

A SITE PLAN FOR 125 & 131 JOSEPH STREET CITY OF O'FALLON ST. CHARLES COUNTY, MISSOURI

General Notes

1. Area of Site: 0.51 Acres.
2. Present Zoning Classification: "C-2" General Business District
3. Proposed Land Use: Multi-family Residential - C.U.P. requested.
4. This Site is served by the following utilities:

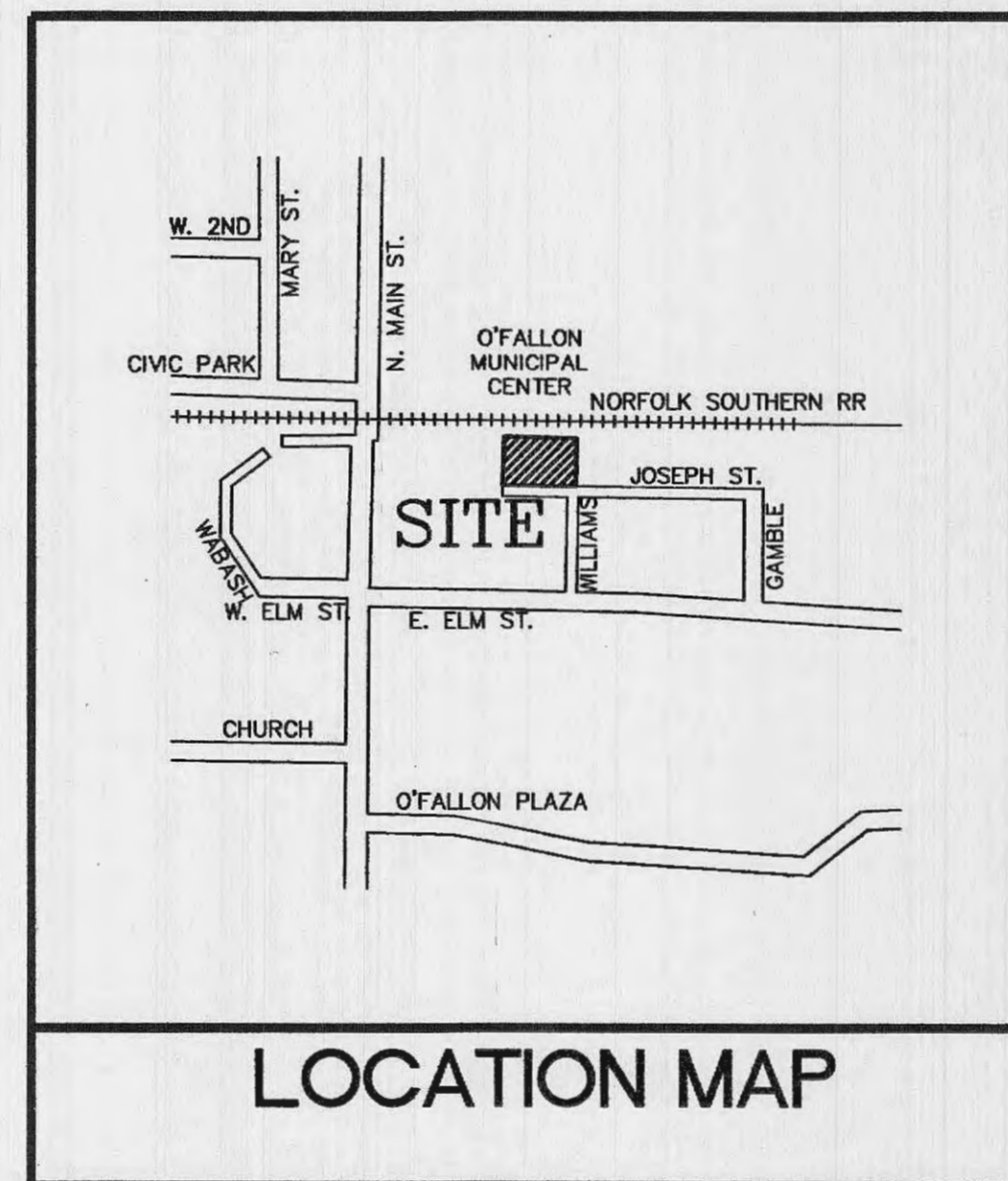
Water:	City of O'Fallon	636-379-7605
Sanitary Sewer:	City of O'Fallon	636-379-7605
Electric:	AmerenUE	800-522-7583
Gas:	Laclede Gas Company	800-887-4173
Telephone:	CenturyLink	800-464-7928
Cable:	Charter Communications	800-211-4450
5. This Site is located in the following service areas:

