

GRADING NOTES

- 1) A Geotechnical Engineer shall be employed by the owner and be an active member of the Missouri Engineering Council...
2) All grades shall be within 0.2 feet of those shown on the Grading Plan...
3) Ground adjoining development sites shall be protected from accelerated and increased surface water, silt and other effects of erosion...
4) Soil walls in the bottom and banks of any existing or former pond sites or tributaries or any sediment basins or traps shall be removed, spread out and permitted to dry sufficiently to be used as fill...
5) Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be properly disposed of off-site...
6) All trash and debris on site, either existing or from construction, must be removed and properly disposed off-site...
7) All wells and/or springs which may exist on this property shall be located and sealed in a manner acceptable to the City of Dardenne Prairie...
8) Temporary access shall be provided for all construction sites prior to any land disturbance to minimize earth damage and mud deposits on the streets...
9) No land clearing, construction or other associated activities are permitted that cause mud, soil, gravel, rock, stone, concrete, building materials or other materials to be deposited on public streets...
10) Water runoff from parking lots, paved sites, buildings, etc., above the area to be developed shall be directed to debris or sediment basins, diversions, concrete gutters and/or underground outlet systems...
11) All filled areas, including trench backfills, under buildings, proposed storm and sanitary sewer lines, proposed roads and/or paved areas, shall be compacted to 90% of maximum density as determined by the Modified AASHTO T-180 Compaction Test...
12) All excavations, grading or filling shall have a finished grade not to exceed 2' above 1:1 slope (33%)...
13) Temporary siltation control measures (structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site...
14) Upon completion of storm sewers, siltation control shall be provided around all open sewer inlets and shall remain until the disturbed drainage areas have been properly stabilized...
15) All Erosion Control Systems shall be inspected and necessary corrections made within 24 hours of any rainstorm resulting in one-half inch of rain or more...
16) The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met...
17) Developer must supply City construction inspectors with soil reports prior to or during site soil testing...
18) Ensure graded areas to remain bare for 2 weeks are seeded and mulched...
19) Fill and backfill should be compacted to the criteria specified in the following table:

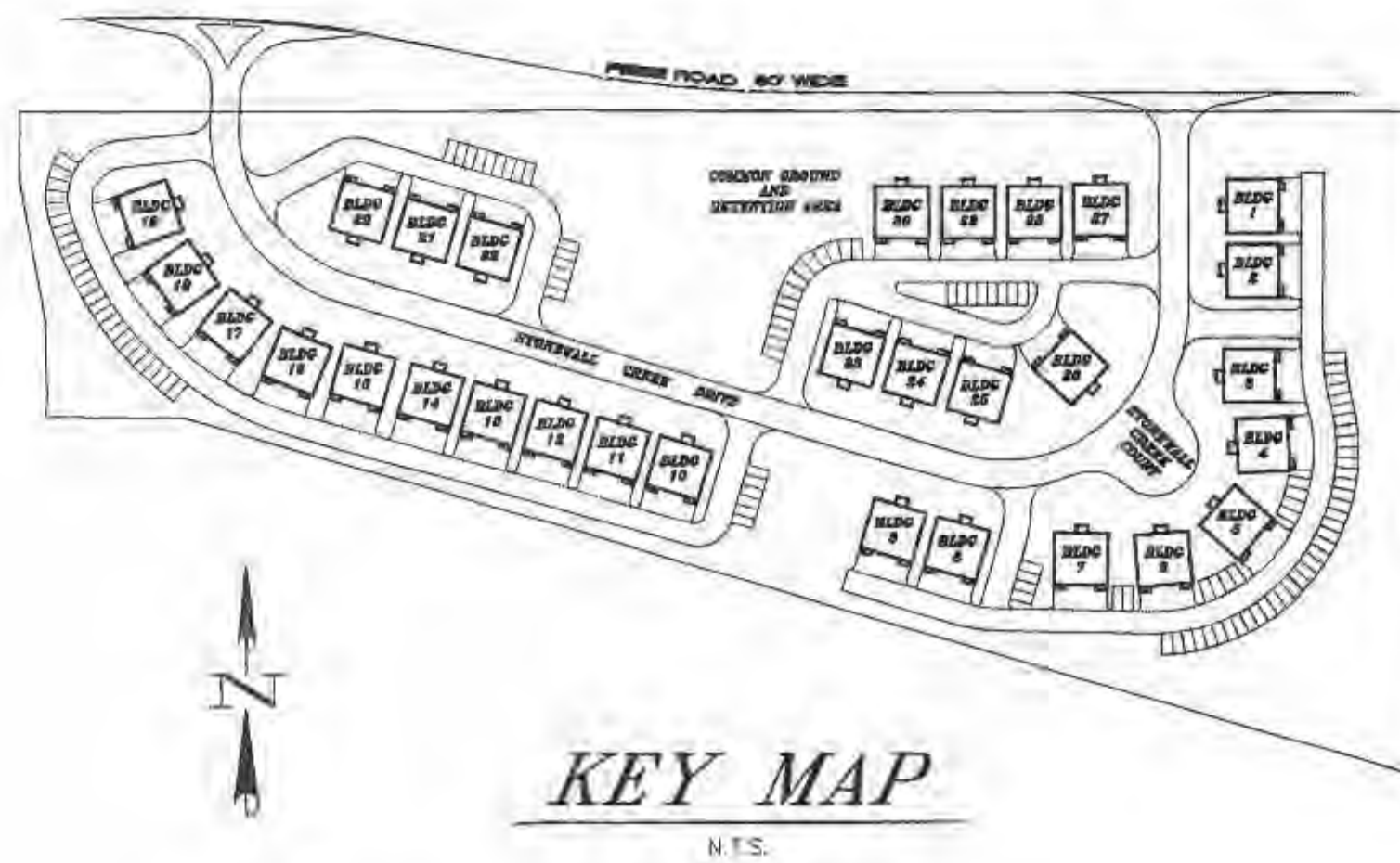
Table with 3 columns: CATEGORY, MINIMUM PERCENT COMPACTION. Rows include Fill in building areas below footings (90%), Fill under drives, walks, and pavement (90%), Fill other than building areas (85%), Natural subgrade (85%), Pavement subgrade (90%), Pavement base course (90%).

Measured as a percent of the maximum dry density as determined by modified Proctor Test (ASTM-D-1557). Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet. 20) The sediment control plan must be implemented before grading begins. No graded area is to remain without at least 75 percent of vegetative ground cover for more than 30 days without being seeded and mulched... 21) All lots shall be seeded and mulched at the rates defined in Appendix A or seeded before an occupancy permit shall be issued except that a temporary occupancy permit may be issued by the Building Department in cases of undue hardship because of unfavorable ground conditions.

GENERAL NOTES

- 1) Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only...
2) All utilities shown are existing unless otherwise noted. All new utilities shall be located underground...
3) All construction methods and practices shall conform with current O.S.H.A. Standards...
4) All construction and materials shall conform to the current construction standards of the City of Dardenne Prairie...
5) The City of Dardenne Prairie shall be notified 48 hours prior to construction for coordination and inspection...
6) The St. Charles County Public Water Supply District No. 2 shall be notified at least 48 hours prior to construction for coordination of inspection...
7) All necessary utilities (public and private) will be available, functioning, and usable at the time any stage of the project or the total project is ready for occupancy...
8) Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer...
9) Maintenance and upkeep of the common ground area shall be the responsibility of the developer and/or successors...
10) A 20' building line shall be established along all Public Rights-Of-Ways...
11) The contractor shall assume complete responsibility for controlling all siltation and erosion of the project area...
12) No area shall be cleared without the permission of the Project Engineer...
13) All soil tests shall be verified by a Soils Engineer concurrent with the grading and backfilling operations...
14) All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre-construction conditions...
15) All paving shall be in accordance with St. Charles County standards and specifications except as modified by the City of Dardenne Prairie ordinances...
16) A Special Use Permit shall be obtained from The City of Lake Saint Louis before any work is performed within Fiese Road right-of-way...
17) All dimensions are to back of curb unless otherwise noted...
18) Sidewalk and sidewalk curb ramps shall be constructed in accordance with the current approved "Americans with Disabilities Act Accessibility Guidelines" (A.S.A.A.S.). If any conflict occurs between the above information and the plans the A.D.A.A.G. shall take precedence and the contractor prior to any construction shall notify the Project Engineer...
19) Driveway locations shall not interfere with the sidewalk curb ramps...
20) All sanitary sewer construction and materials shall conform to the current construction standards of the St. Charles County Public Water Supply District No. 2...
21) Existing sanitary sewer service shall not be interrupted...
22) Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary or storm sewers, including house laterals...
23) All manhole tops & flowlines built without elevations furnished by the Engineer will be the responsibility of the sewer contractor...
24) 8" P.V.C. sanitary sewer pipe shall meet the following standards. A.S.T.M.-D-3034 SDR-35, with wall thickness compression joint A.S.T.M.-D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures...
25) All P.V.C. sanitary sewer is to be SDR-35 or equal with clean 1/2" to 1" granular stone bedding uniformly graded...
26) Pre-manufactured adapters shall be used at all PVC to DIP connections...
27) All sanitary manholes shall be waterproofed on the exterior in accordance with Missouri Department of Natural Resources specifications 10 CSR-8.120 (7)E...
28) Bricks will not be used in the construction of sanitary sewer manholes...
29) All pipes shall have positive drainage through manholes. No flat base structures are allowed...
30) The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system...
31) All sanitary sewer laterals shall be a minimum of 6" in diameter per St. Charles County Public Water Supply District No. 2 standards...
32) All sanitary house connections have been designed so that the minimum vertical distance from the low point of the basement to the flow line of a sanitary sewer at the corresponding house connection is not less than the diameter of the pipe plus the vertical distance of 2 1/2 feet...
33) All trench backfills under paved areas shall be granular backfill, and shall be compacted to 90% of the maximum density as determined by the Modified AASHTO T-180 Compaction Test...
34) All trench backfills may be earth material (free of large clods or stones). All trench backfills shall be water jetted.

A SET OF IMPROVEMENT PLANS FOR GEORGETOWN PARK A TRACT OF LAND BEING PART OF LOT 3 OF THE DIVISION OF BATES LANDS IN FRACTIONAL SECTION 2, TOWNSHIP 46 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN ST. CHARLES COUNTY, MISSOURI



GENERAL NOTES

- 34) All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas...
35) All creek crossings shall be as directed by District inspectors...
36) Concrete pipe for storm sewers shall be Class III, A.S.T.M. C-76 with a minimum diameter of 12"...
37) The ADS N-12 pipe shall have a smooth interior wall...
38) Concrete pipe joints shall be MSD type "A" approved compression-type joints and shall conform to the requirements of the specifications for joints for circular concrete sewer and culvert pipe...
39) The use of High Density Polyethylene Corrugated pipe, ADS N-12 or equal will be permitted as an acceptable alternative to reinforced concrete pipe...
40) When HDPE pipe is used, City of Dardenne Prairie specifications or manufacturers specifications, which ever are more stringent, shall be followed...
41) All storm sewer pipe installed in the Public Right-of-Way shall be Reinforced concrete Class III pipe...
42) All flared and sections and inlet structures will be concrete...
43) All concrete pipe or ADS N-12 pipes shall be installed with "O-Ring" Rubber type gaskets per M.S.D. standard construction specifications or manufacturer...
44) All PVC water pipe shall conform to A.S.T.M.-D-2241, SDR 21 Standard Specification for P.V.C. Pressure Pipe, 200 P.S.I. working pressure for water...
45) All Water mains, valves, hydrants and related items are to be installed in accordance with the current St. Charles County Public Water Supply District No. 2 guidelines and specifications as approved by MDNR on review number 61996-04...
46) All Water hydrants and valves shall be ductile iron and installed in accordance with the plans and details...
47) All water lines shall be laid at least 10 feet vertically from any sanitary sewer, storm sewer, or manhole...
48) Blow-off hydrants and water meters shall not be located in any pavement or hard surfaced area including, but not limited to, driveways, sidewalks, and streets...
49) The retaining walls will require a separate permit issued through the Building Department...
50) The Entrance Manifold size and location will need approval through the City of Dardenne Prairie...
51) Easements shall be provided for sanitary sewers, and all Utilities on the Record Plat...
52) Spot elevations shown on the Parking and Parking Aisles are the pavement elevations, not top of curb...
53) The parking spaces areas are required to be constructed with a concrete "S" curb as well as the driving aisles.

LEGEND

Legend table listing symbols for CURB INLET, AREA INLET, MANHOLE, etc., and their corresponding graphical representations.

VEGETATION ESTABLISHMENT For Urban Development Sites APPENDIX A. Includes SEEDING RATES, PERMANENT, TEMPORARY, MULCH RATES, FERTILIZER RATES, and notes on ENM material.

ALL WATER SYSTEM EXTENSIONS SHALL CONFORM TO THE WATER SYSTEM SPECIFICATIONS OF ST. CHARLES COUNTY PUBLIC WATER SUPPLY DISTRICT NO. 2. DNR REVIEW #61996-04



CALL BEFORE YOU DIG! 1-800-DIG-RITE

AND MODOT (314) 340-4100



DEVELOPMENT NOTES:

- 1) Area of Tract: 34.46 Acres (includes planned South Henke Road right-of-way dedication strip, Proposed Page Avenue right-of-way and City of Dardenne Prairie Property along Fiese Road)
2) Existing Zoning: "R-10" - P.U.D. Single Family Residential attached dwellings.
3) Number of Units Proposed: 120 Units
4) Proposed User: Single Family Residential attached dwellings.
5) Proposed Lot Spacings and Height Requirements:
a. Minimum Front Yard: 20 Feet
b. Minimum Side Yard: 0 Feet and 10' feel Between Buildings
c. Minimum Rear Yard: 20 Feet
d. Maximum Building Height: 35 Feet
6) Owner: Arbor Homes, Inc., 3401 Technology Dr., Suite 260 Lake St. Louis, MO 63397 (636) 561-0541
7) The Site is served by or located in the following:
a. Water - St. Charles County Public Water Supply District No. 2 - (636)551-3737
b. Sewer - St. Charles County Public Water Supply District No. 2 - (636)561-3737
c. Gas - Local Gas Company - (636)978-2663
d. Telephone - CenturyTel Telephone Company - (636)332-7705
e. Electric - Cuivre River Electric Coop - (636)441-7410
f. Fire - Wentzville Fire Protection District - (636)327-6334
g. Cable Television - Charter Communications - (636)688-3375
h. School District - Wentzville School District - (636)327-3800
8) According to the Flood Insurance Rate Map number 29183C0220F effective March 17, 2003, this property is within Zone X. Zone X is defined as an area outside the 500 year flood plain limits.

U.S.G.S. BENCHMARKS

REFERENCE BENCHMARK table with columns for DATE, CITY COMMENTS, PER CLIENT, P.W.S.D. MODOT & DTC COMMENTS.

SITE BENCHMARKS:

- #1 TOP FOUND OLD STONE 41.67' WEST OF THE NORTHWEST PROPERTY CORNER ELEVATION 622.85' NGVD 1929 DATUM (USGS)
#2 TOP FOUND IRON PIPE 3.91' EAST OF THE NORTHWEST PROPERTY CORNER ELEVATION 583.73' NGVD 1929 DATUM (USGS)
#3 TOP FOUND IRON PIPE 23.10' SOUTH OF THE SOUTHEAST PROPERTY CORNER ELEVATION 599.80' NGVD 1929 DATUM (USGS)

SHEET INDEX

SHEET INDEX table listing sheet numbers and descriptions: 1 Cover Sheet, 2-4 Site Plan, 5-7 Grading Plan, 8-10 Water Plan, 11 Street Profiles, 12 Entrance Details, 13-15 Sanitary & Storm Sewer Profiles, 16-18 Drainage Area Map, 19 Pre-developed DA Map, 20-25 Details.

A SET OF IMPROVEMENT PLANS FOR GEORGETOWN PARK

PREPARED FOR: ARBOR HOMES, INC. 3401 TECHNOLOGY DRIVE - SUITE 260 LAKE SAINT LOUIS, MO 63367 (636) 561-0541



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REVISIONS

REVISIONS table with columns for DATE, CITY COMMENTS, PER CLIENT, P.W.S.D. MODOT & DTC COMMENTS.



1052 South Cloverleaf Drive St. Peters, MO. 63376-6445 636-926-5552 FAX 926-1718

JUNE 20, 2005

DATE: 03-12-319E PROJECT NUMBER: 1 OF 25 SHEET OF: 12319BCON.dwg FILE NAME: CLM DRAWN: RKC DESIGNED: MCG CHECKED:

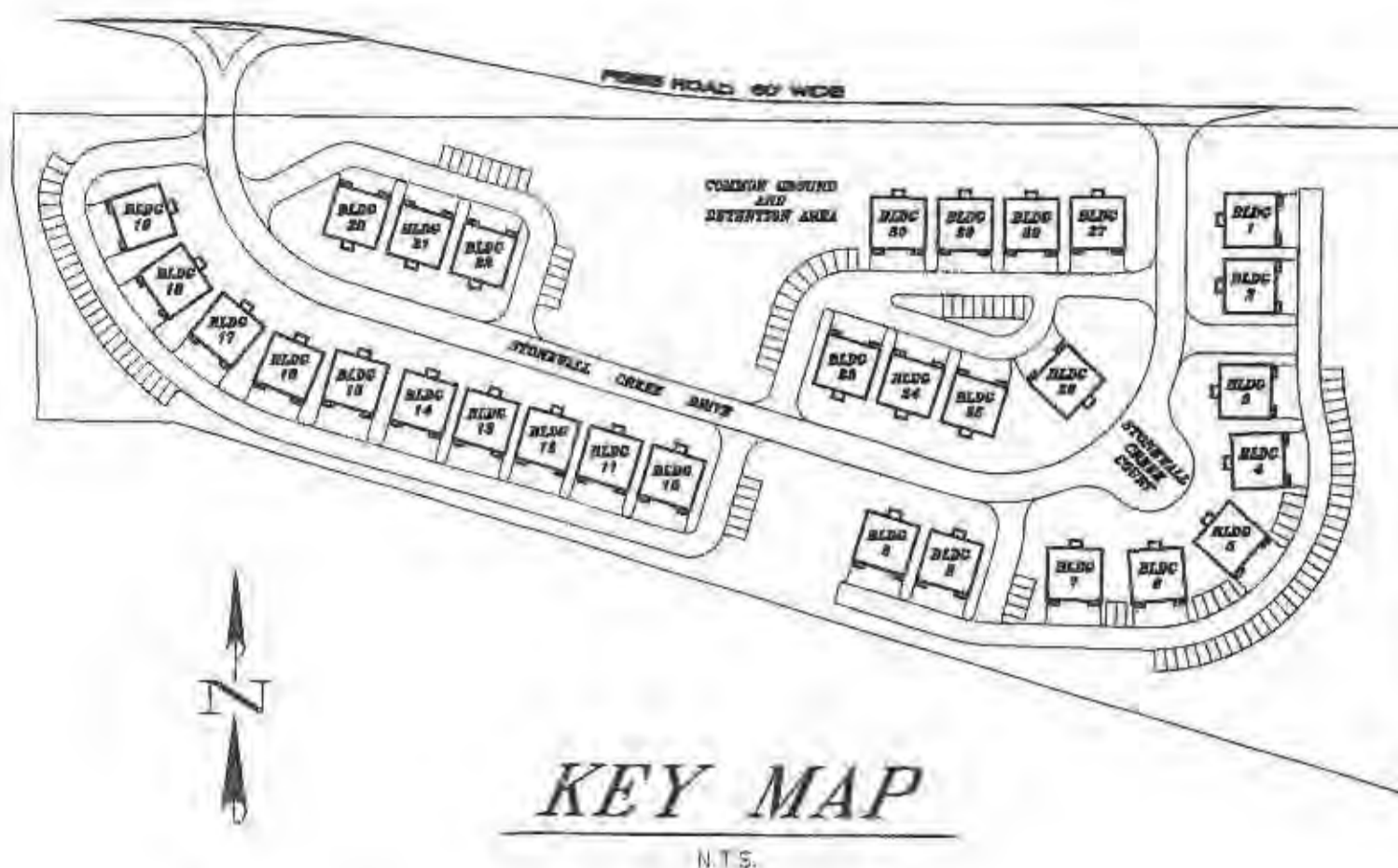
GRADING NOTES

- 1) A Geotechnical Engineer shall be employed by the owner and be on site during grading operations. All soils tests shall be verified by the Geotechnical Engineer concurrent with the grading and backfilling operations.
 - 2) All grades shall be within 0.2' feet of those shown on the Grading Plan.
 - 3) Ground adjoining development sites shall be protected from accelerated and increased surface water, silt and other effects of erosion.
 - 4) Soft soils in the bottom and banks of any existing or former pond sites or tributaries or any sediment basins or traps shall be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed public right-of-way locations or on any storm sewer location.
 - 5) Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be properly disposed of off-site.
 - 6) All trash and debris on-site, either existing or from construction, must be removed and properly disposed of off-site.
 - 7) All wells and/or springs which may exist on this property shall be located and sealed in a manner acceptable to the City of Dardenne Prairie.
 - 8) Temporary access shall be provided for all construction sites prior to any land disturbance to minimize curb damage and mud deposits on the streets. Said temporary access paths shall be rocked to a minimum depth of 4 inches. An underpinment of stabilization fabric is required to keep rock from becoming saturated with mud.
 - 9) No land disturbing, construction or other associated activities are permitted that earth, sand, gravel, stone, concrete, building materials or other materials to be deposited on public streets. Trucks and other construction equipment shall be cleaned on site to prevent mud from being deposited on public streets. If mud, material or debris is deposited on a public or private street, the general contractor, subdivision representative, firm or corporation responsible for the development site concerned will be notified and shall abate the violation within 4 hours of notification. Notification will be made by personal contact, telephone or the site will be posted. The notification will include the time notified and the deadline for abating the violation. If the violation is not abated within 4 hours, a stop work order shall be posted and the City will advise the violation to be abated at the property owner's expense.
 - 10) Water runoff from parking lots, paved sites, buildings, etc., above the area to be developed shall be directed to debris or sediment basins, diversions, concrete gutters and/or underground outlet systems.
 - 11) All filler areas, including trench backfills, under buildings, proposed storm and sanitary sewer lines, proposed roads and/or paved areas, shall be compacted to 90% of maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557), or 95% maximum density as determined by the Standard Proctor Test AASHTO T-99. All fill placed in proposed roads shall be compacted from the bottom of the fill up. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in fill areas is to correspond to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for the compaction. Soil compaction curves shall be submitted to the City of Dardenne Prairie prior to the placement of fill. Proofrolling may be required to verify soil stability at the discretion of the City of Dardenne Prairie.
 - 12) All excavations, grading or filling shall have a finished grade not to exceed a 3:1 slope (33%).
 - 13) Temporary siltation control measures (structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
 - 14) Upon completion of storm sewers, siltation control shall be provided around all open sewer inlets and shall remain until the disturbed drainage areas have been properly stabilized.
 - 15) All Erosion Control Systems shall be inspected and necessary corrections made within 24 hours of any rainstorm resulting in one-half inch of rain or more.
 - 16) The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of fill density tests will be determined on each lift of fill. Interim reports showing fill quality will be made to the Owner at regular intervals.
 - 17) Developer must supply City construction inspectors with soil reports prior to or during site soil testing.
 - 18) Ensure graded areas to remain bare for 2 weeks are seeded and mulched.
 - 19) Fill and backfill should be compacted to the criteria specified in the following table:
- | CATEGORY | MINIMUM PERCENT COMPACTION |
|---------------------------------------|----------------------------|
| Fill in building areas below footings | 90% |
| Fill under slabs, walks, and pavement | 90% |
| Fill other than building areas | 88% |
| Natural subgrade | 88% |
| Pavement subgrade | 90% |
| Pavement base course | 90% |
- Measured as a percent of the maximum dry density as determined by modified Proctor Test (ASTM-D-1557).
- Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.
- 20) The sediment control plan must be implemented before grading begins. No graded area is to remain without at least 75 percent of vegetative ground cover for more than 30 days without being seeded and mulched or sodded. Also, massive steps must be exercised to prevent transported soil from damaging adjacent property and being deposited in the form of silt in storm drainage systems whether on-site or off-site.
 - 21) All lots shall be seeded and mulched at the rates defined in Appendix A or sodded before an occupancy permit shall be issued except that a temporary occupancy permit may be issued by the Building Department in cases of undue hardship because of unfavorable ground conditions.

