

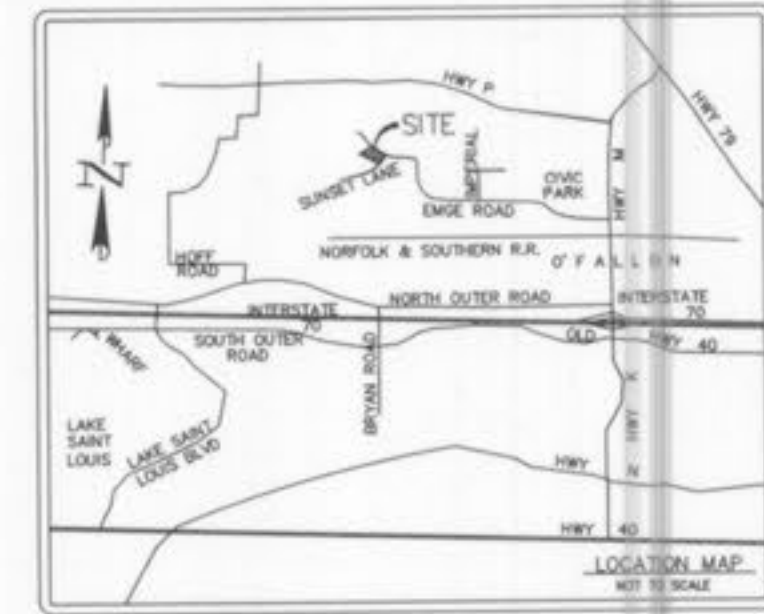
**SANITARY NOTES**

- ALL SANITARY MANHOLES SHALL BE WATERPROOFED ON THE EXTERIOR IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES SPECIFICATIONS 10 CSR-8120 7(E).
- LATERALS SHALL BE INSTALLED AND CONNECTED TO HOMES HAVING A MINIMUM SLOPE BEING 2 PERCENT. THE LATERALS SHALL BE INSTALLED SO THAT ALL BASEMENT FLOORS ARE DRAINED. THE ENDS OF THE EXISTING LATERALS SHALL BE PLUGGED. SEPTIC TANKS AND HOLDING TANKS SHALL BE ABANDONED BY PUMPING THE SEPTIC AND HOLDING TANK, REMOVING THE LID, PLUGGING INCOMING AND OUTGOING LATERALS, BREAKING THE BOTTOM TO PERMIT DRAINAGE THROUGH THE TANK, AND FILLING SEPTIC TANK AND HOLDING TANK WITH MISSOURI OR ILLINOIS CONCRETE SAND CONFORMING TO ASTM C-33 SPECIFICATIONS. THE TOP 24 INCHES TO THE PROPOSED GRADE SHALL BE BACKFILLED WITH CLEAN TOPSOIL. THE DISTURBED AREA SHALL BE SEEDED AND MULCHED.
- SEPTIC TANKS AND LATERALS 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.
- THE SEPTIC REMOVAL SHALL BE IN ACCORDANCE WITH MISSOURI DNR REGULATIONS AND THE CITY OF O'FALLON. THE SYSTEM SHALL BE DEMOLISHED AS SOON AS POSSIBLE AFTER THE CONNECTIONS TO THE CITY SEWER SYSTEM.
- ALL CONNECTIONS TO SANITARY MAIN SHALL BE BY WYE OR T-WYE AS APPROVED BY THE CITY OF O'FALLON.

**GENERAL NOTES**

- UNDERGROUND UTILITIES HAVE PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE LOCATION 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 IMPROVEMENTS.
- GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING OR PROPOSED SANITARY AND STORM SEWERS, INCLUDING HOUSE LATERALS.
- ALL EXISTING SITE IMPROVEMENTS DISTURBED, DAMAGED OR DESTROYED SHALL BE REPAIRED OR REPLACED TO CLOSELY MATCH PRE CONSTRUCTION CONDITIONS.
- ALL FILLED PLACES, INCLUDING TRENCH BACKFILLS, UNDER BUILDINGS, PROPOSED STORM AND SANITARY LINES AND/OR PAVED AREAS, SHALL BE COMPACTED TO 90% MAXIMUM DENSITY AS DETERMINED BY THE "MOVED AASHTO T-99 COMPACTION TEST" (A.S.T.M.-D-1557). ALL FILLED PLACES WITHIN PUBLIC ROADWAYS SHALL BE COMPACTED TO 93% OF MAXIMUM DENSITY AS DETERMINED BY THE "STANDARD PROCTER TEST AASHTO T-99, METHOD C" (A.S.T.M.-D-698).
- THE CONTRACTOR SHALL PREVENT ALL STORM, SURFACE WATER, MUD AND CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER SYSTEM.
- ALL SANITARY SEWER FLOWLINES AND TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER WILL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR.
- EASEMENTS SHALL BE PROVIDED FOR ALL SANITARY SEWERS, STORM SEWERS AND ALL UTILITIES ON THE RECORD PLAT. SEE RECORD PLAT FOR LOCATION AND SIZE OF EASEMENT.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS OF THE CITY OF O'FALLON.
- THE CITY OF O'FALLON SHALL BE NOTIFIED AT LEAST 48 HOUR PRIOR TO START OF CONSTRUCTION FOR COORDINATION AND INSPECTION.
- ALL SANITARY SEWER BUILDING CONNECTIONS HAVE BEEN DESIGNED SO THAT THE MINIMUM VERTICAL DISTANCES FROM THE LOW POINT OF THE SEWER MAIN TO THE FLOWLINE OF A SANITARY SEWER AT THE CORRESPONDING BUILDING CONNECTION IS NOT LESS THAN THE DIAMETER OF THE PIPE PLUS THE VERTICAL DISTANCE OF 2-1/2 FEET.
- ALL SANITARY SEWER MANHOLES SHALL BE WATERPROOFED ON THE EXTERIOR IN ACCORDANCE MISSOURI DEPT. OF NATURAL RESOURCES SPECIFICATIONS 10 CSR-8120 7(E).
- ALL PVC SANITARY SEWER PIPE IS TO BE SDR-35 OR EQUAL WITH "CLEAN" 1/2 INCH TO 1 INCH GRANULAR STONE BEDDING UNIFORMLY GRADED. THIS BEDDING SHALL EXTEND FROM 4 INCHES BELOW THE PIPE TO SPRINGLINE OF PIPE. IMMEDIATE BACK FILL OVER PIPE SHALL CONSIST OF SAME SIZE "CLEAN" OR "MINUS" STONE FROM SPRINGLINE OF PIPE TO 12 INCHES ABOVE THE TOP PIPE.
- ALL PIPES SHALL HAVE POSITIVE DRAINAGE THROUGH MANHOLES. NO FLAT BASE STRUCTURES ARE ALLOWED.
- BRICK SHALL NOT BE USED ON SANITARY SEWER MANHOLES.
- ALL PVC SANITARY SEWER PIPE SHALL MEET THE FOLLOWING STANDARDS:  
A.S.T.M. D-3034 SDR-35 WITH WALL THICKNESS COMPRESSION JOINT AS APPROPRIATE RUBBER SEAL WATERSTOP AS APPROVED BY THE SEWER DISTRICT SHALL BE INSTALLED BETWEEN P.V.C. PIPE AND MASONRY STRUCTURES.
- ALL SANITARY AND STORM SEWERS SHALL MEET ALL SPECIFICATIONS AND INSTALLATION REQUIREMENTS OF THE LOCAL GOVERNING AUTHORITY.
- STORM SEWERS 18 INCH DIAMETER AND SMALLER SHALL BE A.S.T.M. C-14 UNLESS OTHERWISE SHOWN ON THE PLANS.
- STORM SEWERS 21 INCH DIAMETER AND LARGER SHALL BE A.S.T.M. C-76, CLASS II MINIMUM, UNLESS OTHERWISE SHOWN ON THE PLANS.
- ALL STORM SEWER PIPE IN THE RIGHT-OF-WAY SHALL BE REINFORCED CONCRETE PIPE (A.S.T.M. C-76, CLASS II MINIMUM).
- ALL STORM SEWER PIPE SHALL BE "O-RING" PIPE.
- ALL WATER LINES SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY SANITARY SEWER, MANHOLE, UNDERGROUND 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 18 INCHES 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. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATER LINE LOCATED WITHIN 10 FEET, HORIZONTALLY, OF ANY SEWER OR DRAIN IT CROSSES.
- ALL WATER LINES SHALL BE SDR 21 AS APPROVED BY A.S.T.M.-D-2241.
- ALL SANITARY SEWER LATERALS SHALL BE A MINIMUM OF 6 INCHES DIAMETER.
- EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- MAINTAIN ACCESS TO ALL EXISTING RESIDENTIAL DRIVES AND STREETS.
- PRE-MANUFACTURED ADAPTERS SHALL BE USED AT ALL P.V.C. TO D.I.P. CONNECTIONS. RUBBER BOOT / MISSION TYPE COUPLINGS WILL NOT BE ALLOWED.
- ANY PERMITS, LICENSES, EASEMENTS, OR APPROVALS REQUIRED TO WORK ON PUBLIC, PRIVATE PROPERTIES OR ROADWAYS ARE THE RESPONSIBILITY OF THE DEVELOPER.
- 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). CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND OR THE CITY OF O'FALLON. 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 O'FALLON 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 RAINFALL AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON.
- ALL SEWER STRUCTURES SHALL HAVE A 0.2" DROP THROUGH STRUCTURES AND CONTAIN 31 MILLIMETERS OF A WATER BARRIER PROOFING AGENT.
- THE DEVELOPER MUST SUPPLY THE CITY CONSTRUCTION INSPECTORS WITH A SOILS REPORT PRIOR TO OR DURING SITE SOIL TESTING.
- A BORE WILL BE NEEDED IF PROPOSED WATER MAIN CROSSES UNDER SUNSET LANE IF THE FINAL OVERLAY HAS BEEN PLACED. IF FINAL OVERLAY HAS NOT BEEN MADE ON SUNSET LANE THEN A TRENCH WILL BE PROVIDED. SEE DETAIL SHEET 4.