Fire Protection:	O'Fallon Fire Protection District	636-272-3493
School District:	Fort Zumwalt R-2 School District	636-240-2072
6. The following Height and Area Requirements pertain to this site:

Minimum Building Front Yard Setback:	25 feet
Minimum Building Side Yard Setback:	0 feet
Minimum Building Rear Yard Setback:	0 feet
Maximum Building Height:	50 feet
7. The required number of off-street parking spaces for this site is 20, of which 8 spaces must be covered, calculated at 2.5 parking spaces per unit.
8. The number of off-street parking spaces provided for this site is 20 spaces, of which 8 spaces are covered (garage) and 8 are in the driveways.
9. Project Benchmark: F 149 - A standard disk, stamped "F 149 1935" and set in the top of a concrete post projecting 6 inches above ground, located on the Wabash Railroad, one block east of the station, in the southeast corner of the St. Mary Institute yard, 40 feet east of the center of a street crossing, and 45 feet north of the centerline of the main track, Elev. = 542.80.
10. 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.
11. All construction procedures and materials shall conform to the current City of O'Fallon standards.
12. This site is not located in the 100-year flood plain. FIRM Map 29183C0237 G, revised January 20, 2016.
13. Sidewalks, curb ramps, ramp and accessible parking spaces shall be constructed in accordance with the current approved "American with Disabilities Act Accessibility Guidelines" (ADAAG) along with the required grades, construction materials, specifications and signage.
14. All siltation control devices shall follow St. Charles County Soil and Water Conservation District Erosion and Sediment Control guidelines.
15. All proposed fencing requires a separate permit through the Building Division.
16. All sign locations and sizes must be approved separately through the Planning Division.
17. All proposed utilities to be underground.
18. Water lines to comply with City of O'Fallon standards.
19. All installations and construction shall conform to the approved engineering drawings. However, if the developer chooses to make minor modifications in design and/or specifications during construction, he/she shall make such changes at his/her own risk, without any assurance that the City Engineer will approve the completed installation or construction. It shall be the responsibility of the developer to notify the City Engineer of any changes from the approved drawings. The developer may be required to correct the installed improvements so as to conform to the approved engineering drawings. The developer may request a letter from the Construction Inspection Division regarding any field changes approved by the City Inspectors.
20. Stormwater cleaning will be determined on the Construction Plans and comply to Section 405.245 of the City Code.
21. No graded slopes shall exceed 3:1 maximum.
22. Proposed Site Coverage:

Grass:	0.19 Ac. (37.3%)
Pavement/Building:	0.32 Ac. (62.7%)
23. Lighting to comply to Section 400.298 of the City Code.
24. A full-time representative with appropriate skills, training and experience to operate and/or maintain a multi-family development will be provided per Section 400.298 of the City Code.
25. Current property owners:

125 Joseph Trust & 131 Joseph Trust
1278 Jungermann Road, Suite F
Saint Peters, MO 63376
636-262-4473



BENCHMARKS

SITE BENCHMARK: An old iron pipe at the southwest corner of 125 Joseph Street, Elevation: 541.50.