GENERAL NOTES

- 1) Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans shall be the responsibility of the contractor, and shall be located prior to any grading or construction of the improvements.
- 2) All utilities shown are existing unless otherwise noted. All new utilities shall be located underground.
- 3) All construction methods and practices shall conform with current O.S.H.A. Standards.
- 4) All construction and materials shall conform to the current construction standards of the City of Dardenne Prairie.
- 5) The City of Dardenne Prairie shall be notified 48 hours prior to construction for coordination and inspection.
- 6) The St. Charles County Public Water Supply District No. 2 shall be notified at least 48 hours prior to construction for coordination of inspection.
- 7) All necessary utilities (public and private) will be available, functioning, and usable at the time any stage of the project or the total project is ready for occupancy.
- 8) Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- 9) Maintenance and upkeep of the common ground area shall be the responsibility of the developer and/or successors.
- 10) A 20' building line shall be established along all Public Rights-Of-Ways.
- 11) The contractor shall assume complete responsibility for controlling all siltation and erosion of the project area. The contractor shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fabric fences (possible methods of control are detailed in the plan). Erosion control shall commence with grading and be maintained throughout the project until acceptance of the work by the owner and/or the City of Dardenne Prairie. The contractor's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The owner and/or the City of Dardenne Prairie may, at their option, direct the contractor in his methods as deemed fit to protect property and improvements. Any depositing of silts or mud on new or existing pavement or in new or existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the owner and/or the City of Dardenne Prairie.
- 12) No area shall be cleared without the permission of the Project Engineer.
- 13) All soils test shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
- 14) All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre-construction conditions.
- 15) All paving shall be in accordance with St. Charles County standards and specifications except as modified by the City of Dardenne Prairie ordinances.
- 16) A Special Use Permit shall be obtained from the City of Lake Saint Louis before any work is performed within Fiasse Road right-of-way.
- 17) All dimensions are to back of curb unless otherwise noted.
- 18) Sidewalks and sidewalk curb ramps shall be constructed in accordance with the current approved "Americans with Disabilities Act Accessibility Guidelines" (A.D.A.A.G.). If any conflict occurs between the above information and the plans the A.D.A.A.G. shall take precedence and the contractor prior to any construction shall notify the Project Engineer.
- 19) Driveway locations shall not interfere with the sidewalk curb ramps.
- 20) All sanitary sewer construction and materials shall conform to the current construction standards of the St. Charles County Public Water Supply District No. 2.
- 21) Existing sanitary sewer service shall not be interrupted.
- 22) Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary or storm sewers, including house laterals.
- 23) All manhole logs & flowlines built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
- 24) 8" P.V.C. sanitary sewer pipe shall meet the following standards. A.S.T.M.-D-3034 SDR-35, with wall thickness compression joint A.S.T.M.-D-3212. An appropriate rubber seal watertight as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures.
- 25) All P.V.C. sanitary sewer is to be SDR-35 or equal with clean 1/2" to 1" granular stone bedding uniformly graded. This bedding shall extend from 4" below the pipe to the springline of the pipe. Immediate backfill over pipe shall consist of some size "clean" or minus stone from springline of pipe to 12" above the top of pipe.
- 26) Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot/Mission-type couplings will not be allowed.
- 27) All sanitary manholes shall be waterproofed on the exterior in accordance with Missouri Department of Natural Resources specifications 10 CSR-8.120 (7)C.
- 28) Brick will not be used in the construction of sanitary sewer manholes.
- 29) All pipes shall have positive drainage through manholes. No flat base structures are allowed.
- 30) The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
- 31) All sanitary sewer laterals shall be a minimum of 6" in diameter per St. Charles County Public Water Supply District No. 2 standards.
- 32) All sanitary house connections have been designed so that the minimum vertical distance from the low point of the basement to the flow line of a sanitary sewer at the corresponding house connection is not less than the diameter of the pipe plus the vertical distance of 2 1/2 feet.
- 33) All trench backfills under paved areas shall be granular backfill, and shall be compacted to 90% of the maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557). All other trench backfills may be earth material (free of large clods or stones). All trench backfills shall be water jetted.

A SET OF IMPROVEMENT PLANS FOR GEORGETOWN PARK
A TRACT OF LAND BEING PART OF LOT 3 OF THE DIVISION OF BATES LANDS
IN FRACTIONAL SECTION 2, TOWNSHIP 46 NORTH, RANGE 2 EAST
OF THE FIFTH PRINCIPAL MERIDIAN
ST. CHARLES COUNTY, MISSOURI



GENERAL NOTES

- 34) All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
- 35) All creek crossings shall be as directed by District Inspectors.
- 36) Concrete pipe for storm sewers shall be Class III, A.S.T.M. C-76 with a minimum diameter of 12".
- 37) The ADS N-12 pipe shall have a smooth interior wall.
- 38) Concrete pipe joints shall be MSD type "A" approved compression-type joints and shall conform to the requirements of the specifications for joints for circular concrete sewer and culvert pipe, using flexible, watertight, rubber-type gaskets (A.S.T.M.-C-443). Bond-type gaskets depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.
- 39) The use of High Density Polyethylene Corrugated pipe, ADS N-12 or equal will be permitted as an acceptable alternative to reinforced concrete pipe. AS-N-12 HC shall be used for all ADS pipe greater than 36". Pipe shall meet A.S.T.M.-D-2321 and A.A.S.H.T.O. M-294-291.
- 40) When HDPE pipe is used, City of Dardenne Prairie specifications for manufacturers specifications, which ever are more stringent, shall be followed.
- 41) All storm sewer pipe installed in the Public Right-of-Way shall be Reinforced concrete Class III pipe.
- 42) All flared end sections and inlet structures will be concrete.
- 43) All concrete pipe or ADS N-12 pipe shall be installed with "O-Ring" Rubber type gaskets per M.S.D. standard construction specifications or manufacturer.
- 44) All PVC water pipe shall conform to A.S.T.M.-D-2241, SDR 21 Standard Specification for P.V.C. Pressure Pipe, 200 P.S.I. working pressure for water, with approved joint. P.V.C. pipe used for waterlines is to be certified by NSF, listed in NSF Standard 61, and have the NSF logo stamped on the pipe.
- 45) All Water mains, valves, hydrants and related items are to be installed in accordance with the current St. Charles County Public Water Supply District No. 2 guidelines and specifications as approved by MDNR on review number 61998-04.
- 46) All Water hydrants and valves shall be ductile iron and installed in accordance with the plans and details. All ductile iron pipe for water mains shall conform to A.W.W.A. Specification C-151 and be cement lined and seal coated in accordance with A.W.W.A. Specification C-104. The ductile iron fittings shall conform to A.W.W.A. Specification C-153. All joints for water ductile iron pressure pipe shall be push on type with rubber gasket conforming to A.W.W.A. Specification C-111 and fittings shall be ductile iron, Class 350, conforming to A.W.W.A. Specification C-153.
- 47) All water lines shall be laid at least 10 feet horizontally, from any sanitary sewer, storm sewer, or manhole. 18" vertical clearance from outside of pipe to outside of pipe shall be maintained wherever water lines must cross sanitary sewers, laterals, or storm drains the water line shall be laid at such an elevation that the bottom of the water line is above the top of the drain or sewer. A full length of water pipe shall be centered over the sewer line to be crossed so that the joints will be equally distant from the sewer and as remote therefrom as possible. This vertical separation shall be maintained for that portion of the water line located within 10 feet horizontally, of any sewer or drain it crosses.
- 48) Blow-off hydrants and water meters shall not be located in any pavement or hard surfaced area including, but not limited to, driveways, sidewalks, and streets. Since the location of all such areas is not shown on this plan all costs to relocate any blow-off hydrants and water meters from any pavement or hard surfaced areas shall be borne by the Developer or the Builders.
- 49) The retaining walls will require a separate permit issued through the Building Department.
- 50) The Entrance Monument size and location will need approval through the City of Dardenne Prairie. Also a separate Building Permit and Sign Permit will be required.
- 51) Easements shall be provided for sanitary sewers, and all utilities on the Record Plot. See Record Plot for location and size of easements.
- 52) Spot elevations shown on the Parking and Parking Aisles are the pavement elevations, not top of curb.
- 53) The parking spaces areas are required to be constructed with a concrete "S" curb as well as the driving aisles.

LEGEND



VEGETATION ESTABLISHMENT For Urban Development Sites APPENDIX A

SEEDING RATES:

PERMANENT:
Tall Fescue - 300 lbs./ac.
Smooth Brome - 200 lbs./ac.
Combined - Fescue @ 150 lbs./ac. AND Brome @ 100 lbs./ac.

TEMPORARY:
Wheat or Rye - 150 lbs./ac. (3.5 lbs. per 1000 square feet)
Oats - 120 lbs./ac. (2.8 lbs. per 1000 square feet)

SEEDING PERIODS:
Fescue or Brome - March 1 to June 1
Wheat or Rye - August 1 to October 1
Oats - March 15 to September 15

MULCH RATES:
100 lbs. per 1000 sq. ft. (4,356 lbs. per ac.)

FERTILIZER RATES:
Nitrogen - 30 lbs./ac.
Phosphate - 30 lbs./ac.
Potassium - 30 lbs./ac.
Lime - 600 lbs./ac. ENM*

* ENM = effective neutralizing material as per State evaluation of quarried rock.

U.S.G.S. BENCHMARKS

REFERENCE BENCHMARK:
ELEVATION 667.66 NGVD 1929 DATUM (USGS)
ST. CHARLES COUNTY GEOGRAPHIC REFERENCE STATION "ORF" STANDARD BRASS DISK STAMPED "ORF 1831" IN A SQUARE CONCRETE POST IN A SMALL MOUND 107' E NORTHWEST OF THE NORTHWEST CORNER OF A SHED ADDITION TO AN OLDER BARN, 20'-25' SOUTHWEST OF A SMALL POND, 39' NORTHEAST OF A LONE PEAR TREE AND 24.9' NORTHEAST OF A METAL WITNESS POST AND SIGN, LOCATED AT 1301 BRYAN ROAD, 350' NORTHWEST OF HOUSE.

SITE BENCHMARKS:

- #1 TOP FOUND OLD STONE 41.67' WEST OF THE NORTHWEST PROPERTY CORNER. ELEVATION 622.85 NGVD 1929 DATUM (USGS).
- #2 TOP FOUND IRON PIPE 3.91' EAST OF THE NORTHWEST PROPERTY CORNER. ELEVATION 589.75' NGVD 1929 DATUM (USGS).
- #3 TOP FOUND IRON PIPE 23.10' SOUTH OF THE SOUTHEAST PROPERTY CORNER. ELEVATION 599.80' NGVD 1929 DATUM (USGS).

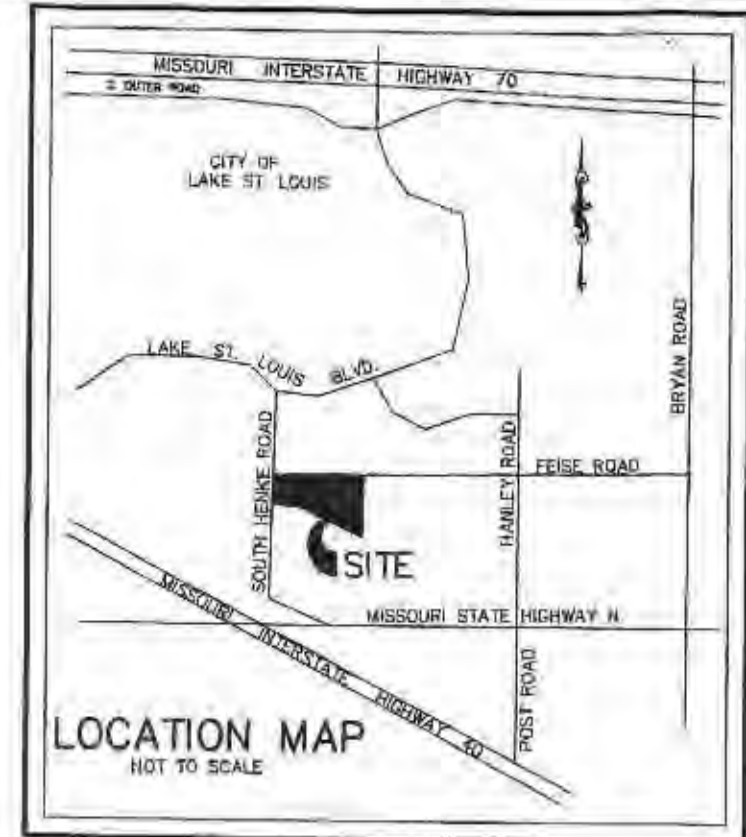
SHEET INDEX

- 1 Cover Sheet
- 2-4 Site Plan
- 5-7 Grading Plan
- 8-10 Water Plan
- 11 Street Profiles
- 12 Entrance Details
- 13-15 Sanitary & Storm Sewer Profiles
- 16-18 Drainage Area Map
- 19 Pre-developed DA Map
- 20 Details

CALL BEFORE YOU DIG!
1-800-DIG-RITE



AND MODOT (314) 340-4100



- 44,770 gpd
- DEVELOPMENT NOTES:**
1. Area of Tract: 34.48 Acres (includes planned South Henke Road right-of-way dedication strip, Proposed Page Avenue right-of-way and City of Dardenne Prairie Property along Fiasse Road.)
 2. Existing Zoning: "R-10" - P.U.D. Single Family Residential attached dwellings.
 3. Number of Units Proposed: 120 Units
 4. Proposed Use: Single Family Residential attached dwellings.
 5. Proposed Lot Setbacks and Height Requirements:
a. Minimum Front Yard: 20 Feet
b. Minimum Side Yard: 0 Feet and 10 Feet Between Buildings
c. Minimum Rear Yard: 20 Feet
d. Maximum Building Height: 35 Feet
 6. Owner: Arbor Homes, Inc. 3401 Technology Dr., Suite 260, Lake St. Louis, MO 63367, (636) 561-0541
 7. The Site is served by or located in the following:
a. Water - St. Charles County Public Water Supply District No. 2 - (636)561-3737
b. Sewer - St. Charles County Public Water Supply District No. 2 - (636)561-3737
c. Gas - Laclede Gas Company - (636)978-2663
d. Telephone - CenturyTel Telephone Company - (636)332-7705
e. Electric - Cuivre River Electric Coop - (636)441-7410
f. Fire - Wentzville Fire Protection District - (636)327-6334
g. Cable Television - Charter Communications - (636)688-3375
h. School District - Wentzville School District - (636)327-3800
 8. According to the Flood Insurance Rate Map number 29183C0220P effective March 17, 2003, this property is within Zone X. Zone X is defined as an area outside the 500 year flood plain limits.

PREPARED FOR:
ARBOR HOMES, INC.
3401 TECHNOLOGY DRIVE - SUITE 260
LAKE SAINT LOUIS, MO 63367
(636) 561-0541

PROFILER OF RESPONSIBILITY

I hereby certify that the documents contained herein were prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer in the State of Missouri.

RICHARD L. FRANCHES
REGISTERED PROFESSIONAL ENGINEER
NO. 22861
8/18/05

Copyright 2005
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All Rights Reserved.

REVISIONS

DATE	CITY COMMENTS
07-28-05	CITY COMMENTS
08-02-05	PER CLIENT
08-10-05	P.W.S.D.#2, MODOT & CITY COMMENTS

RECEIVED
OCT 11 2005
MISSOURI ENGINEERING

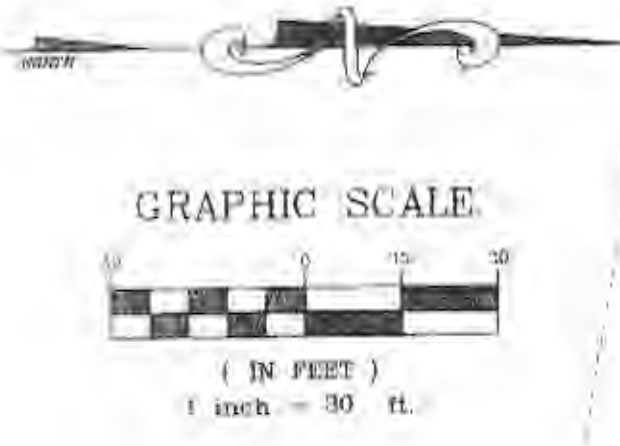
ENGINEERING PLANNING SURVEYING

1052 South Cloverleaf Drive
St. Peters, MO 65376-6445
636-928-5552
FAX 928-1718

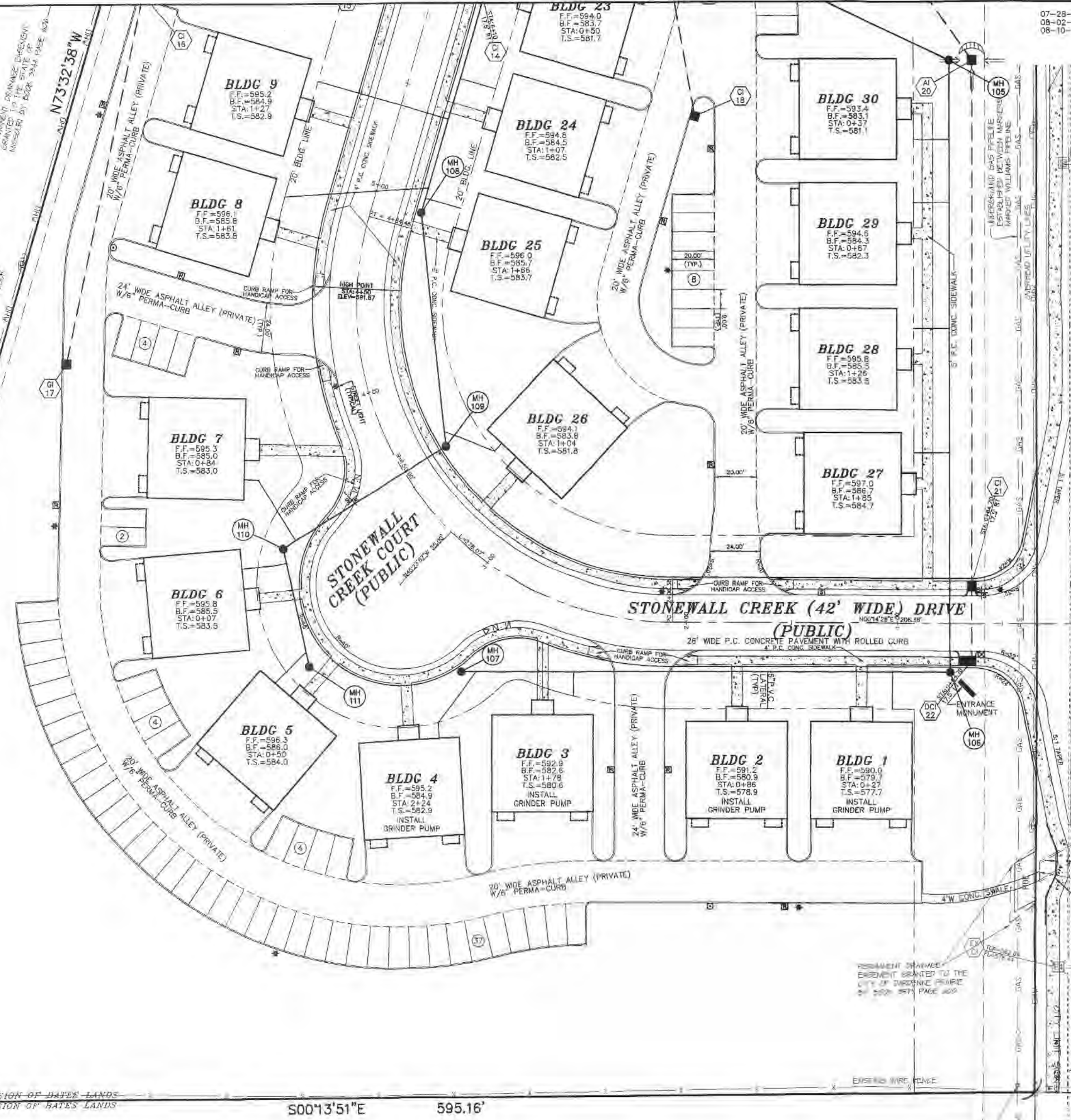
JUNE 20, 2005
DATE
03-12319B
PROJECT NUMBER
1 OF **25**
SHEET OF
12319BCON.dwg
FILE NAME
CLM
DRAWN
RKC MGG
DESIGNED
CLM
CHECKED

07-28-05 REVISIONS PER CITY COMMENTS
 08-02-05 REVISIONS PER CLIENT
 08-10-05 REVISIONS PER COMMENTS

PROPERTY N/F
 SCOTT BROTHERS
 PARTNERSHIP CORPORATION
 BK. 1474 PG. 92



MISSOURI STATE HIGHWAY ROUTE 364
 FUTURE NORTH OUTER ROAD



STONEWALL CREEK DRIVE STA: 0+00
 FEISE ROAD STA: 51+17.18

CONCRETE BOX CULVERT
 7.0' W X 4.0' H
 TOP BOX = 578.88
 FL BOX = 574.00

CONCRETE BOX CULVERT
 7.0' W X 4.0' H
 TOP BOX = 582.20
 FL BOX = 576.90

PERMANENT DRAINAGE IMPROVEMENT
 GRANTED TO THE CITY OF DARDENNE
 PRAIRIE BY BOOK 2679 PAGE 596

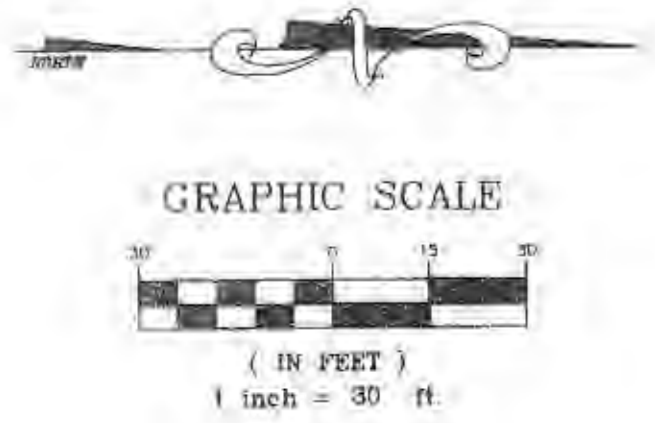
S00'13'51"E 595.16'

PROPERTY N/F
 MORNING STAR CHURCH
 BK. 2812 PG. 1655

DARDENNE LANDING
 P.B. 37 PGS. 44-46
 COMMON GROUND A

SIGN LEGEND	
	STREET SIGN (MUTCD D3)
	STOP SIGN (MUTCD R1-1)
	YIELD SIGN (MUTCD R1-2)
	SPEED LIMIT SIGN (MUTCD R2-1)
	NO OUTLET SIGN (MUTCD W14-2)
	NO PARKING SIGN (MUTCD R7-1)

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.



