

Location Map



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Principles and 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 IBC Codes and must be approved by the Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted IBC Codes.
- Sediment and erosion control plans for sites that exceed 10,000 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 14 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. Refer to Cottleville Grading Ordinance Appendix B for mulch and tack rates. All finished grades in excess of 20% slopes (5:1) shall be blanketed with North American Green 475 erosion control blanket or equal.
- 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 lined with rock rip rap or concrete or other suitable materials as approved by the City Engineer. Detention basins, diversions, or other appropriate structures shall be constructed to prevent velocities above 5 fps.
- 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 Cottleville. 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 Cottleville 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 Cottleville.
- Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas 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 should 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 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.

VEGETATION ESTABLISHMENT For Urban Development Sites APPENDIX A

SEEDING RATES:

PERMANENT:

Tall Fescue — 30 lbs./ac. Smooth
Brome — 20 lbs./ac.
Combined — Fescue @ 15 lbs./ac. AND
Brome @ 10 lbs./ac.

TEMPORARY:

Wheat or Rye — 150 lbs./ac. (3.5 lbs. per 1,000 s.f.)
Oats — 120 lbs./ac. (2.75 lbs. per 1,000 s.f.)

SEEDING PERIODS:

Fescue or Brome — March 1 to June 1
August 1 to October 1
Wheat or Rye — March 15 to November 1
Oats — March 15 to September 15

MULCH RATES:

100 lbs. per 1,000 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.

Cottleville Fire Protection District Notes:

- A permit will be required through the Cottleville Fire Department for the installation of the private fire service mains.
- Each fire hydrant shall not have less than two 2-1/2 inch outlets and one 4 inch outlet, a 5-1/4 inch valve, a 6 inch barrel and shall be of the breakaway design, frost free with chain, left hand open design and have National Standard Threads.
- Fire hydrant shall be provided with a control valve in the hydrant connection such that the hydrant can be removed from service without shutting off water supply to other fire hydrants.
- In setting hydrants, dug regard shall be given to final grade line. The center of a hose nozzle outlet shall not be less than 18 inches above grade and the outlets must face the street or access drive.
- There shall be no obstruction, i.e. planting, bushes, trees, signs, light standards, mailboxes, etc. within six (6) feet of any fire hydrant, and/or fire department connection to an automatic sprinkler system.
- Public hydrants shall have the bonnets color coded in accordance with Ordinance No. 13 of the Cottleville Fire Protection District. Private hydrants shall be painted entirely red (Porter 4119 or equal) in accordance with Section 507.33 of the 2015 IFC.
- A fire hydrant is required to be within 150 feet of a fire department connection to an automatic fire suppression systems, if such a system is required or installed.
- All tees, plugs, caps, bends, reducers, valves, and hydrant branches shall be restrained against movement by using thrust blocks in accordance with NFPA 24 Section 10.8.2 or restrained joint systems in accordance with NFPA 24 Section 10.8.3.
- Every connection from a private fire service main to a building shall be provided with a listed post indicator valve, located to control all sources of water supply, in accordance with IFC Section 903.3.5.3.
- The flushing and testing of the underground piping, etc. for private service mains shall comply with Chapter 9 of NFPA 24 and shall be witnessed by a representative from The Cottleville Fire Protection District.
- Underground piping for private fire service mains shall be listed for fire protection service and shall comply with AWWA standards.

A SET OF CONSTRUCTION PLANS FOR MAJESTIC DENTAL

A TRACT OF LAND BEING ALL OF LOT 5 OF
"HARMONY RIDGE COMMERCIAL PARK" PB. 50 PG. 228 IN U.S. SURVEY 353,
TOWNSHIP 46 NORTH, RANGE 3 EAST
OF THE FIFTH PRINCIPAL MERIDIAN
CITY OF COTTLEVILLE, ST. CHARLES COUNTY, MISSOURI

General Notes:

- Underground utilities have been plotted from available information and therefore locations shall be considered approximate only. The verifications 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 building laterals.
- All existing site improvements scheduled to remain that are disturbed, damaged or destroyed shall be repaired or replaced to closely match pre construction conditions.
- All fill, including places under proposed storm and sanitary sewer lines and paved areas within and off the road right-of-way shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test (ASTM D 698). All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-yielding and non-pumping during proof rolling and compaction.
- 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 public sanitary sewers, storm sewers and utilities on the record plat. See record plat (if required) for location and size of easement.
- All construction and materials shall conform to the current construction standards of the City of Cottleville.
- City of Cottleville shall be notified at least 48 hours prior to start of construction for coordination and inspection.
- All sanitary sewer manholes shall be waterproofed on the exterior in accordance Missouri Dept. Of Natural Resources specifications 10 CSR-8.120(7)(E).
- All PVC sanitary sewer pipe is to be SDR-35 or equal. (Note: All P.V.C. Force Main shall be C-900, Class 200 P.V.C.)
- All sanitary and storm sewer trench backfills shall be mechanically compacted. See specifications for details.
- All pipes shall have positive drainage through manholes. No flat base structures are allowed.
- Brick shall not be used on sanitary/storm sewer 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 III 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 III 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, or manhole. Whenever 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. 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.
- All fire lines shall be C-900 with working pressure of 150 P.S.I.
- Upon completion of the storm sewers, siltation control shall be provided around all open sewer inlet and shall remain until the disturbed drainage areas have been properly stabilized.
- The contractor shall verify quantities prior to construction.
- All sanitary sewer laterals shall be a minimum of 4 inches in diameter.
- All sanitary sewer construction and materials to be in accordance with City of St. Peters.
- The contractor is responsible for following the current Siltation and Land Erosion Control Ordinance Chapter 515 for the installation of sediment and erosion control devices as well as site inspections and providing all documentation of rainfall inspections per City of Cottleville specifications.
- All water line construction shall be in accordance with Missouri American Water and Cottleville Fire Protection District standards and specifications.

Legend

	FLARED END SECTION		CLEANOUT
	GRATED INLET		DOWNSPOUT
	GRATED MANHOLE		POWER POLE
	STORM SEWER MANHOLE		GUY WIRE
	SANITARY SEWER MANHOLE		LIGHT STANDARD/ ELECTRIC YARD LIGHT
	PIPELINE MARKER		UTILITY BOX
	FIBER OPTIC MARKER		MAILBOX
	AC UNIT		SIGN
	ELECTRIC BOX		TREE
	ELECTRIC TRANSFORMER		BUSH
	TELEPHONE CABLE PEDESTAL		—UGE— BURIED ELECTRIC
	TELEPHONE BOX		—OHW— OVERHEAD UTILITIES
	ELECTRIC METER		—GAS— BURIED GAS
	GAS METER		— W — BURIED WATER
	WATER METER		— FO — BURIED FIBER OPTIC
	GAS VALVE		— T — BURIED TELEPHONE
	WATER VALVE		— SAN— SANITARY SEWER
	FIRE HYDRANT		— X — FENCE LINE
	ELECTRIC STUB		TBR TO BE REMOVED
	YARD DRAIN		UIP USE IN PLACE

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 there from, 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 silting up existing downstream storm drainage system.
- Any existing trash and debris currently on this property must be removed and disposed of offsite.
- 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 manmade structures. The unsuitable material shall be properly disposed of offsite. 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 determine 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 repetition 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.
- All siltation control devices shall be inspected by the contractor after any rain of 1/4" or more with any appreciable accumulation of mud to be removed and siltation measures repaired where necessary.
- No slope shall be steeper than 3(Horizontal):1(Vertical). All slopes shall be sodded or seeded and mulched in accordance with the City of Cottleville Grading Ordinance.

- Fill and back fill shall be compacted to the criteria specified in the following table:

CATEGORY:	MINIMUM PERCENT COMPACTION %
Fill in building areas below footings	95 %
Fill under slabs, walks, and pavement	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 Proctor Test (ASTM-D-698). Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.

- Any contaminated soil encountered during excavation shall be hauled and placed as directed by the owners environmental engineering representative.

Grading Quantities:

3,900 C.Y. FILL (INCLUDES 8% SHRINKAGE)

1,500 C.Y. CUT (INCLUDES SUBGRADE; DOES NOT INCLUDE ANY SOIL REMEDIATION)

2,400 C.Y. IMPORT

THE ABOVE GRADING QUANTITY IS APPROXIMATE ONLY, NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY QUANTITIES PRIOR TO CONSTRUCTION.

Sheet Index

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| C1 | COVER SHEET |
| C2 | DEMOLITION PLAN |
| C3 | SITE PLAN |
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| C5 | SEDIMENT & EROSION CONTROL PLAN |
| C6 | SEDIMENT & EROSION CONTROL DETAILS |
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| C8 | PROPOSED DRAINAGE AREA MAP |
| C9 | STORM SEWER PROFILES |
| C10-C11 | CONSTRUCTION DETAILS |

Development Notes:

- THIS PROPERTY IS A PART OF THE PROPERTY REFERENCED AS PARCEL I.D. NUMBER 3-0104-C752-00-0005.0000000 OF THE ST. CHARLES COUNTY ASSESSOR'S OFFICE.
- AREA OF TRACT: 0.99 ACRES
- EXISTING ZONING: C-3 GENERAL COMMERCIAL RETAIL DISTRICT, CITY OF COTTLEVILLE COMMUNITY COLLEGE SPECIAL DISTRICT, CITY OF COTTLEVILLE
- SITE ADDRESS: 1451 COTTLEVILLE PARKWAY COTTLEVILLE, MO 63376
- PROPOSED USE: DENTIST OFFICE
- OWNER: MD REAL PROPERTY LLC 7100 CASTLE CLIFF ST. CHARLES MO, 63304
- THIS SITE IS SERVED BY THE FOLLOWING:
AMEREN ELECTRIC COMPANY 636-639-8312
AT&T TELEPHONE COMPANY 636-573-5450
SPIRE GAS COMPANY 314-522-2297
DUCKETT CREEK SEWER DISTRICT 636-441-1244
CITY OF ST. PETERS WATER 636-477-6600
MISSOURI AMERICAN WATER 636-922-9164
BLUEBIRD NETWORK 877-766-2662
CHARTER COMMUNICATIONS 888-438-2427
COTTLEVILLE FIRE PROTECTION DISTRICT 636-447-6655
- REQUIRED HEIGHT AND BUILDING SETBACKS FOR C-3 GENERAL COMMERCIAL RETAIL DISTRICT:
FRONT YARD = 35 FEET
REAR YARD = 25 FEET
INTERIOR SIDE YARD = 20 FEET
STREET SIDE YARD = 35 FEET
MAX. BUILDING HEIGHT = 40 FEET
- PARKING REQUIREMENTS:
MEDICAL OFFICE = 7 SPACES PER DOCTOR, PLUS 2 SPACES PER 3 EMPLOYEE OR 1 SPACE PER 120 SQ. FT. (WHICHEVER IS GREATER)
TOTAL TREES REQUIRED = 13 TREES
TOTAL TREES PROVIDED = 13 TREES
TOTAL PARKING PROVIDED = 42 SPACES (INCLUDING 2 ACCESSIBLE SPACES)
TOTAL PARKING REQUIRED = 31 SPACES
LANDSCAPING REQUIREMENTS:
STREET TREES: 1 TREE PER 40 FEET OF STREET FRONTAGE
234.98/40 FEET STREET FRONTAGE X 1 TREE = 5.87 TREES
OPEN SPACE: 1 TREE PER 3,000 SQ. FT.
19,311/3,000 SQ. FT. X 1 TREE = 6.44 TREES
INTERIOR LANDSCAPE AREA: 16 SQ. FT. PER 1 PARKING SPACE
42 PARKING SPACES X 16 SQ. FT. = 672 SQ. FT. OF LANDSCAPE AREA REQUIRED
1,205 SQ. FT. OF LANDSCAPE AREA PROVIDED
- LANDSCAPE BUFFER: COMPACT EVERGREEN HEDGE VEGETATIVE PLANTING SCREEN OR A SIGHT-PROOF FENCE WITH MINIMUM HEIGHT OF 6 FEET SHALL BE PROVIDED

- A PERMANENT IRRIGATION SYSTEM SHALL BE INSTALLED TO COVER ALL LANDSCAPED AREAS AROUND THE PROPOSED BUILDING(S).

- SITE COVERAGE:
SITE = 43,395 SQ. FT. (0.99 ACRES)
BUILDING = 5,658 SQ. FT. (13%)
PAVEMENT = 18,156 SQ. FT. (42%)
GREENSPACE = 19,581 SQ. FT. (45%)

- TO DETERMINE THE LOCATION OF FLOOD DESIGNATIONS AND BOUNDARIES, WE DETERMINED THE HORIZONTAL LOCATION OF THIS TRACT OF LAND BY SCALING THE FOLLOWING FLOOD INSURANCE RATE MAP (FIRM): ST. CHARLES COUNTY, MISSOURI AND INCORPORATED AREAS, MAP NUMBER 29183C0244G, WITH AN EFFECTIVE DATE OF JANUARY 20, 2016.

COMMUNITY: CITY OF COTTLEVILLE
NUMBER: 290898
PANEL: 0244
SUFFIX: G

BY EXPRESS REFERENCE TO THIS MAP AND ITS LEGEND, THIS TRACT OF LAND IS INDICATED TO BE WITHIN ZONE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

THE EVALUATION PROVIDED IN THIS NOTE IS RESTRICTED TO SIMPLY INDICATING THE APPARENT HORIZONTAL LOCATION OF THE PROPERTY WITH RESPECT TO THE FEATURES DISPLAYED ON THE MAP. NO FIELD STUDY OF THE DRAINAGE CHARACTERISTICS TO WHICH THIS PROPERTY MAY BE SUBJECT TO HAS BEEN CONDUCTED AND NO REPRESENTATION CONCERNING THE INSURABILITY OF THIS PROPERTY OR THE POTENTIAL SUSCEPTIBILITY OF THIS PROPERTY TO FLOODING HAS BEEN MADE. BAX ENGINEERING MAKES NO REPRESENTATION CONCERNING THE ACCURACY OF THE ABOVE REFERENCED FIRM MAP WHICH INCLUDES A NOTE THAT "THIS MAP IS FOR USE IN ADMINISTERING THE NATIONAL FLOOD INSURANCE PROGRAM. IT DOES NOT NECESSARILY IDENTIFY ALL AREA SUBJECT TO FLOODING, PARTICULARLY FROM LOCAL DRAINAGE SOURCES OF SMALL SIZE.

THIS FLOOD ZONE DETERMINATION AND THE FLOOD ZONE LIMITS SHOWN HEREON, IF ANY, WERE MADE USING FEMA INFORMATION WHICH WAS AVAILABLE ON THE DATE THIS SURVEY WAS SIGNED AND SEALED.

- REFERENCE BENCHMARK: THE OBSERVED VERTICAL CHECK STATION UTILIZED IS LISTED ON WWW.NGS.NOAA.GOV AS DESIGNATION "SC 05 (RESET)" WITH A PID OF AA8596 AND A PUBLISHED ELEVATION OF 160.3M (NAVD88).