**A SET OF AS-BUILT PLANS FOR  
A WATER MAIN AND SANITARY SEWER EXTENSION FOR  
THE RESUBDIVISION OF PART OF LOTS 8 AND 9 OF  
O'FALLON GARDENS  
A TRACT OF LAND BEING PART OF  
LOTS 8 AND 9 OF "O'FALLON GARDENS",  
PLAT BOOK 5, PAGE 8, ST. CHARLES COUNTY RECORDS,  
IN THE SOUTHWEST QUARTER OF FRACTIONAL SECTION 20,  
TOWNSHIP 47 NORTH, RANGE 3 EAST  
OF THE FIFTH PRINCIPAL MERIDIAN,  
CITY OF O'FALLON,  
ST. CHARLES COUNTY, MISSOURI**



**DEVELOPMENT NOTES**

- AREA OF TRACT: 1.240 ACRES
- EXISTING ZONING: "A" AGRICULTURAL (ST. CHARLES COUNTY)
- PROPOSED ZONING: "R-1" SINGLE FAMILY RESIDENTIAL (CITY OF O'FALLON)
- YARD REQUIREMENTS - "R-1"  
A. FRONT YARD: 25 FEET  
B. SIDE YARD: 6 FEET  
C. REAR YARD: 25 FEET
- AREA IN LOT 1 - 13,006 SQUARE FEET
- AREA IN LOT 2 - 15,688 SQUARE FEET
- AREA IN LOT 3 - 16,946 SQUARE FEET
- PROPOSED USE: SINGLE FAMILY RESIDENTIAL
- NUMBER OF LOTS PROPOSED: 3
- NO FLOOD PLAIN EXISTS ON PROPERTY PER F.I.R.M. #29183C0230E.
- TOPOGRAPHIC INFORMATION IS PER SURVEY BY BAX ENGINEERING COMPANY, INC. AND PER U.S.G.S. QUADRANGLE MAP (O'FALLON)
- BOUNDARY INFORMATION PROVIDED PER SURVEY BY BAX ENGINEERING COMPANY, INC.
- ALL UTILITIES MUST BE LOCATED UNDERGROUND
- THE DEVELOPER REALIZES THAT THEY WILL COMPLY WITH CURRENT TREE PRESERVATION ORDINANCE NUMBER 1689 AND PROVIDE LANDSCAPING AS SET FORTH IN ARTICLE 23 OF THE CITY OF O'FALLON ZONING ORDINANCES.
- ADDITIONAL LIGHTING MAY BE REQUIRED BY THE CITY OF O'FALLON
- THE SITE IS SERVED BY THE FOLLOWING:  
A. SANITARY SEWERS: CITY OF O'FALLON  
B. WATER: CITY OF O'FALLON  
C. ELECTRIC: OUVRE RIVER ELECTRIC CO-OP  
D. TELEPHONE: CENTURYTEL TELEPHONE COMPANY  
E. GAS: LAULEE GAS COMPANY  
F. SCHOOL: FORT ZUMWALT  
G. FIRE: O'FALLON FIRE PROTECTION DISTRICT
- CURRENT OWNER/DEVELOPER: BRAD SCHNEIDER, MICHAEL AND VICKI SCHNEIDER  
707 SUNSET LANE  
O'FALLON, MO 63366

**SITE PLAN NOTES**

- BASIS OF BEARINGS FOR THIS SURVEY ADOPTED FROM THE RECORD PLAT OF NORTHWARD ESTATES AS RECORDED IN PLAT BOOK 11, PAGE 46 OF THE ST. CHARLES COUNTY RECORDS.
- THIS PROPERTY IS CURRENTLY VESTED IN THE NAMES OF BRAD SCHNEIDER, MICHAEL AND VICKI SCHNEIDER BY DEED RECORDED IN BOOK 3088, PAGE 1346 OF THE ST. CHARLES COUNTY RECORDS.
- THIS PLAT CONTAINS 1.240 ACRES AND 3 LOTS.
- ALL TIES SHOWN ARE PERPENDICULAR TO THE PROPERTY LINES TO WHICH THEY ARE TIED UNLESS OTHERWISE NOTED.
- "⊙" DENOTES SET IRON PIPE UNLESS OTHERWISE NOTED.
- A CURRENT TITLE COMMITMENT WAS NOT FURNISHED FOR THIS SURVEY THEREFORE THIS PLAT AND THE SURVEY ON WHICH IT IS BASED ARE SUBJECT TO THE FOLLOWING CONDITIONS AND EXCEPTIONS.  
A. EASEMENTS OF RECORD  
B. EASEMENTS, OR CLAIMS OF EASEMENTS NOT SHOWN BY THE PUBLIC RECORDS.  
C. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS.  
D. DEFECTS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY.
- ALL IMPROVEMENTS, CONTOURS, UTILITIES, ROADS AND TREES SHOWN ON THIS PLAT ARE EXISTING.
- ALL EASEMENTS SHOWN IN LOTS ARE PROPOSED, 10 FEET FRONTS AND REARS, 5 FOOT SIDES AND WILL BE CREATED BY RECORD SUBDIVISION PLAT.

**REFERENCE BENCHMARK**

RM 67 ELEV=465.74 CHESELED SQUARE ON NORTHEAST CORNER OF NORTHWEST CONCRETE BRIDGE SEAT OF COUNTY HIGHWAY P BRIDGE OVER PEROUQUE CREEK, ABOUT 3 FEET BELOW ROADWAY

**SITE BENCHMARK**

CUT BOX ON SOUTHWEST CORNER OF CONCRETE PAD ELEVATION=578.04. LOCATED IN THE SOUTHWEST CORNER OF 711 EMGE ROAD, WHICH IS WEST OF POSSUM TROT ROAD.

**SEWER MEASUREMENTS**

THE EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS.

ALL PUBLIC SEWERS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS FOLLOWS:

SIGNED:  
P.E./L.S.



**ASBUILTS NOTE:**  
ALL DISTANCE AND SLOPE CALCULATIONS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

**GRADING NOTES**

- 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 BACK FILLING OPERATIONS.
- THE GRADING CONTRACTOR SHALL PERFORM A COMPLETE GRADING AND COMPACTION OPERATION AS SHOWN ON THE PLANS, STATED IN THESE NOTES, OR REASONABLY IMPLIED THEREFROM. ALL IN ACCORDANCE WITH THE PLANS AND NOTES AS INTERPRETED BY THE GEOTECHNICAL ENGINEER.
- THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER AT LEAST TWO DAYS IN ADVANCE OF THE START OF THE GRADING OPERATION.
- ALL AREAS SHALL BE ALLOWED TO DRAIN. ALL LOW POINTS SHALL BE PROVIDED WITH TEMPORARY DITCHES.
- A SEDIMENT CONTROL PLAN THAT INCLUDES MONITORED AND MAINTAINED SEDIMENT CONTROL BASINS AND/OR STRAW BALES SHOULD BE IMPLEMENTED AS SOON AS POSSIBLE. NO GRADED AREA IS TO BE ALLOWED TO REMAIN BARE OVER THE WINTER WITHOUT BEING SEEDED AND MULCHED. CARE SHOULD BE EXERCISED TO PREVENT SOIL FROM DAMAGING ADJACENT PROPERTY AND SILLING UP EXISTING DOWNSTREAM DRAINAGE SYSTEM.
- ANY EXISTING TRASH AND DEBRIS CURRENTLY ON THIS PROPERTY MUST BE REMOVED AND DISPOSED OF OFF-SITE.
- SOFT SOIL IN THE BOTTOM AND BANKS OF ANY EXISTING OR FORMER POND SITES OR TRIBUTARIES SHOULD BE REMOVED, SPREAD OUT AND PERMITTED TO DRY SUFFICIENTLY TO BE USED AS FILL. NONE OF THIS MATERIAL SHOULD BE PLACED IN PROPOSED RIGHT-OF-WAY LOCATIONS OR ON STORM SEWER LOCATIONS.
- SITE PREPARATION INCLUDES THE CLEARANCE OF ALL STUMPS, TREES, BUSHES, SHRUBS, AND WEEDS; THE GRUBBING AND REMOVAL OF ROOTS AND OTHER SURFACE OBSTRUCTIONS FROM THE SITE; AND THE DEMOLITION AND REMOVAL OF ANY MAN-MADE STRUCTURES. THE UNSUITABLE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE. TOPSOIL AND GRASS IN THE FILL AREAS SHALL BE THOROUGHLY DISCED PRIOR TO THE PLACEMENT OF ANY FILL. THE SOILS ENGINEER SHALL APPROVE THE DISCING OPERATION.
- COMPACTION EQUIPMENT SHALL CONSIST OF TAMPING ROLLERS, PNEUMATIC-TIRED ROLLERS, VIBRATORY ROLLER, OR HIGH SPEED IMPACT TYPE DRUM ROLLERS ACCEPTABLE TO THE SOILS ENGINEER. THE ROLLER SHALL BE DESIGNED SO AS TO AVOID THE CREATION OF A LAYERED FILL WITHOUT PROPER BLENDING OF SUCCESSIVE FILL LAYERS.
- 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.
- THE SOILS ENGINEER SHALL NOTIFY THE CONTRACTOR OF REJECTION OF A LIFT OF FILL OR PORTION THEREOF. THE CONTRACTOR SHALL REWORK THE REJECTED PORTION OF FILL AND OBTAIN NOTIFICATION FROM THE SOILS ENGINEER OF ITS ACCEPTANCE PRIOR TO THE PLACEMENT OF ADDITIONAL FILL.
- ALL AREAS TO RECEIVE FILL SHALL BE SCARIFIED TO A DEPTH OF NOT LESS THAN 6 INCHES AND THEN COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN BELOW. NATURAL SLOPES STEEPER THAN 1 VERTICAL TO 5 HORIZONTAL TO RECEIVE FILL SHALL HAVE HORIZONTAL BENCHES, CUT INTO THE SLOPES BEFORE THE PLACEMENT OF ANY FILL. THE WIDTH AND HEIGHT TO BE DETERMINED BY THE SOILS ENGINEER. THE FILL SHALL BE LOOSELY PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 8 INCHES IN THICKNESS AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN BELOW. THE SOILS ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE ACCEPTABILITY OF SOILS PLACED. ANY UNACCEPTABLE SOILS PLACED SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE.
- THE SEQUENCE OF OPERATION IN THE FILL AREAS WILL BE FILL, COMPACT, VERIFY ACCEPTABLE SOIL DENSITY, AND REPEATITION OF THE SEQUENCE. THE ACCEPTABLE MOISTURE CONTENTS DURING THE FILLING OPERATION ARE THOSE AT WHICH SATISFACTORY DRY DENSITIES CAN BE OBTAINED. THE ACCEPTABLE MOISTURE CONTENTS DURING THE FILLING OPERATION IN THE REMAINING AREAS ARE FROM 2 TO 8 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT.
- THE SURFACE OF THE FILL SHALL BE FINISHED SO THAT IT WILL NOT IMPOUND WATER. IF AT THE END OF A DAYS WORK IT WOULD APPEAR THAT THERE MAY BE RAIN PRIOR TO THE NEXT WORKING DAY, THE SURFACE SHALL BE FINISHED SMOOTH. IF THE SURFACE HAS BEEN FINISHED SMOOTH FOR ANY REASON, IT SHALL BE SCARIFIED BEFORE PROCEEDING WITH THE PLACEMENT OF SUCCEEDING LIFTS. FILL SHALL NOT BE PLACED ON FROZEN GROUND, NOR SHALL FILLING OPERATIONS CONTINUE WHEN THE TEMPERATURE IS SUCH AS TO PERMIT THE LAYER UNDER PLACEMENT TO FREEZE.
- FILL AND BACK FILL SHOULD BE COMPACTED TO THE CRITERIA SPECIFIED IN THE FOLLOWING TABLE:

CATEGORY	MINIMUM PERCENT COMPACTION	VEGETATIVE ESTABLISHMENT FOR URBAN DEVELOPMENT SITES
FILL IN BUILDING AREAS BELOW FOOTINGS	95	APPENDIX A
FILL UNDER SLABS, WALLS AND DRIVEWAYS	95	
FILL OTHER THAN BUILDING AREAS	90	
NATURAL SUB GRADE	90	
PAVEMENT SUB GRADE	90	
PAVEMENT BASE COURSE	90	
MEASURED AS A PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTER TEST (ASTM-0-698)		
MOISTURE CONTENT MUST BE WITHIN 2 PERCENT BELOW OR 4 PERCENT ABOVE OPTIMUM MOISTURE CONTENT IF FILL IS DEEPER THAN 10 FEET.		