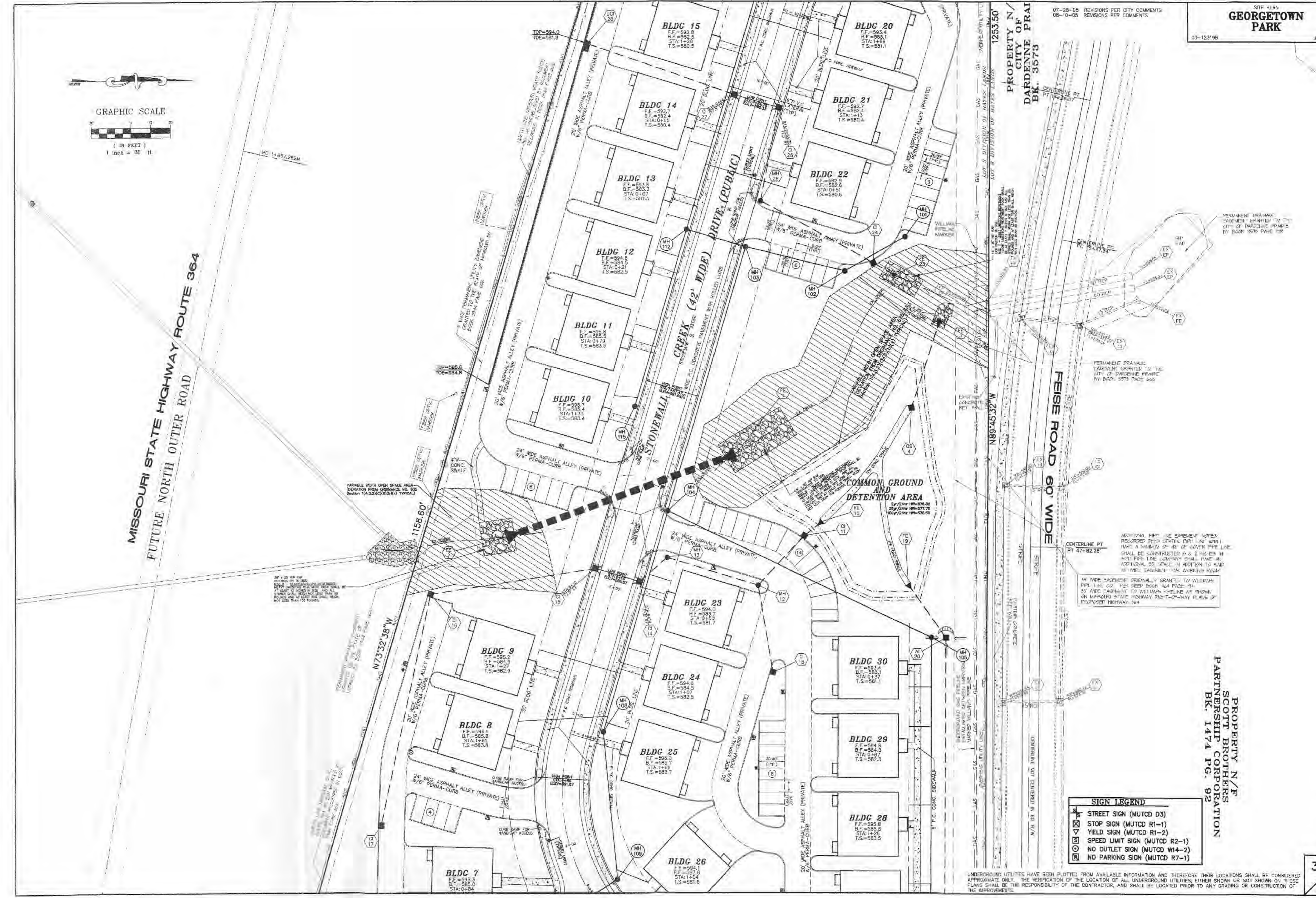
MISSOURI STATE HIGHWAY ROUTE 364
 FUTURE NORTH OUTER ROAD

PROPERTY N/
 CITY OF
 DARDENNE PRAIRIE
 BK. 3573

1253.50
 LOT 3 DIVISION OF BATES LARDS

FEISE ROAD 60' WIDE

PROPERTY N/
 SCOTT BROTHERS
 PARTNERSHIP CORPORATION
 BK. 1474 PG. 92



SIGN LEGEND

	STREET SIGN (MUTCD D3)
	STOP SIGN (MUTCD R1-1)
	YIELD SIGN (MUTCD R1-2)
	SPEED LIMIT SIGN (MUTCD R2-1)
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07-28-06 REVISIONS PER CITY COMMENTS
 08-10-05 REVISIONS PER COMMENTS

PROPERTY N/F
 ENTERPRISE TRUST
 TRUSTEE OF THE HOING FAMILY
 CHARITABLE REMAINDER UNITRUST
 BK. 2716 PG. 1431

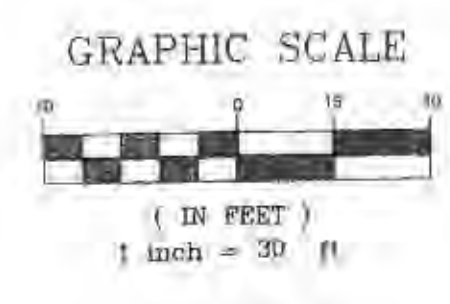
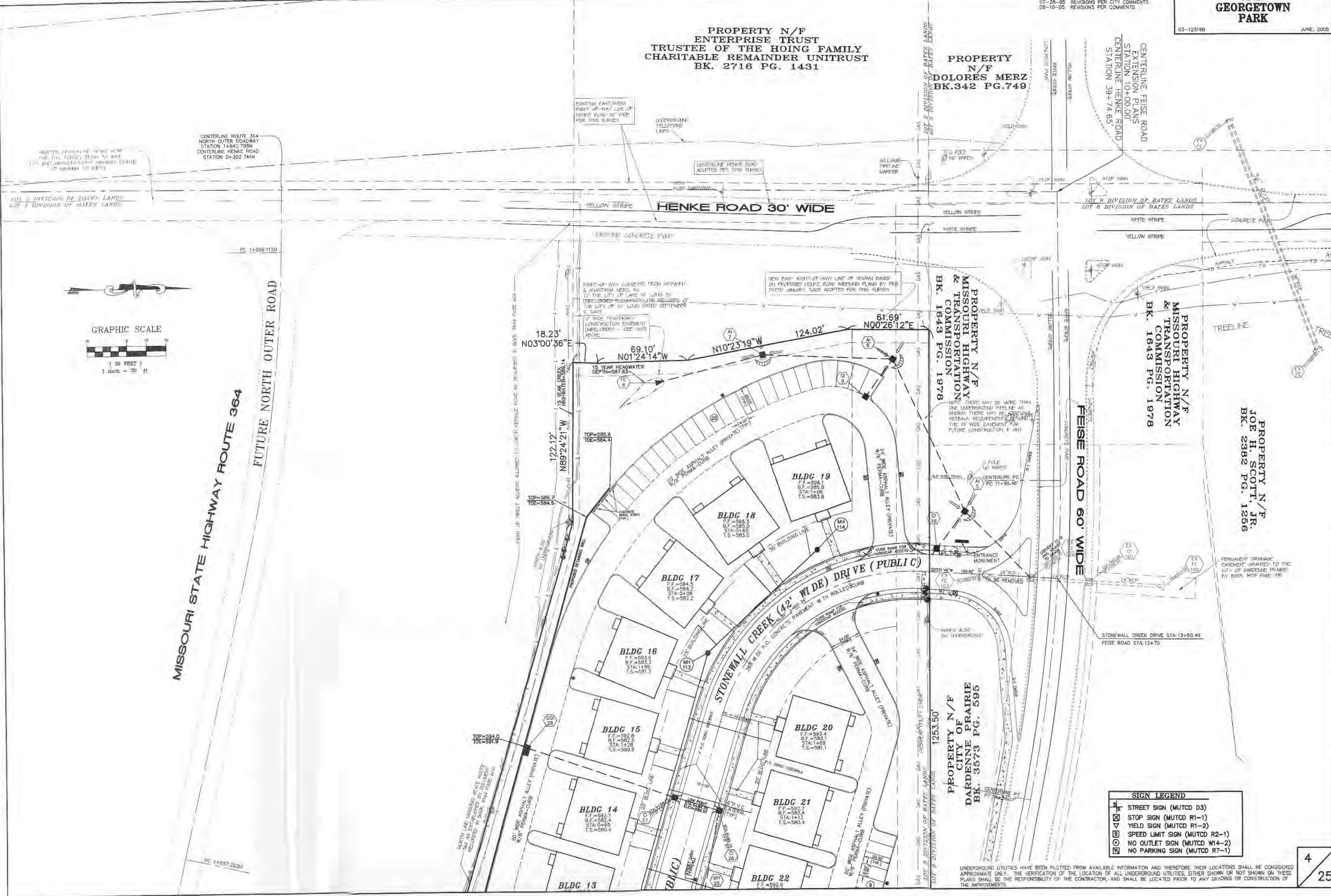
PROPERTY
 N/F
 DOLORES MERZ
 BK.342 PG.749

PROPERTY N/F
 MISSOURI HIGHWAY
 & TRANSPORTATION
 COMMISSION
 BK. 1643 PG. 1978

PROPERTY N/F
 MISSOURI HIGHWAY
 & TRANSPORTATION
 COMMISSION
 BK. 1643 PG. 1978

PROPERTY N/F
 JOE H. SCOTT, JR.
 BK. 2382 PG. 1256

PROPERTY N/F
 CITY OF
 DARDENNE PRAIRIE
 BK. 3573 PG. 595

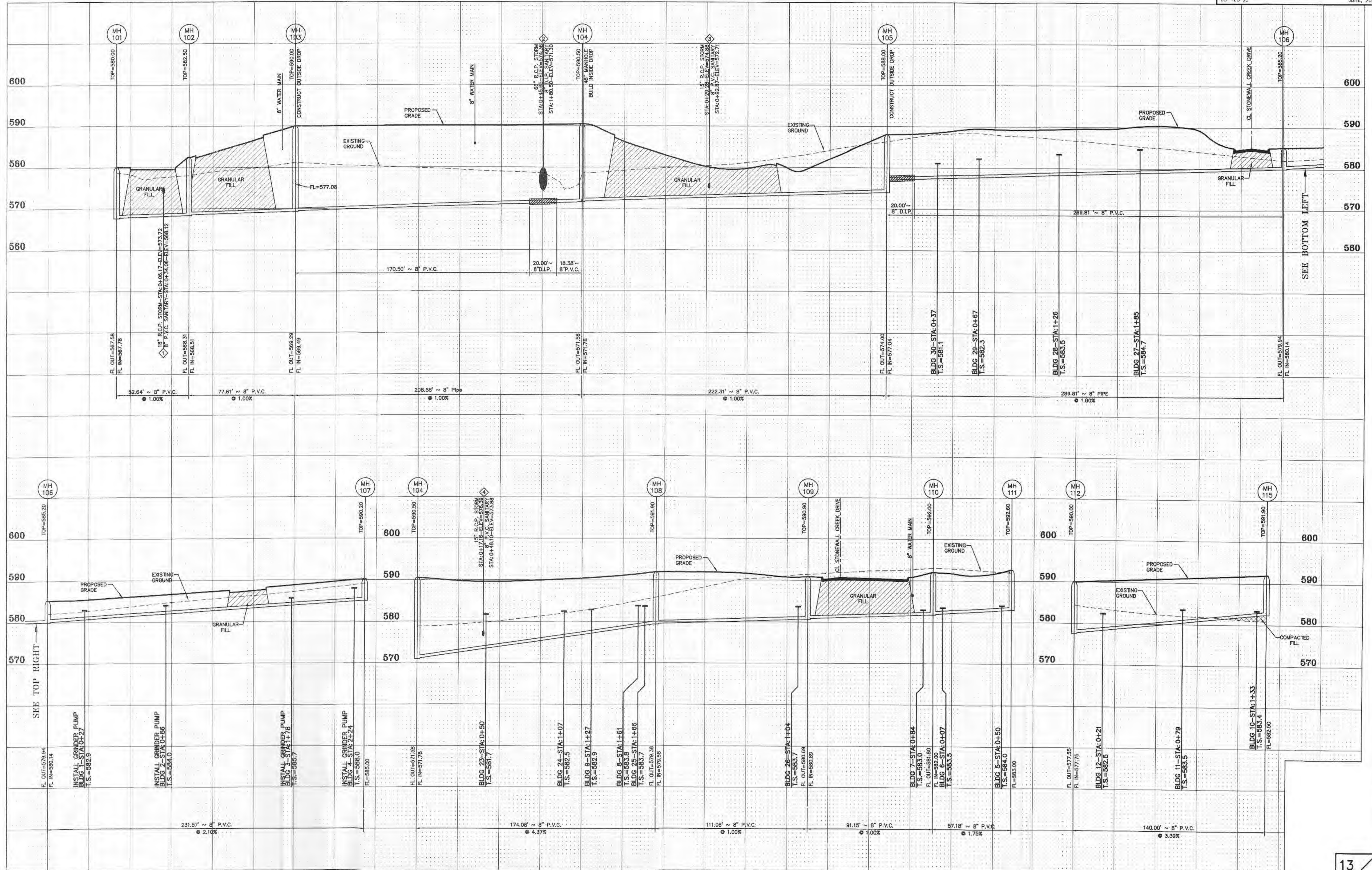


MISSOURI STATE HIGHWAY ROUTE 364
 FUTURE NORTH OUTER ROAD

SIGN LEGEND	
	STREET SIGN (MUTCD D3)
	STOP SIGN (MUTCD R1-1)
	YIELD SIGN (MUTCD R1-2)
	SPEED LIMIT SIGN (MUTCD R2-1)
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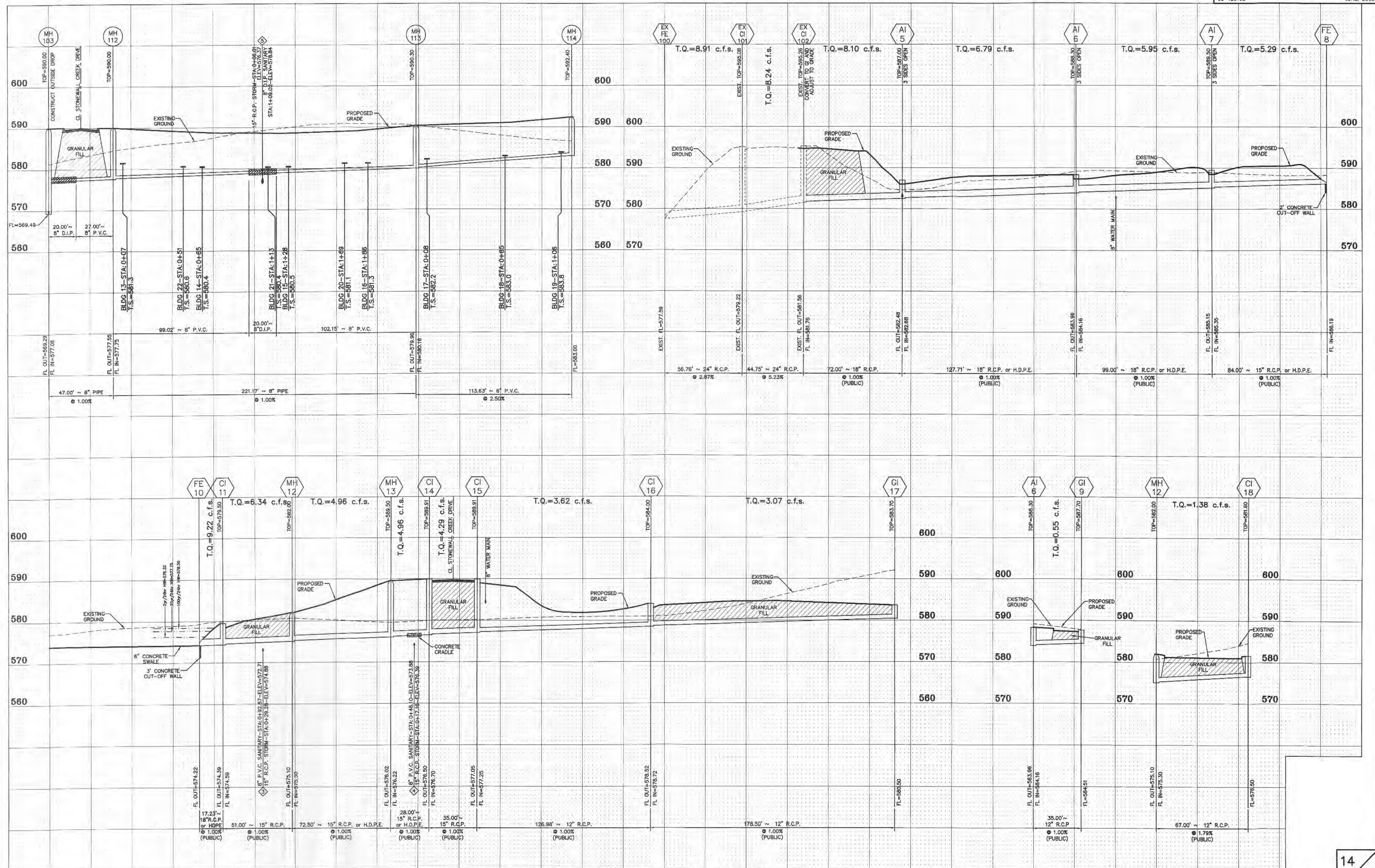
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ALL SANITARY SEWER LATERAL TAILSTAKE ELEVATIONS HAVE BEEN DESIGNED FOR A 9.0' BASEMENT POUR IN HOMES WITH THE TOP OF FOUNDATION ELEVATION BEING SET A MINIMUM OF 4.33' ABOVE THE TOP OF CURB ELEVATION.

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

SCALE: VERTICAL = 1"=10'
 HORIZONTAL = 1"=30'



ALL SANITARY SEWER LATERAL TALLSTAK ELEVATIONS HAVE BEEN DESIGNED FOR A 9.00' BASEMENT FLOOR IN HOMES WITH THE TOP OF FOUNDATION ELEVATION BEING SET A MINIMUM OF 4.33' ABOVE THE TOP OF CURB ELEVATION.