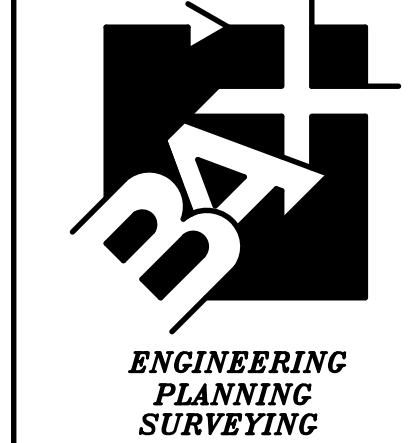
DESCRIPTION: BRASS DISK MARKED "SC-05 RESET, 2000". THE STATION IS LOCATED IN COTTLEVILLE, MO, ATHWART FROM THE COTTLEVILLE FIRE STATION AND NEAR THE ST. JOSEPH CATHOLIC CHURCH PARKING LOT ON THE WEST RIGHT-OF-WAY OF MOTHERHEAD ROAD.

SITE BENCHMARK (NAVD 88)- CHISELED "L" LOCATED ON SEAM OF CONCRETE CURB LOCATED ALONG THE SOUTH RIGHT-OF-WAY OF COTTLEVILLE PARKWAY AND SHOWN HEREON (ELEVATION=549.35).

- ALL ACCESSIBLE PARKING AND STRIPING WILL BE CONSTRUCTED TO ADA AND THE CITY OF COTTLEVILLE STANDARDS AND SPECIFICATIONS.
- 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.
- ALL NEW UTILITIES ARE TO BE LOCATED UNDERGROUND.
- HVAC EQUIPMENT SHALL BE ROOF MOUNTED. ALL HVAC EQUIPMENT SHALL BE SCREENED PER CITY OF COTTLEVILLE ZONING ORDINANCE.
- SITE LIGHTING SHALL BE INSTALLED PER CITY OF COTTLEVILLE STANDARDS AND SPECIFICATIONS. ALL LIGHTS ON THE BACK OF THE BUILDING MUST BE SHIELDED TO PREVENT LIGHT FROM SHINING INTO THE NEIGHBORING HOMES.

A SET OF CONSTRUCTION PLANS FOR
MAJESTIC DENTAL
1451 COTTLEVILLE PARKWAY
COTTLEVILLE, MO 63376

PREPARED FOR:
MAJESTIC DENTAL
1255 MAJESTIC ROAD
ST. PETERS, MO. 63376
816-986-3430



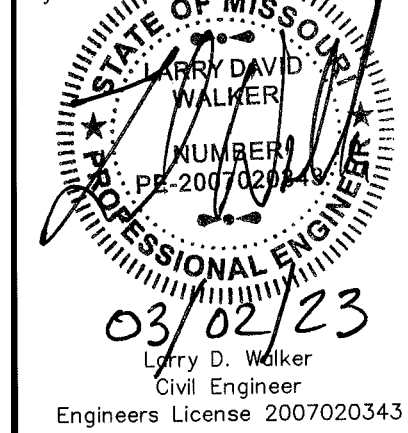
211 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

Box Engineering Company, Inc.
Missouri State Certificate of Authority
Engineering #000655
Missouri State Certificate of Authority
Surveying #000144

REVISIONS

NO.	DATE	DESCRIPTION

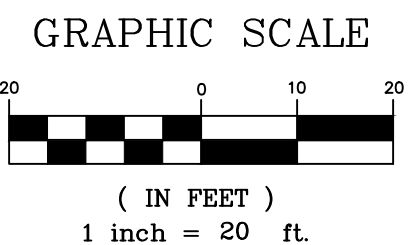
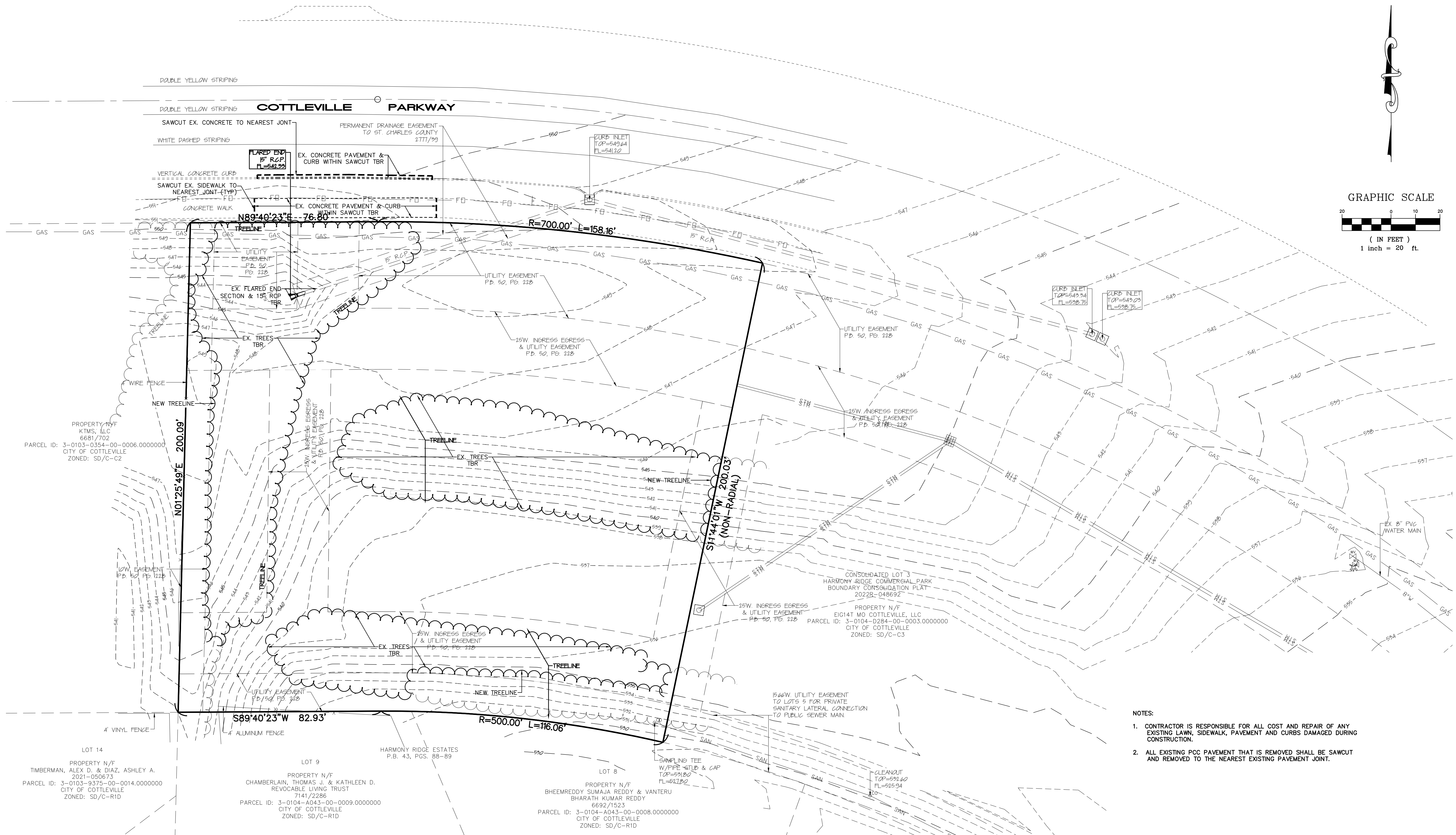
DISCLAIMER OF RESPONSIBILITY
I hereby disclaim any
responsibility for all other
drawings, specifications, estimates,
reports or other documents or
instruments relating to or
intended to be used for any part
or parts of the architectural or
engineering project or survey
other than that specifically
indicated by my seal.



03-02-23
DATE
16-16778B
PROJECT NUMBER
16778B CON.DWG
FILE NAME
RKC
DRAWN
RKC LDW
DESIGNED CHECKED

COVER SHEET

C-1



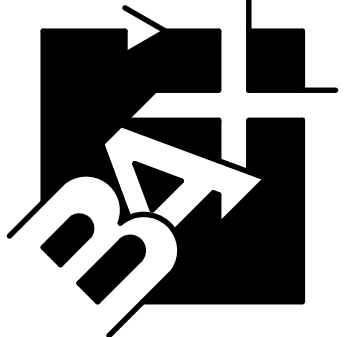
- NOTES:
1. CONTRACTOR IS RESPONSIBLE FOR ALL COST AND REPAIR OF ANY EXISTING LAWN, SIDEWALK, PAVEMENT AND CURBS DAMAGED DURING CONSTRUCTION.
 2. ALL EXISTING PCC PAVEMENT THAT IS REMOVED SHALL BE SAWCUT AND REMOVED TO THE NEAREST EXISTING PAVEMENT JOINT.



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YOU DIG!
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A SET OF CONSTRUCTION PLANS FOR
MAJESTIC DENTAL
1451 COTTLEVILLE PARKWAY
COTTLEVILLE, MO 63376

PREPARED FOR:
MAJESTIC DENTAL
1251 PETERS ROAD
ST. PETERS, MO. 63376
816-986-3430



**ENGINEERING
PLANNING
SURVEYING**

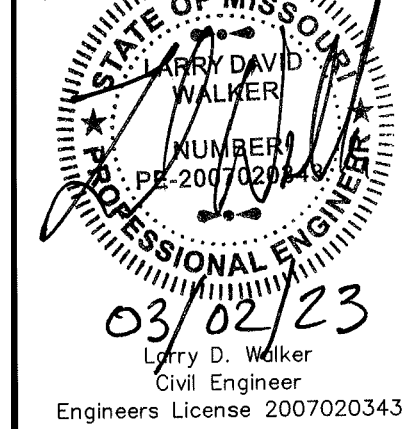
221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

Box Engineering Company, Inc.
Missouri State Certificate of Authority
Engineering #000655
Missouri State Certificate of Authority
Surveying #000144

REVISIONS

NO.	DESCRIPTION	DATE

DISCLAIMER OF RESPONSIBILITY
I hereby disclaim any
responsibility for all other
drawings, specifications, estimates,
reports or other documents or
instruments relating to or
intended to be used for any part
or parts of the architectural or
engineering project or survey
other than that specifically
indicated by my seal.




03-02-23
DATE
16-16778B
PROJECT NUMBER
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FILE NAME
RKC
DRAWN
RKC LDW
DESIGNED CHECKED


DEMOLITION
PLAN

C-2


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.




QTY. (7) REDBUD




QTY. (6) RED MAPLE



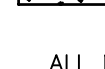
QTY. (12) VIRGINIA SWEETPIRE



QTY. (7) BOXWOOD



QTY. (3) CHINESE JUNIPER



LANDSCAPED AREA

CEROIS CANADENSIS

ACER RUBRUM 'ARMSTRONG'

ITEA VIRGINICA 'SPRICH'

BUXUS 'GREEN GEM'

JUNIPERUS X PFITZERIANA

MINIMUM 2" CALIPER

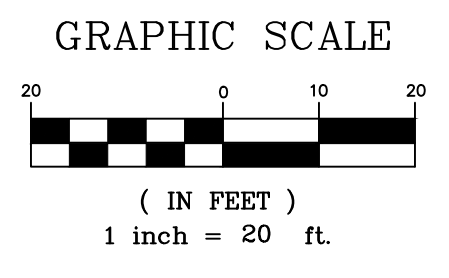
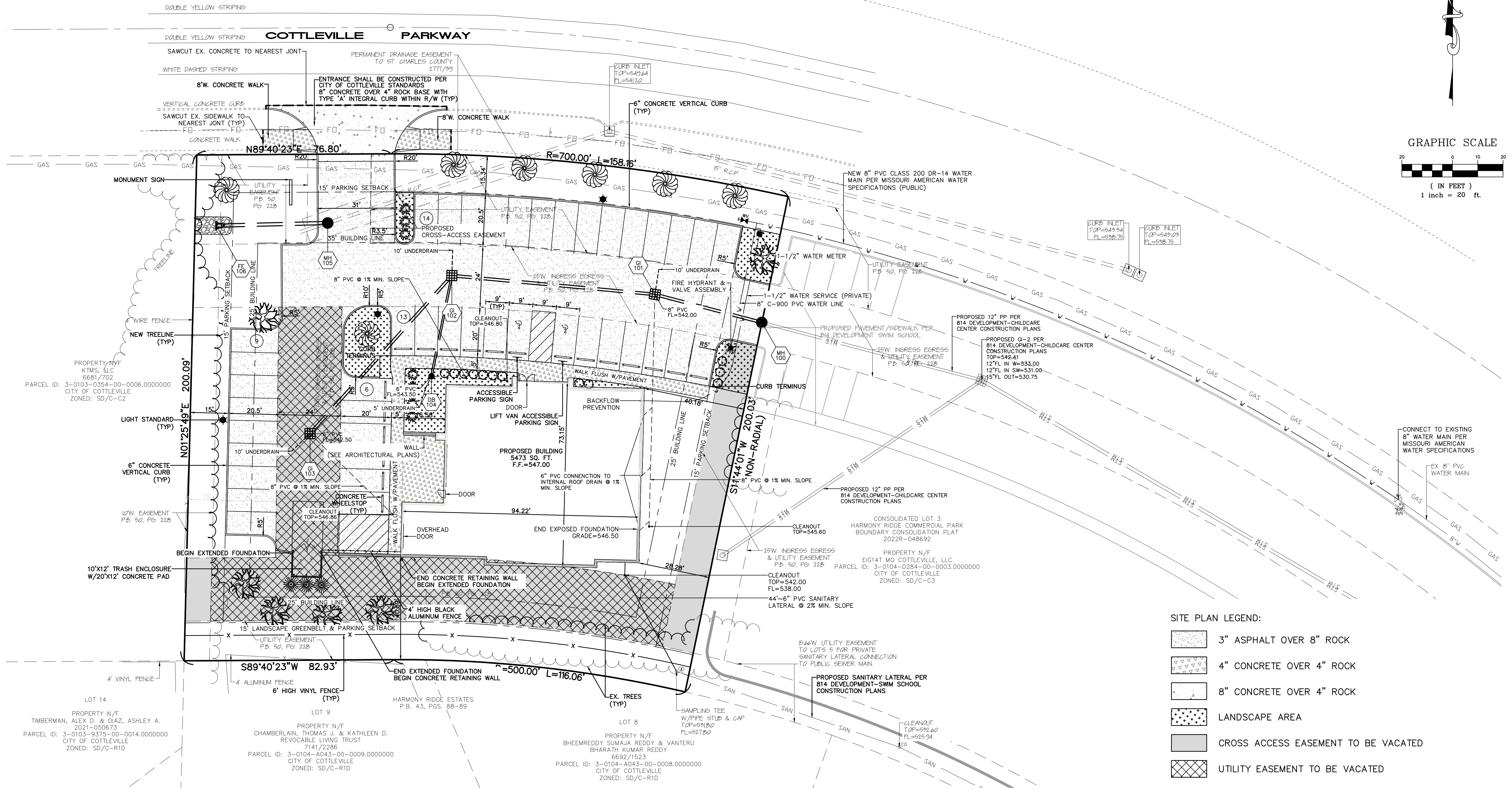
MINIMUM 2" CALIPER

MINIMUM 2 GALLON

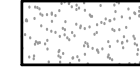
MINIMUM 2 GALLON

MINIMUM 2 GALLON


ALL MEDIUM AND LARGE DECIDUOUS SHADE TREES SHALL BE A MINIMUM CALIPER OF 2 INCHES MEASURED 6 INCHES ABOVE GRADE. ALL SMALL DECIDUOUS TREES SHALL BE 4 FOOT IN HEIGHT. LANDSCAPING AS DEPICTED IS SUBJECT TO FINAL DESIGN BY A QUALIFIED LANDSCAPE DESIGNER.