- ALL SILTATION CONTROL DEVICES SHALL BE INSPECTED BY THE CONTRACTOR AFTER ANY RAIN OF 1/2" OR MORE WITH ANY APPRECIABLE ACCUMULATION OF MUD TO BE REMOVED AND SILTATION MEASURES REPAIRED WHERE NECESSARY.
- NO SLOPE SHALL BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL. ALL SLOPES SHALL BE SODDED OR SEEDED AND MULCHED.

**PRINCIPALS & STANDARDS**

- ALL EXCAVATIONS, GRADING, OR FILLING SHALL HAVE A FINISHED GRADE NOT TO EXCEED A 3:1 SLOPE (33%). STEEPER GRADES MAY BE APPROVED BY THE DESIGNATED OFFICIAL IF THE EXCAVATION IS THROUGH ROCK OR THE EXCAVATION OR THE FILL IS ADEQUATELY PROTECTED (A DESIGNED HEAD WALL OR TOE WALL MAY BE REQUIRED). RETAINING WALLS THAT EXCEED A HEIGHT OF FOUR (4) FEET SHALL REQUIRE THE CONSTRUCTION OF SAFETY GUARDS AS IDENTIFIED IN THE APPROPRIATE SECTION(S) OF THE ADOPTED BOCA CODES AND MUST BE APPROVED BY THE COUNTY BUILDING DEPARTMENT. PERMANENT SAFETY GUARDS WILL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE SECTION(S) OF THE ADOPTED BOCA CODES.
- SEDIMENT AND EROSION CONTROL PLANS FOR SITES THAT EXCEED 20,000 SQUARE FEET OF GRADING SHALL PROVIDE FOR SEDIMENT OR DEBRIS BASINS, SILT TRAPS OR FILTERS, STAKED STRAW BALES OR OTHER APPROVED MEASURES TO REMOVE SEDIMENT FROM RUN-OFF WATERS. THE DESIGN TO BE APPROVED BY THE DESIGNATED OFFICIAL. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE.
- WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION. PERMANENT TYPE GRASSES SHALL BE ESTABLISHED AS SOON AS POSSIBLE DURING THE NEXT SEEDING PERIOD AFTER GRADING HAS BEEN COMPLETED.
- WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 30 DAYS PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO THE CITY ENGINEER'S RECOMMENDATIONS. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENT) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED.
- PROVISIONS SHALL BE MADE TO ACCOMMODATE THE INCREASED RUNOFF CAUSED BY CHANGED SOILS AND SURFACE CONDITIONS DURING AND AFTER GRADING. UNVEGETATED OPEN CHANNELS SHALL BE DESIGNED SO THAT GRADIENTS RESULT IN VELOCITIES OF 2 FPS (FEET PER SECOND) OR LESS. OPEN CHANNELS WITH VELOCITIES MORE THAN 2 FPS AND LESS THAN 5 FPS SHALL BE ESTABLISHED IN PERMANENT VEGETATION BY USE OF COMMERCIAL EROSION CONTROL BLANKETS OR GUTTERS AND/OR UNDERGROUND OUTLET SYSTEMS. SUFFICIENTLY ANCHORED STRAW BALES MAY BE TEMPORARILY SUBSTITUTED WITH THE APPROVAL OF THE CITY ENGINEER.
- THE ADJOINING GROUND TO DEVELOPMENT SITES (LOTS) SHALL BE PROVIDED WITH PROTECTION FROM ACCELERATED AND INCREASED SURFACE WATER, SILT FROM EROSION, AND ANY OTHER CONSEQUENCE OF EROSION. RUN-OFF WATER FROM DEVELOPED AREAS (PARKING LOTS, PAVED SITES AND BUILDINGS) ABOVE THE AREA TO BE DEVELOPED SHALL BE DIRECTED TO DIVERSIONS, DETENTION BASINS, CONCRETE GUTTERS AND/OR UNDERGROUND OUTLET SYSTEMS. SUFFICIENTLY ANCHORED STRAW BALES MAY BE TEMPORARILY SUBSTITUTED WITH THE APPROVAL OF THE CITY ENGINEER.
- DEVELOPMENT ALONG NATURAL WATERCOURSES SHALL HAVE RESIDENTIAL LOT LINES, COMMERCIAL OR INDUSTRIAL IMPROVEMENTS OR DRIVEWAYS SET BACK A MINIMUM OF 25 FEET FROM THE TOP OF THE EXISTING STREAM BANK. THE WATERCOURSE SHALL BE MAINTAINED AND MADE THE RESPONSIBILITY OF THE SUBDIVISION TRUSTEES OR IN THE CASE OF A SITE PLAN BY THE PROPERTY OWNER. PERMANENT VEGETATION SHALL BE LEFT INTACT. VARIANCES WILL INCLUDE DESIGNED STREAM BANK EROSION CONTROL MEASURES AND SHALL BE APPROVED BY THE CITY ENGINEER. FEMA AND U.S. ARMY CORPS OF ENGINEERS GUIDELINES SHALL BE FOLLOWED WHERE APPLICABLE REGARDING SITE DEVELOPMENT AREAS DESIGNATED AS FLOOD PLAINS AND WETLANDS.
- ALL LOTS SHALL BE SEEDED AND MULCHED AT THE MINIMUM RATES DEFINED IN APPENDIX A OR SODDED BEFORE AN OCCUPANCY PERMIT MAY BE ISSUED EXCEPT THAT A TEMPORARY OCCUPANCY PERMIT MAY BE ISSUED BY THE BUILDING DEPARTMENT IN CASES OF UNDOE HARDSHIP BECAUSE OF UNFAVORABLE GROUND CONDITIONS.
- ALL OUTSIDE TRASH CONTAINERS, HVAC UNITS, ELECTRIC, TELEPHONE AND GAS METERS, SATELITE DISHES, ROOFTOP MECHANICAL APPARATUS, AND OUTDOOR STORAGE AREAS SHALL BE THOROUGHLY SCREENED WITH MATERIALS AND/OR LANDSCAPING TO CONCEAL THE VISIBILITY OF SUCH ITEMS FROM THE VIEW OF RIGHTS-OF-WAY AND/OR ADJACENT PROPERTIES AS REVIEWED AND APPROVED BY THE PLANNING DIVISIONS.
- THE DEVELOPER SHALL COMPLY WITH ARTICLES 26 PERFORMANCE STANDARDS.
- THE DEVELOPER SHALL COMPLY WITH THE CURRENT COMPREHENSIVE PLAN FOR THE CITY OF O'FALLON.
- TREE PRESERVATION AND LANDSCAPE REQUIREMENTS PER CITY OF O'FALLON ZONING ORDINANCES WILL BE PROVIDED PRIOR TO CONSTRUCTION.

**PREPARED FOR:** SCHNEIDER CUSTOM HOMES AND PROPERTIES  
429 NORTH MAIN  
O'FALLON, MISSOURI 63366  
636-240-0930

**DISCLAIMER OF RESPONSIBILITY**  
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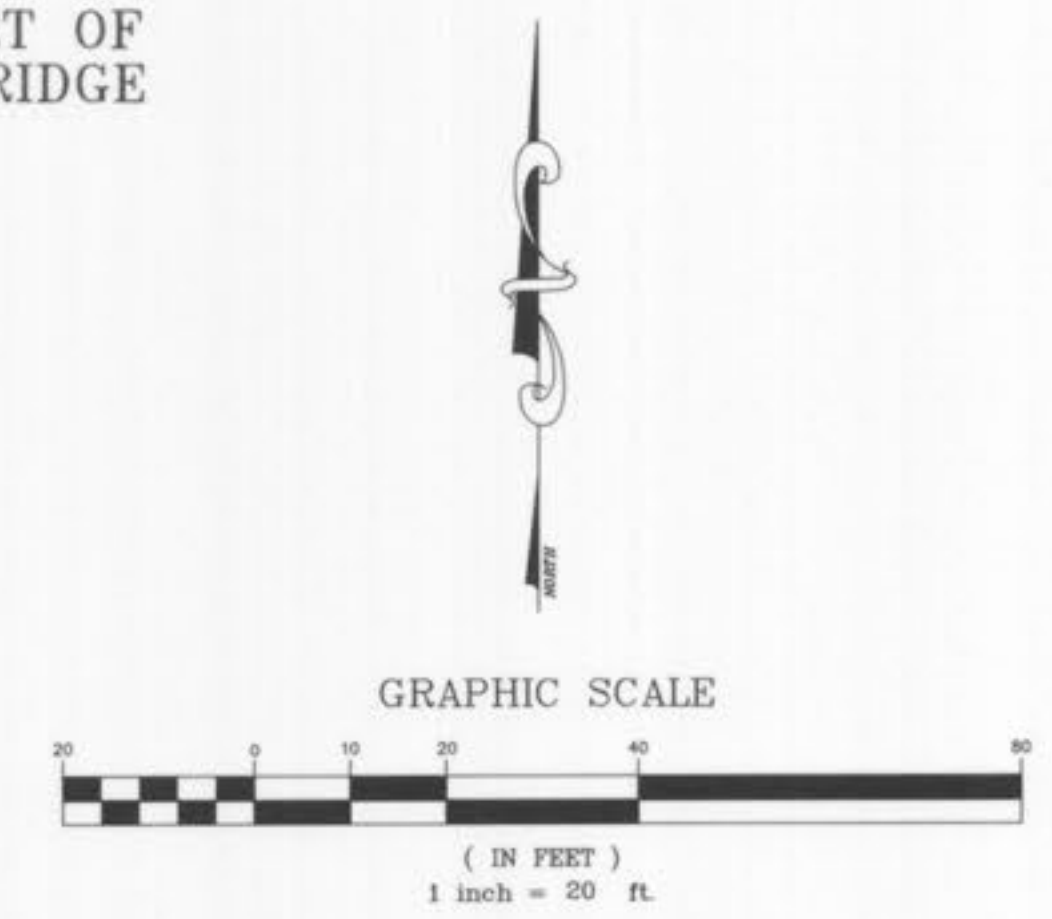
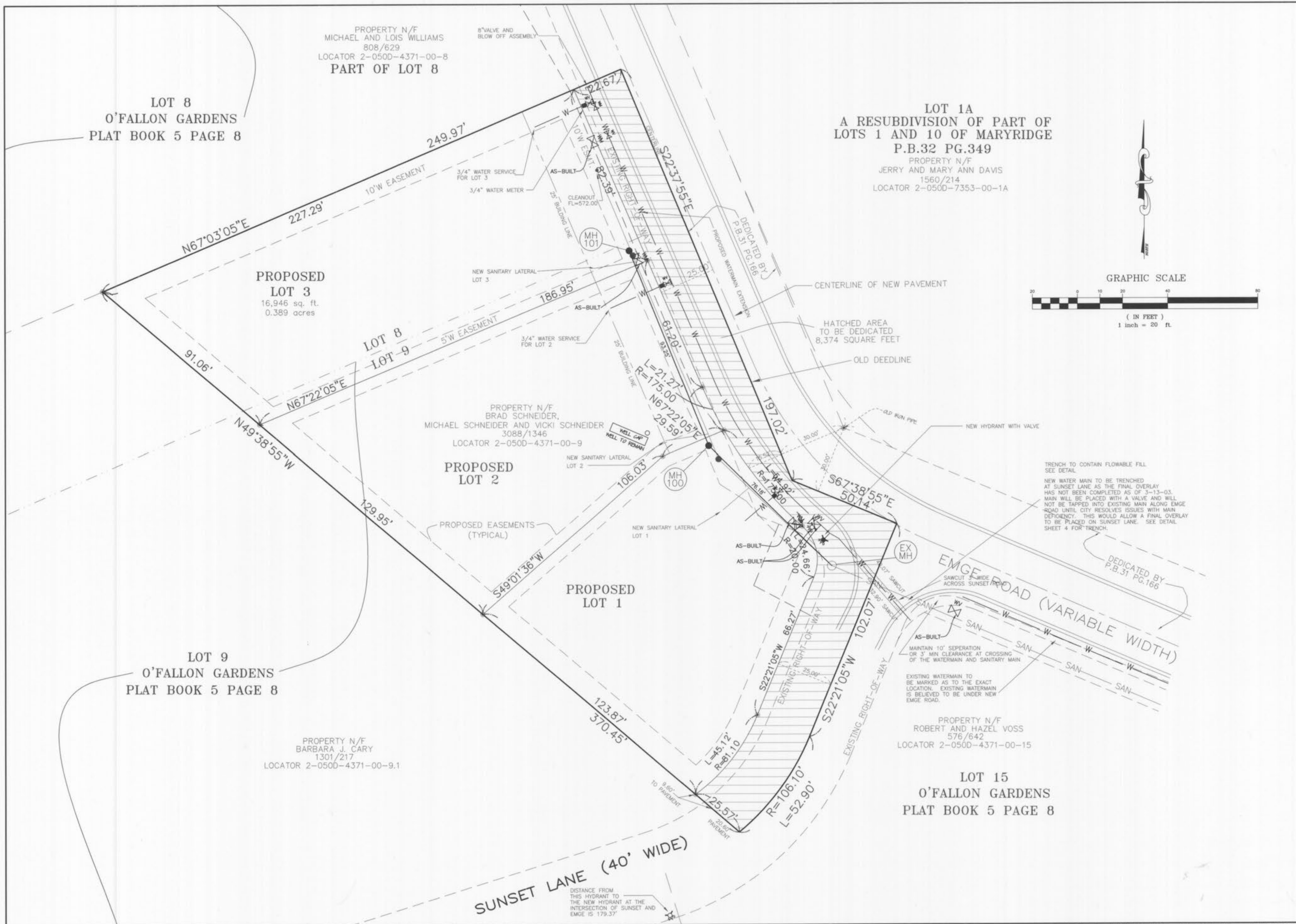
REVISIONS
3-13-03 CITY COMMENTS
5-30-03 CITY COMMENTS
2-29-08 CITY COMMENTS
3-24-08 CITY COMMENTS