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

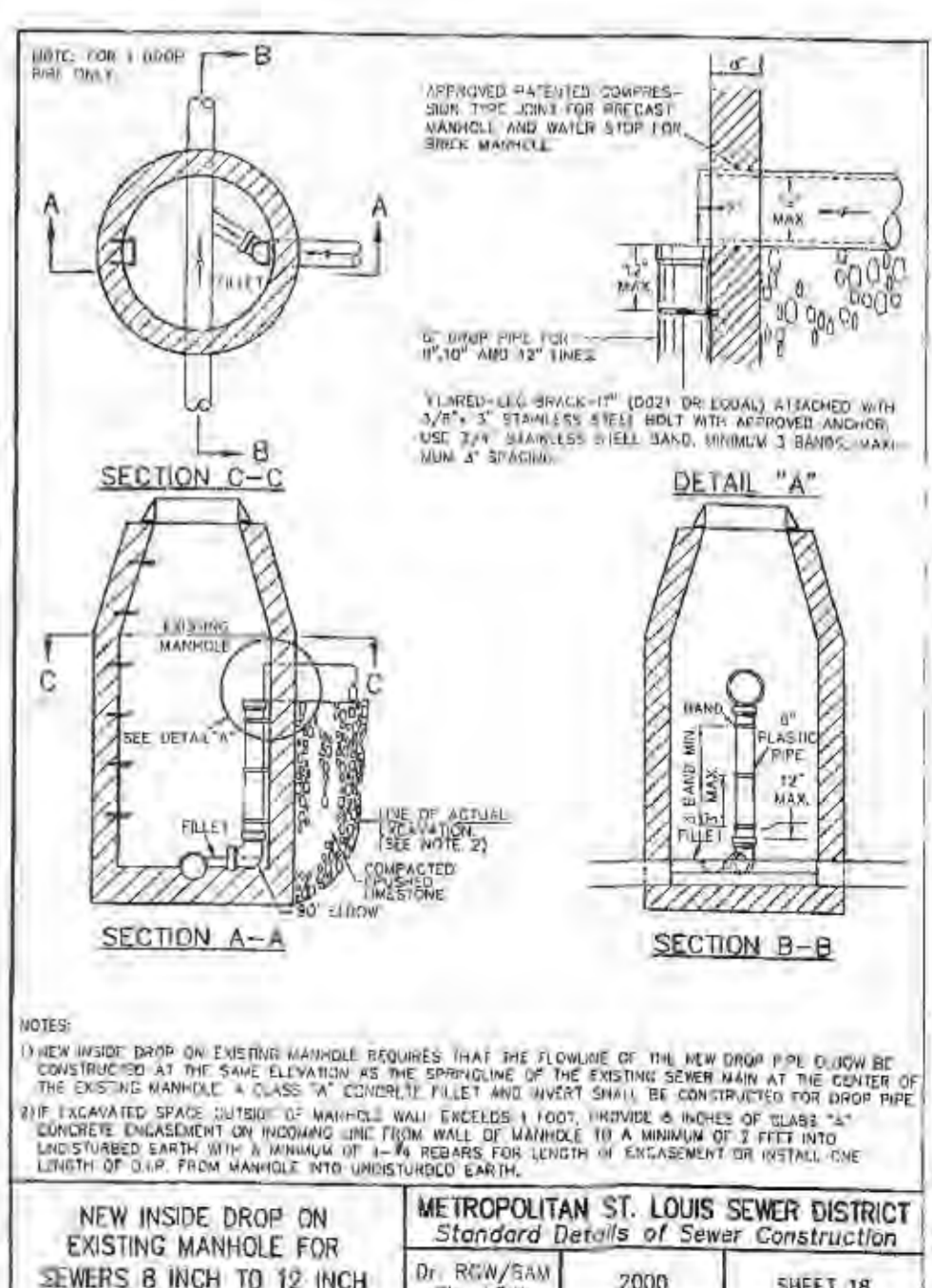
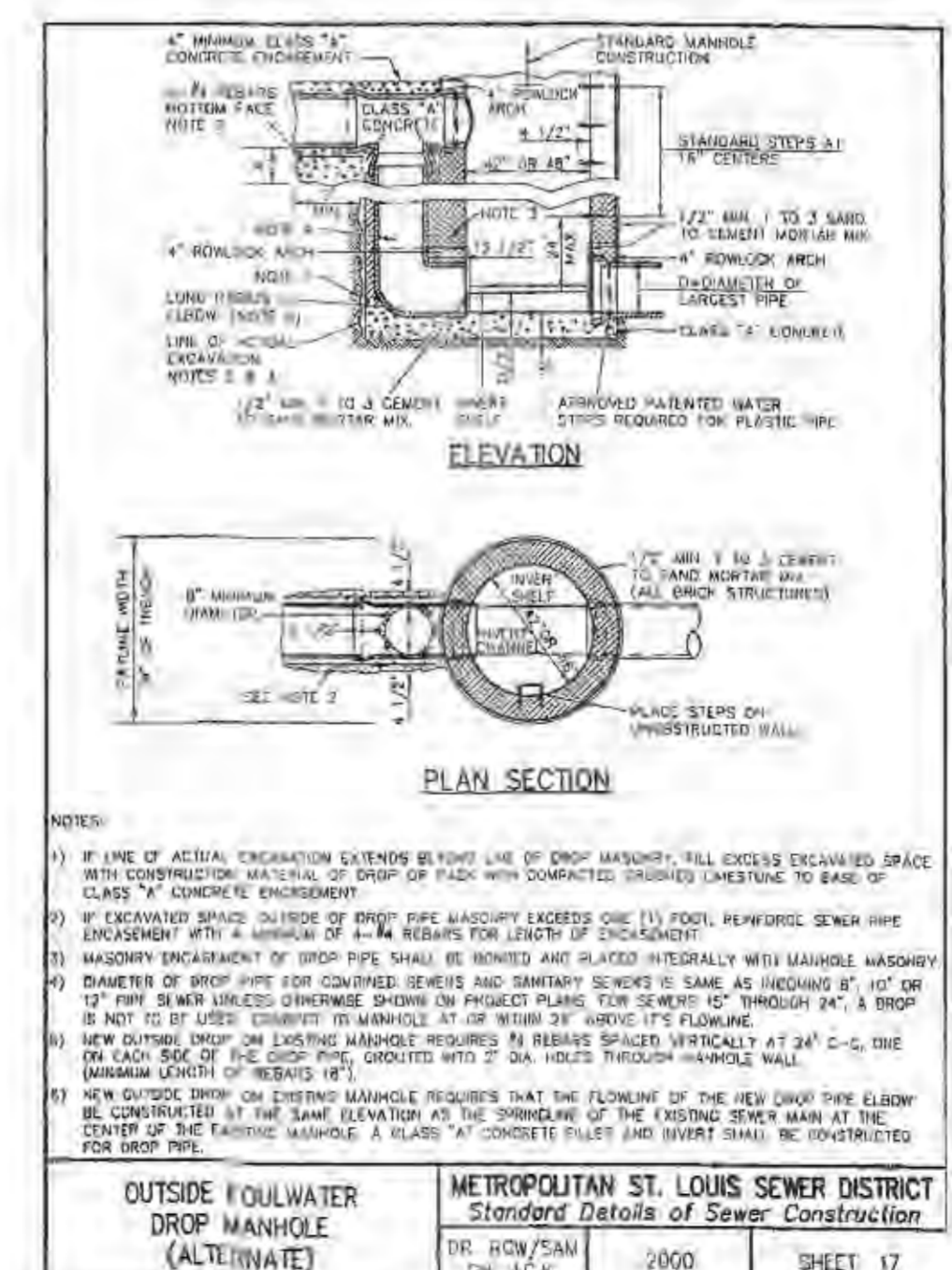
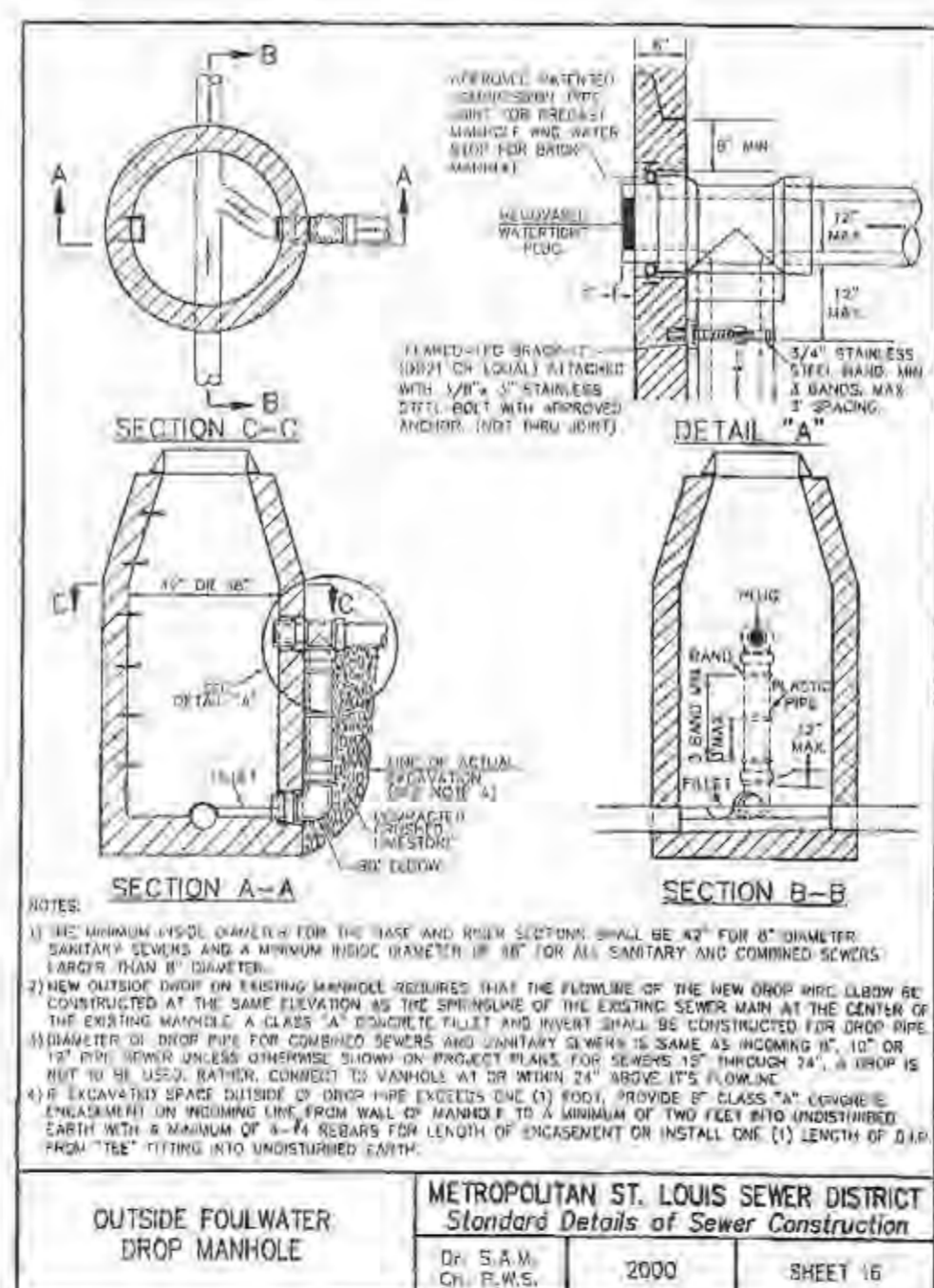
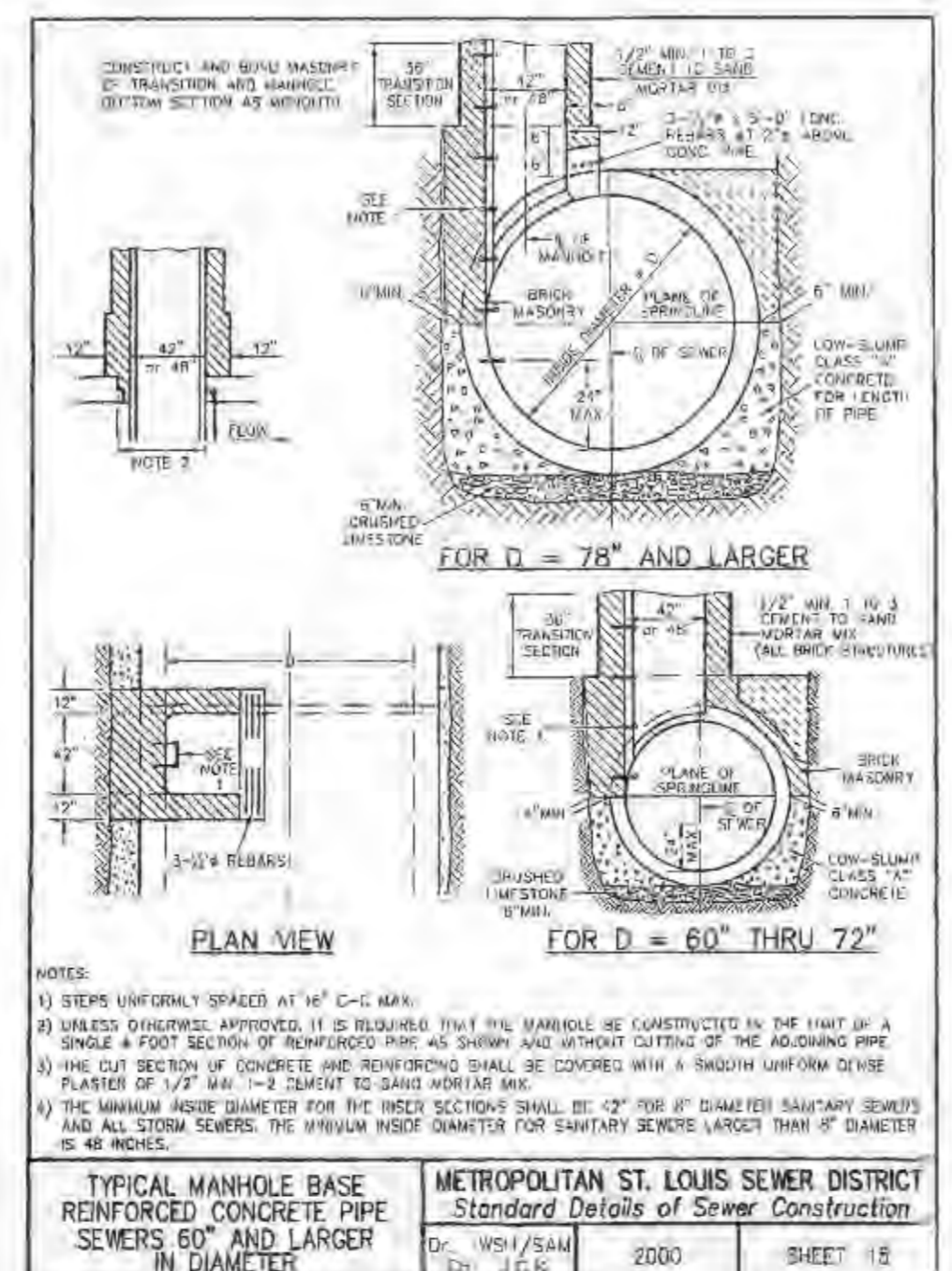
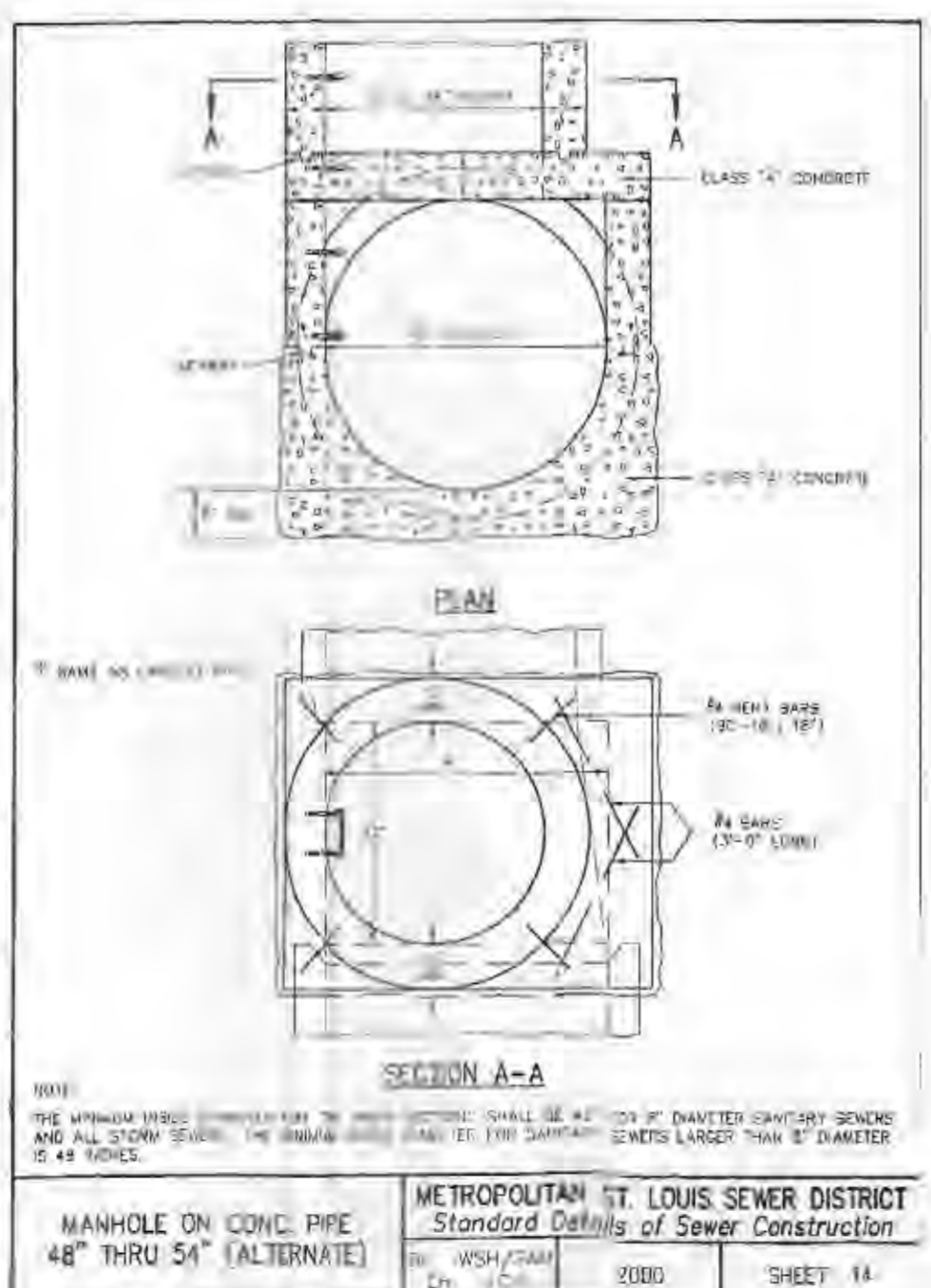
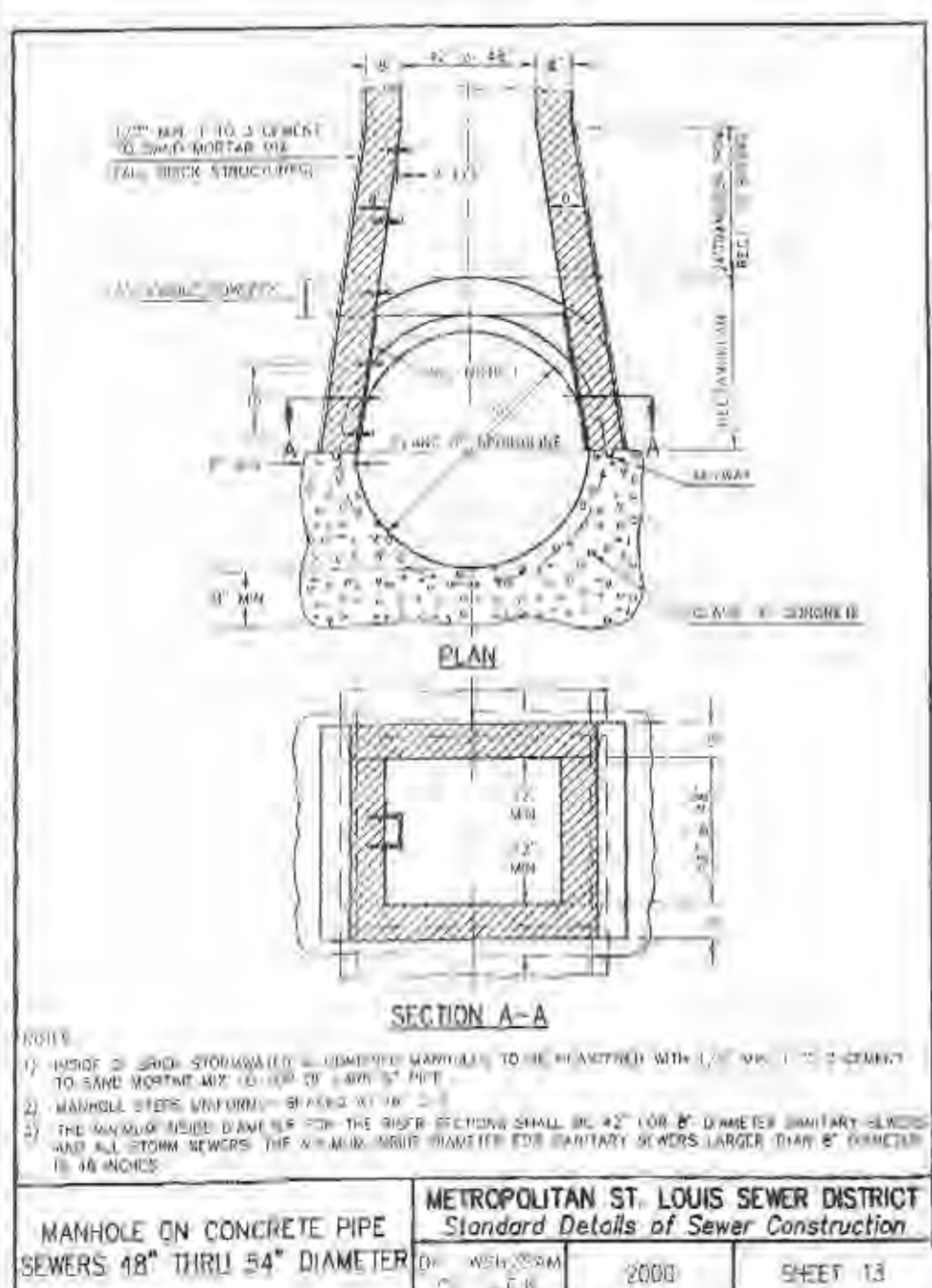
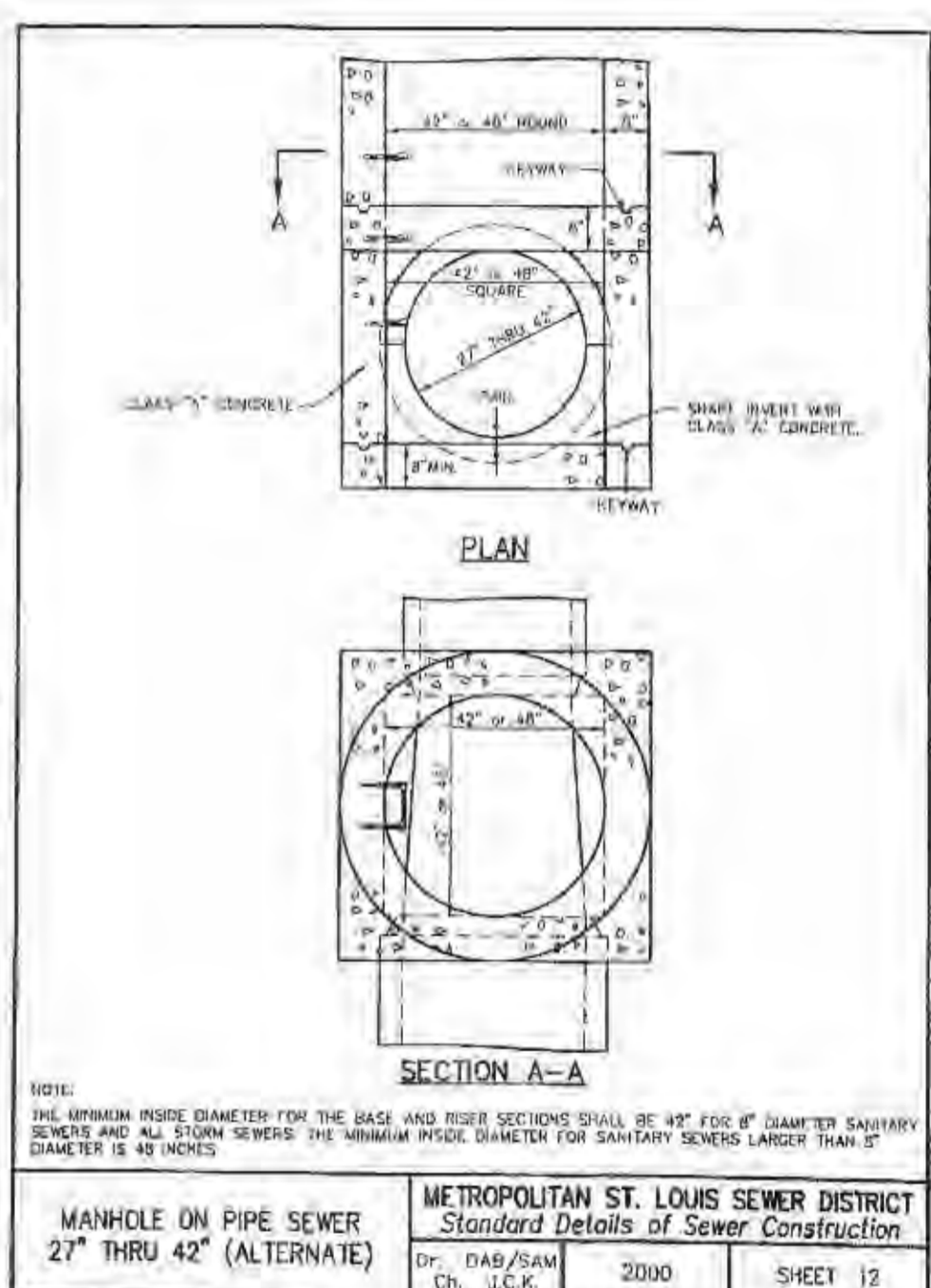
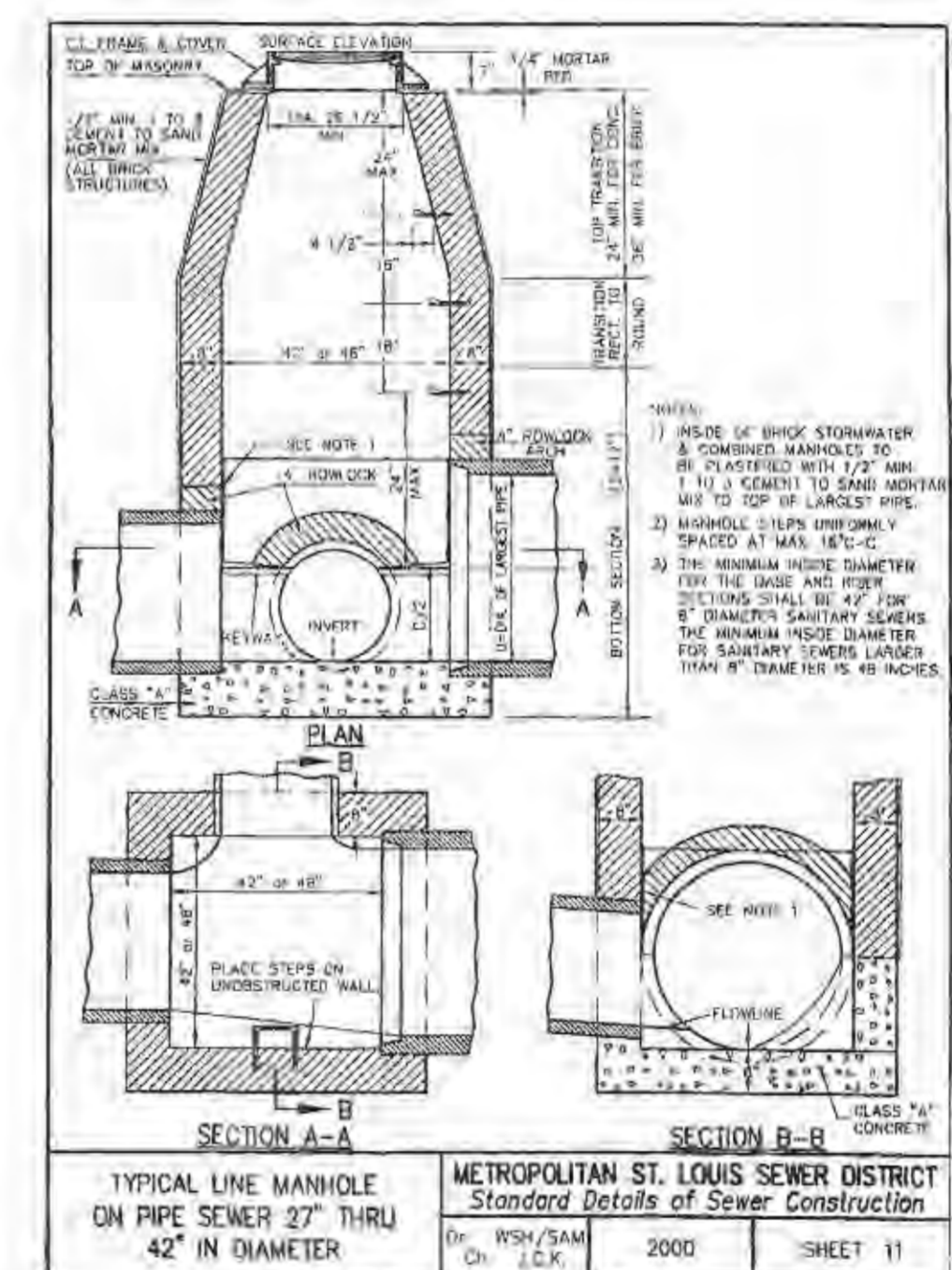
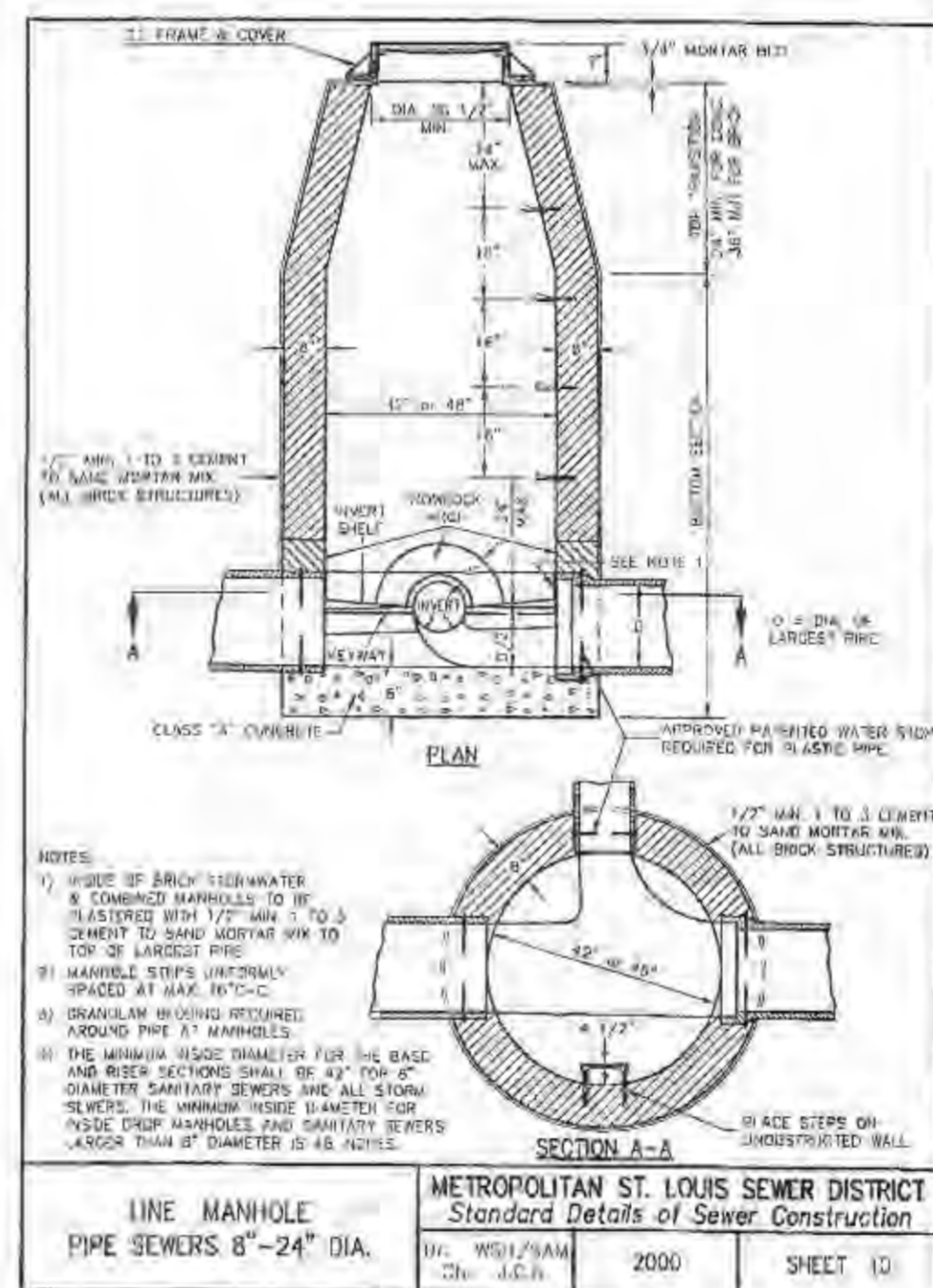
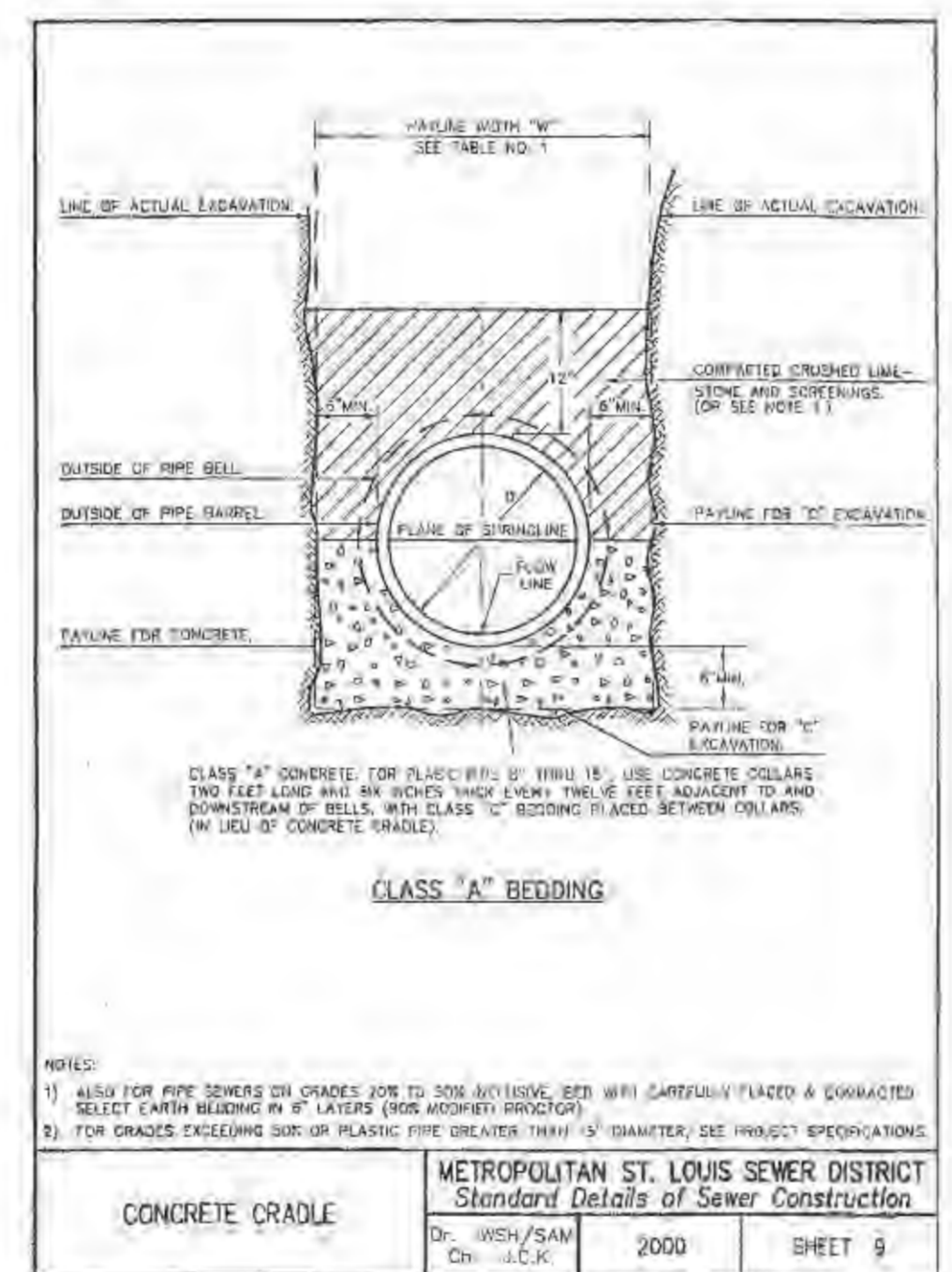
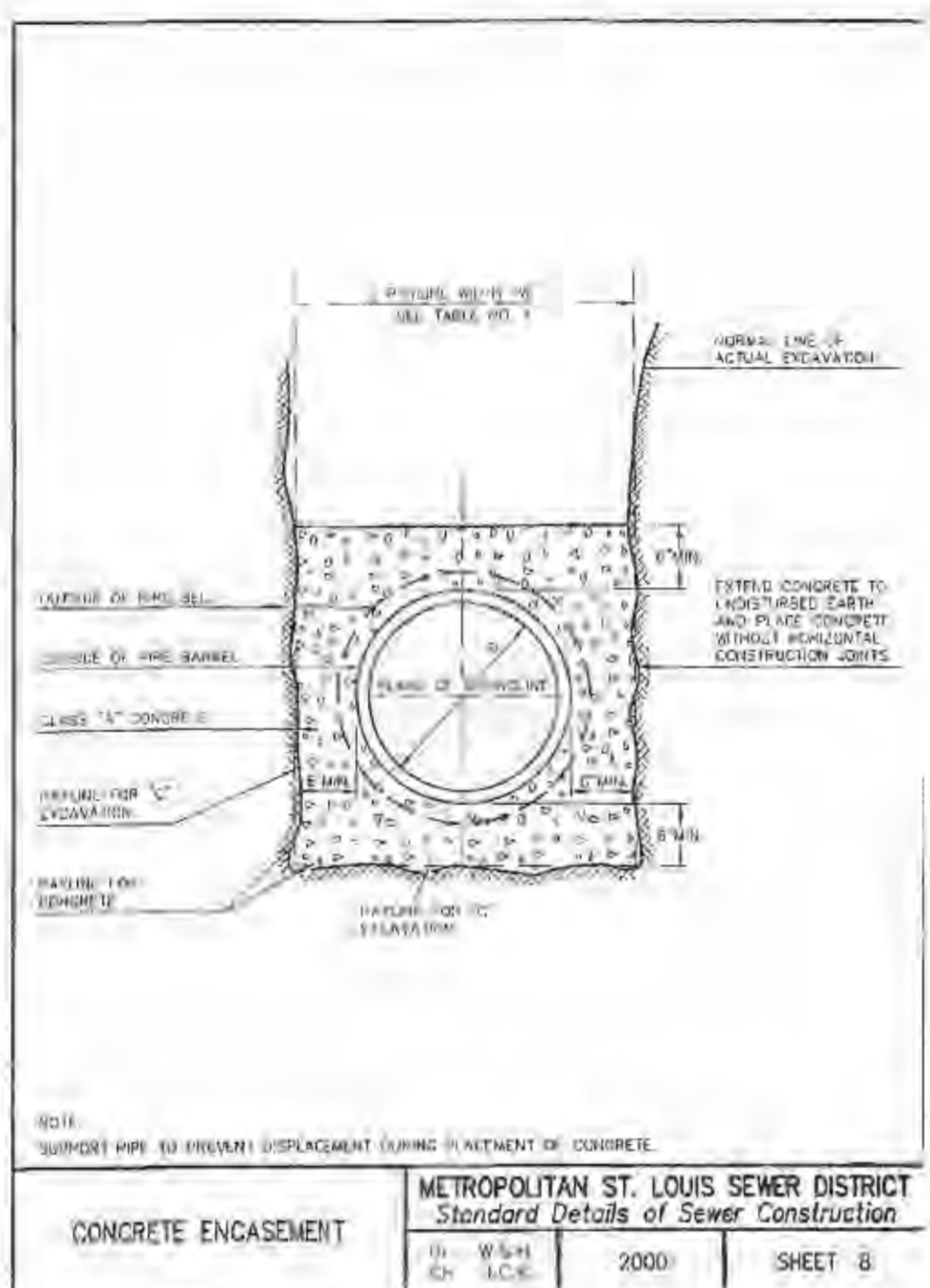
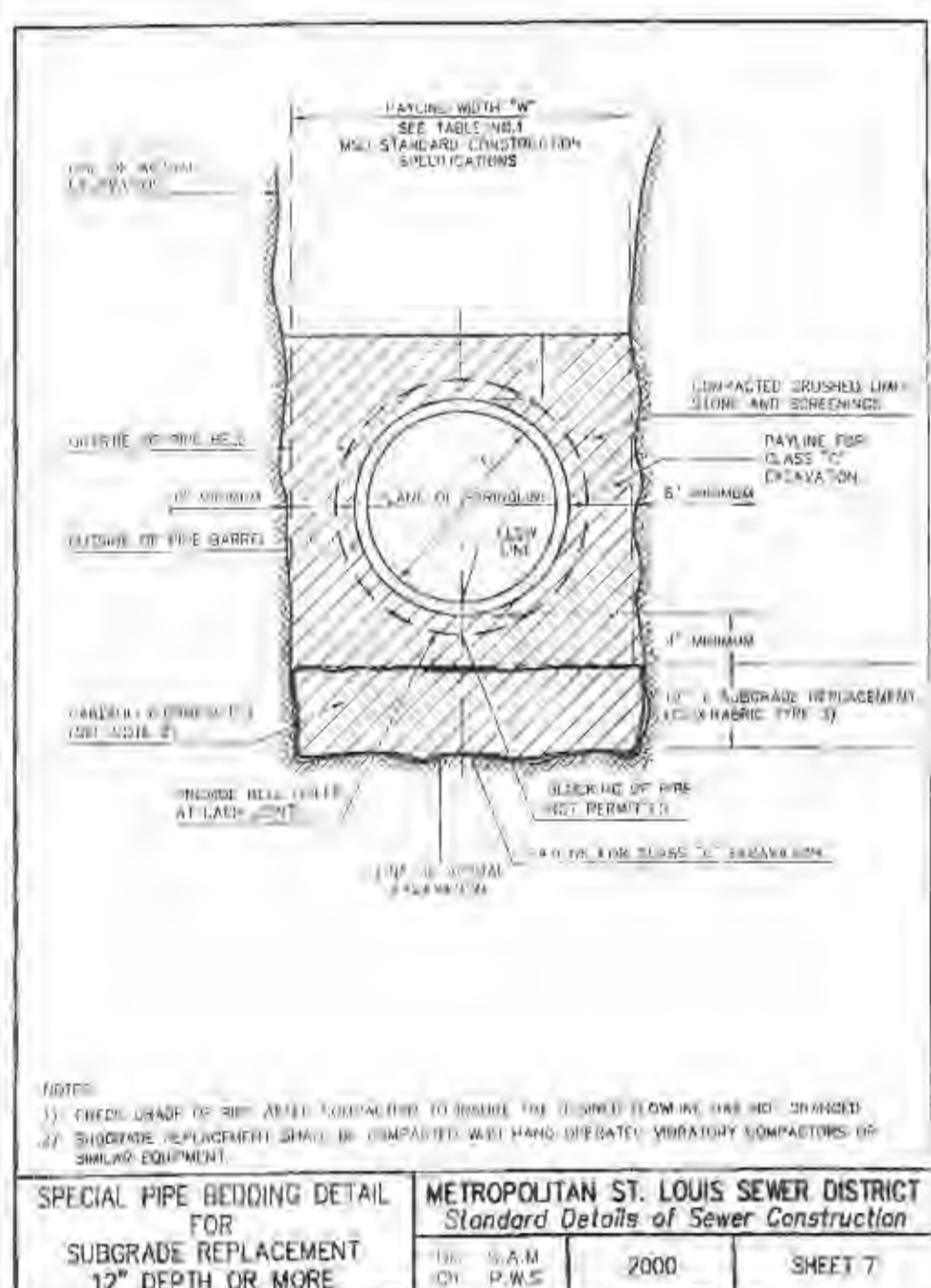
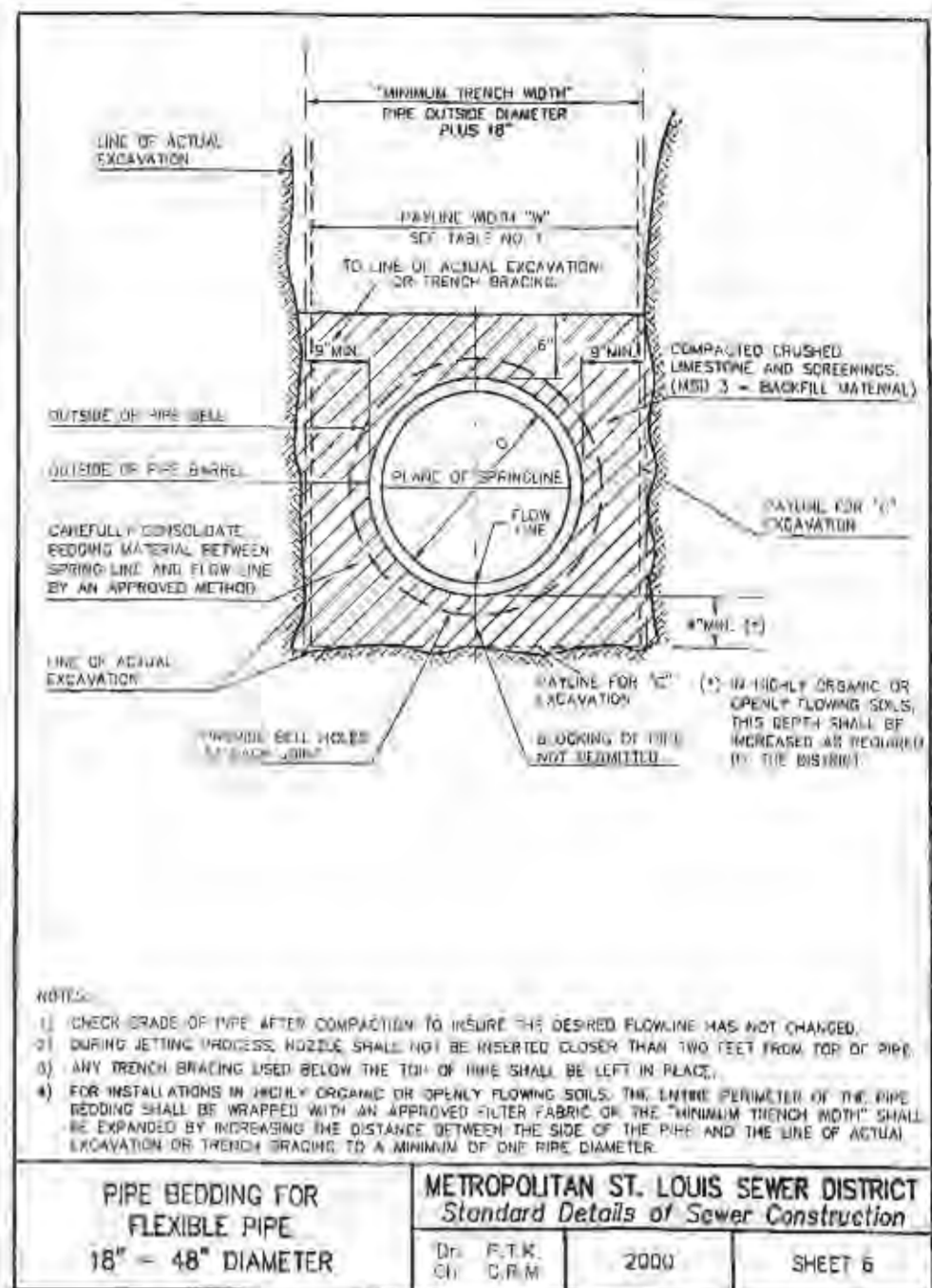
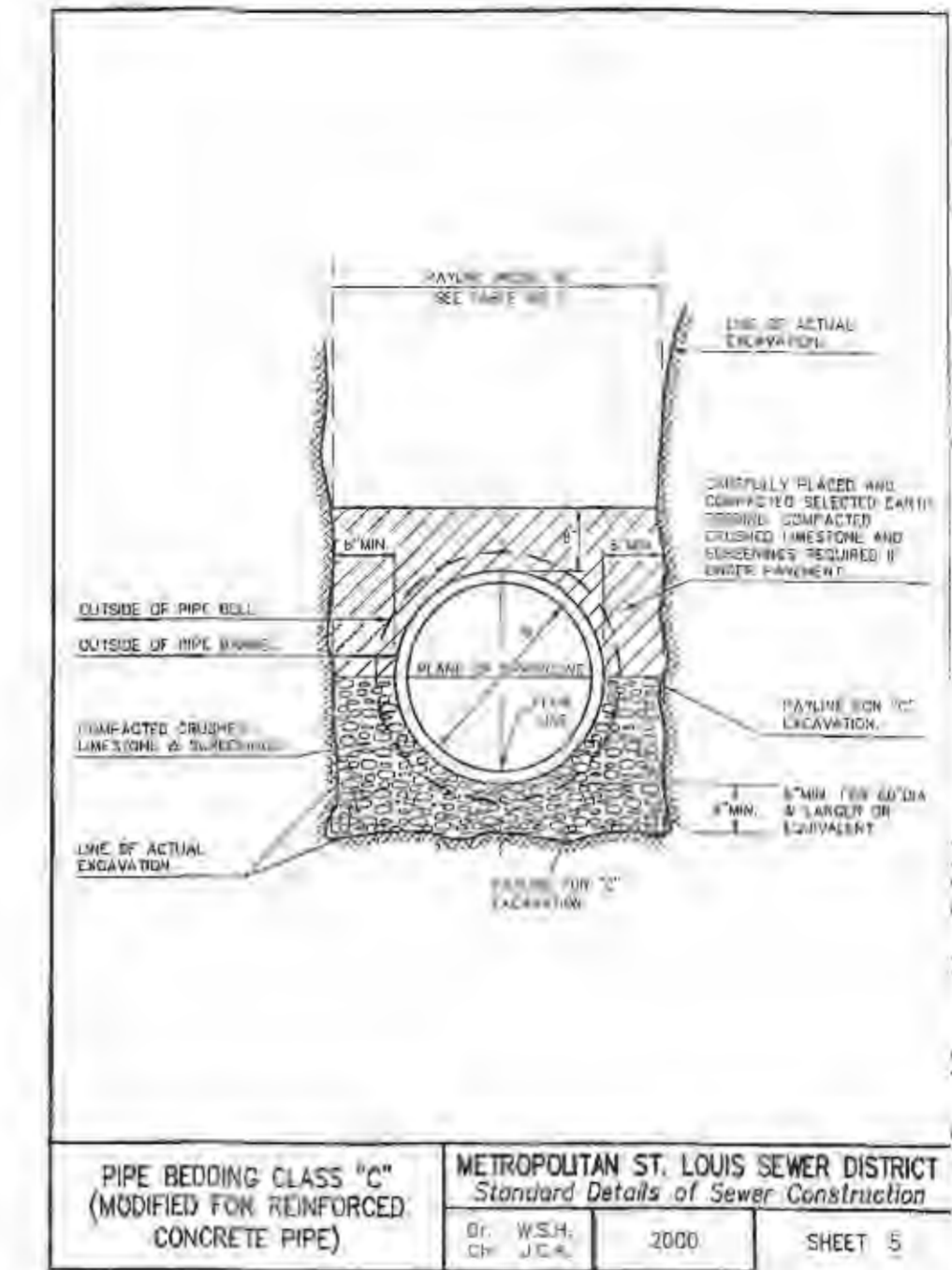
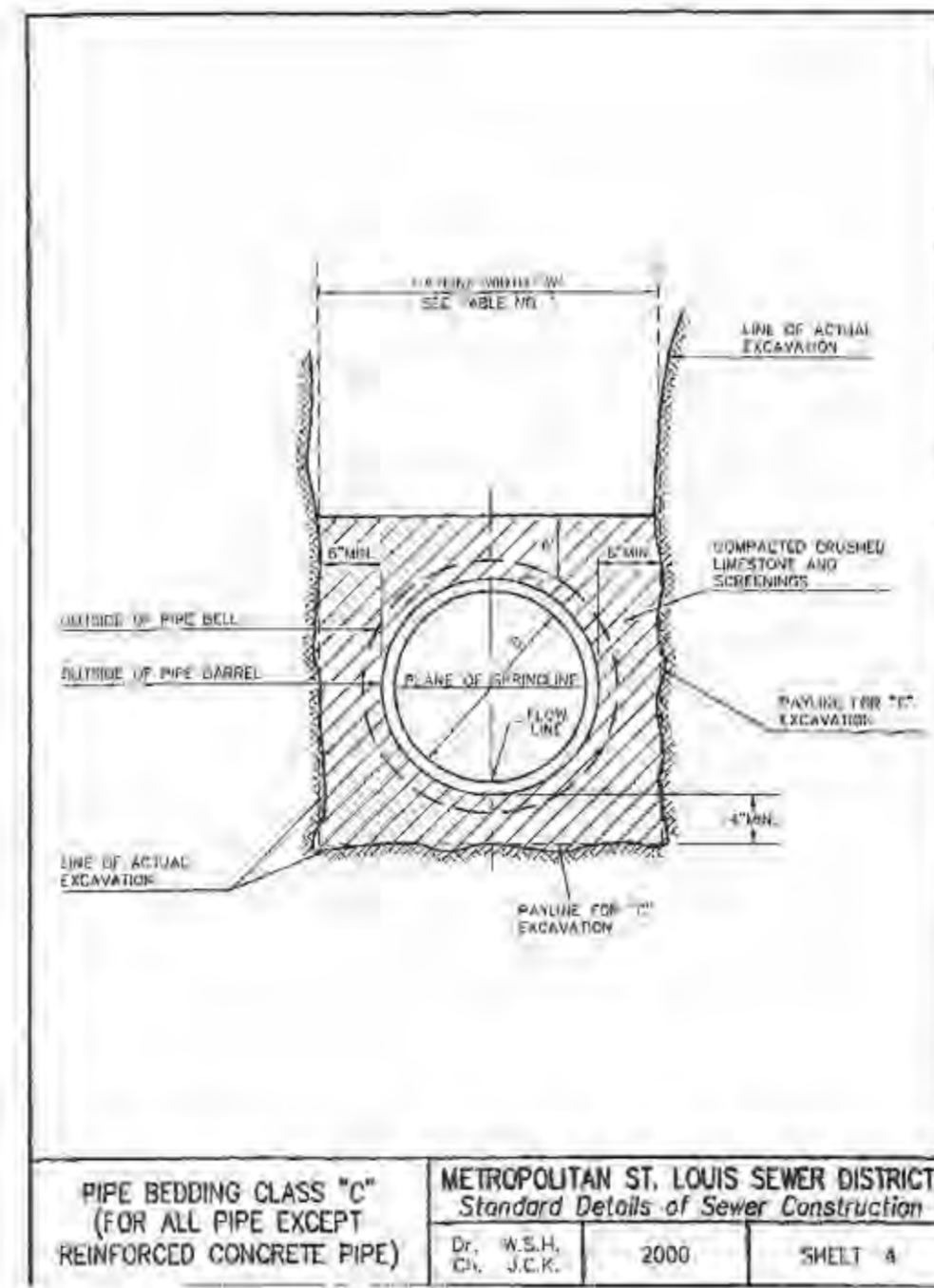
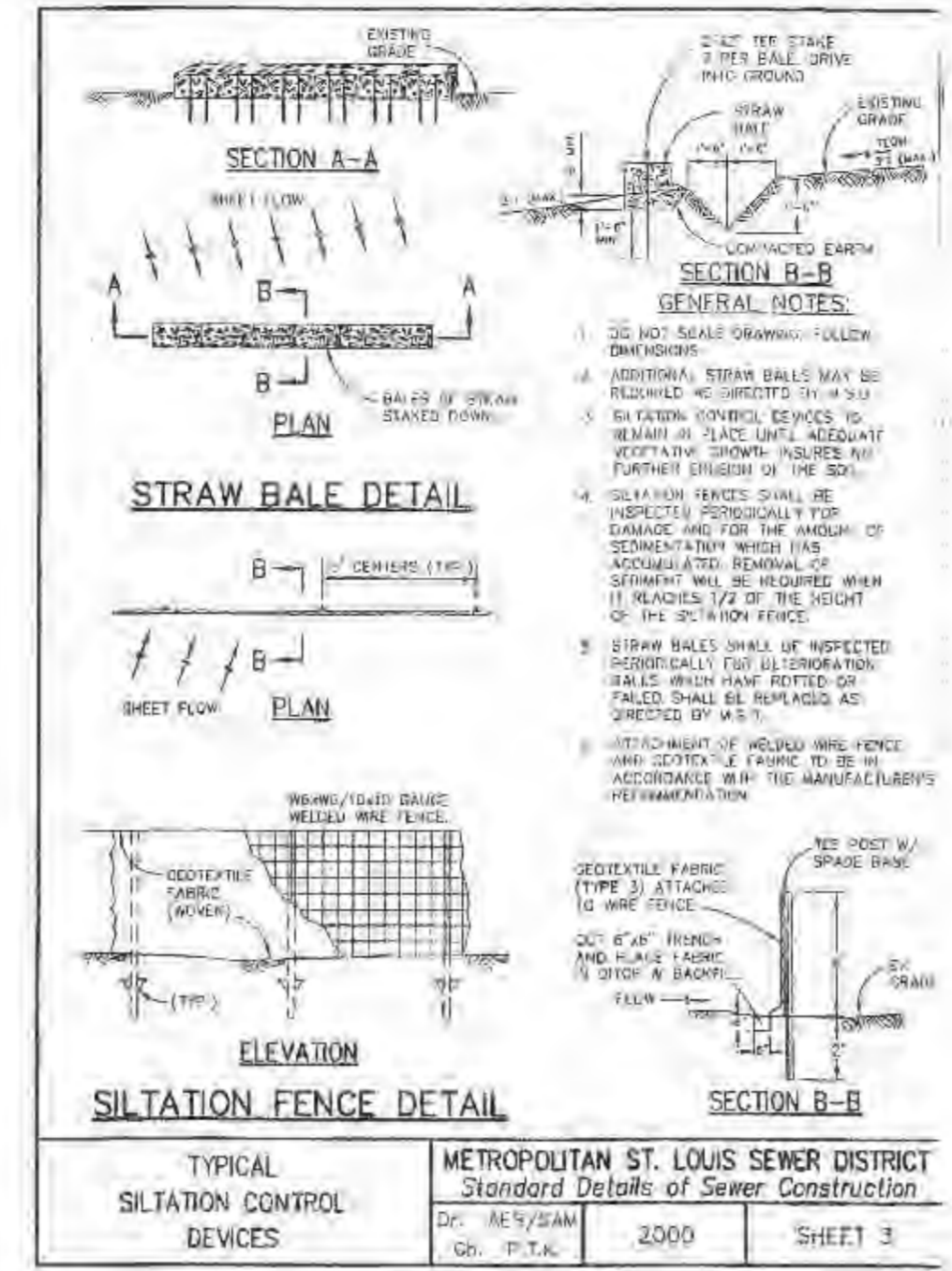
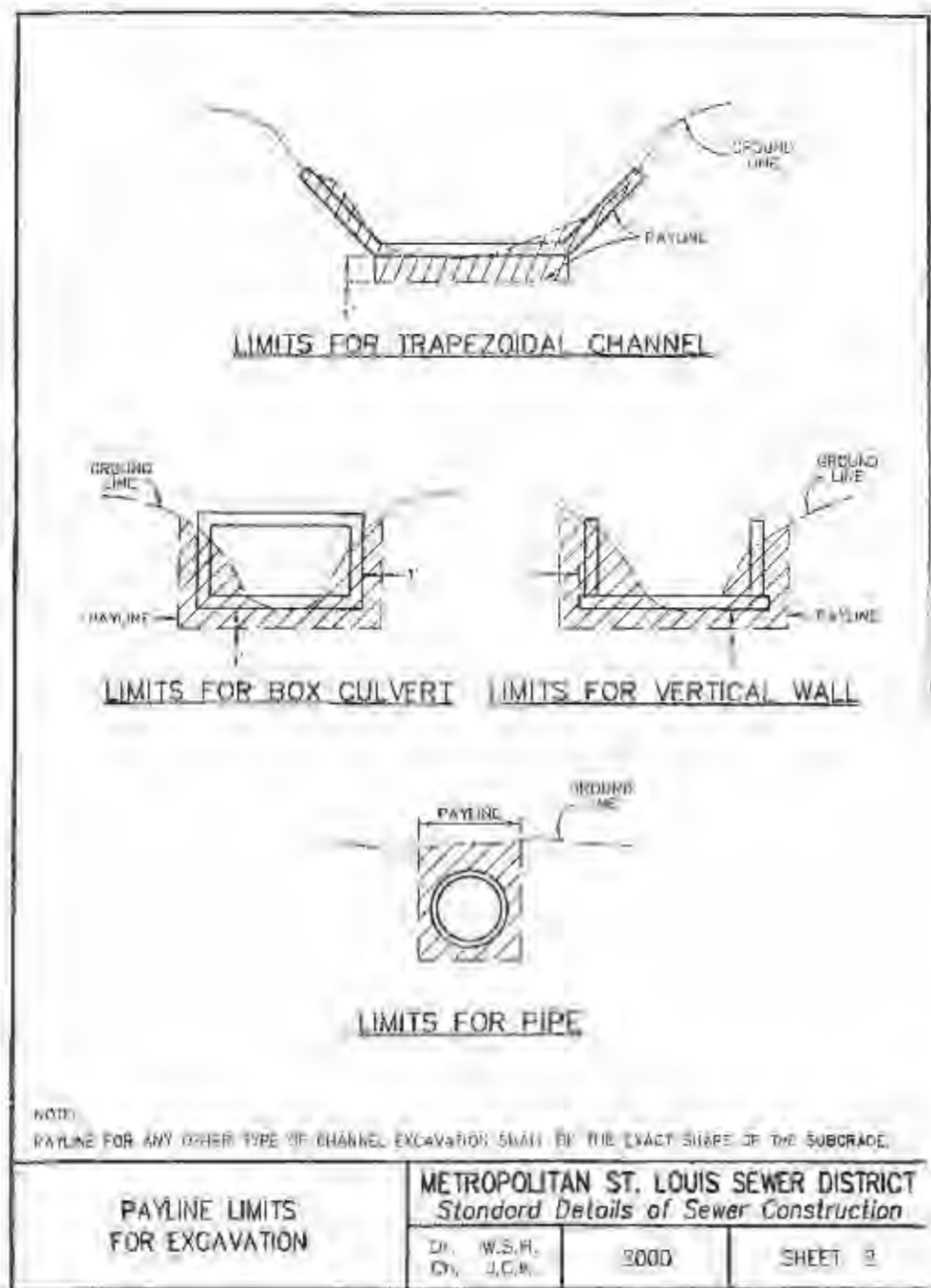
SCALE: VERTICAL = 1"=10'
 HORIZONTAL = 1"=30'