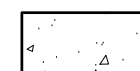
SITE PLAN LEGEND:



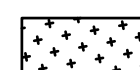
3" ASPHALT OVER 8" ROCK




4" CONCRETE OVER 4" ROCK




8" CONCRETE OVER 4" ROCK



LANDSCAPE AREA



CROSS ACCESS EASEMENT TO BE VACATED



UTILITY EASEMENT TO BE VACATED



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A SET OF CONSTRUCTION PLANS FOR
MAJESTIC DENTAL
1451 COTTLEVILLE PARKWAY
COTTLEVILLE, MO 63376

PREPARED FOR:
MAJESTIC DENTAL
12511 PETERS ROAD
ST. PETERS, MO. 63376
816-986-3430



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221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

Box Engineering Company, Inc.
Missouri State Certificate of Authority
Engineering #000655
Missouri State Certificate of Authority
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NO.	DESCRIPTION

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reports or other documents or
instruments relating to or
intended to be used for any part
or parts of the architectural or
engineering project or survey
other than that specifically
indicated by my seal.



03/02/23
LARRY D. WALKER
Civil Engineer
Engineers License 2007020343

03-02-23
DATE

16-16778B
PROJECT NUMBER

16778B_CON.DWG
FILE NAME

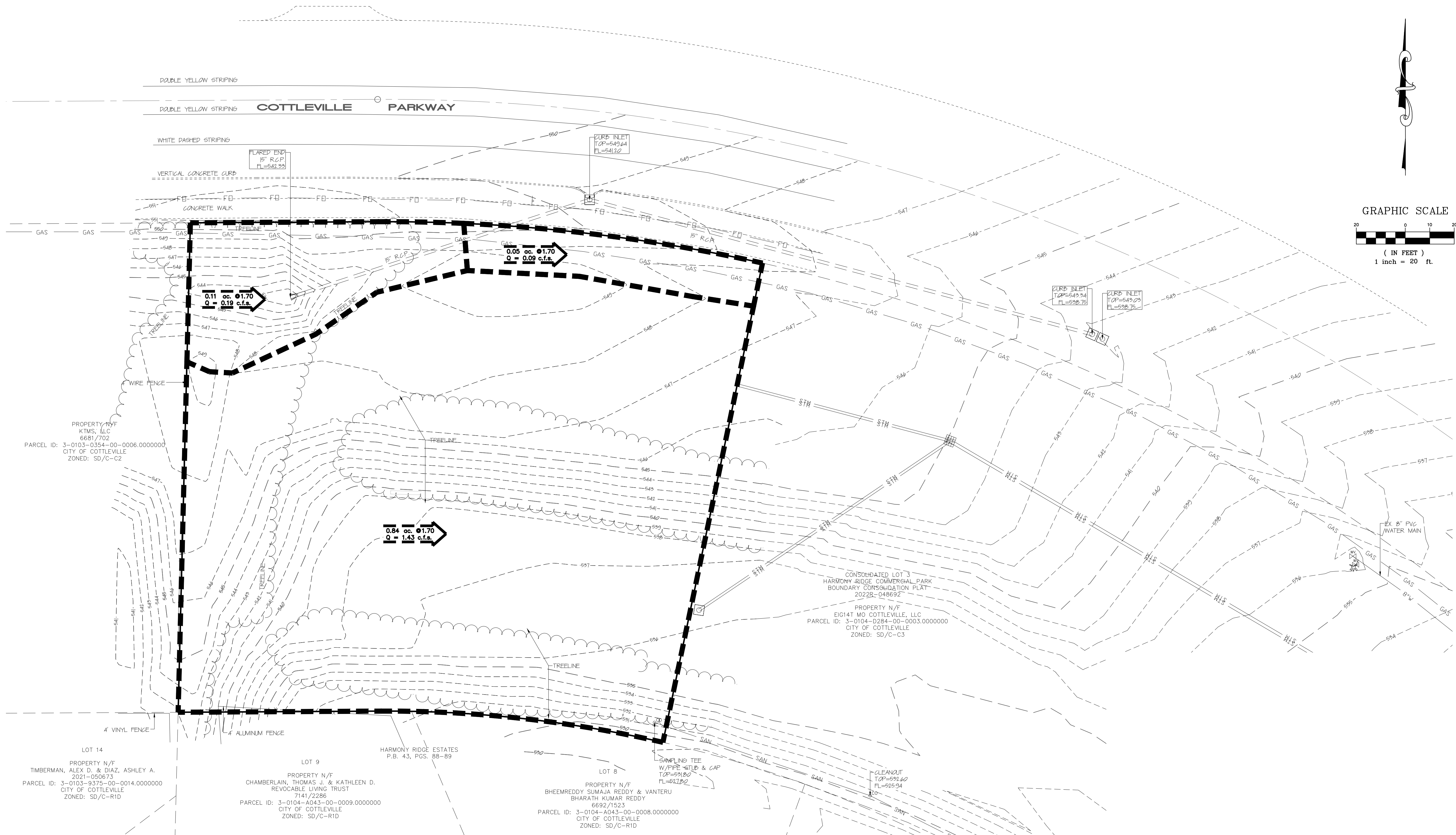
RKC
DRAWN

RKC LDW
DESIGNED CHECKED

SITE PLAN

C-3

THIS SHEET IS FOR DRAINAGE PURPOSES ONLY. NOT TO BE USED FOR CONSTRUCTION.

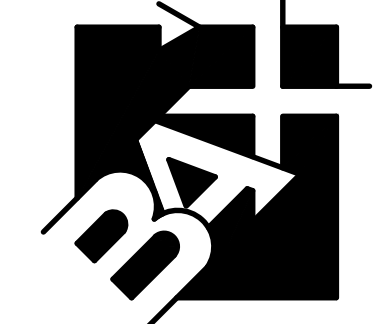


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UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE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

A SET OF CONSTRUCTION PLANS FOR
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COTTLEVILLE, MO 63376

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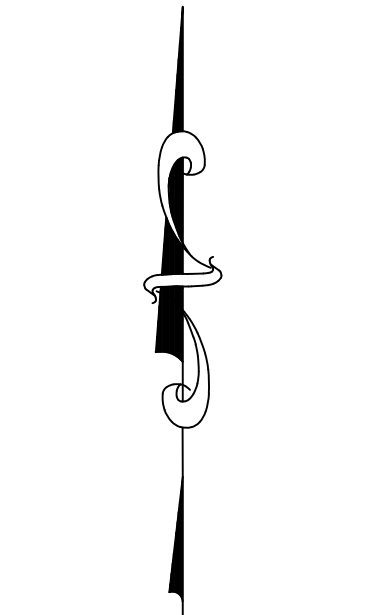
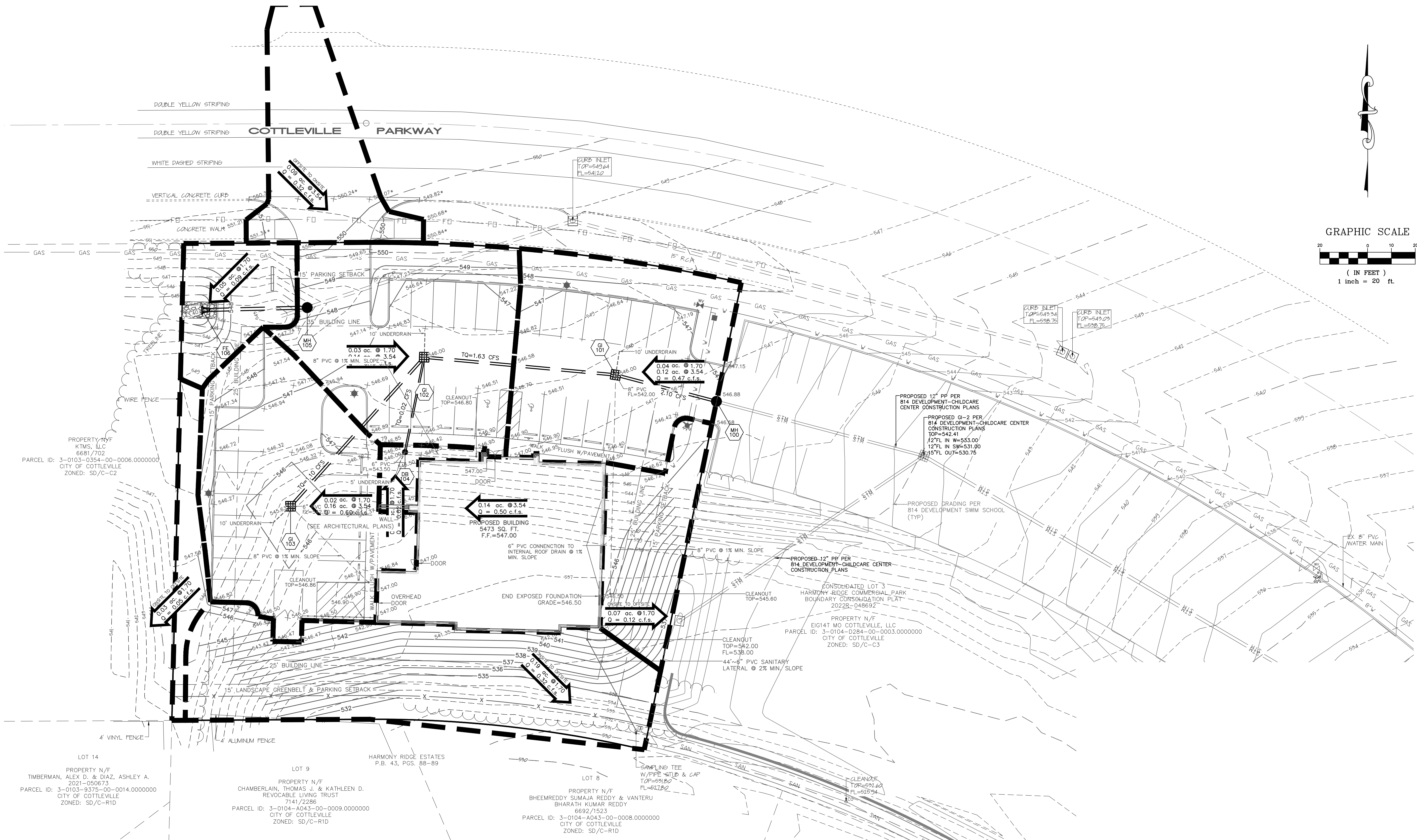


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16-16778B
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DRAWN
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EXISTING
DRAINAGE AREA
MAP

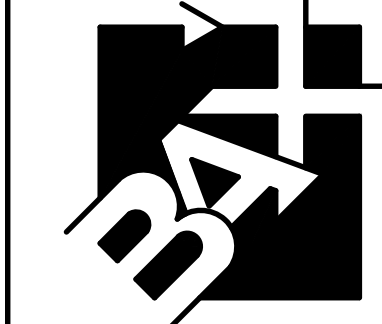
C-7

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GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