**ENGINEERING PLANNING SURVEYING**

1052 South Cloverleaf Drive  
St. Peters, MO. 63376-6445  
636-928-5552  
FAX 636-1718

4-10-2003	DATE
02-11932	PROJECT NUMBER
1 OF 4	SHEET OF
11932AASB.DWG	FILE NAME
BGC	DRAWN
WSK	DESIGNED
CHECKED	

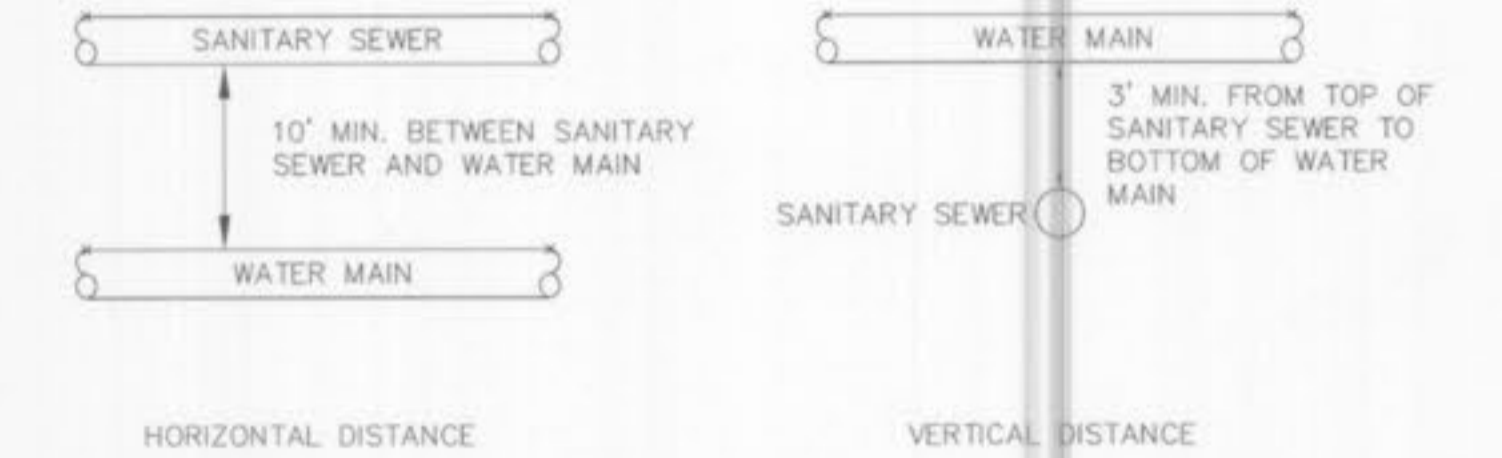


**AS-BUILTS ADDED APRIL 2003**

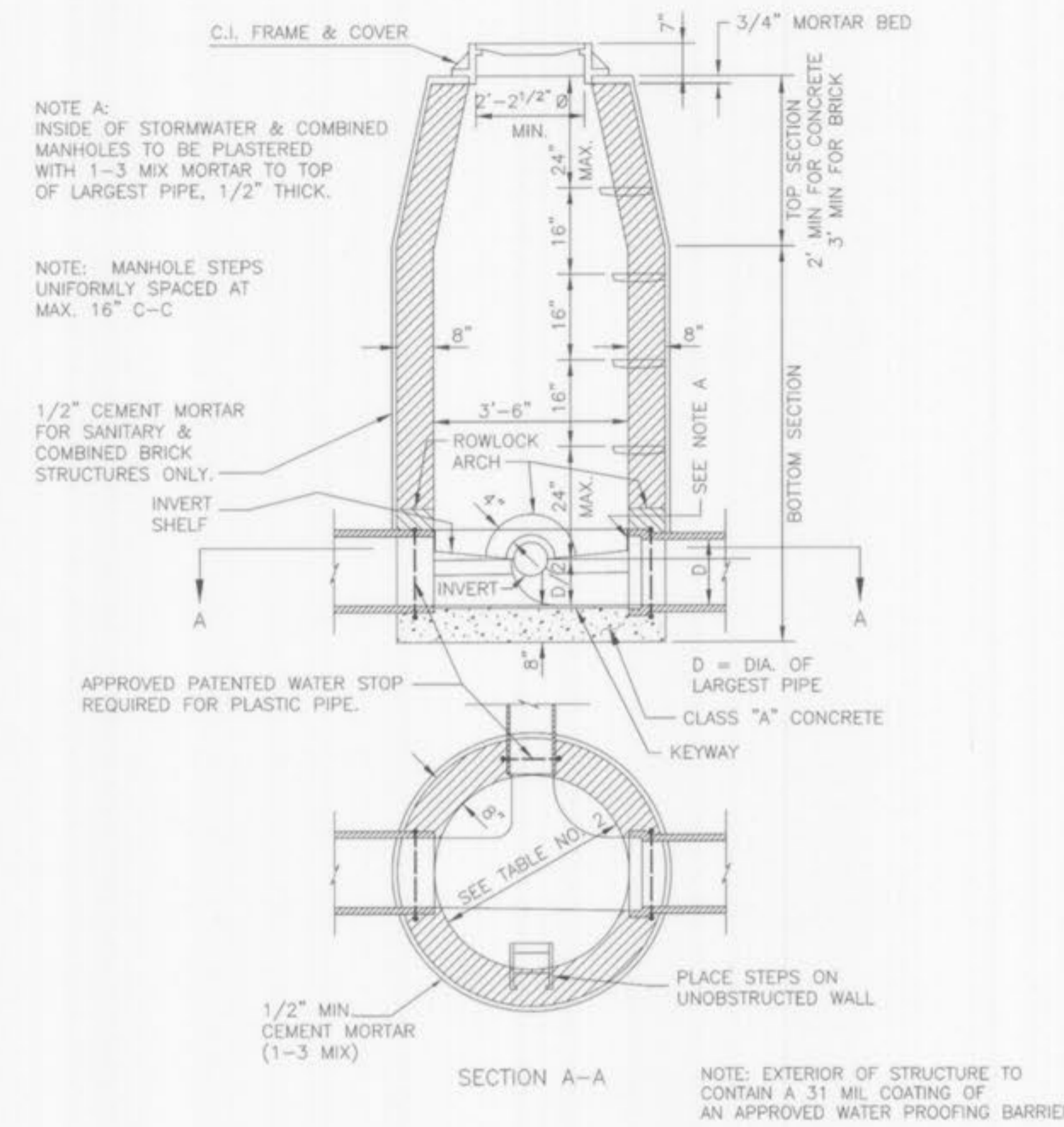
*[Handwritten signature]*  
 2/20/03

ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
Inside Diameter of Pipe (Inches)	"W" Payline Width of Trench (Inches)	"W" Payline Width of Trench (Feet)	Pay-volumes cu. ft. per ft. Concrete Encasement	Inside Diameter of Pipe (Inches)	"W" Payline Width of Trench (Inches)	"W" Payline Width of Trench (Feet)	Pay-volumes cu. ft. per ft. Concrete Encasement
4	28	2.33	3.20				
6	28	2.33	3.46				
8	28	2.33	3.70				
10	28	2.33	3.86				