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ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
PIPE DIAMETER (INS.)	PAVING WIDTH (FEET)	PAVING QUANTITIES (CY)	PAVING QUANTITIES (CY)	PAVING WIDTH (FEET)	PAVING QUANTITIES (CY)	PAVING QUANTITIES (CY)	PAVING QUANTITIES (CY)
4	2.00	1.20	1.20	4	2.00	1.20	1.20
6	2.25	1.50	1.50	6	2.25	1.50	1.50
8	2.50	1.80	1.80	8	2.50	1.80	1.80
10	2.75	2.10	2.10	10	2.75	2.10	2.10
12	3.00	2.40	2.40	12	3.00	2.40	2.40
15	3.38	3.00	3.00	15	3.38	3.00	3.00
18	3.75	3.60	3.60	18	3.75	3.60	3.60
20	4.00	4.00	4.00	20	4.00	4.00	4.00
24	4.50	4.80	4.80	24	4.50	4.80	4.80
27	5.00	5.40	5.40	27	5.00	5.40	5.40
30	5.25	5.70	5.70	30	5.25	5.70	5.70
36	6.00	6.60	6.60	36	6.00	6.60	6.60
42	6.75	7.50	7.50	42	6.75	7.50	7.50
48	7.50	8.40	8.40	48	7.50	8.40	8.40
54	8.25	9.30	9.30	54	8.25	9.30	9.30
60	9.00	10.20	10.20	60	9.00	10.20	10.20
66	9.75	11.10	11.10	66	9.75	11.10	11.10
72	10.50	12.00	12.00	72	10.50	12.00	12.00
78	11.25	12.90	12.90	78	11.25	12.90	12.90
84	12.00	13.80	13.80	84	12.00	13.80	13.80
90	12.75	14.70	14.70	90	12.75	14.70	14.70
96	13.50	15.60	15.60	96	13.50	15.60	15.60
102	14.25	16.50	16.50	102	14.25	16.50	16.50
108	15.00	17.40	17.40	108	15.00	17.40	17.40
114	15.75	18.30	18.30	114	15.75	18.30	18.30
120	16.50	19.20	19.20	120	16.50	19.20	19.20
126	17.25	20.10	20.10	126	17.25	20.10	20.10
132	18.00	21.00	21.00	132	18.00	21.00	21.00
138	18.75	21.90	21.90	138	18.75	21.90	21.90
144	19.50	22.80	22.80	144	19.50	22.80	22.80