A SET OF CONSTRUCTION PLANS FOR
MAJESTIC DENTAL
1451 COTTLEVILLE PARKWAY
COTTLEVILLE, MO 63376

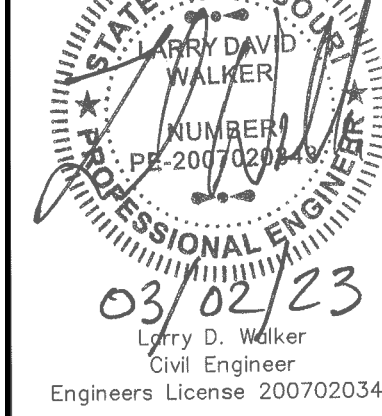


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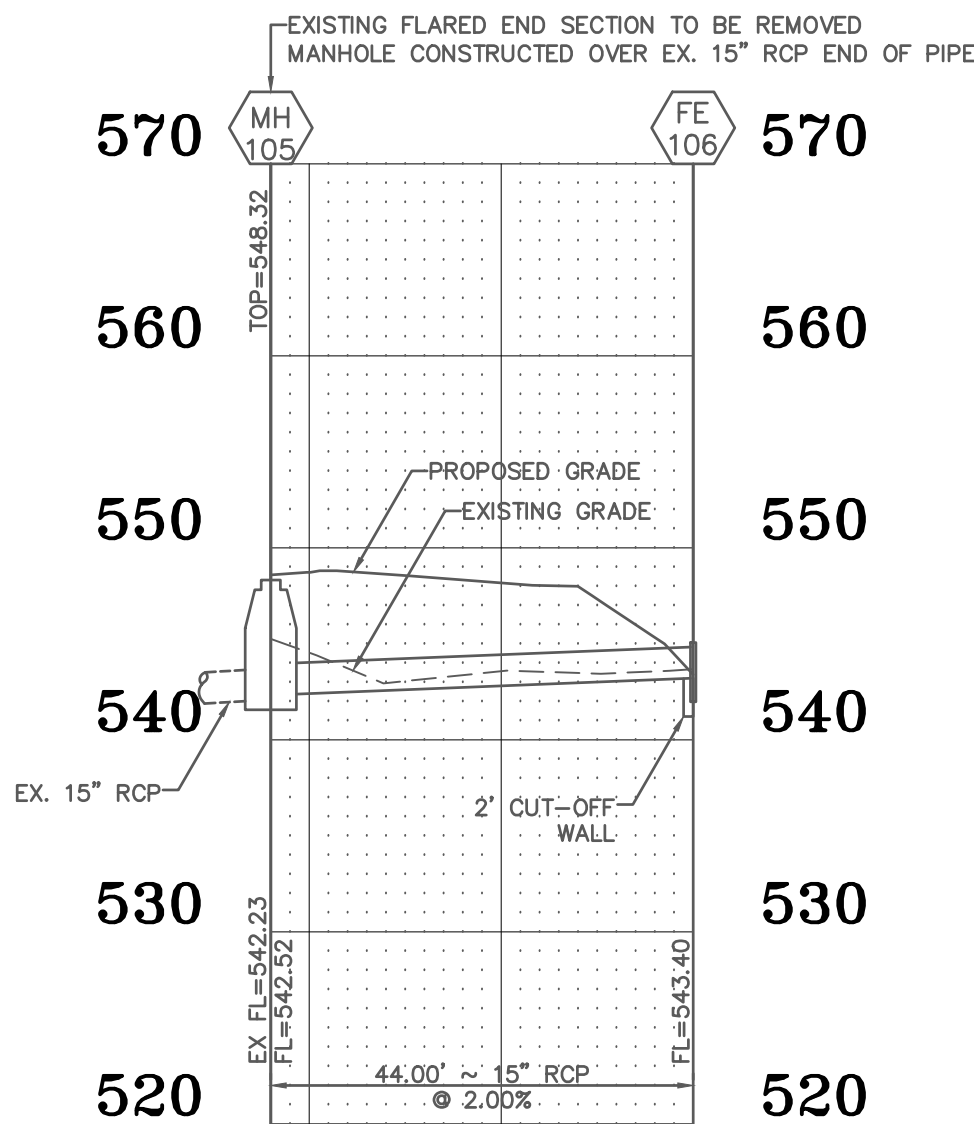
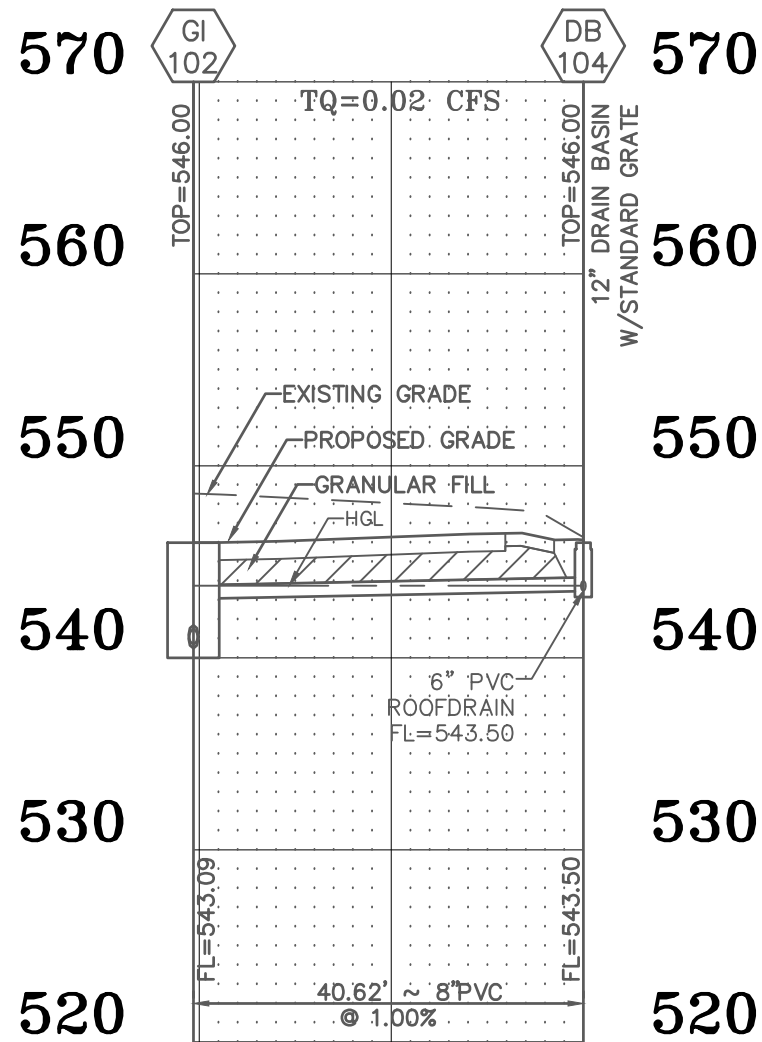
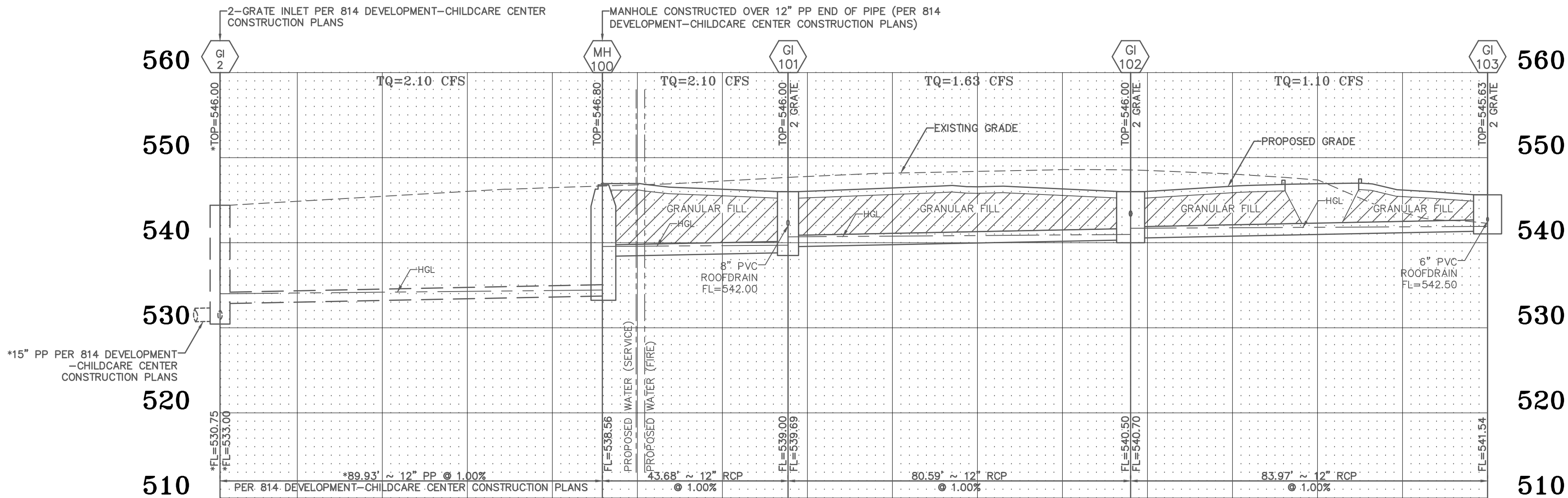
PROPOSED
DRAINAGE AREA
MAP

C-8



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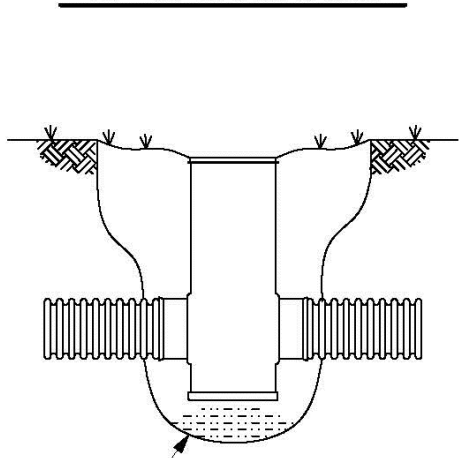
(PRIVATE)
Storm Sewer Profile

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 10'
* PROPOSED STORM SEWERS PER 814 DEVELOPMENT-CHILDCARE CENTER CONSTRUCTION PLANS

St Charles County Government Hydraulic Review Output Data										\\VAULTSERVER\\FileFolders\\16000\\16778B - Harmony Ridge Commercial Park, Lot 5\\Engineering\\Hydraulics\\16778B.txt 3/2/2023 Calculations Under Full Flow															
Upp Str	Low Str	PL	S	Upp FL LN	Low FL LN	PS	Upp ST EL	Depth HY GR	Upp HY EL	Low HY EL	Hydr Grade	FR Head	VEL	VEL Head	Junc Loss	Turn Loss	Curve Loss	STR Grade	Inl Cap	DR Area	P.I.	Q	TQ	Pipe Cap	Remarks
1	DB104	GI102	41	8	543.50	543.09	1.01	546.00	2.24	543.76	543.76	0.00000	0.00	0.06	0.00	0.00	0.00	0.00					0.02	1.21	
2	GI103	GI102	84	12	541.54	540.70	1.00	545.63	3.72	541.92*	541.70	0.00100	0.08	1.40	0.03	0.03	0.00	0.00					1.10	3.56	
3	GI102	GI101	81	12	540.50	539.69	1.01	546.00	5.03	540.97*	540.69	0.00210	0.17	2.08	0.07	0.06	0.00	0.00					1.63	3.58	
4	GI101	MH100	44	12	539.00	538.56	1.01	546.00	6.28	539.72	539.56	0.00350	0.15	2.67	0.11	0.00	0.01	0.00					2.10	3.58	
5	MH100	GI2	90	12	533.90	533.00	1.00	546.80	12.35	534.45*	534.00	0.00350	0.31	2.67	0.11	0.00	0.00	0.00					2.10	3.56	ITP=534.00

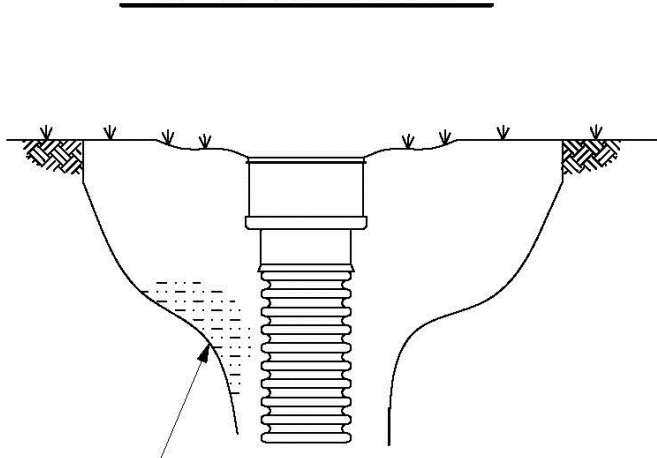
ENGINEER SEAL DOES NOT APPLY TO NYLOPLAST DETAILS

12" - 30" DRAIN BASIN

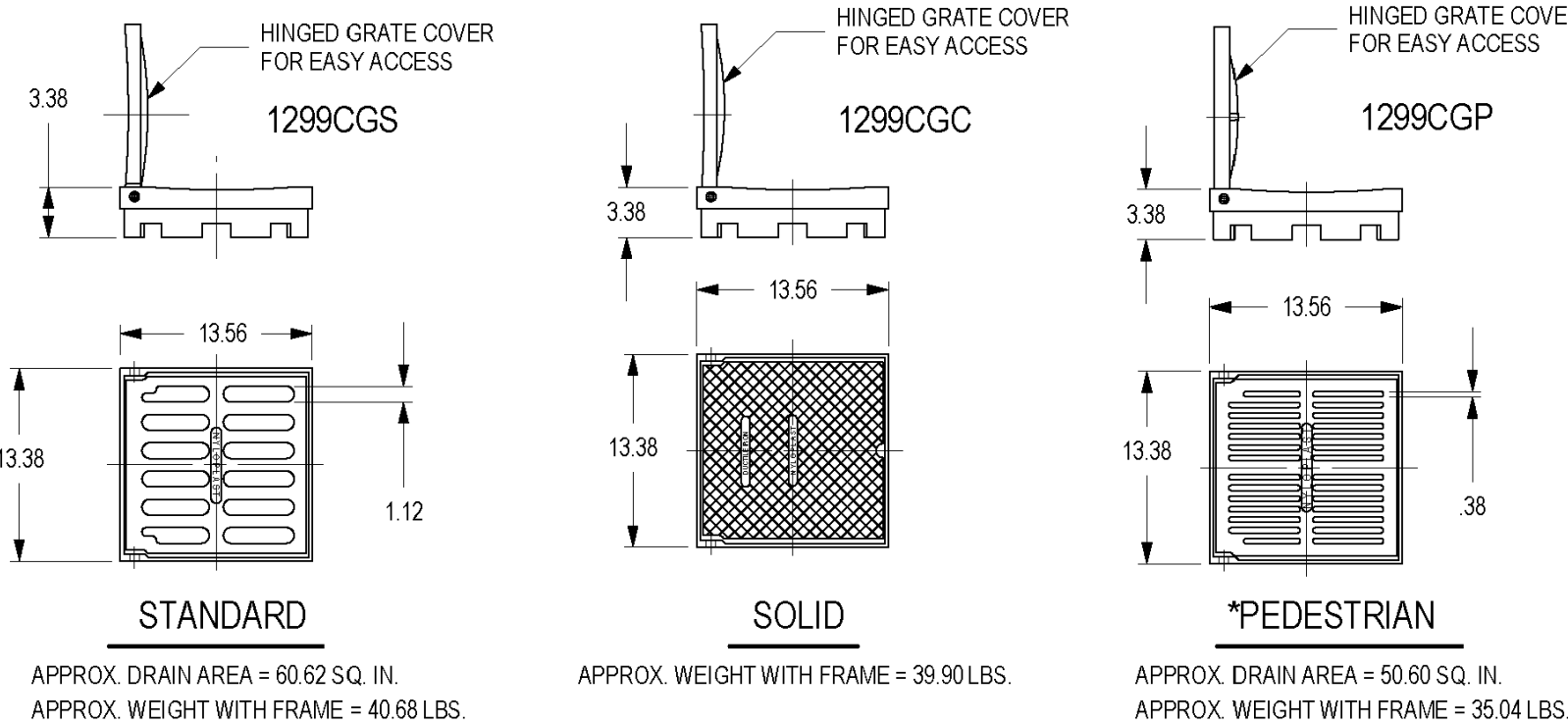


BACKFILL MATERIAL SHALL BE CRUSHED STONE OR GRAVEL MEETING CLASS 1 OR 2 AS SPECIFIED IN ASTM D2321. BACKFILL MATERIAL SHALL BE PLACED UNIFORMLY IN 12" LIFTS AND COMPACTED TO 90 - 95% DENSITY.

12" - 30" INLINE DRAIN




BACKFILL MATERIAL SHALL BE CRUSHED STONE OR GRAVEL MEETING CLASS 1 OR 2 AS SPECIFIED IN ASTM D2321. BACKFILL MATERIAL SHALL BE PLACED UNIFORMLY IN 12" LIFTS AND COMPACTED TO 90 - 95% DENSITY.





NYLOPLAST 12" GRATES/COVERS

STANDARD GRATE HAS H-25 HEAVY DUTY RATING
SOLID COVER HAS H-25 HEAVY DUTY RATING
PEDESTRIAN GRATE HAS H-10 MEDIUM DUTY RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05 & A48-CLASS 30B
MATERIAL: DUCTILE IRON GRATE W/CAST IRON FRAME
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST
PRICE INCLUDES FRAME & GRATE/COVER

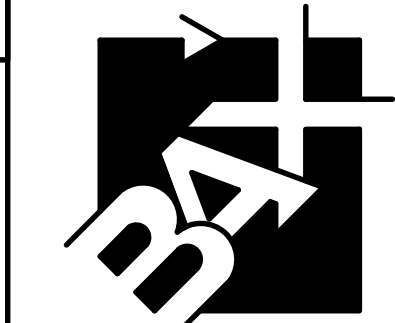
* SIZE OF OPENING MEETS REQUIREMENTS OF AMERICAN DISABILITY ACT AS STATED IN FEDERAL REGISTER PART III, DEPARTMENT OF JUSTICE, 28 CFR PART 36. NONDISCRIMINATION ON THE BASIS OF DISABILITY BY PUBLIC ACCOMMODATIONS AND IN COMMERCIAL FACILITIES; FINAL RULE.

