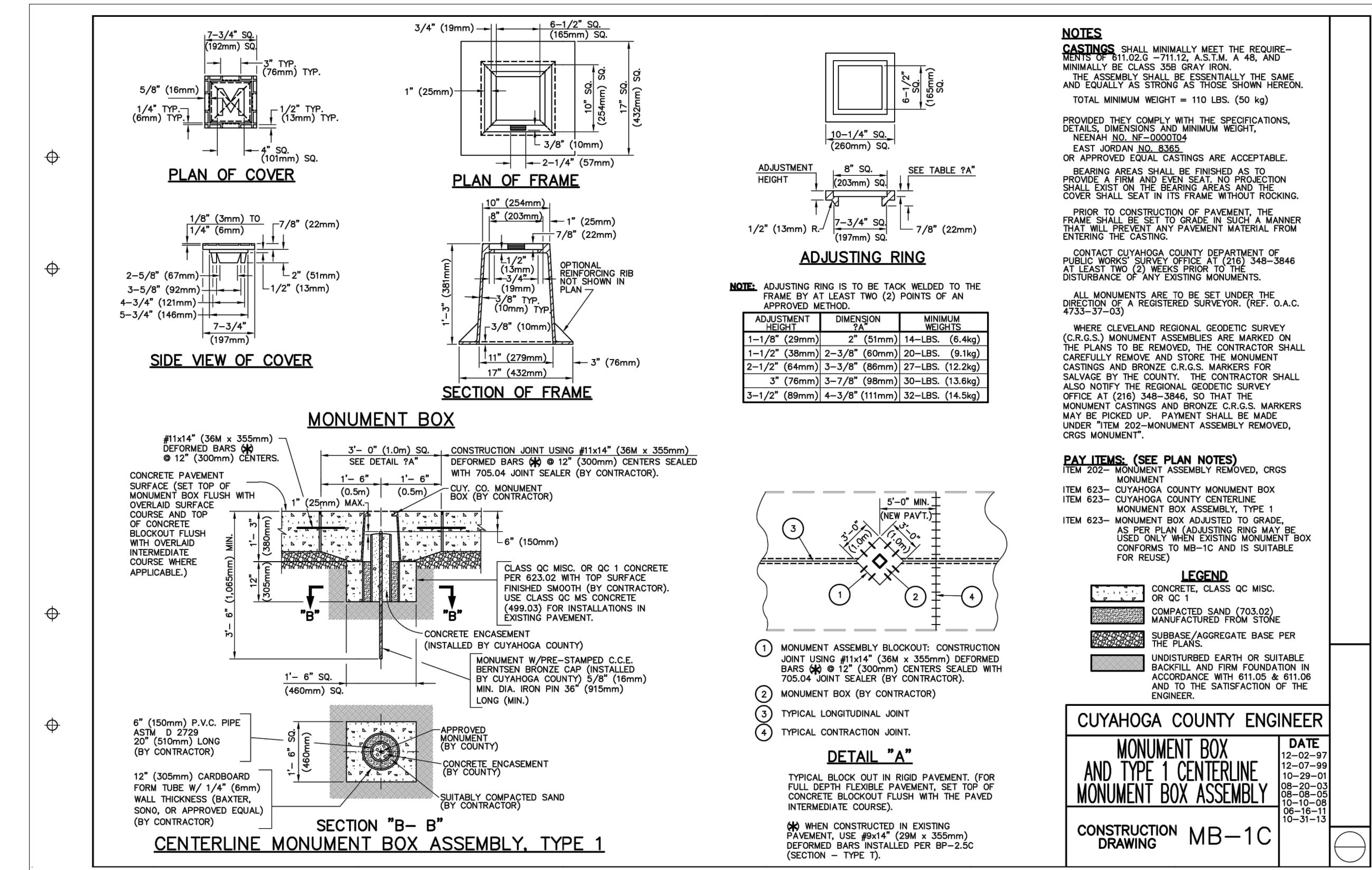
***SECTION "B - B"*****SECTION "A - A"****CUYAHOGA COUNTY 3C CATCH BASIN W/SUMP*****SECTION "B - B"*****SECTION "A - A"****CUYAHOGA COUNTY 3C CATCH BASIN W/SUMP & TRAP**