TABLE 1
PAVING WIDTHS OF TRENCH AND PAVING QUANTITIES OF CONCRETE

METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H./SAM
Ch. J.C.K. 2000 SHEET 1



TERMINAL MANHOLE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 19

PRECAST CONCRETE MANHOLE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 21

PRECAST MANHOLE ON EXIST. PIPE W/CONTINUOUS FLOW ONLY
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 22

ADJUST TO GRADE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 23

TYPICAL PRECAST MANHOLE TEE FOR REINFORCED CONCRETE PIPE SEWERS 48 INCH AND LARGER IN DIAMETER
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 24

UNTRAPPED STREET INLET BRICK CONSTRUCTION
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 25

TRAPPED STREET INLET BRICK CONSTRUCTION
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 26

MULTIPLE STREET INLET BRICK CONSTRUCTION
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 27

DOUBLE UNTRAPPED STREET INLET BRICK CONSTRUCTION
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 28

AREA INLET OPEN 4 SIDES BRICK CONSTRUCTION
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 29

AREA INLET MANHOLE (12" THRU 24")
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 30

DOUBLE AREA INLET OPEN 4 SIDES BRICK CONSTRUCTION
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 31

2 GRATE INLET BRICK CONSTRUCTION
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 32

GRATE SEAT FOR 2 GRATE WITH SIDE INTAKE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 33

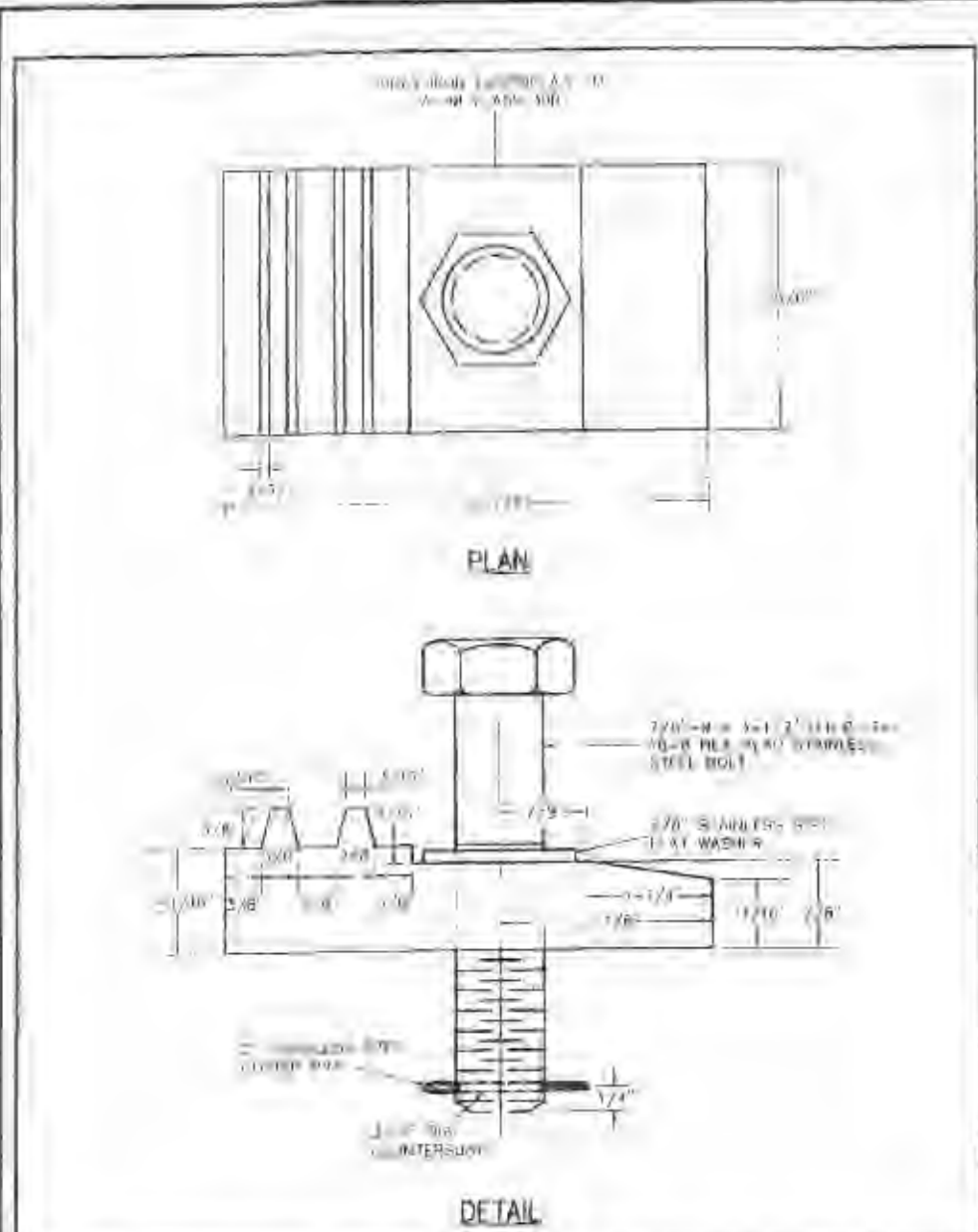
PRECAST CONCRETE STORMWATER STRUCTURES
 MINIMUM DISTANCE FROM LINE TO TOP OF STONE OR GRATE

PIPE 12 INCHES	AREA INLET	2 GRATE INLET	4 WAY CONCRETE UNIT	ADAPTER RING	INLET BASE & INLET MANHOLE BASE
12"	48"	48"	48"	48"	48"
18"	48"	48"	48"	48"	48"
24"	48"	48"	48"	48"	48"
30"	48"	48"	48"	48"	48"
36"	48"	48"	48"	48"	48"
42"	48"	48"	48"	48"	48"
48"	48"	48"	48"	48"	48"
54"	48"	48"	48"	48"	48"
60"	48"	48"	48"	48"	48"
66"	48"	48"	48"	48"	48"
72"	48"	48"	48"	48"	48"
78"	48"	48"	48"	48"	48"
84"	48"	48"	48"	48"	48"
90"	48"	48"	48"	48"	48"

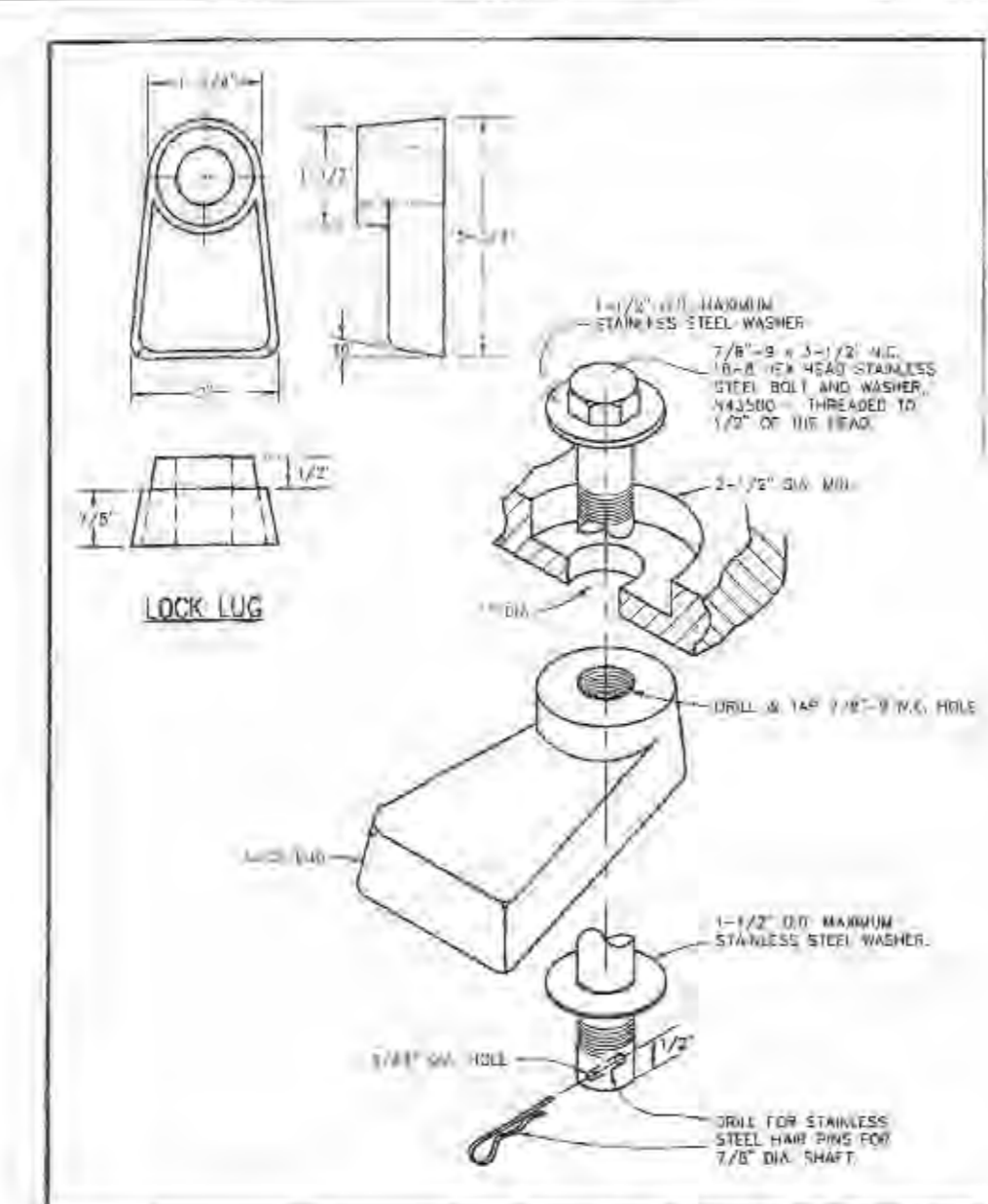
PRECAST CONCRETE STORMWATER STRUCTURES
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 34

CONCRETE OR CAST IRON COVER
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 35

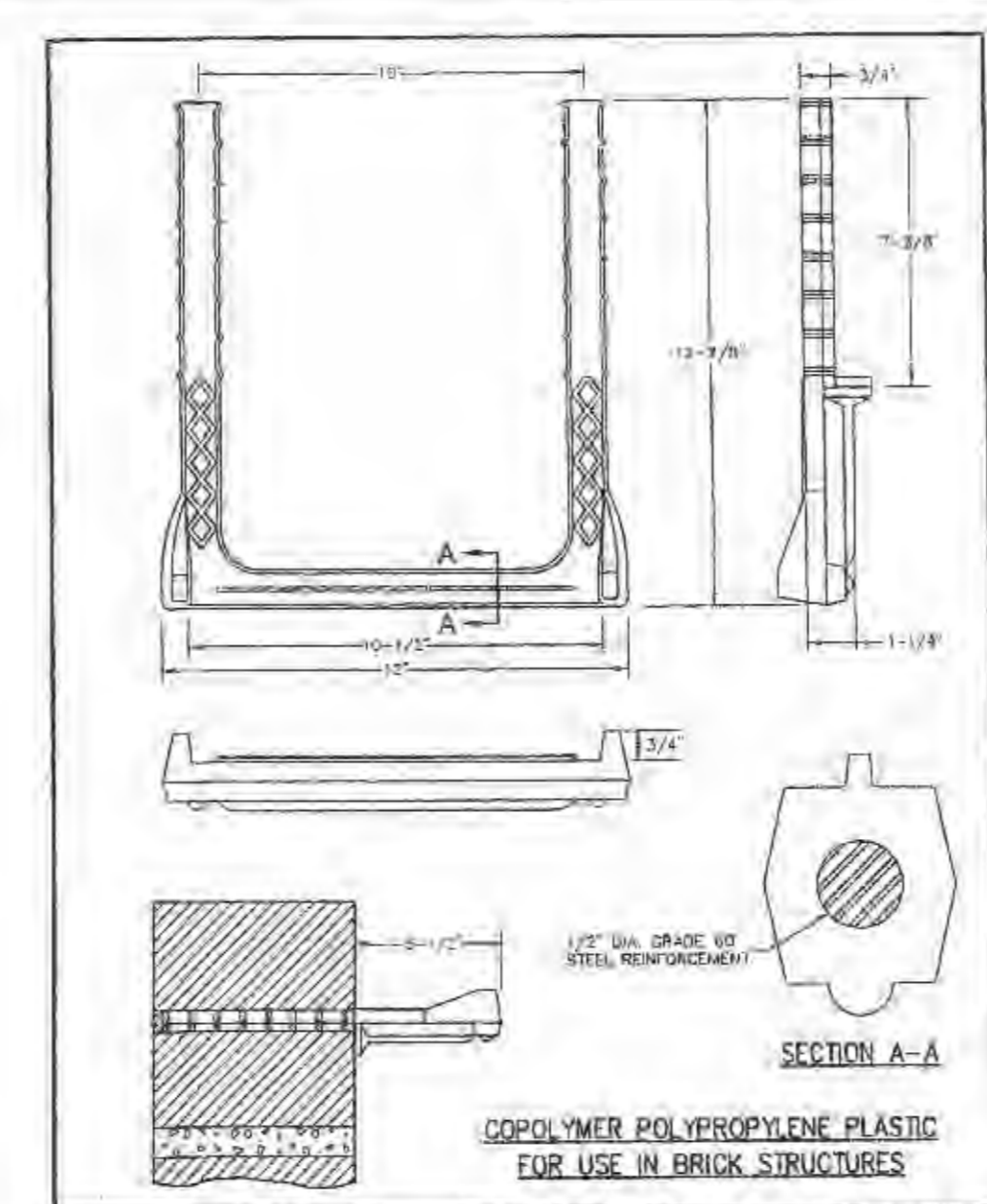
2 GRATE INLETS PRECAST CONCRETE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D. WSH/SAM
 Ch. J.C.K. 2000 SHEET 36