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DATE: 2/22/02	PROJECT NO. NAME:	TITLE: 12" IN DB & ID NON TRAFFIC INSTALLATION		
DATE: 2/22/02	DRAIN BASIN / IN LINE DRAIN			
DWG SIZE: A	SCALE: 1"=20'	SHEET: 1 OF 1	DWG NO.: 700-110-111	REV: A

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	DATE 15AUG00	DUCTILE IRON	
	APPRO BY CJA	PROJECT NO. NAME:	
	DATE 15AUG00	GRATE / COVER	
	DWG SIZE A	SCALE 1"=2'	
			 Nyloplast 12" STANDARD, SOLID & PEDESTRIAN
			TITLE
			DWGNO. 700-110-089 REV C

A SET OF CONSTRUCTION PLANS FOR
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COTTLEVILLE, MO 63376

PREPARED FOR:
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ST. PETERS, MO. 63376
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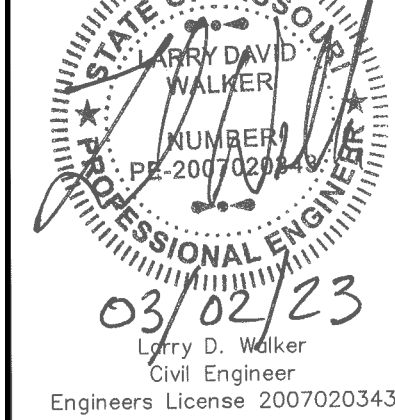
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PROJECT NUMBER

16778B_CON.DWG

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RKC

LDW

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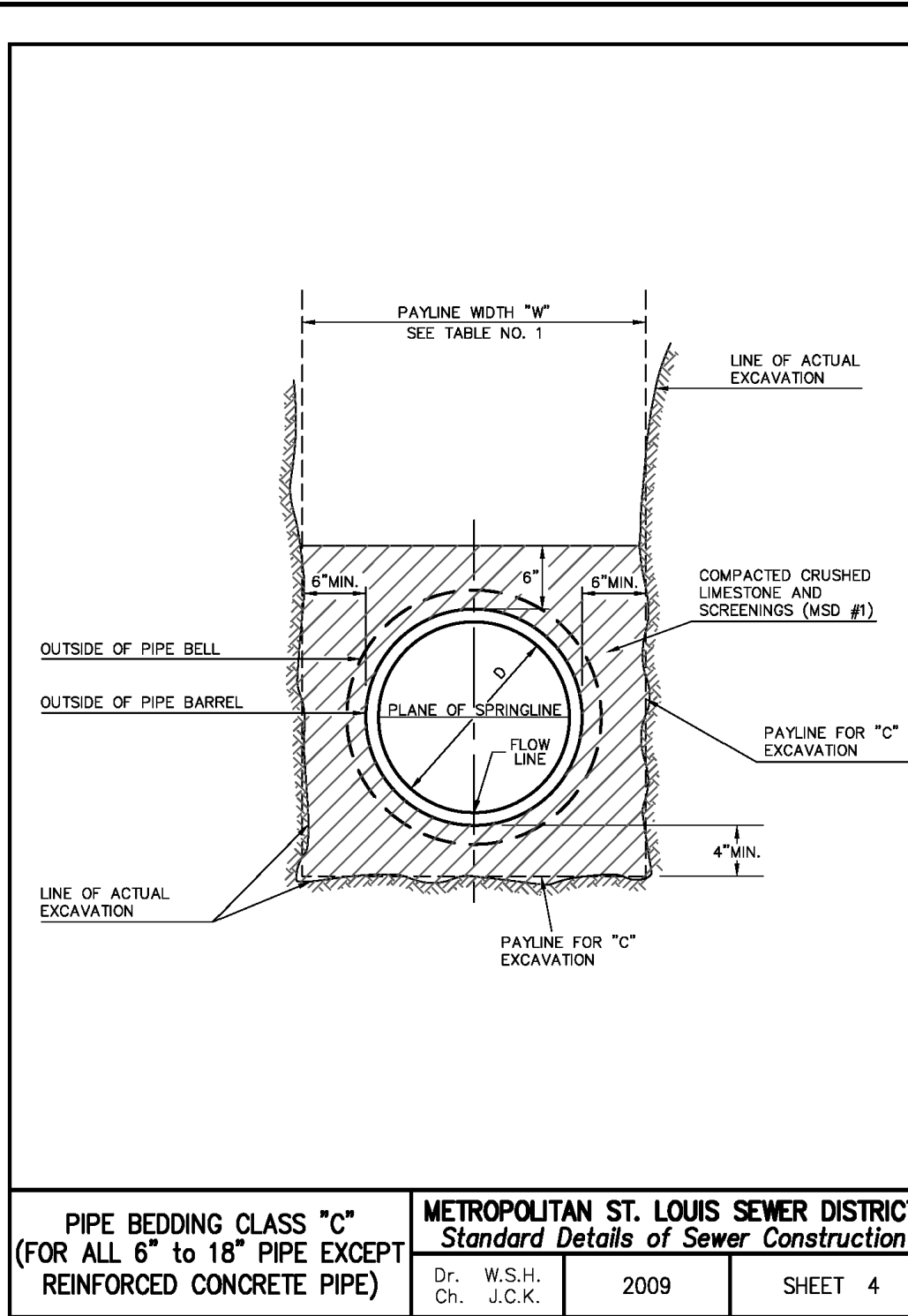
**STORM SEWER
PROFILES**

C-9

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 ENCASUREMENT	INSIDE DIMENSIONS OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASUREMENT
4	30	2.50	3.28				
6	30	2.50	3.59				
8	30	2.50	3.87				
10	30	2.50	4.09				
12	30	2.50	4.25				
15	36	3.00	5.55				
18	36	3.00	5.77				
21	39	3.25	6.61	14 x 23	41	3.42	5.94
24	42	3.50	7.39	19 x 30	49	4.08	7.68
27	45	3.75	8.18	22 x 34	53	4.42	8.61
30	49	4.08	9.30	24 x 38	58	4.83	9.70
33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	56	4.67	11.43	29 x 45	66	5.50	11.72
39	60	5.00	12.43	32 x 49	71	5.92	13.14
42	63	5.25	13.38	34 x 53	75	6.25	14.05
45	70	5.83	15.67	38 x 60	83	6.92	16.18
48	77	6.42	18.15	43 x 68	92	7.67	18.81
60	84	7.00	20.73	48 x 78	101	8.42	21.59
66	91	7.58	23.45	53 x 83	109	9.08	24.35
72	98	8.17	26.37	58 x 91	118	9.83	27.45
78	105	8.75	29.39	63 x 98	126	10.50	30.50
84	112	9.33	32.57	68 x 106	135	11.25	33.91
90	119	9.92	35.90	72 x 113	143	11.92	36.99
96	126	10.50	39.37	77 x 121	152	12.67	40.69
102	133	11.08	42.99	82 x 128	160	13.33	44.45
108	140	11.67	46.75	87 x 136	168	14.00	47.79
114	147	12.25	50.66	92 x 143	176	14.67	51.70
120	154	12.83	54.72	97 x 151	185	15.42	56.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 x 166	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.59

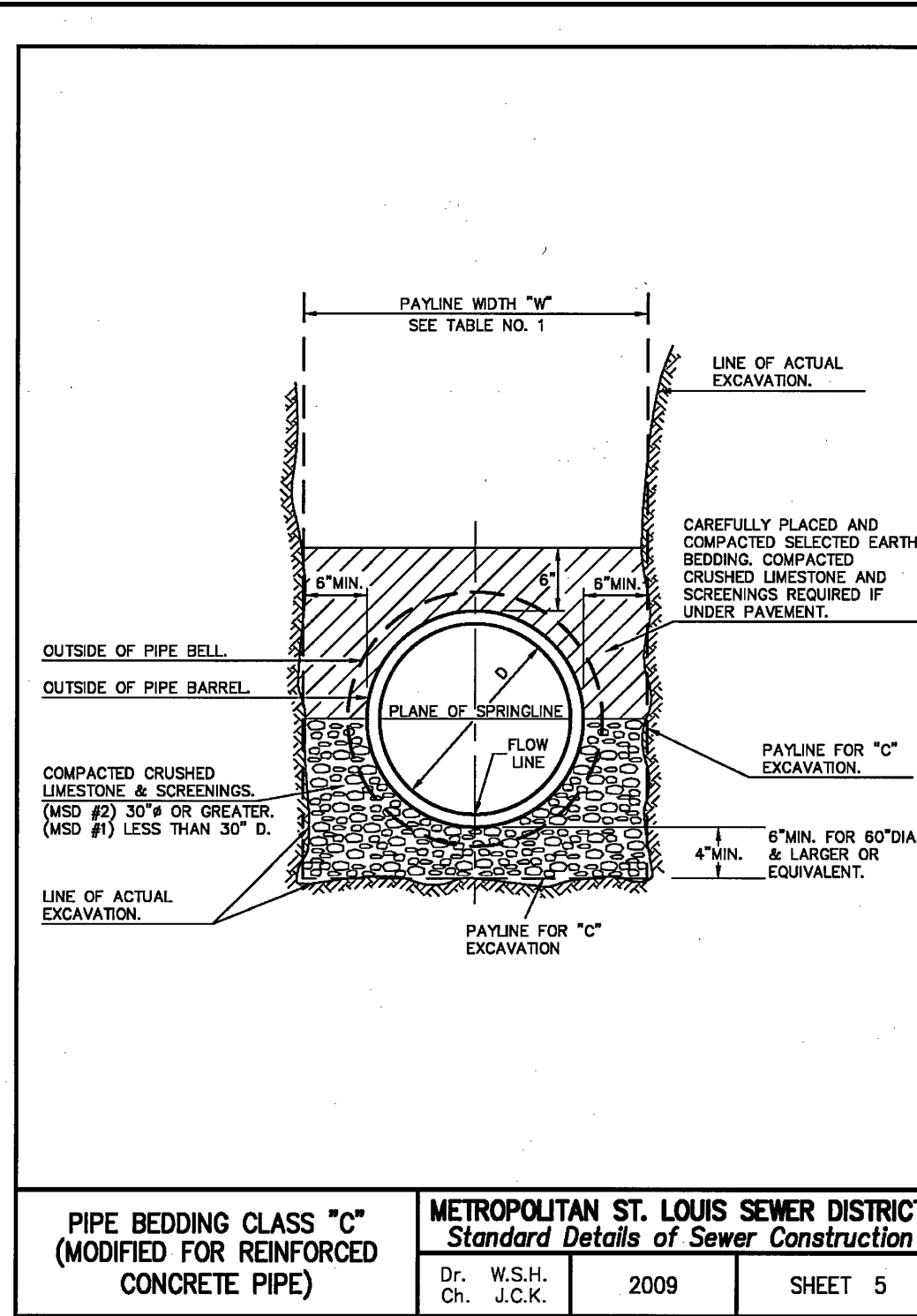
TABLE 1
PAYLINE WIDTHS OF TRENCH
AND PAY-QUANTITIES
OF CONCRETE

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. B.E.B. Ch. J.C.K.	2009	SHEET	1



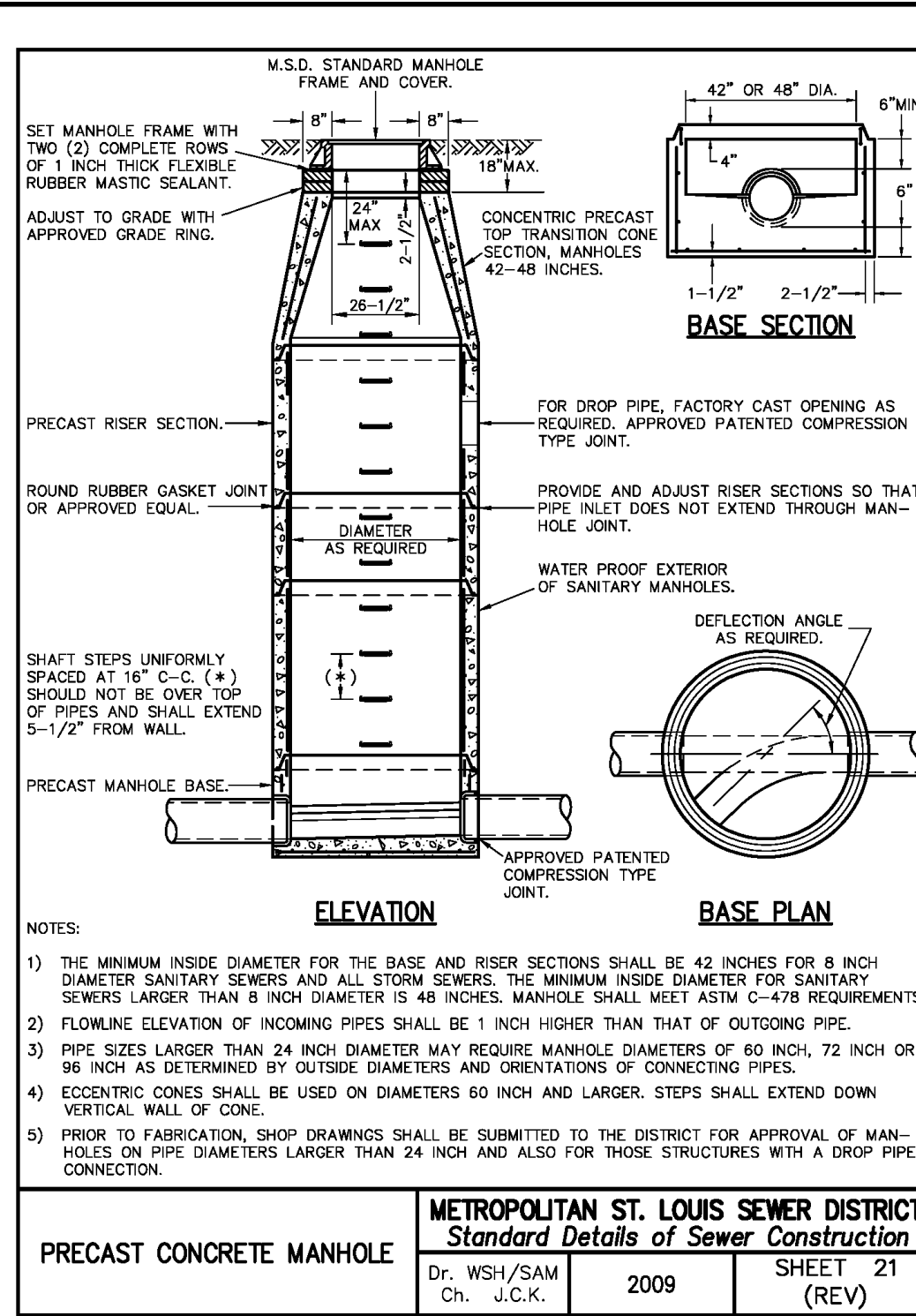
PIPE BEDDING CLASS "C"
(FOR ALL 6" to 18" PIPE EXCEPT
REINFORCED CONCRETE PIPE)

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. W.S.H. Ch. J.C.K.	2009	SHEET	4