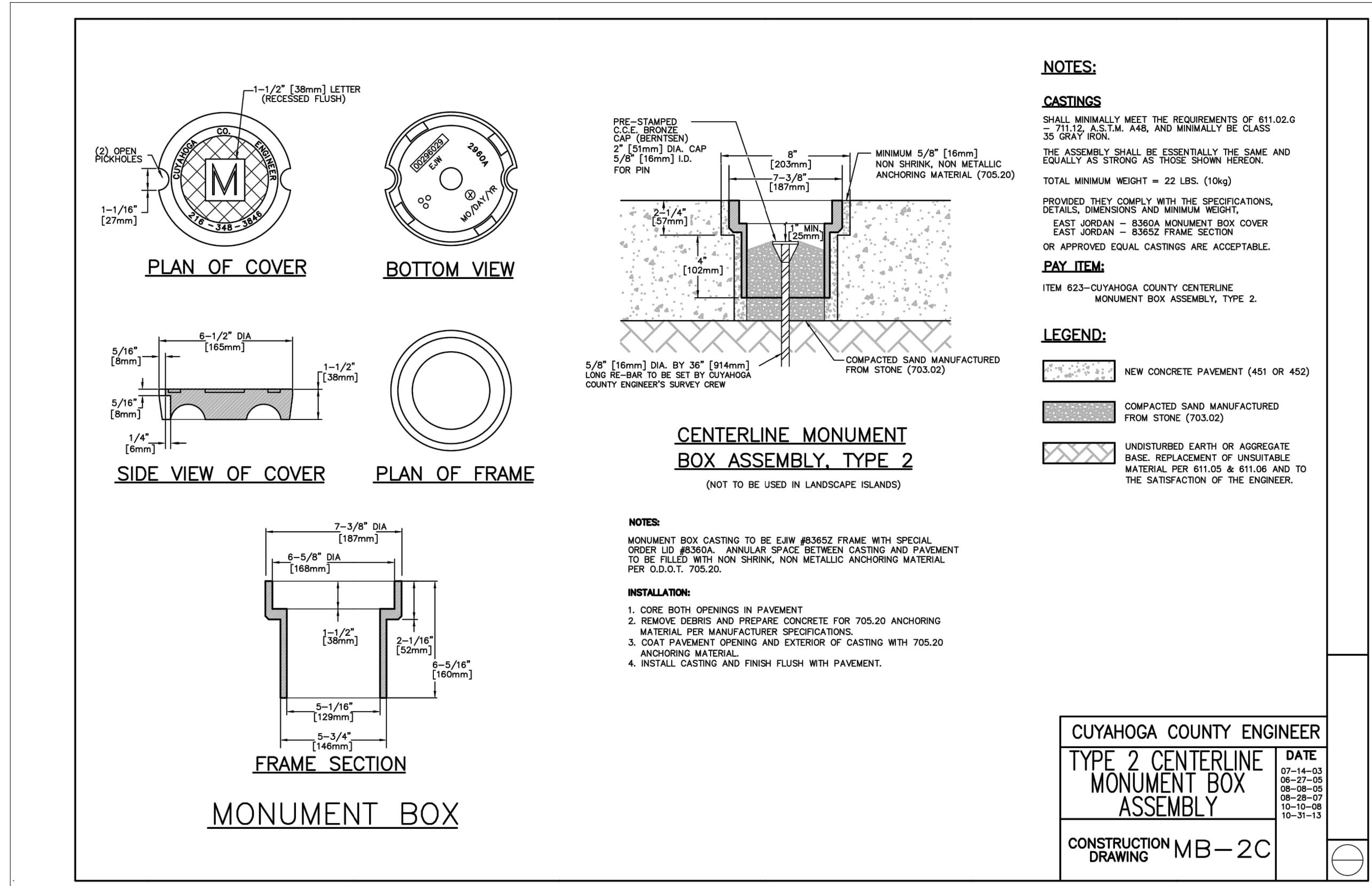
CUYAHOGA COUNTY ENGINEER	
CATCH BASIN WITH SUMP OR WITH SUMP AND TRAP	
CONSTRUCTION DRAWING	CB-3C S/T
DATE	
12-07-99 10-29-01 07-07-09 10-31-13	