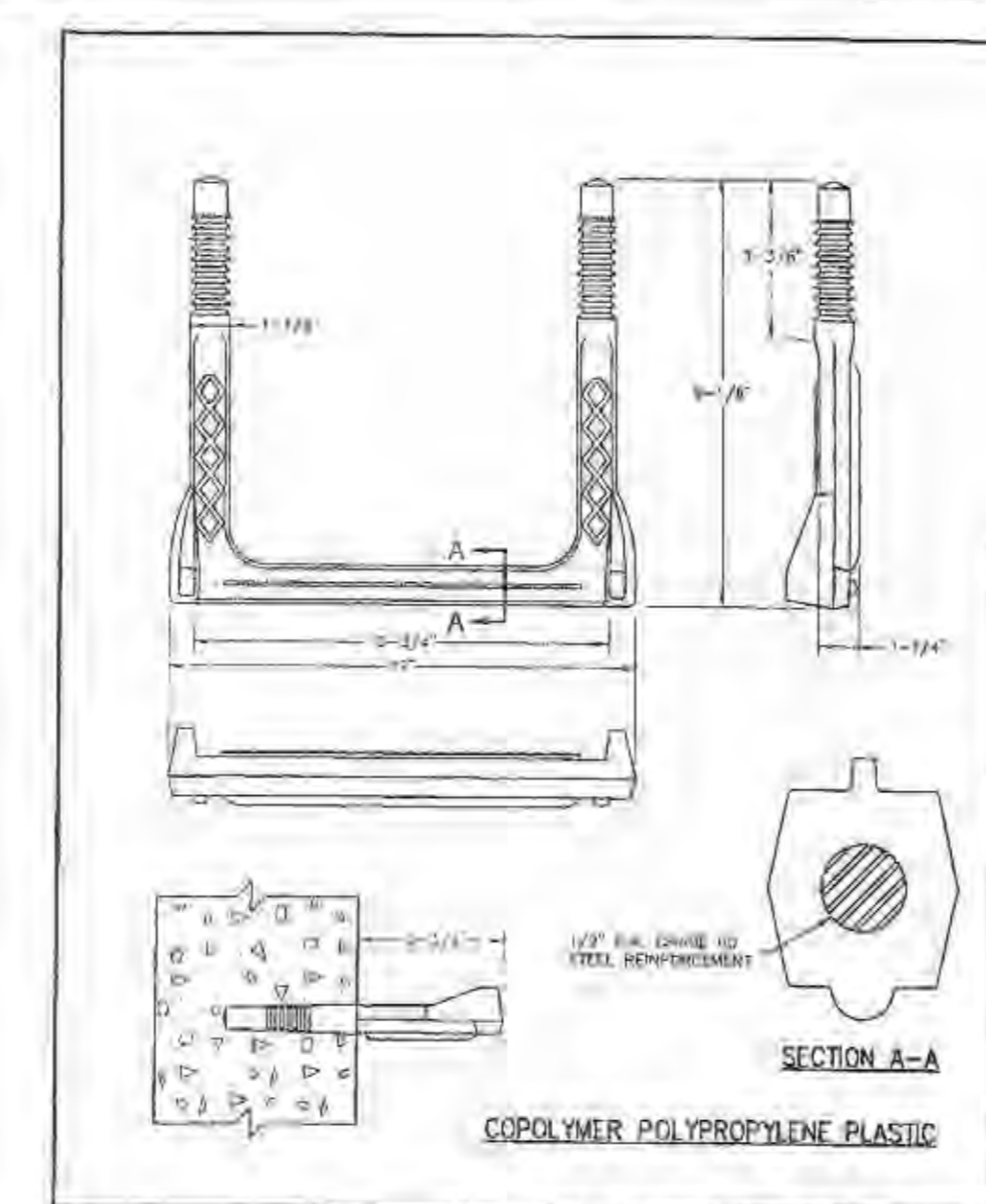
LOCKING DEVICE FOR TYPE "T" LOCK TYPE MANHOLE COVER
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: WSH/SAM
 Ch: J.C.R. 2000 SHEET 55



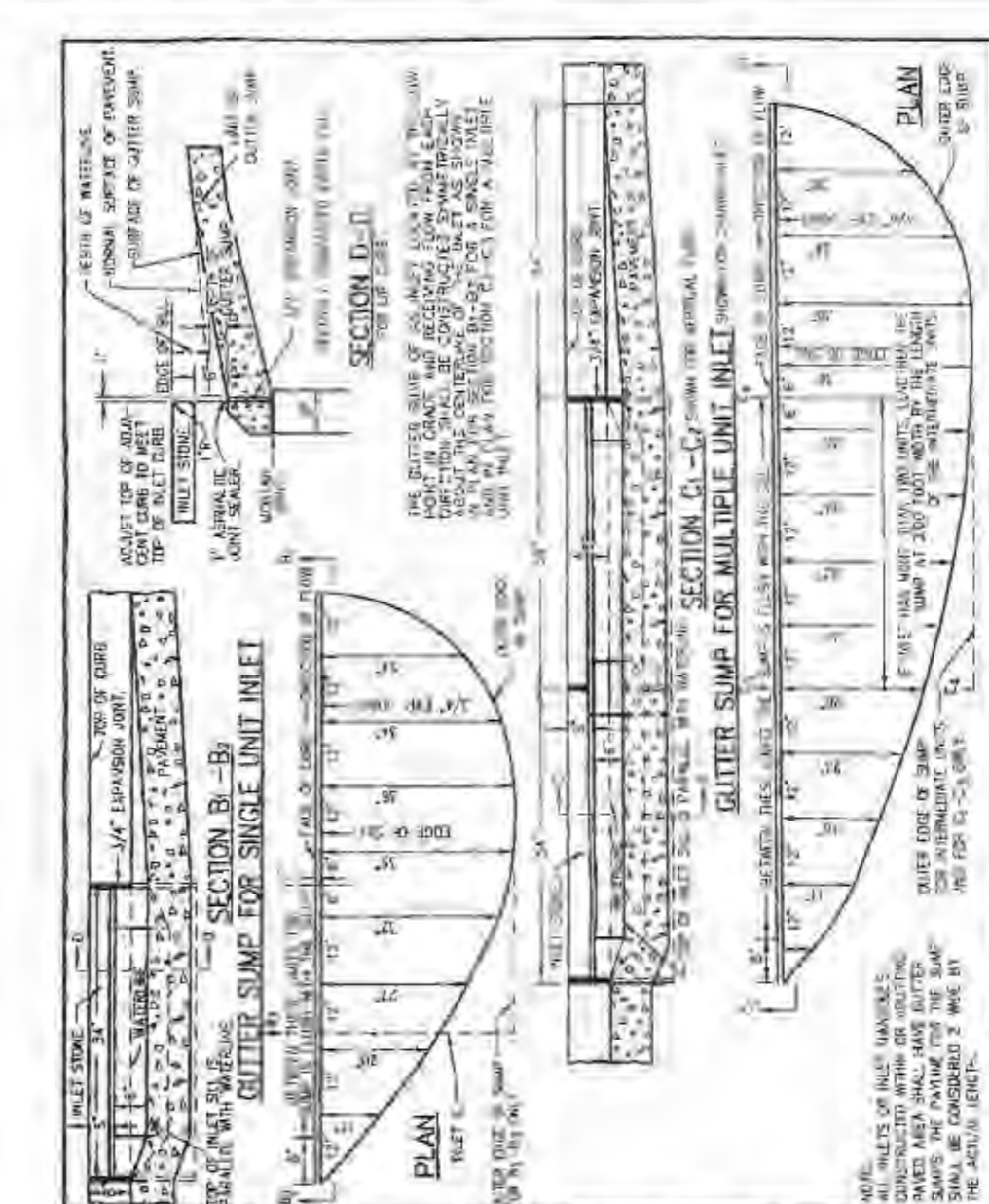
LOCKING DEVICE FOR TYPE "N" LOCK TYPE MANHOLE COVER
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: WSH/SAM
 Ch: J.C.R. 2000 SHEET 56



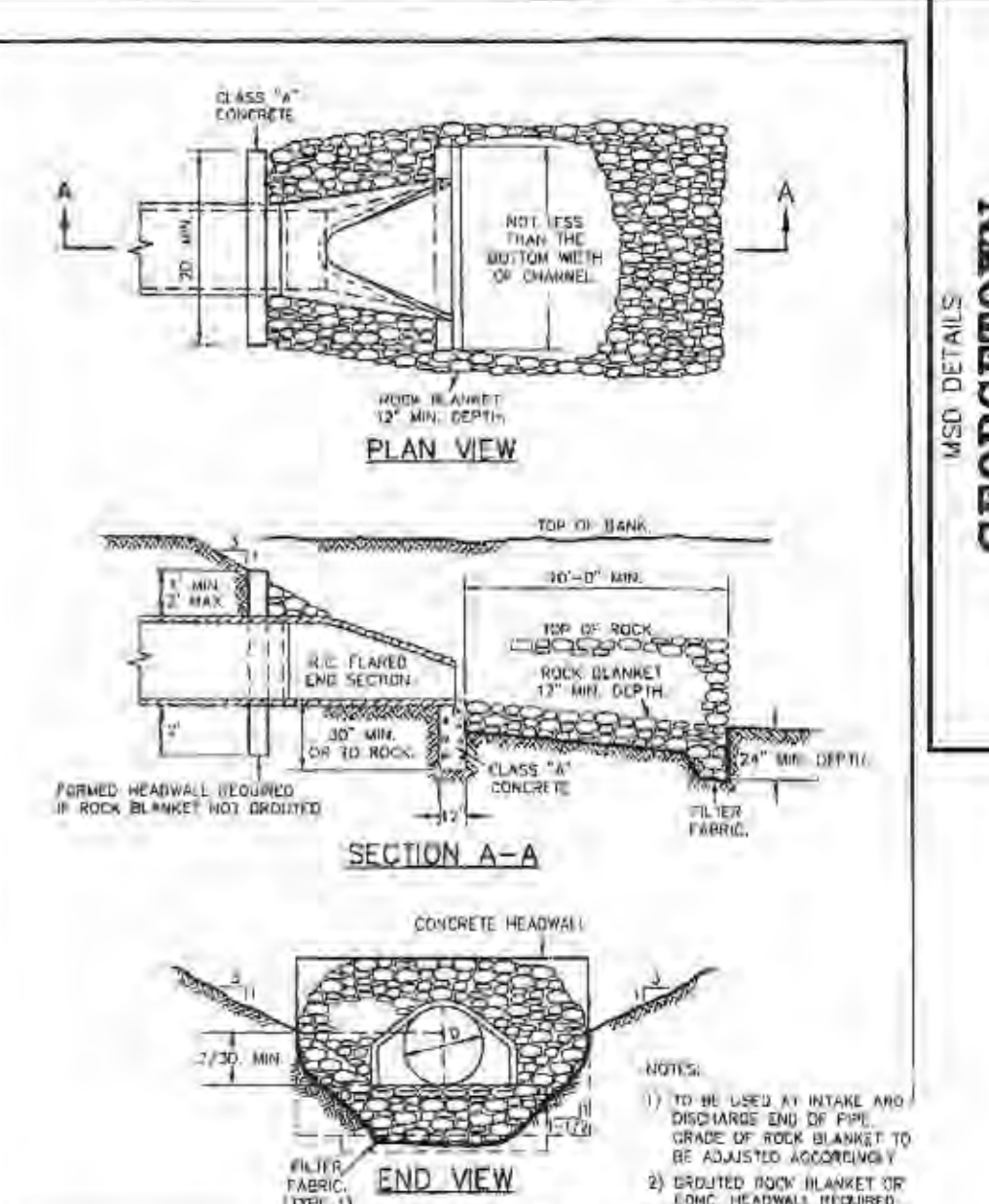
PSI-B MANHOLE STEP INTO JOINT
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: W.S.H.
 Ch: J.C.R. 2000 SHEET 57



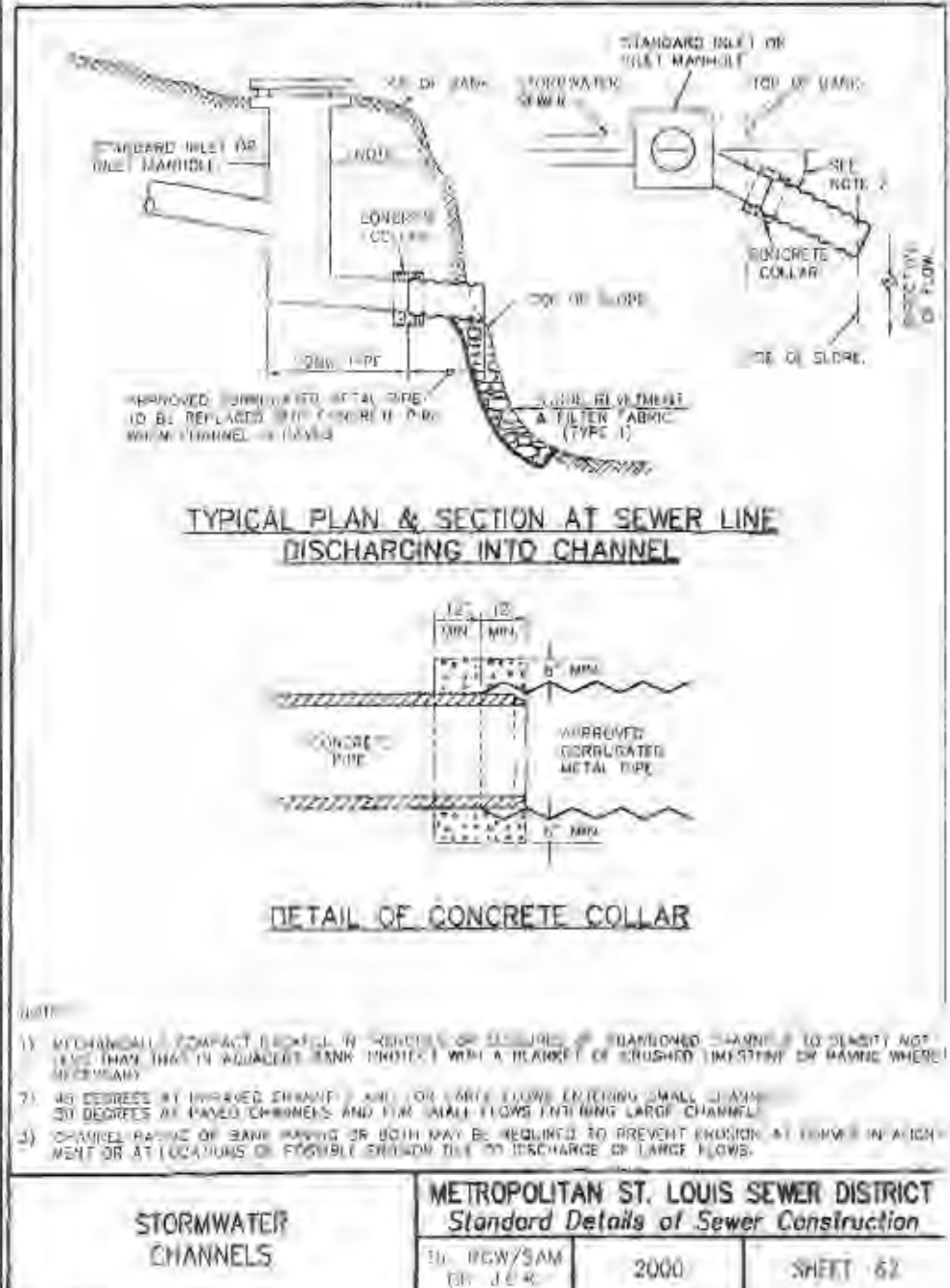
MANHOLE STEP FOR PRECAST & CAST-IN-PLACE MANHOLE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: W.S.H.
 Ch: J.C.R. 2000 SHEET 58



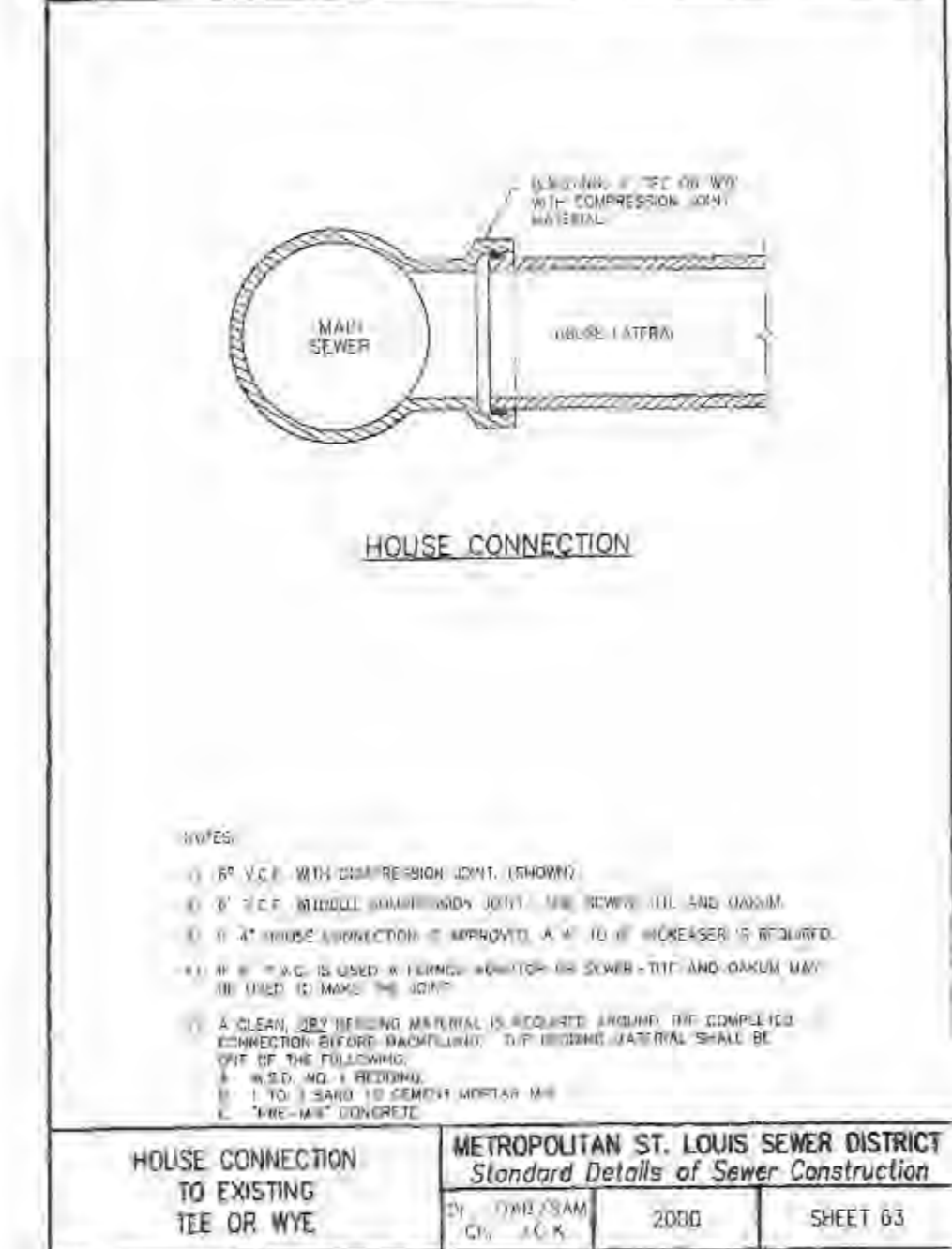
GUTTER SUMPS FOR VERTICAL CURB
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: WSH/SAM
 Ch: J.C.R. 2000 SHEET 59



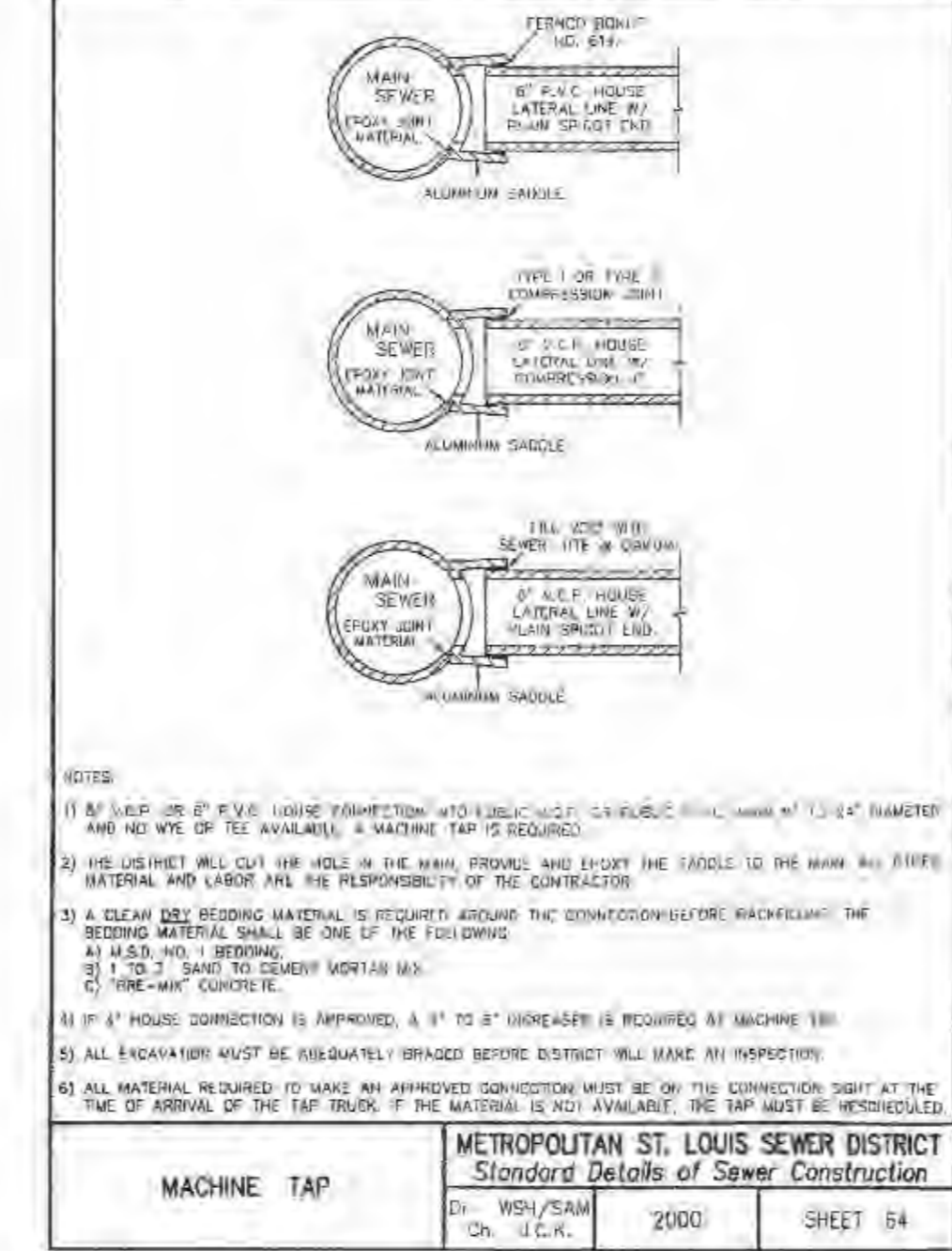
FLARED END SECTION
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: WSH/SAM
 Ch: J.C.R. 2000 SHEET 61



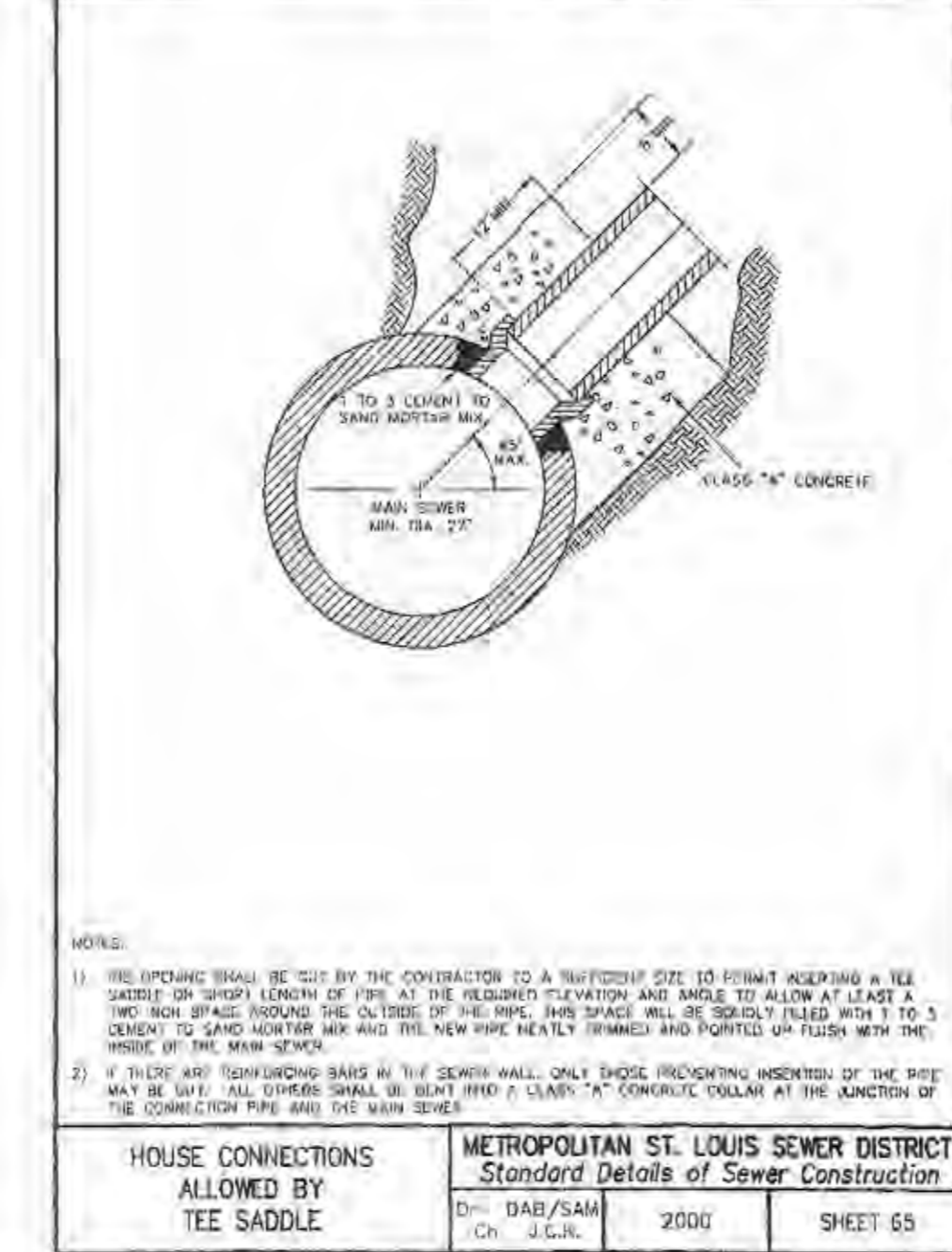
STORMWATER CHANNELS
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: WSH/SAM
 Ch: J.C.R. 2000 SHEET 62