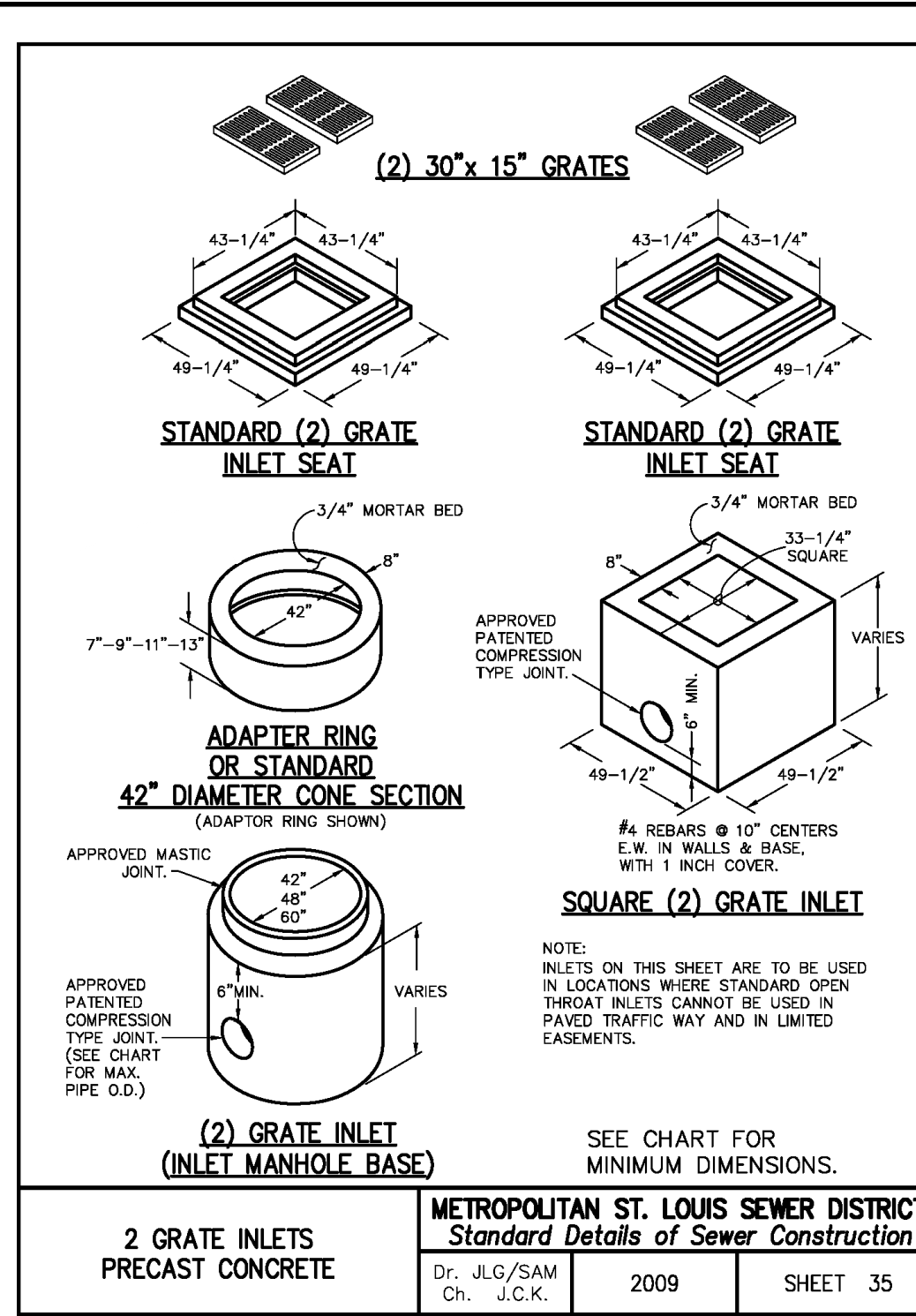
PIPE BEDDING CLASS "C"
(MODIFIED FOR REINFORCED
CONCRETE PIPE)

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. W.S.H. Ch. J.C.K.	2009	SHEET	5



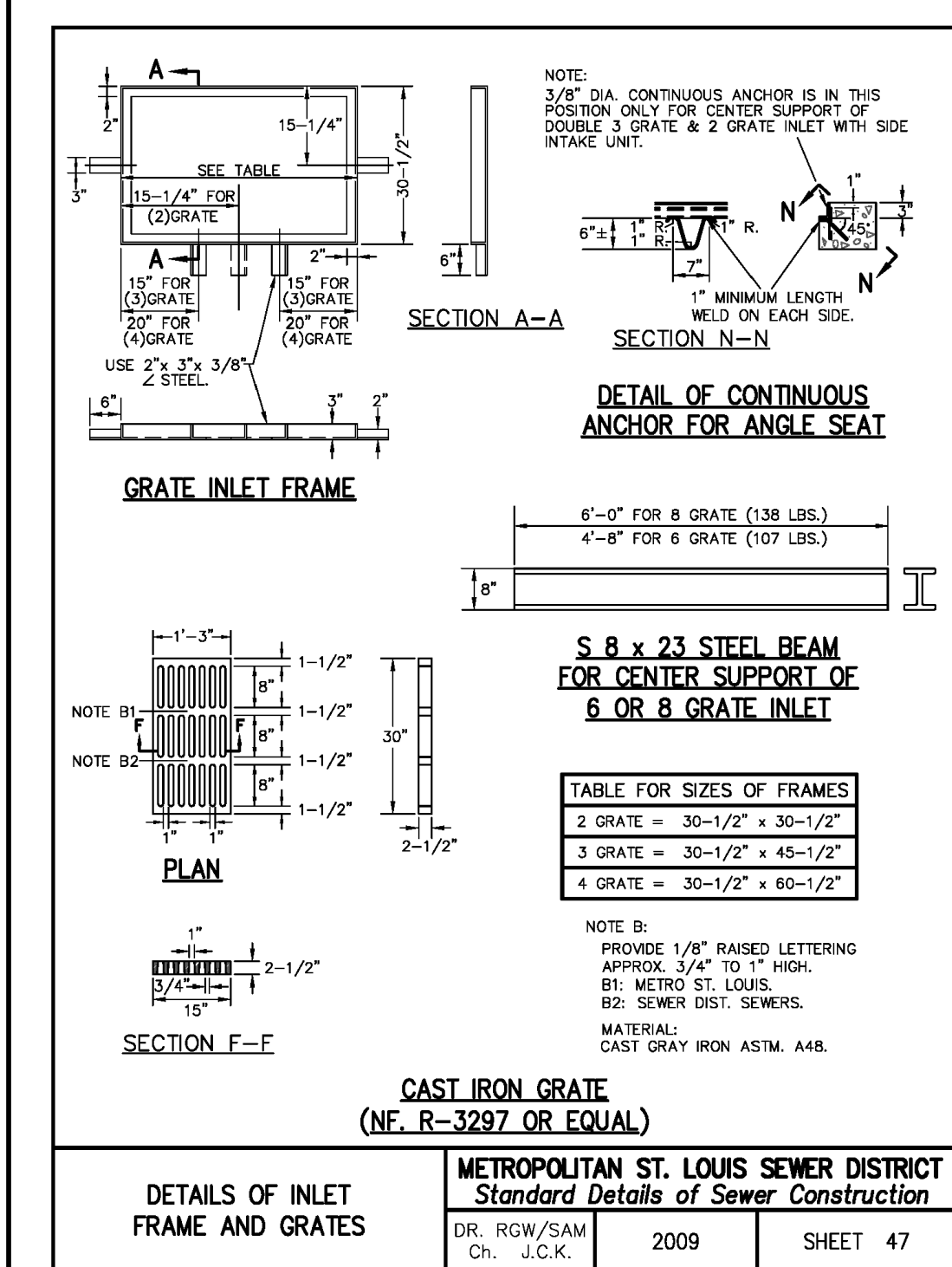
PRECAST CONCRETE MANHOLE

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. W.S.H./SAM Ch. J.C.K.	2009	SHEET	21 (REV)



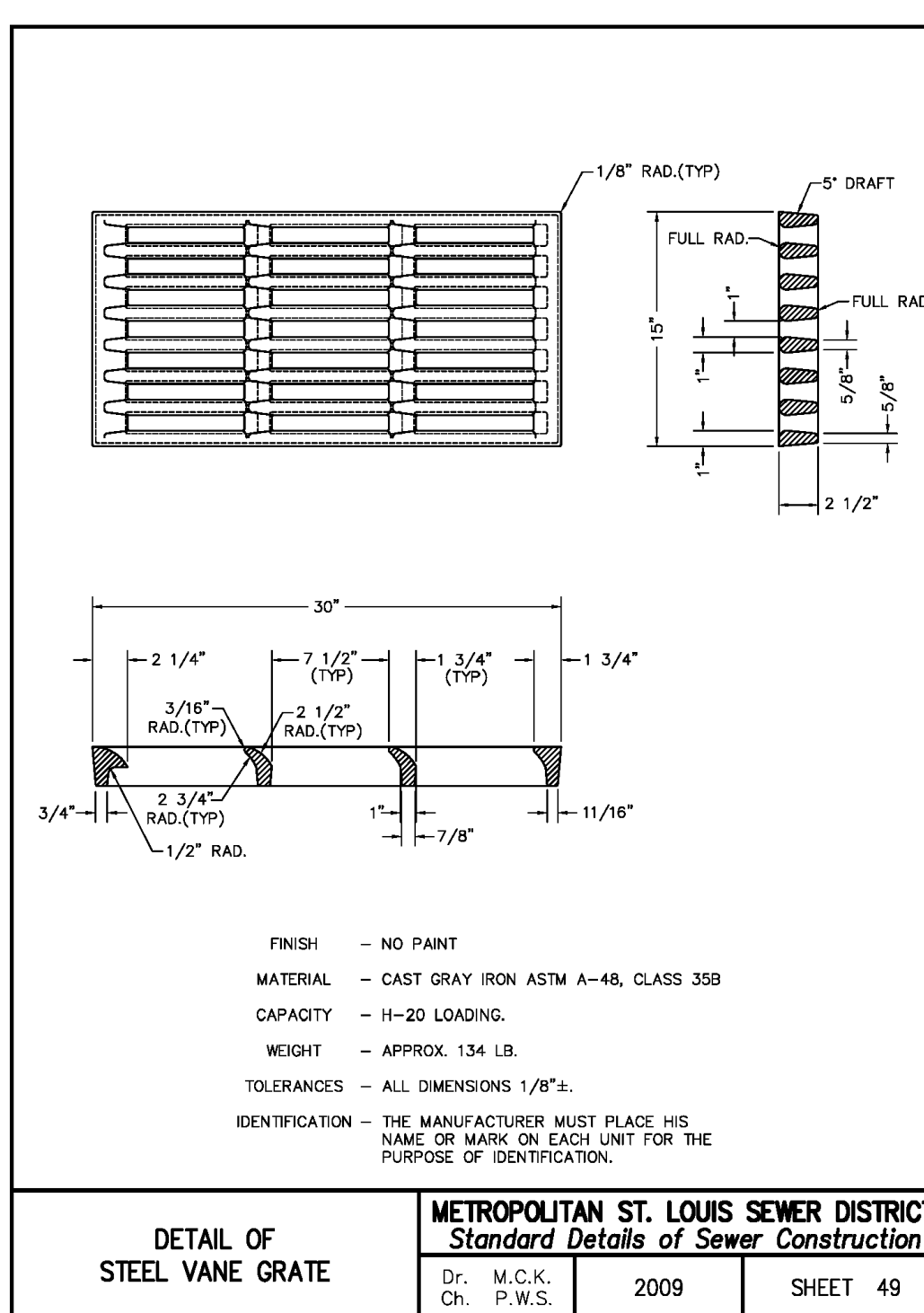
2 GRATE INLETS
PRECAST CONCRETE

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. J.L.G./SAM Ch. J.C.K.	2009	SHEET	35