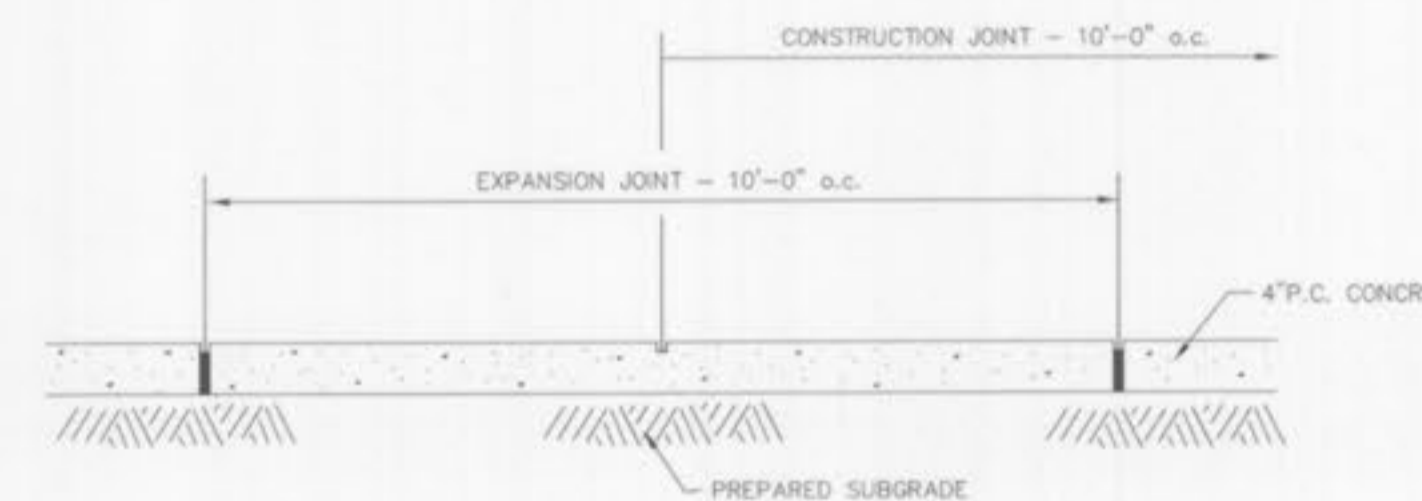
TABLE NO. 1  
PAYLINE WIDTHS OF TRENCH AND  
PAY-QUANTITIES OF CONCRETE



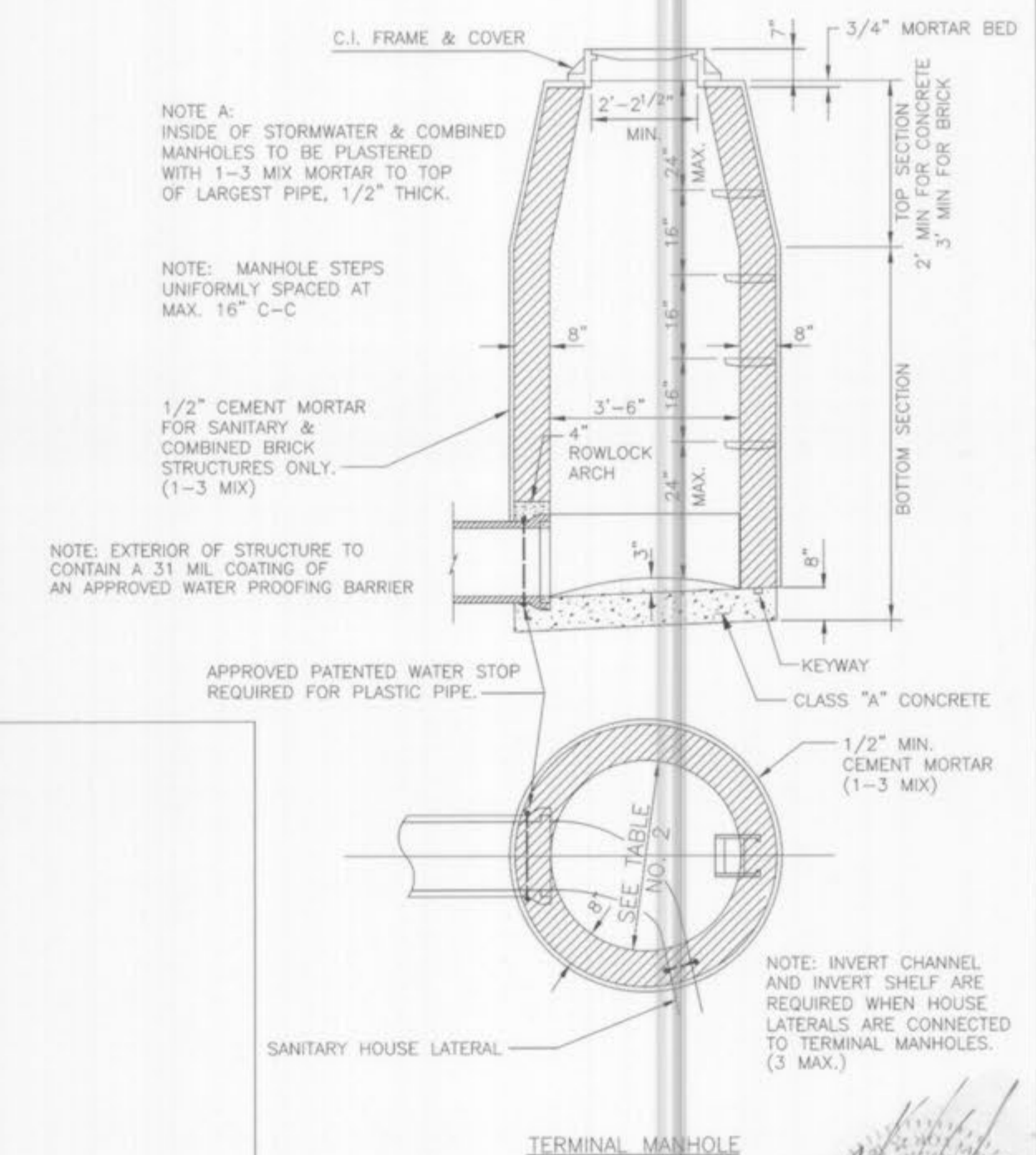
TYPICAL WATER AND SEWER SEPARATION  
NOT TO SCALE



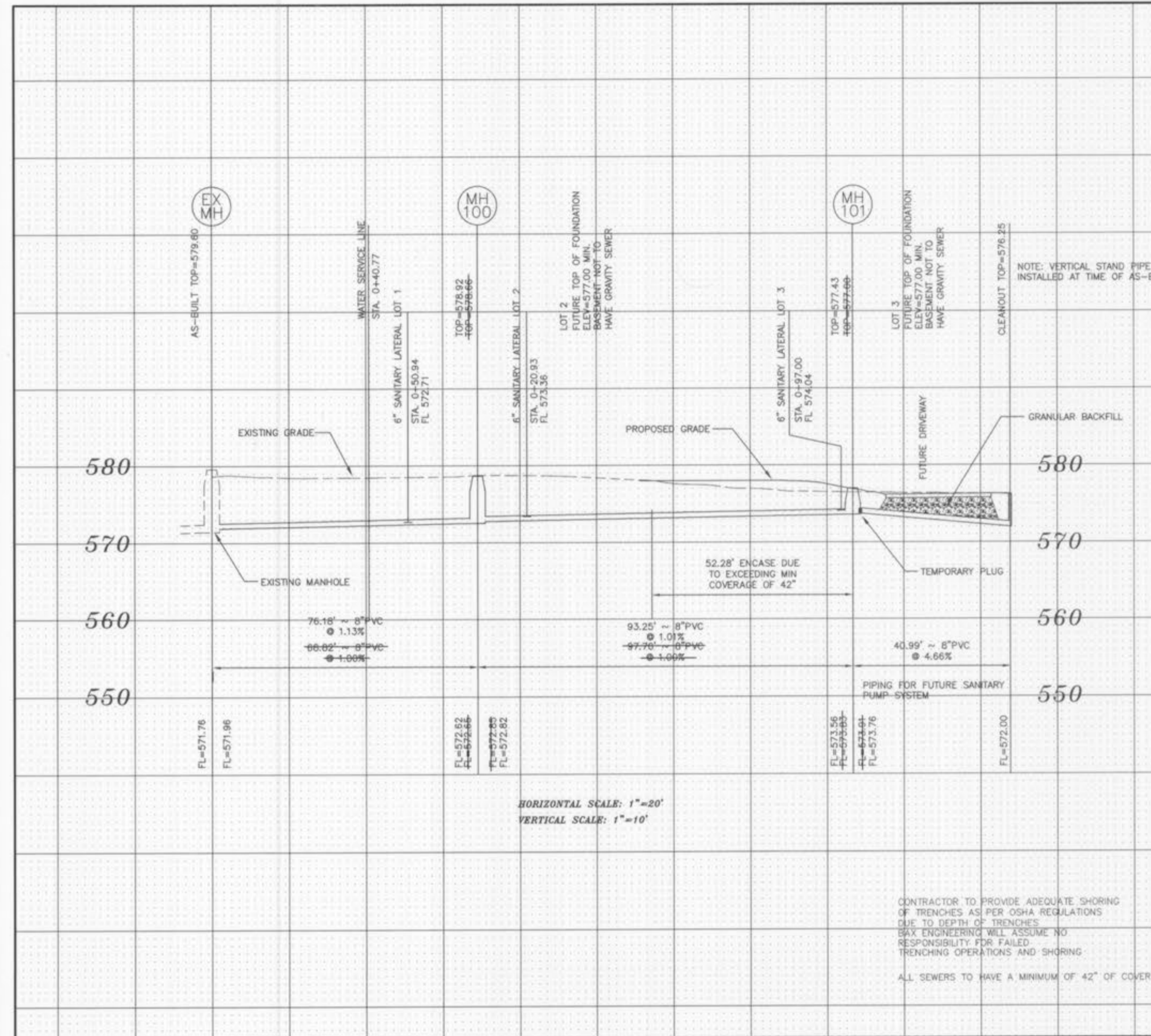
LINE MANHOLE  
PIPE SEWERS 8"-24" DIA.