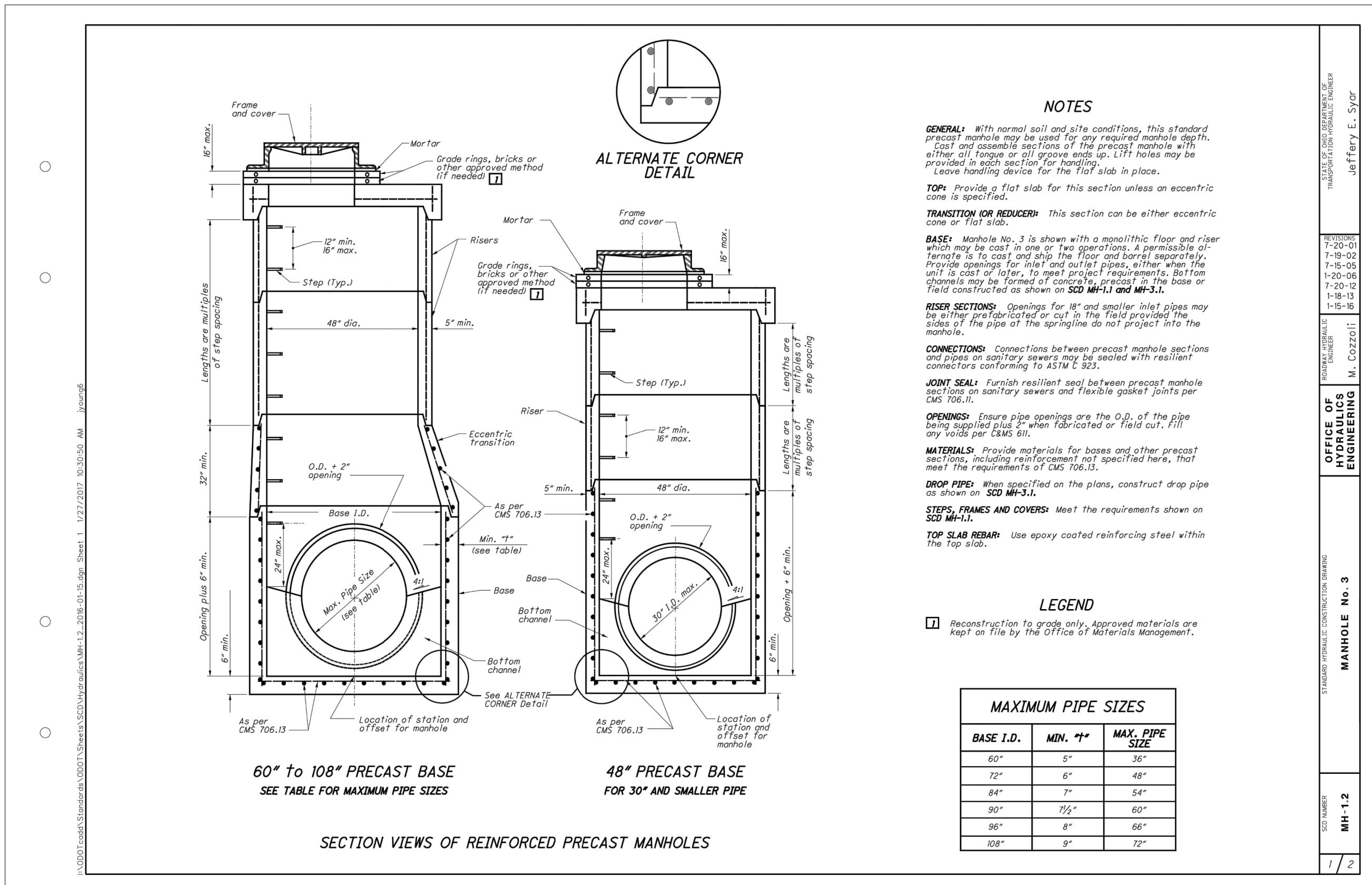












STATE OF OHIO DEPARTMENT OF
TRANSPORTATION HYDRAULIC ENGINEER
Jeffrey E. Syar

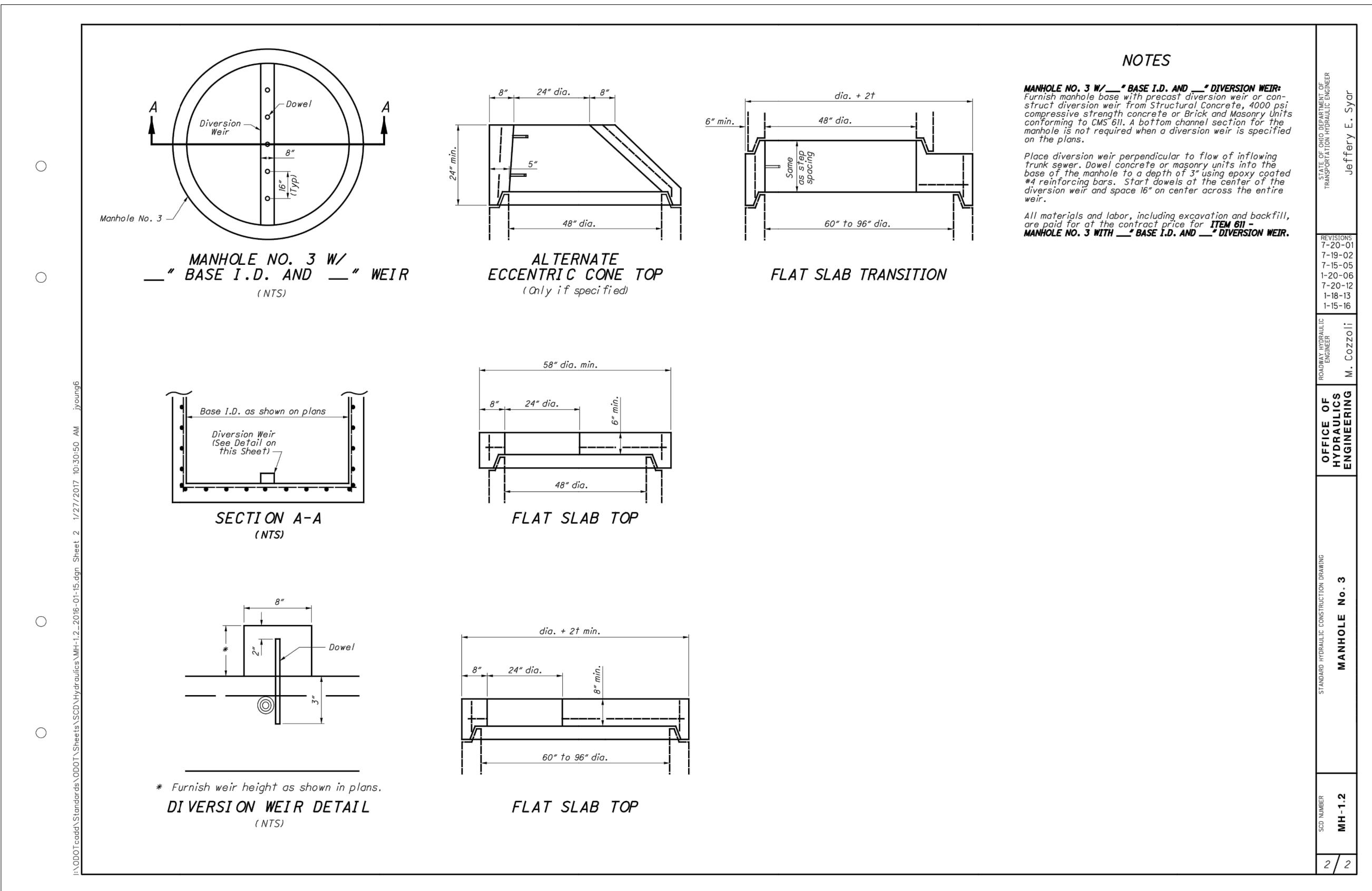
REVISIONS
7-20-01
7-19-02
7-15-05
1-20-06
7-20-12
1-18-13
1-15-16

STANDARD HYDRAULIC CONSTRUCTION DRAWING
MANHOLE No. 3
OFFICE OF HYDRAULICS ENGINEERING M. Cozzoli

SCD NUMBER

MH-1.2

1 / 2



STATE OF OHIO DEPARTMENT OF
TRANSPORTATION HYDRAULIC ENGINEER
Jeffery E. Syar

REVISIONS
7-20-01
7-19-02
7-15-05
1-20-06
7-20-12
1-18-13
1-15-16

OFFICE OF
ROADWAY HYDRAULIC
ENGINEER
M. Cozzoli

STANDARD HYDRAULIC CONSTRUCTION DRAWING
MANHOLE No. 3

SCD NUMBER
MH-1.2

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