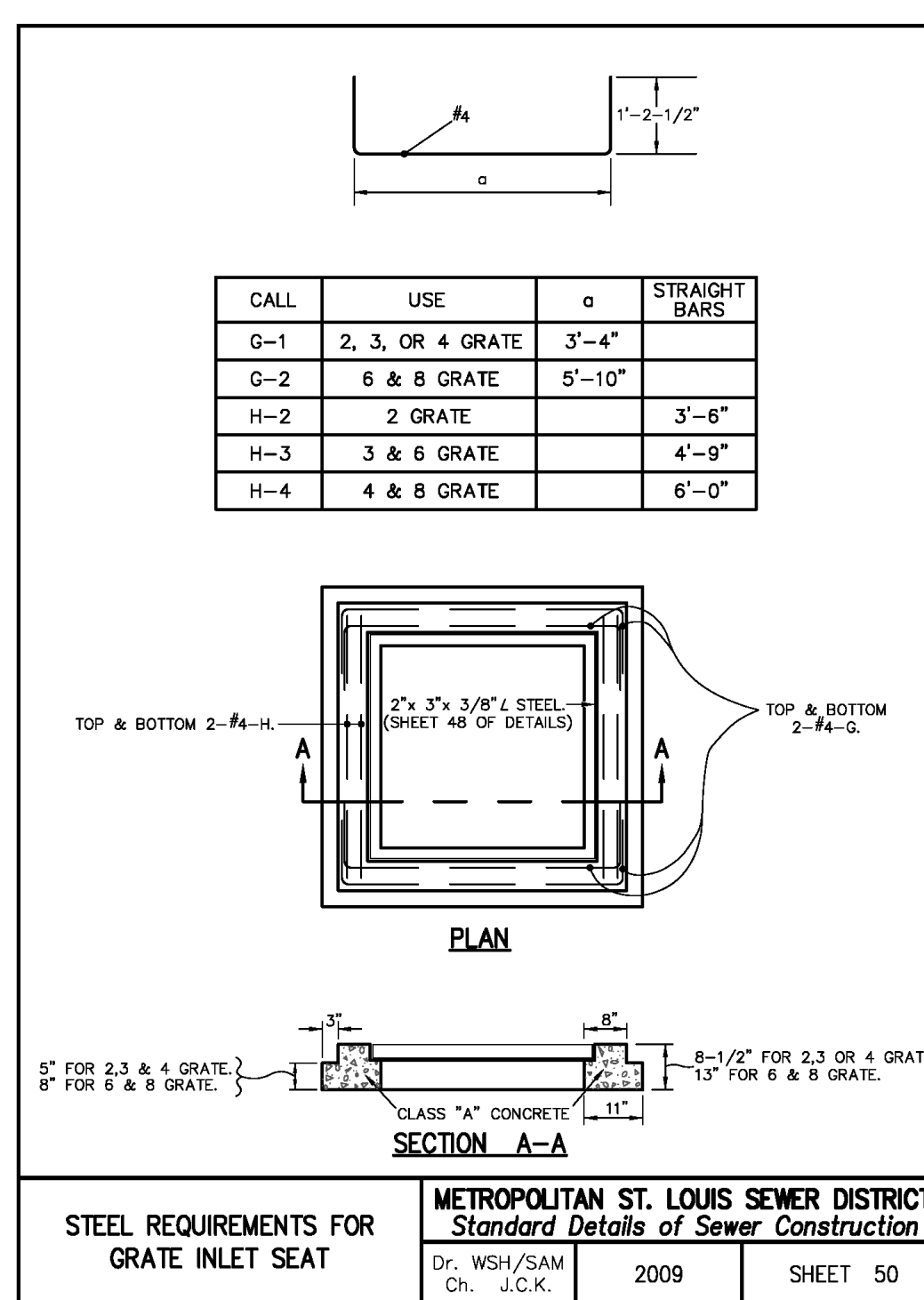
DETAILS OF INLET
FRAME AND GRATES

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	47



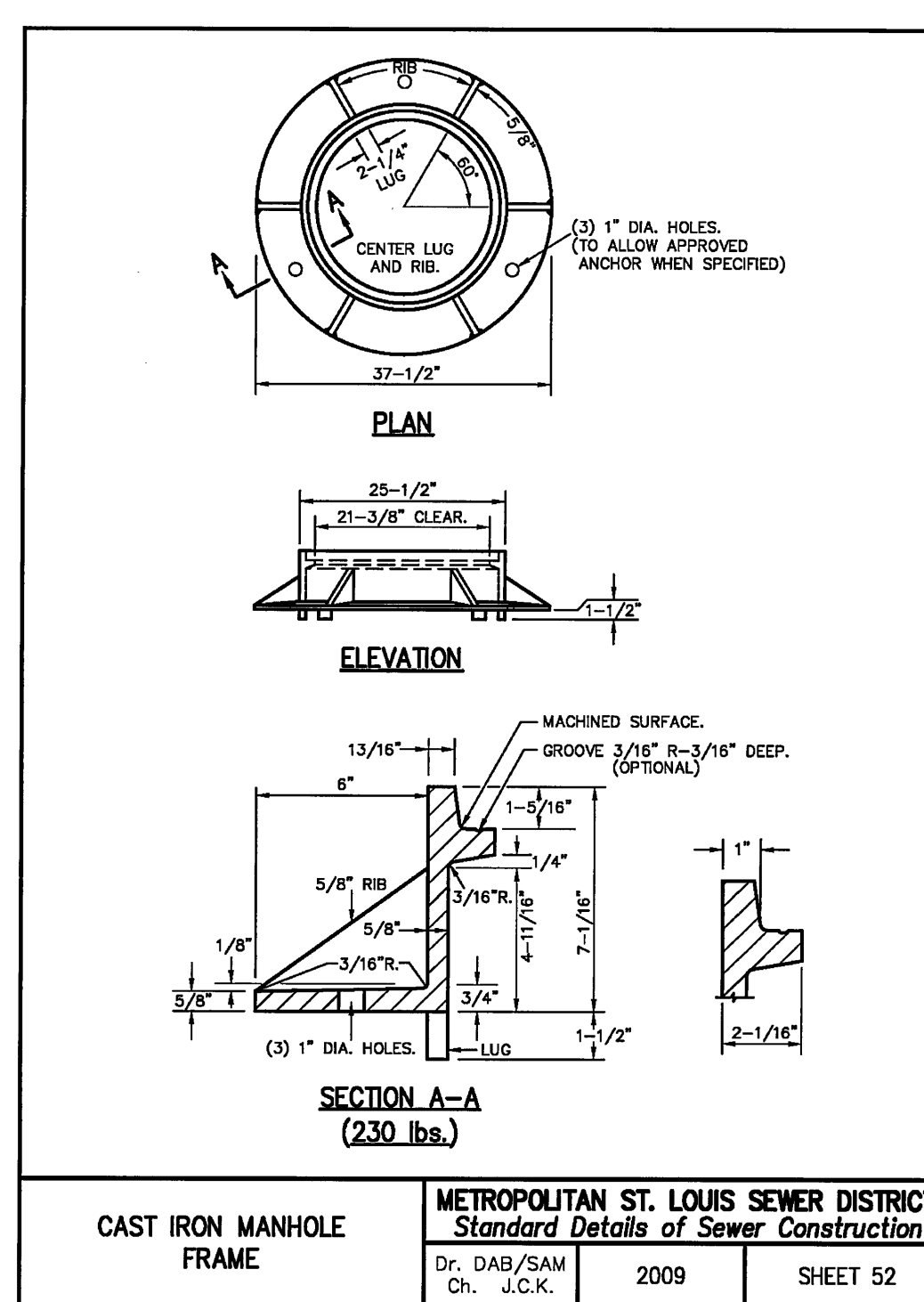
DETAIL OF
STEEL VANE GRATE

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. M.C.K. Ch. F.W.S.	2009	SHEET	49



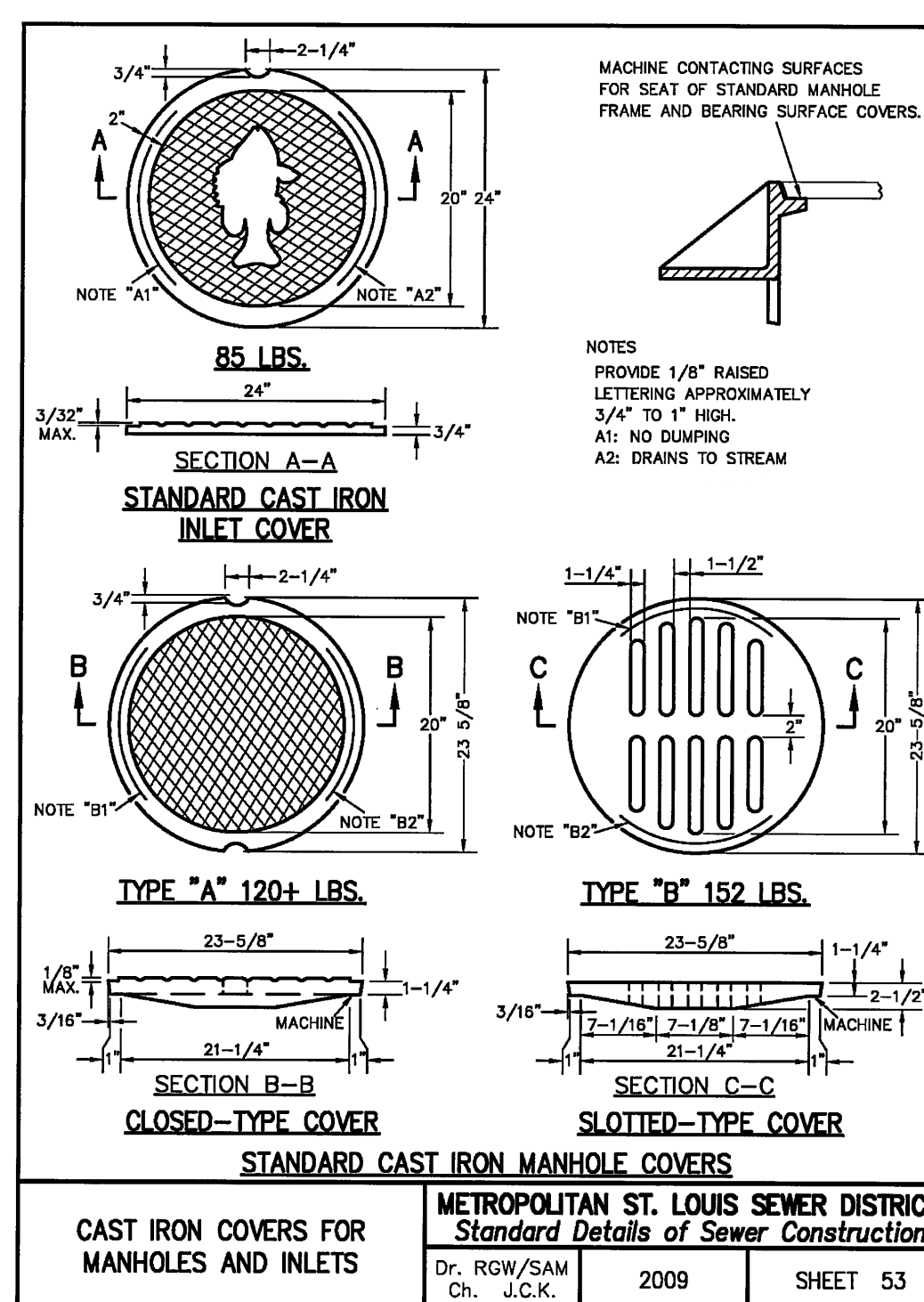
STEEL REQUIREMENTS FOR
GRATE INLET SEAT

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	50



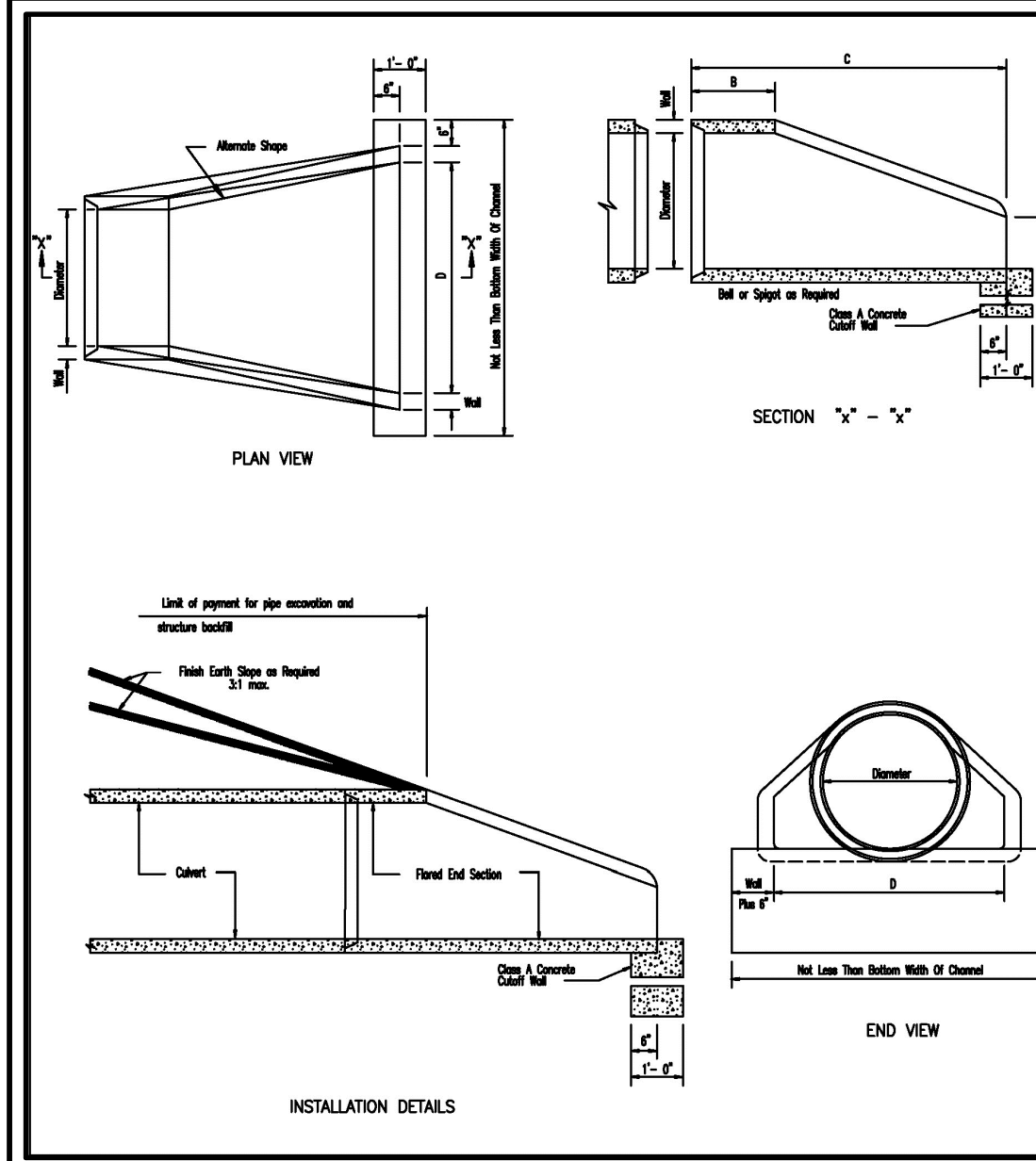
CAST IRON MANHOLE
FRAME

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	52



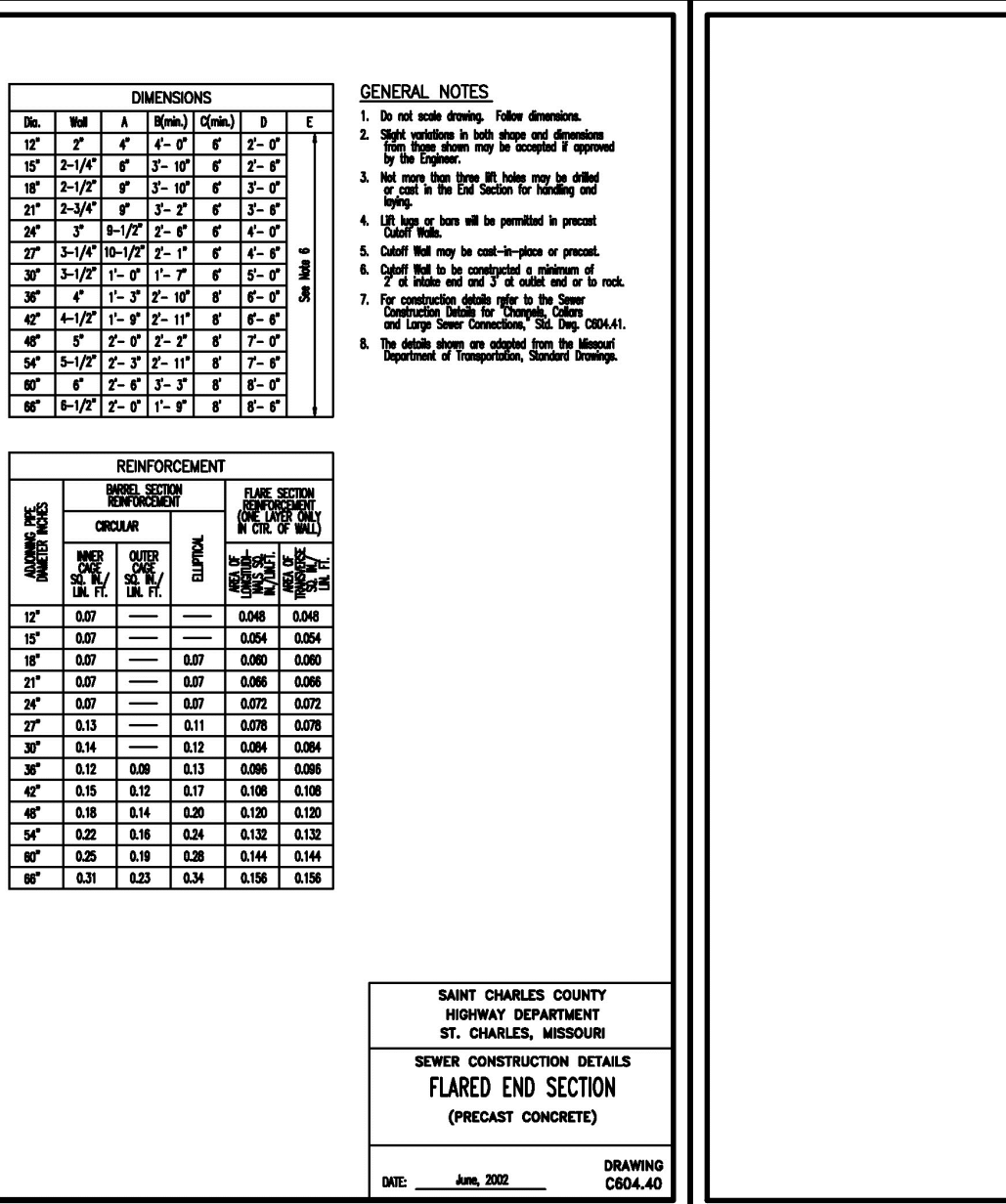
CAST IRON COVERS FOR
MANHOLES AND INLETS