CONCRETE SIDEWALK DETAIL  
NOT TO SCALE

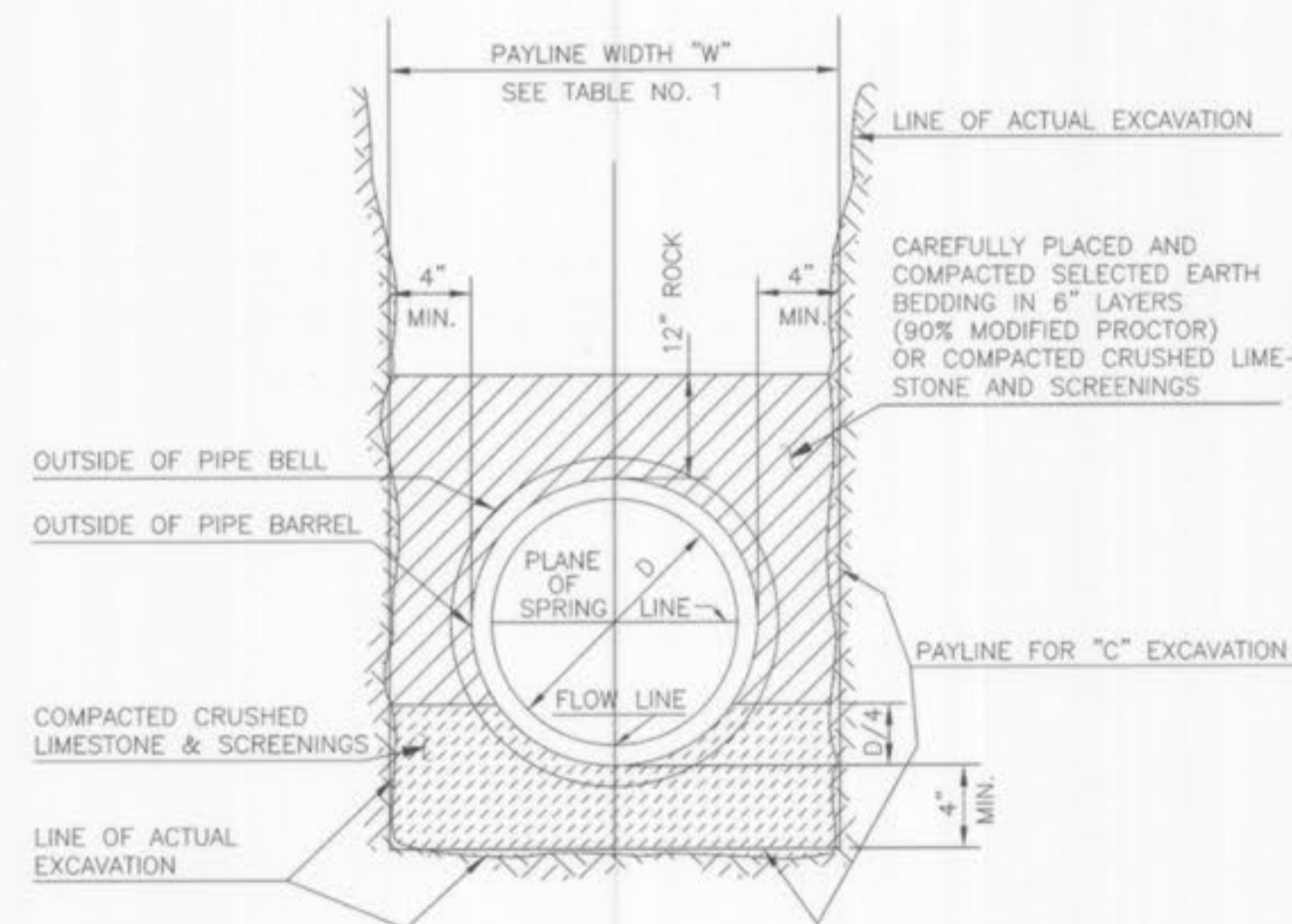


TERMINAL MANHOLE

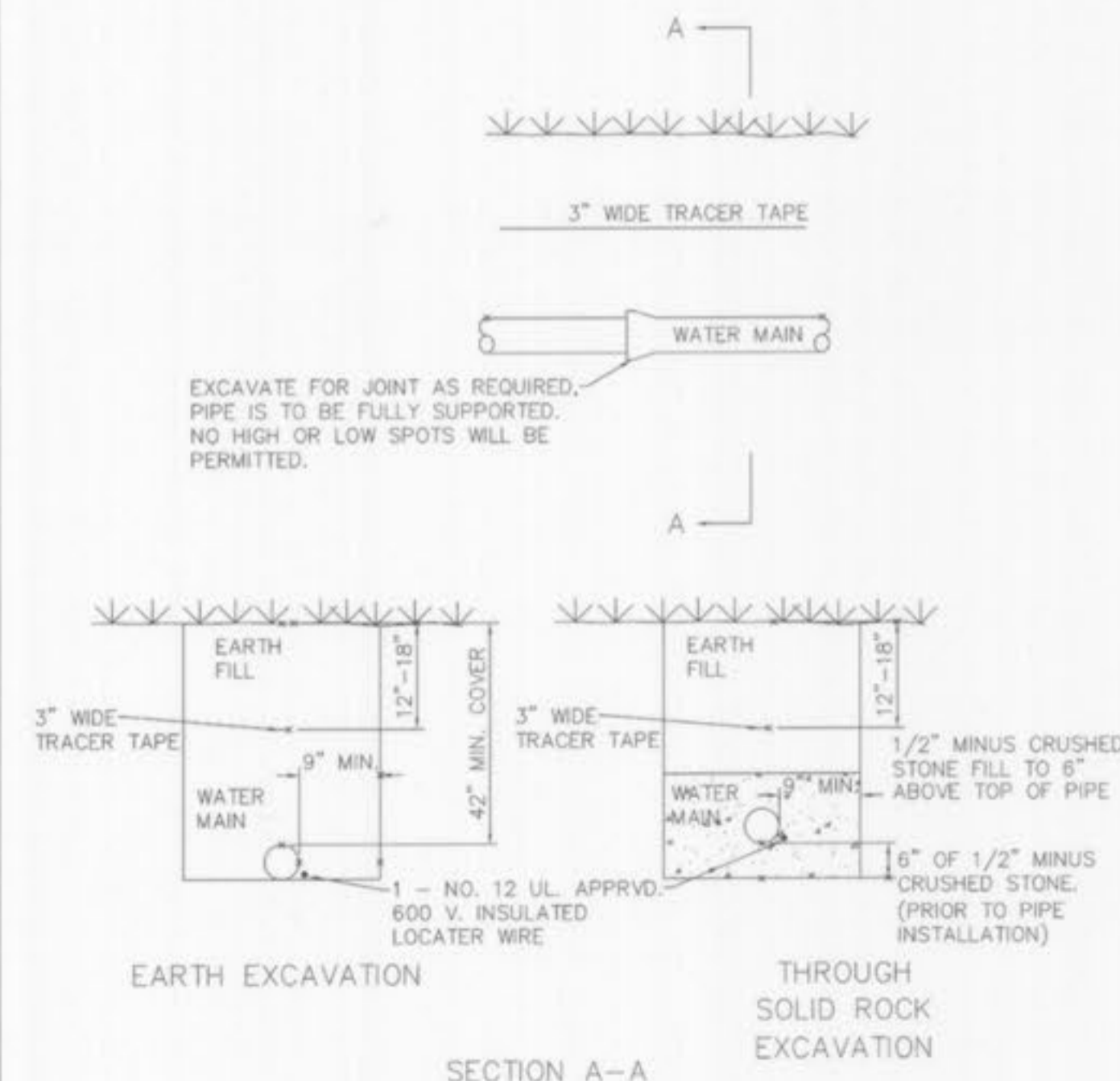


HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=10'

CONTRACTOR TO PROVIDE ADEQUATE SHORING OF TRENCHES AS PER OSHA REGULATIONS DUE TO DEPTH OF TRENCHES. MAX ENGINEERING WILL ASSUME NO RESPONSIBILITY FOR FAILED TRENCHING OPERATIONS AND SHORING. ALL SEWERS TO HAVE A MINIMUM OF 42" OF COVER.



PIPE BEDDING CLASS "C"  
(FOR ALL PIPE EXCEPT  
REINFORCED CONCRETE PIPE)



TYPICAL WATER MAIN INSTALLATION DETAILS  
NOT TO SCALE

AS-BUILTS ADDED APRIL 2003



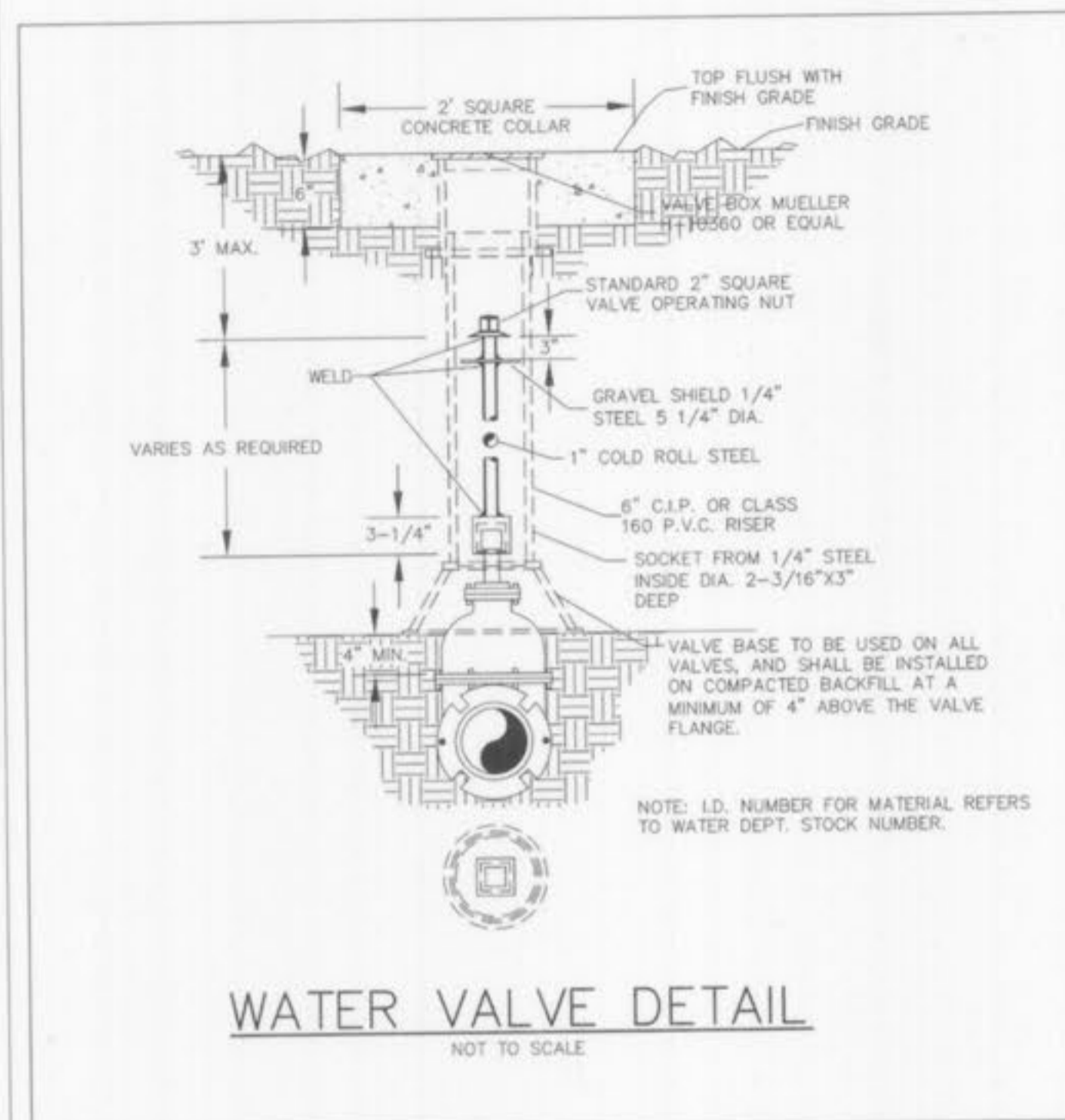
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YOU DIG!  
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INSTALLATION OF WATER MAINS