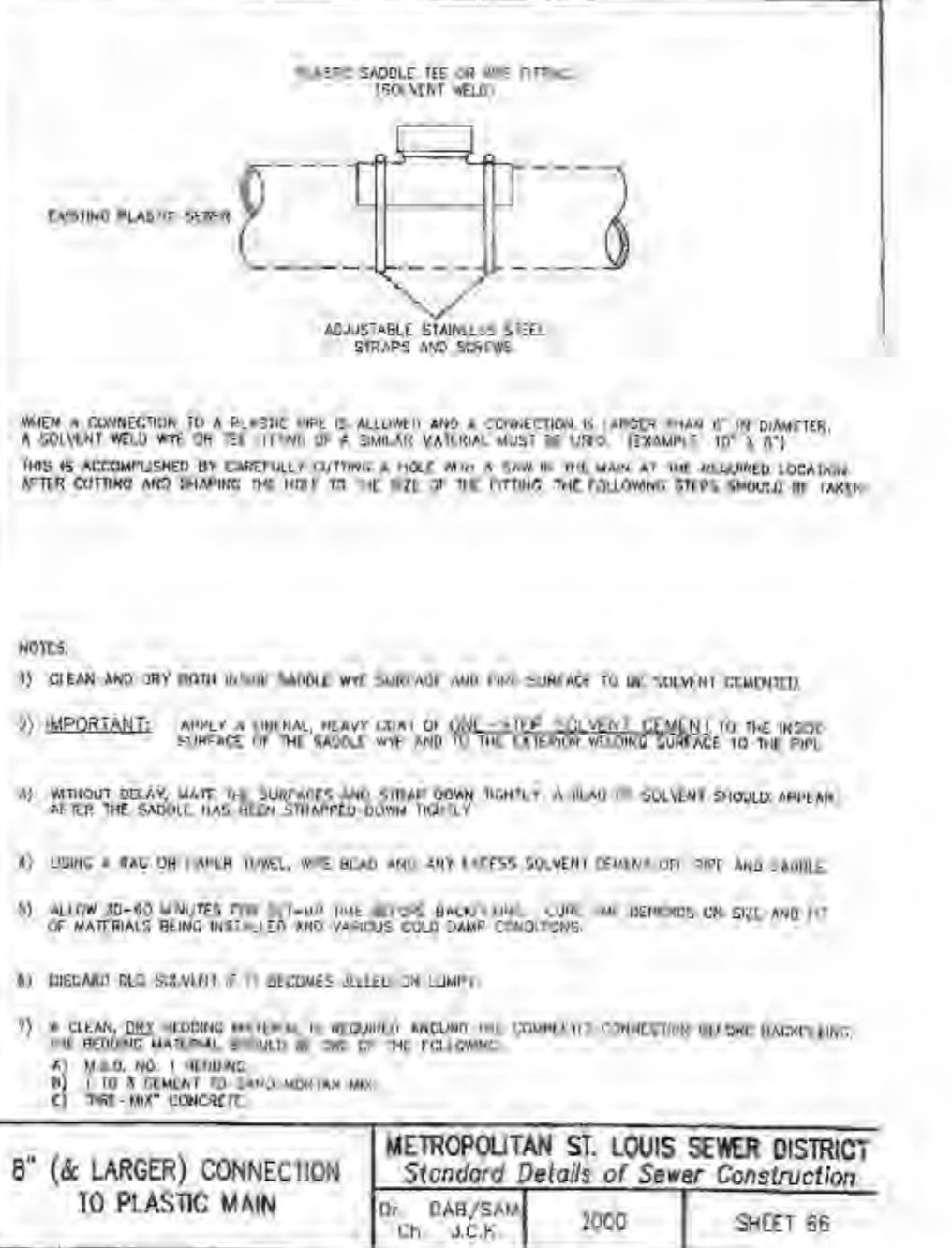
HOUSE CONNECTION TO EXISTING TEE OR WYE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: WSH/SAM
 Ch: J.C.R. 2000 SHEET 63



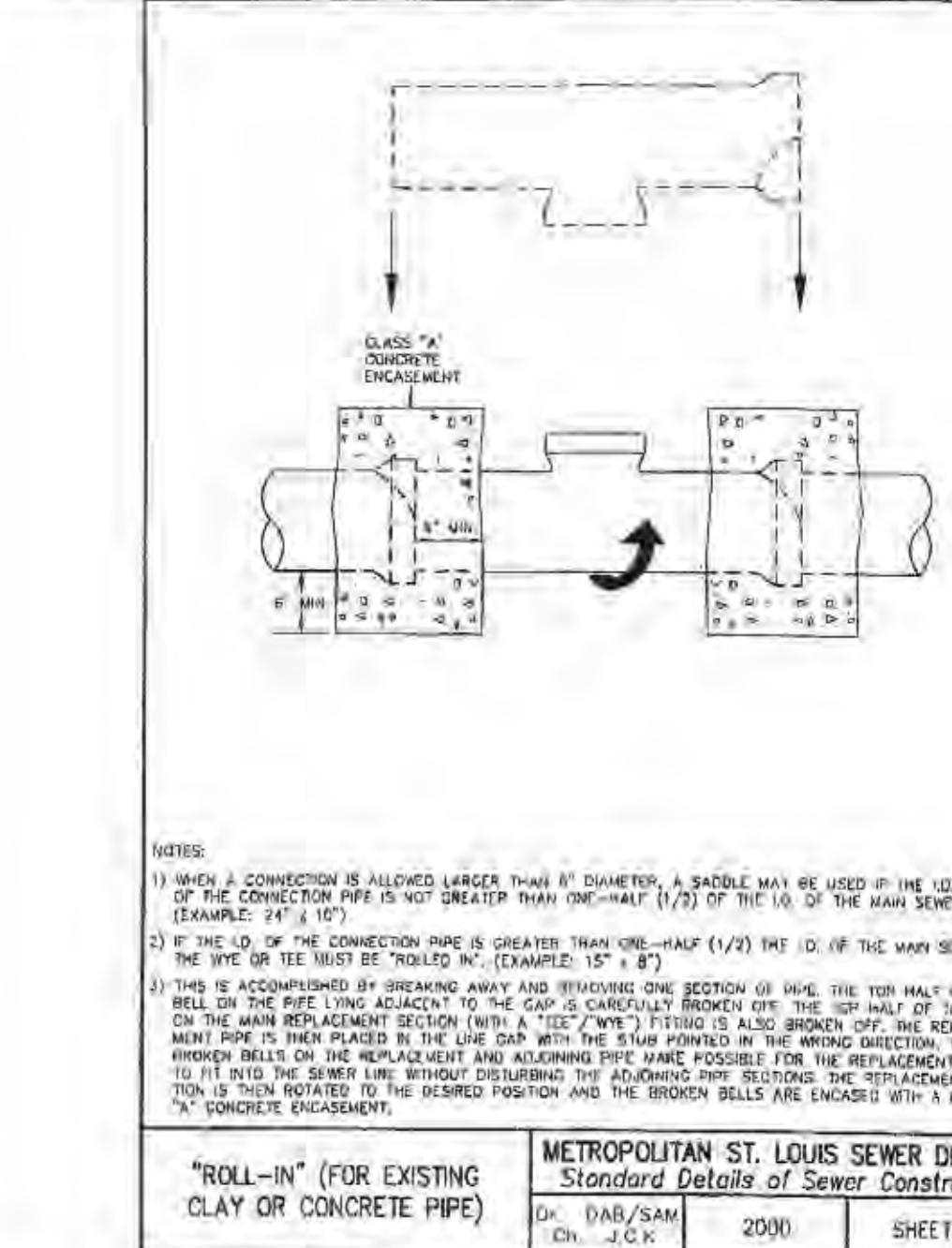
MACHINE TAP
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: WSH/SAM
 Ch: J.C.R. 2000 SHEET 64



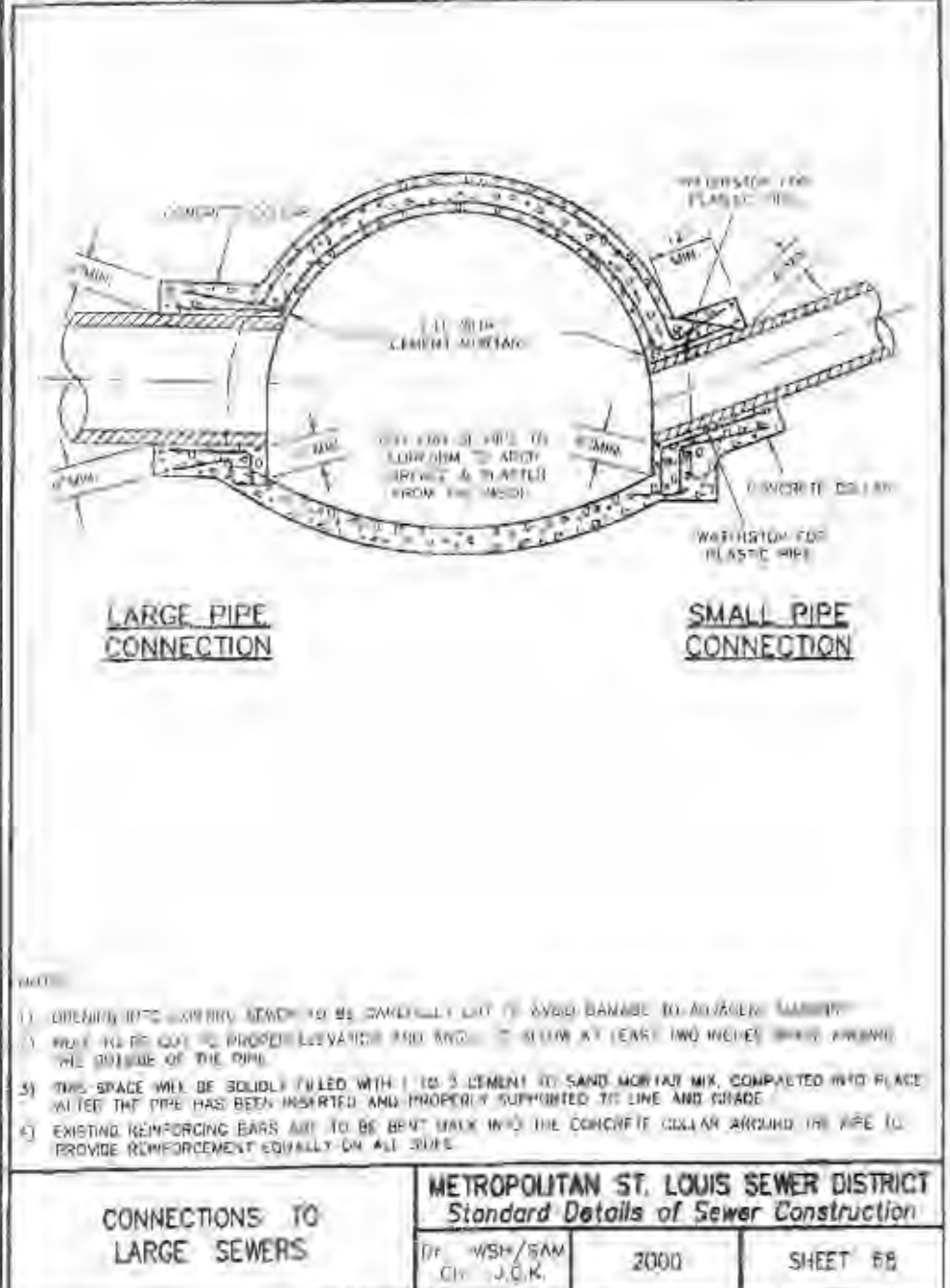
HOUSE CONNECTIONS ALLOWED BY TEE SADDLE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: DAB/SAM
 Ch: J.C.R. 2000 SHEET 65



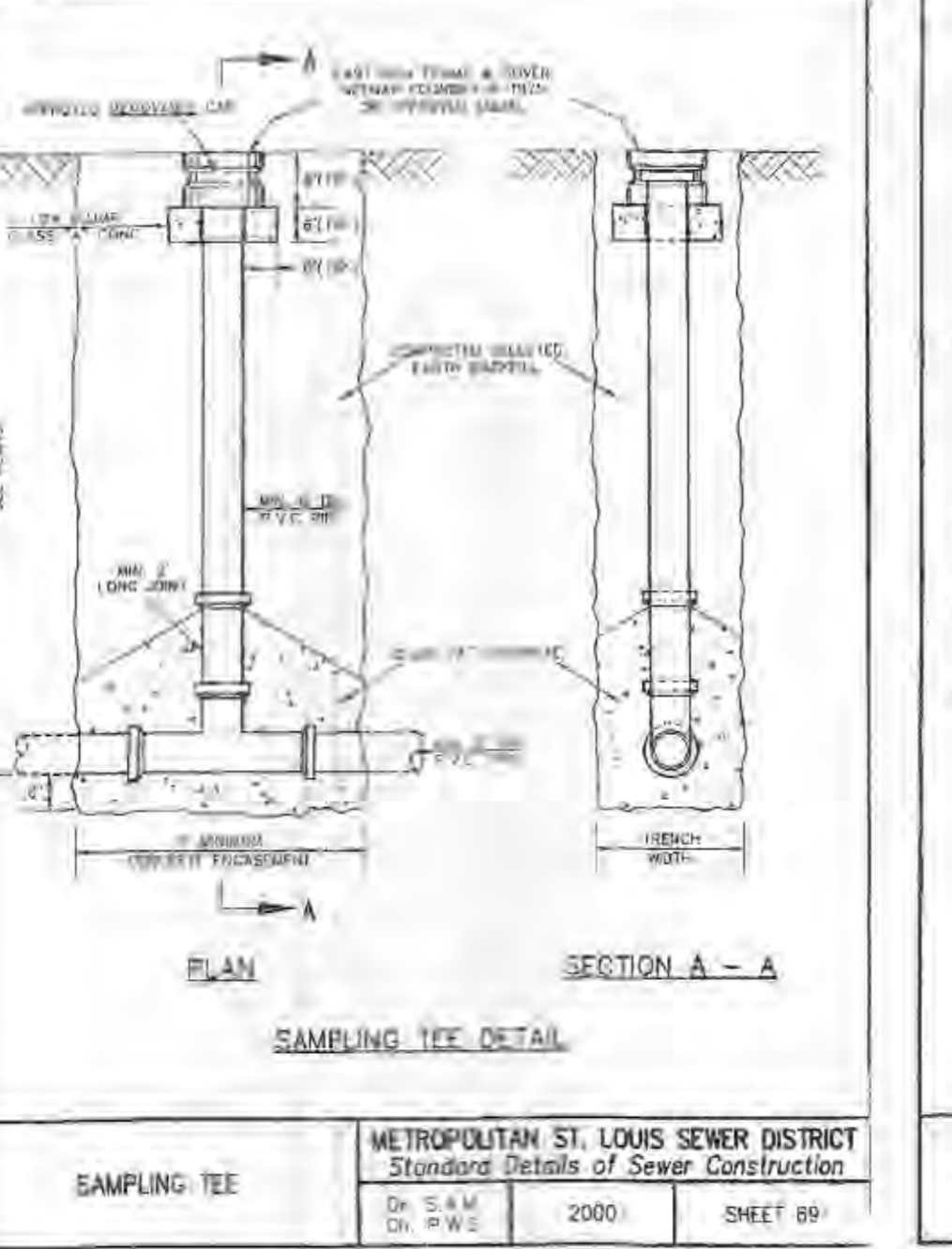
6" (& LARGER) CONNECTION TO PLASTIC MAIN
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: DAB/SAM
 Ch: J.C.R. 2000 SHEET 66



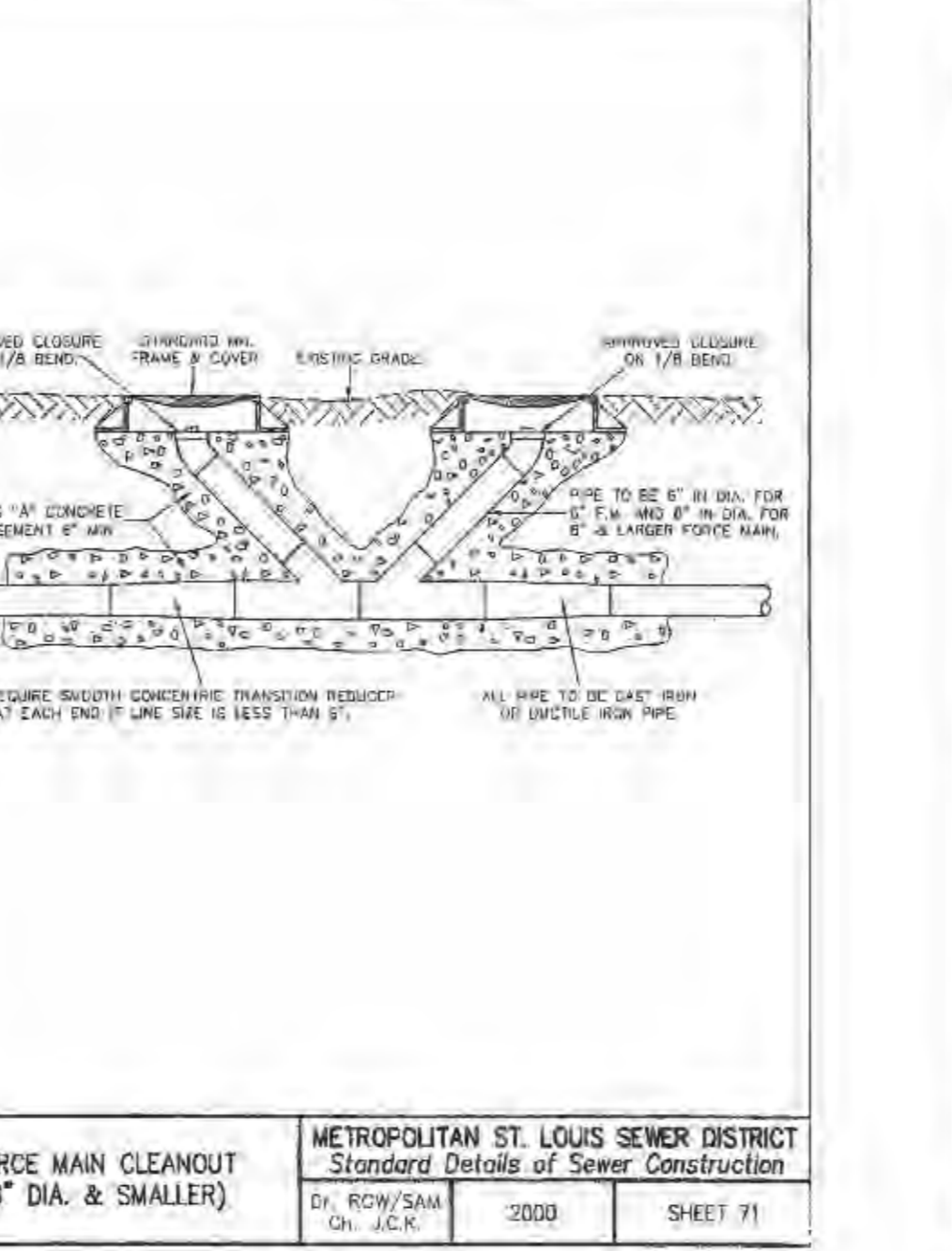
"ROLL-IN" (FOR EXISTING CLAY OR CONCRETE PIPE)
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: DAB/SAM
 Ch: J.C.R. 2000 SHEET 67



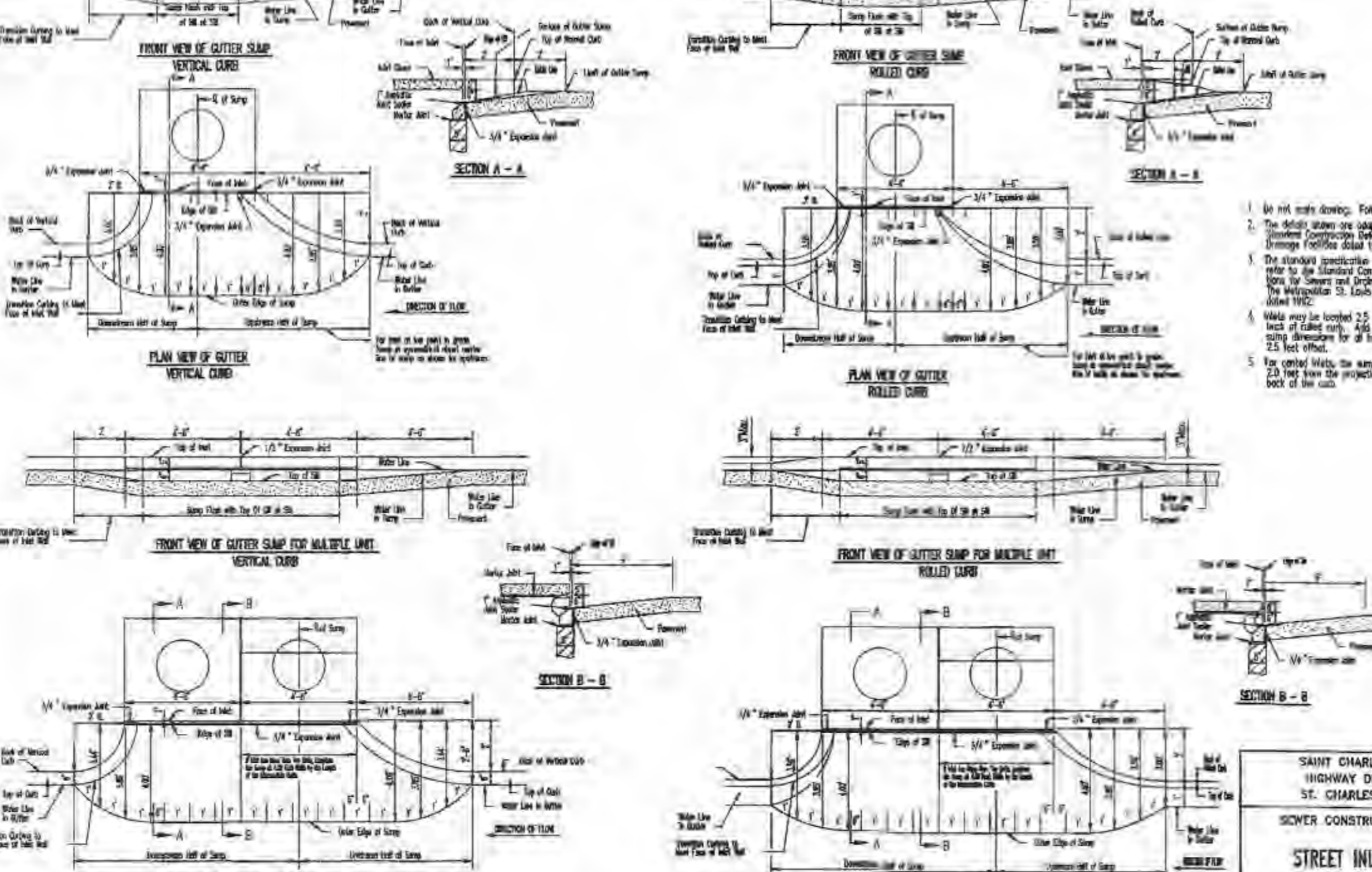
CONNECTIONS TO LARGE SEWERS
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: WSH/SAM
 Ch: J.C.R. 2000 SHEET 68



SAMPLING TEE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: S.A.M.
 Ch: P.W.S. 2000 SHEET 69



FORCE MAIN CLEANOUT (6" DIA. & SMALLER)
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 D: RW/SAM
 Ch: J.C.R. 2000 SHEET 71



STREET INLET SUMPS
 SAINT CHARLES COUNTY
 HIGHWAY DEPARTMENT
 ST. CHARLES, MISSOURI
 SEWER CONSTRUCTION DETAILS
 DATE: JUN. 2000 DRAWING: C504.36