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	53



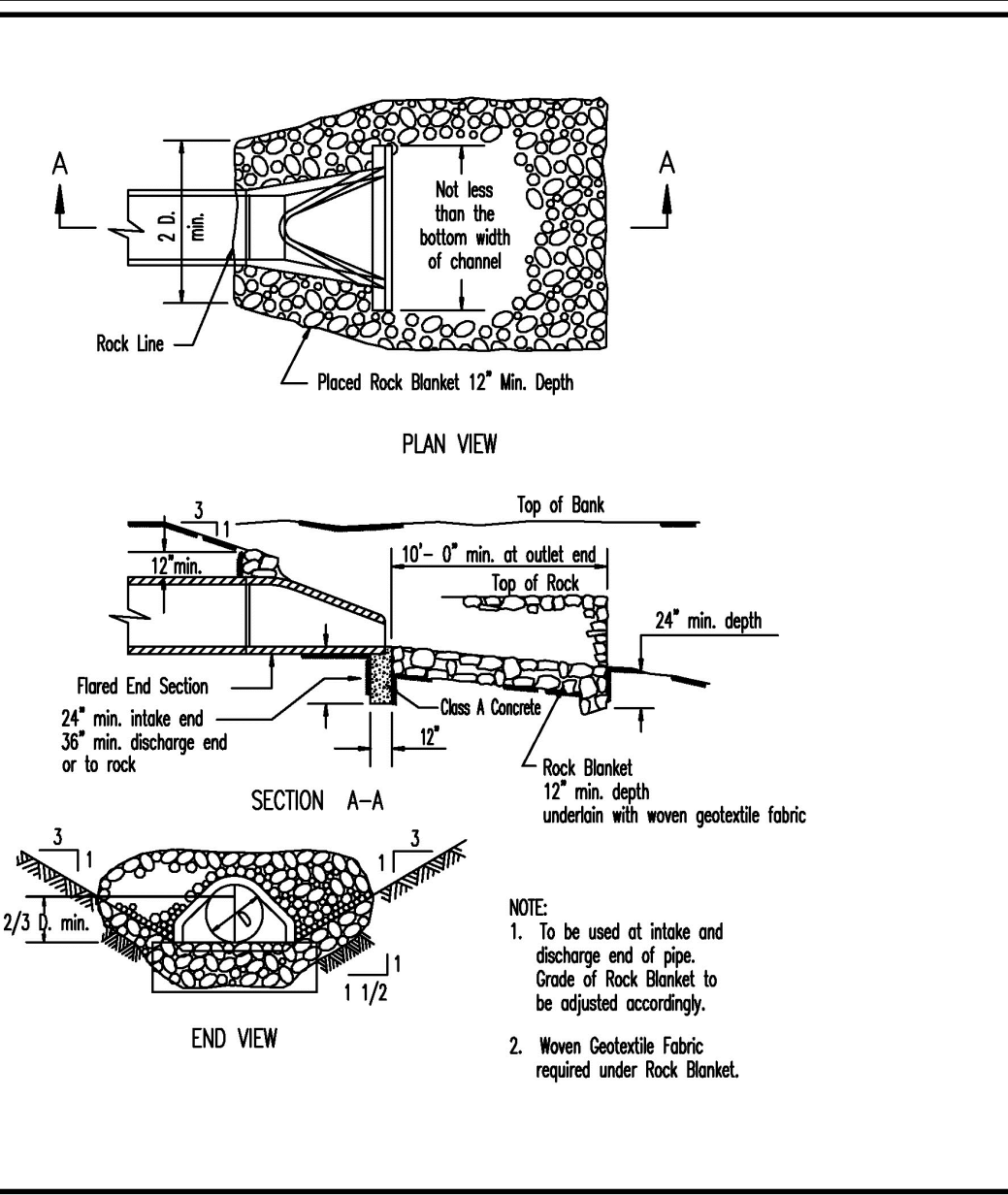
FLARED END SECTION
(INLET/OUTLET PROTECTION)

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	54



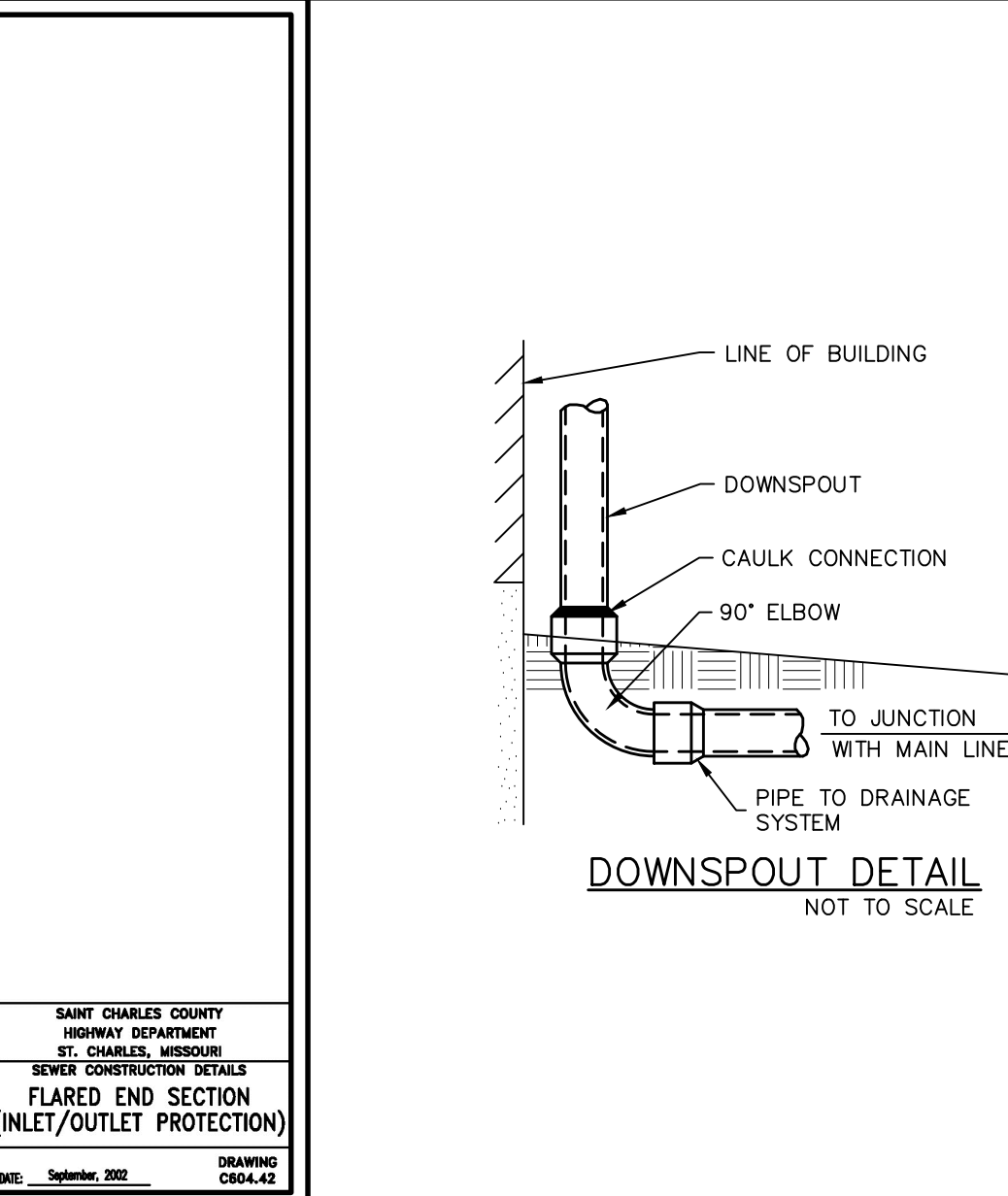
FLARED END SECTION
(INLET/OUTLET PROTECTION)

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	55



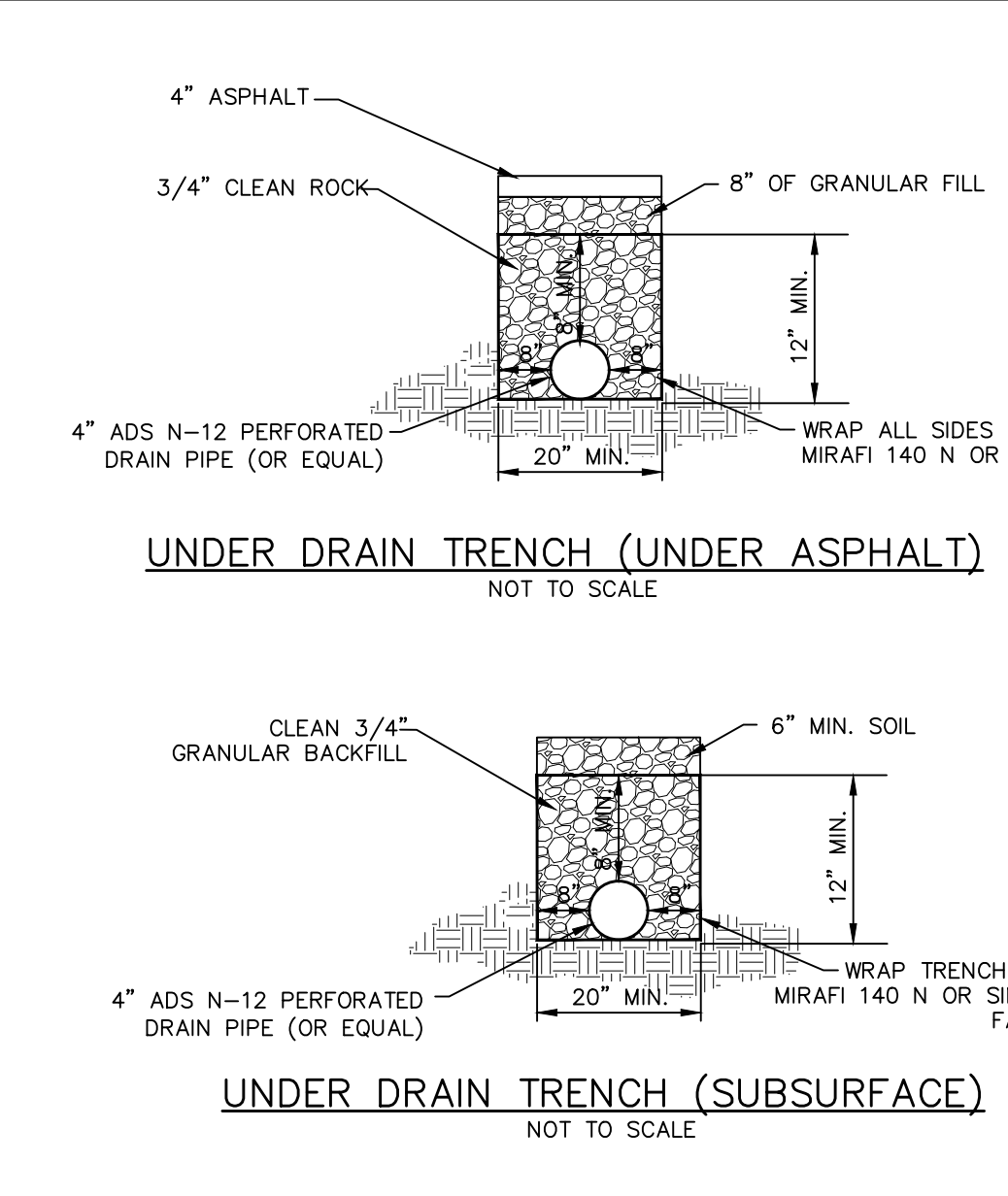
DOWNSPOUT DETAIL
(NOT TO SCALE)

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	56



UNDER DRAIN TRENCH (UNDER ASPHALT)
(NOT TO SCALE)

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	57



UNDER DRAIN TRENCH (SUBSURFACE)
(NOT TO SCALE)

METROPOLITAN ST. LOUIS SEWER DISTRICT Standard Details of Sewer Construction			
Dr. R.G.W./SAM Ch. J.C.K.	2009	SHEET	58

ENGINEER SEAL DOES NOT APPLY TO ST. CHARLES COUNTY AND MSD DETAILS

A SET OF CONSTRUCTION PLANS FOR

MAJESTIC DENTAL

1451 COTTEVILLE PARKWAY

COTTEVILLE, MO 63376

PREPARED FOR:

MAJESTIC DENTAL

1255 PETERS, MO. 63376

ST. PETERS, MO. 63376

816-985-3430

Box Engineering Company, Inc.

Missouri State Certificate of Authority

Engineering #000655

Missouri State Certificate of Authority

Surveying #000144

REVISIONS

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DISCLAIMER OF RESPONSIBILITY

I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey other than that specifically identified by my seal.

STATE OF MISSOURI

LARRY DAVID P. WALKER

NUMBER

PE-20070284

03/02/23

Larry D. Walker

Civil Engineer

Engineers License 200702843

03-02-23

DATE

16-16778B

PROJECT NUMBER

16778B.CON.DWG

FILE NAME

RKC

DRAWN





RKC LDW

DESIGNED CHECKED

CONSTRUCTION DETAILS

C-10



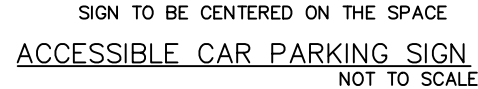
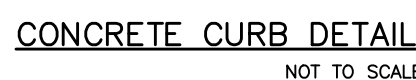
-  3" ASPHALT OVER 8" ROCK
-  4" CONCRETE OVER 4" ROCK
-  8" CONCRETE OVER 4" ROCK
-  2% MAX. CROSS SLOPE

1. ALL ELEVATIONS ARE TOP OF PAVEMENT.
2. ALL DIMENSIONS ARE TO FACE OF CURB.
3. "x" = EXISTING ELEVATION
4. ENTRANCE DRIVE SHALL NOT EXCEED 2% CROSS SLOPE ACROSS CONTINUATION OF SIDEWALK THROUGH DRIVE.

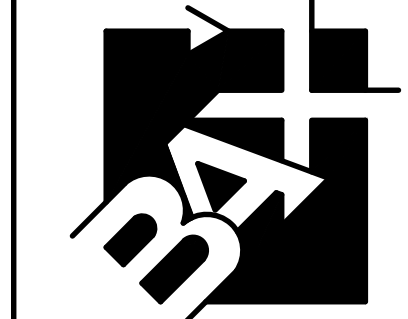


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UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE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



1. ALL ELEVATIONS ARE TOP OF PAVEMENT OR FINISHED GRADE UNLESS OTHERWISE NOTED.
 "TP" = TOP OF PAVEMENT ELEVATION AT FACE OF WALL
 "TW" = TOP OF WALL ELEVATION.
2. TOP OF WALL SHALL BE 6" ABOVE FINISHED GRADE. CONTRACTOR SHALL HOLD TOP OF WALL ELEVATION WHEN INSTALLING RETAINING WALL.
3. RETAINING WALL SHALL BE DESIGNED BY OTHERS. WALL DESIGN SHALL INCLUDE IMPACT OF PROPOSED FENCE LOCATIONS.



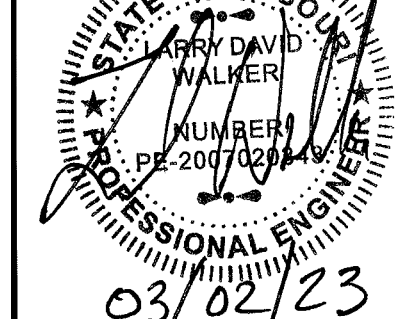
**ENGINEERING
PLANNING
SURVEYING**

221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

Box Engineering Company, Inc.
Missouri State Certificate of Authority
Engineering #000655
Missouri State Certificate of Authority
Surveying #000144

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Civil Engineer
Engineers License 2007020343

03-02-23
DATE
16-16778B
PROJECT NUMBER
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FILE NAME
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DRAWN
RKC LDW
DESIGNED CHECKED

CONSTRUCTION DETAILS

C-11