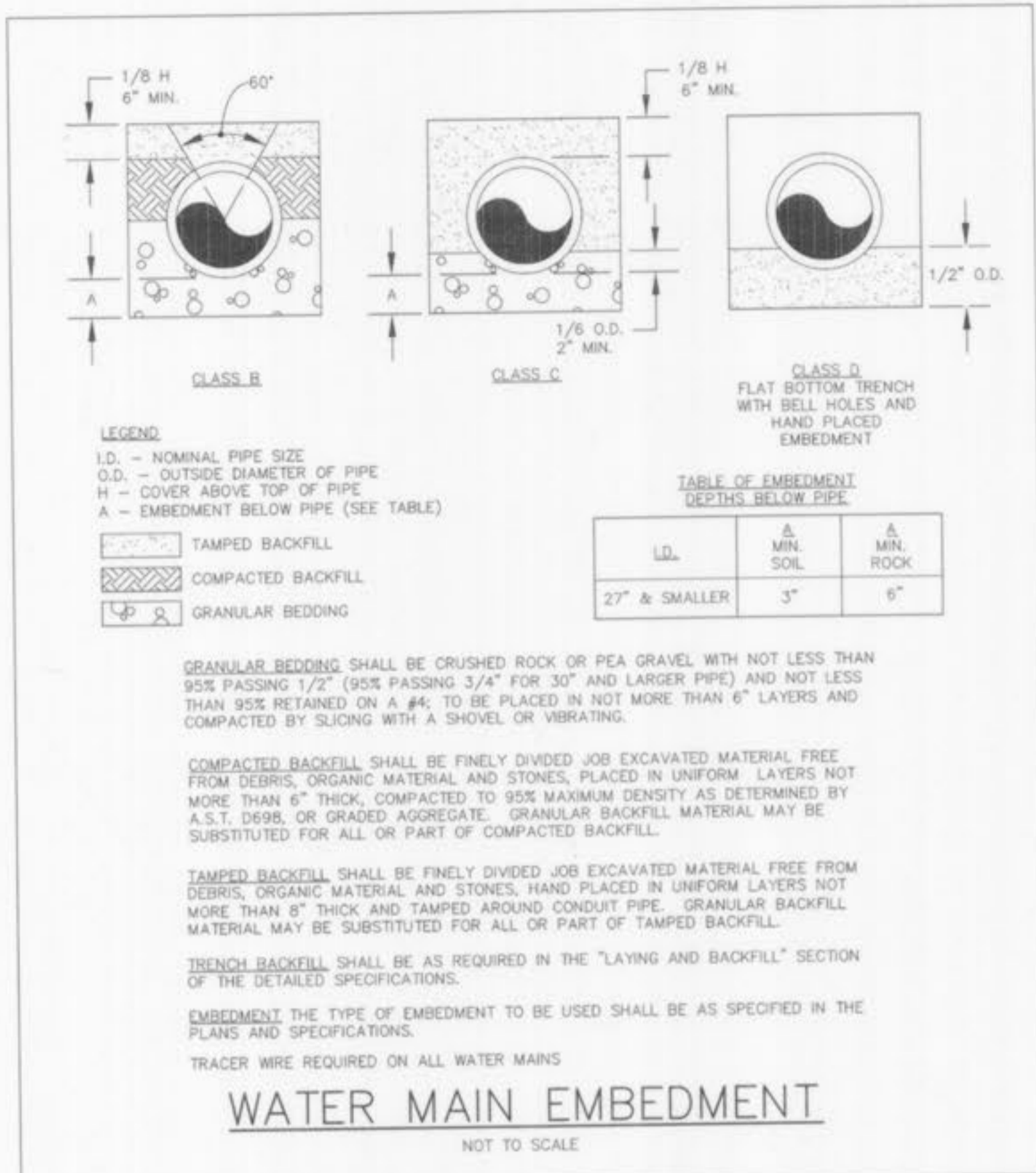
"ALWAYS KEEP THE WATER MAIN ON EASEMENT"

- Water main should be located 5' behind the curb, as not to interfere with other utility locations.
- All water mains should be 8 inches in diameter, the last 300' can be 6" diameter pipe. The pipe should have a Minimum Pressure Rating (PR) of 200 or SDR-21. All water mains of PVC materials shall be certified by NSF (National Sanitation Foundation) and listed in NSF Standard 61 (certified drinking water system components). Missouri DNR requires that any product which comes in contact with drinking water be listed in NSF Standard 61. If the pipe is NSF certified, it will have a stamp on the pipe that says "NSF-pw".
- Fire hydrants must be Mueller Steamer Centurion and painted yellow in color and all valves must be Mueller mechanical joint resilient wedge gate valve.
- All fire hydrants are to have valves flanged to the tee and (with a total length of 38" or less) hydrant swivel anchored to the valve. Clean 1" rock should be used to backfill above the weep holes of the fire hydrant.
- The contractor shall place all fire hydrants between 1.5 (1-1/2) feet and three feet (3') from the street curb (measured from the edge of the fire hydrant).
- These water bends (45 degree, 22-1/2 degree, 11-1/4 degree), are to be made with mechanical joint fittings using mega lugs. Ninety degree (90°) bends are not allowed. The first slip joint, up and down stream after fittings, should be restrained per pipe manufacturer specs.
- Tees, 4-ways, etc. shall have concrete blocking. Concrete not to be on nuts or bolts.
- Rocky soils shall require bedding 6" under and 6" over water pipe.
- Concrete encasement require, to DNR Specification, when crossing storm or sanitary sewers. Sanitary: vertical is 18", horizontal is 10" - Storm: vertical is 12", horizontal is 3".
- Must use appropriate sized casings when crossing streets.
- Must attach coated solid core, 12 gauge tracer wire, taped to the top of the pipe. All wire must run up the outside of the valve box and come up inside the valve box under the water lid.
- Use 3M waterproof splice kits for all splicing of tracer wire.
- Any project with over 1500' of pipe should use the 2500' role of tracer wire to eliminate splicing.
- A chlorine test is required. It must initially test at 25 PPM, or greater, and 24 hours later 10 PPM must be present. It must be tested by a City Inspector, and have 24 hours notice prior to that inspection. The main will be tested for Cl<sub>2</sub> every 1,200' of pipe.
- If chlorine test fails then main must be rechlorinated.
- Coliform samples should be collected every 1,200'.
- Final Pressure Test: The water main must be pumped up to 125 PSI and maintain this pressure for one hour without any drop in pressure.
- Gas, water, and other underground utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers including house laterals.
- All waterline construction shall conform to current City of Wentzville Standards and Specifications.
- The contractor shall place the "steamer" outlet of the fire hydrant toward the street.
- Backfill no debris larger than 6" in diameter.
- All creek crossings will require ductile iron pipe. If less than 3' of cover, concrete encasement with rip-rap required.
- Hydrant distances: 600'/300' - Residential/Commercial pending.
- Easements shall be provided for water mains, and all utilities on the record plat. See record plat for location size, and width of easements.
- The City of O'Fallon Water Department shall be notified, at least 48 hours prior to construction of water mains for coordination and inspections.
- All open mains should be properly capped when the main is unattended for more than 4 hours. Duct tape the end closed so it is visually seen.
- All bore casings, except service lines, shall have a casing spacer every 10'.
- All service lines under the streets are to have a 2" PVC casing installed, at a minimum of 30" depth.
- All water mains to have a minimum cover of 42".

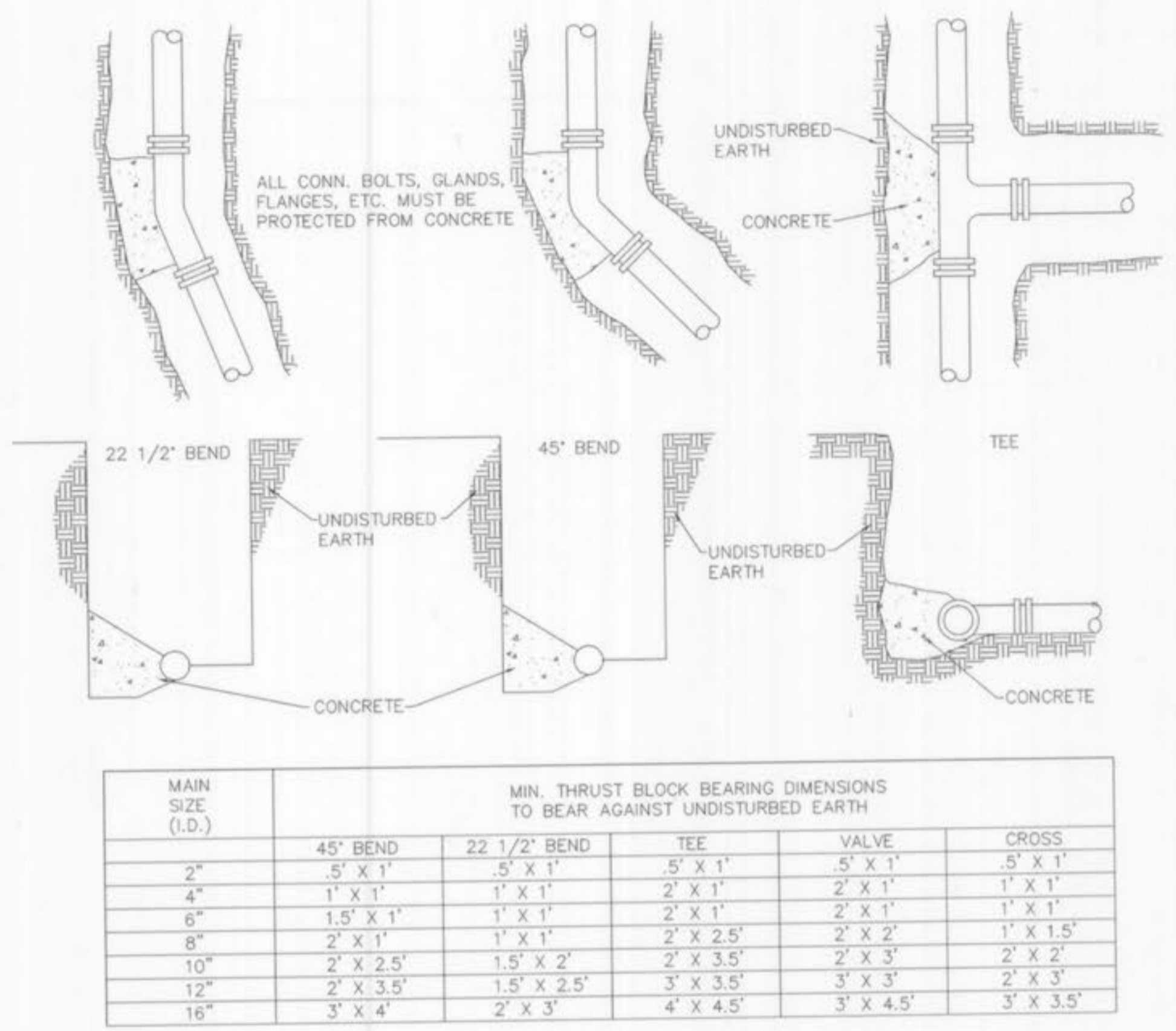
NOTE: 24 HOUR NOTICE REQUIRED ON ALL INSPECTIONS



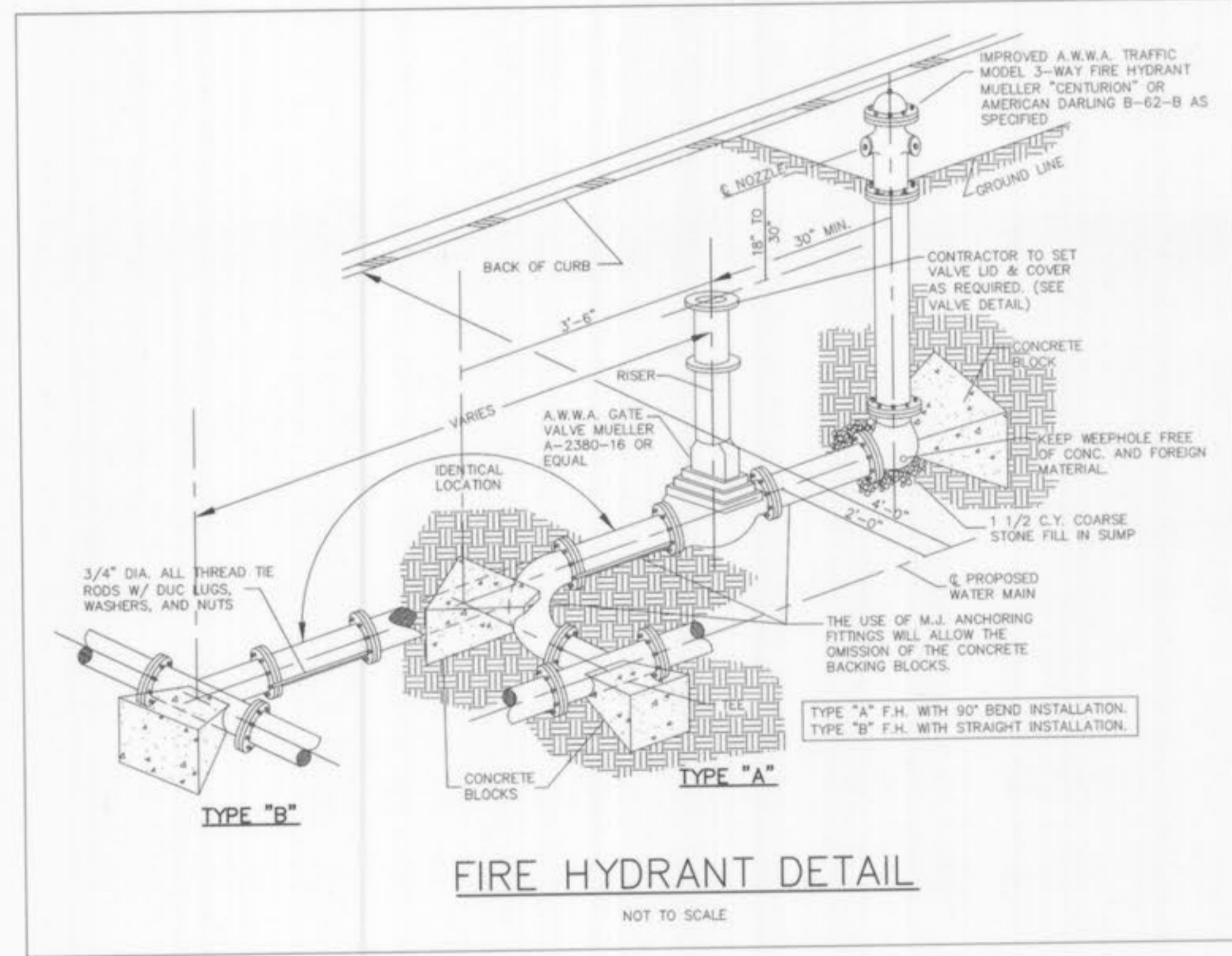
WATER VALVE DETAIL  
NOT TO SCALE



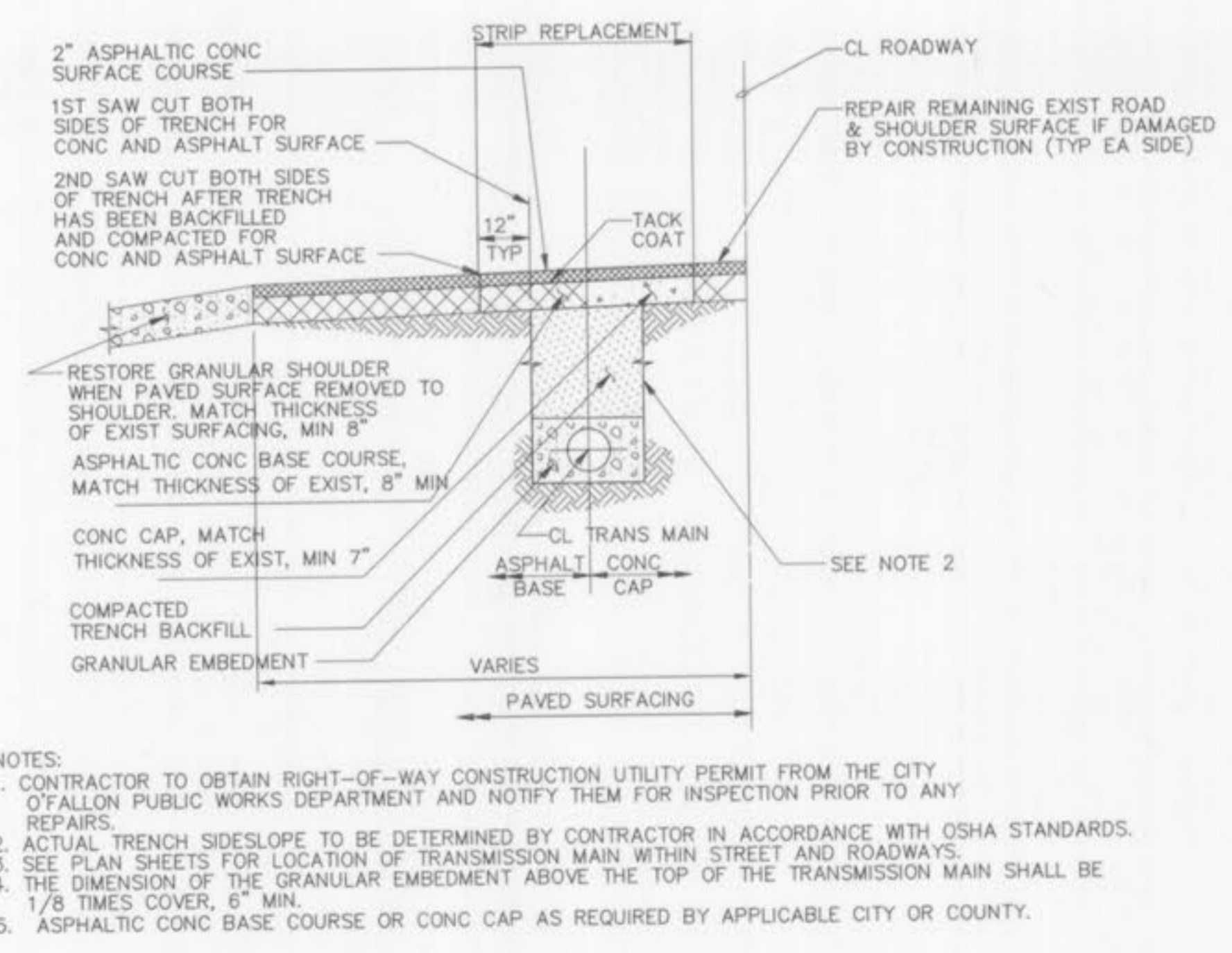
WATER MAIN EMBEDMENT  
NOT TO SCALE



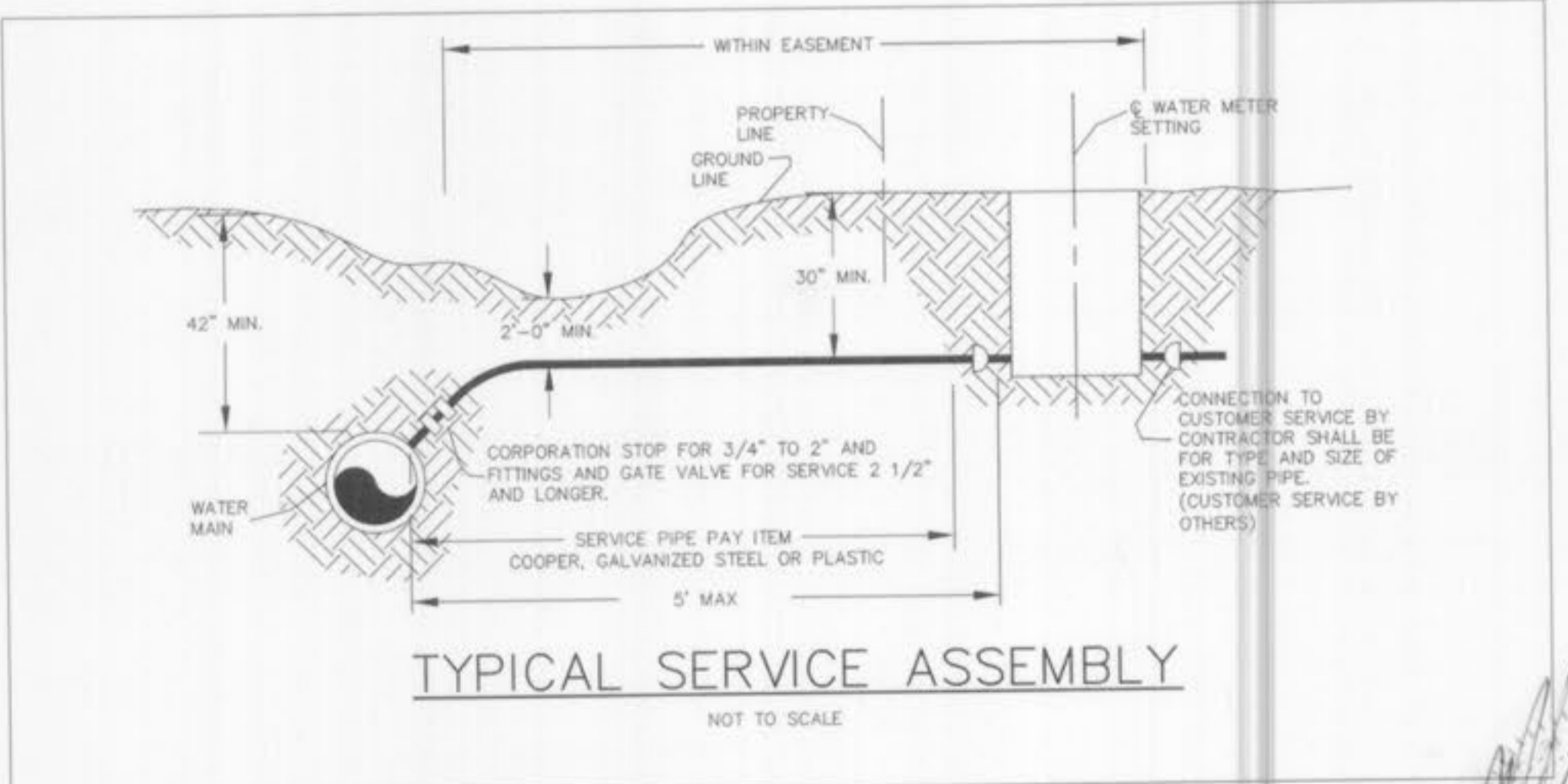
TYPICAL THRUST BLOCK DETAILS  
NOT TO SCALE



FIRE HYDRANT DETAIL  
NOT TO SCALE



STREET TRENCHING DETAIL  
AND CROSSING SECTION  
NO SCALE



TYPICAL SERVICE ASSEMBLY  
NOT TO SCALE



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AS-BUILTS ADDED APRIL 2003