INDEX

- | | |
|------|--------------------------------|
| 1 | COVER SHEET |
| 2 | O'FALLON REQUIRED NOTES |
| 3 | PROJECT NOTES |
| 4 | SITE PLAN |
| 5 | STORM SEWER PROFILES & DETAILS |
| 6 | DRAINAGE AREA MAP - PROPOSED |
| 7 | DRAINAGE AREA MAP - EXISTING |
| 8 | LANDSCAPE PLAN |
| 9-12 | DETAILS |

PLANNING & ZONING COMMISSION REQUIREMENTS AND CONDITIONS OF APPROVAL:

STAFF RECOMMENDATIONS:

1. Work with City staff on the location for the extension of the water to Elm Street.
2. If the residential units are planned to be sold in the future, a Preliminary Plat will be required.
3. Provide floor plans for the development.
4. The provided parking calculations reflect eight (8) units with two (2) bedrooms. If there is a change to the proposed number of bedrooms, a new site plan will be required.
5. Provide the approval letter from USPS for the method of mail delivery.
6. Work with City staff on the provision of a full-time representative for the maintenance of the development.
7. Provide recreation facilities or other amenities for the development.
8. The applicant shall comply with the municipal code requirements.

MUNICIPAL CODE REQUIREMENTS:

1. A photometric lighting plan shall be provided to show that adequate lighting has been provided to promote safety and security of residents.
2. Typical sections for pavement, road widening, sidewalks and the parking lot shall be provided.
3. There is currently not an existing manhole where one is shown on the plans. Provide manhole at end of the existing sanitary line.
4. Provide Fire District approval.

CITY COUNCIL CONTINGENCIES OF APPROVAL:

1. A maximum of eight (8) units can be constructed on the site.
2. With the approval of the property owner, construct a driveway/parking pad for the property at 12 Williams Street to provide off-street parking with three (3) spaces for that residence.
3. Make improvements to the turning radius from Joseph Street to Williams Street at the southeast corner, within the existing right-of-way/easement.
4. After project construction, including the installation of the new water line, the streets in the area shall be restored to no worse condition than they are today.
5. "No parking" signs shall be installed on both sides of Williams Street upon completion of these improvements.

UTILITY CONTACTS

SANITARY SEWER
City of O'Fallon
100 N. Main Street
O'Fallon, MO. 63366
636-281-2858

WATER
City of O'Fallon
100 N. Main Street
O'Fallon, MO. 63366
636-281-2858

STORM SEWER
City of O'Fallon
100 N. Main Street
O'Fallon, MO. 63366
636-281-2858

ELECTRIC
Ameren UE
200 Callahan Road
Wentzville, MO. 63385
636-357-2978

GAS
Laclede Gas Company
6400 Graham Road
St. Louis, MO. 63134
314-522-2297

TELEPHONE
Century Link
1151 Century Link Drive
Wentzville, MO. 63385
636-332-7261

FIRE DEPARTMENT
O'Fallon Fire Protection District
119 East Elm Street
O'Fallon, MO. 63366
636-272-3493

* City of O'Fallon construction work hours per City Ordinance # 3249 as shown in Section 500.420 of the Municipal Code of the City of O'Fallon are as follows:
October 1 through May 31: 7:00 A.M. to 7:00 P.M. Monday through Sunday
June 1 through September 30: 6:00 A.M. to 8:00 P.M. Monday through Friday, and 7:00 A.M. to 8:00 P.M. Saturday and Sunday

* The area of land disturbed is 0.87 acres

CITY OF O'FALLON
PUBLIC WORKS DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: *Dennis Givens* DATE: 01/22/18
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

PROJECT TITLE:
**125 & 131 JOSEPH ST.
SITE PLAN**

11/07/17	2	CITY COMMENTS	REVISION:	
10/12/17	1	CITY COMMENTS		
DATE:		NO.:		
MUSLER ENGINEERING COMPANY				
CIVIL ENGINEERING - PLANNING - LAND SURVEYING				
32 Fortwest Court, St. Charles, Missouri 63303				
Telephone: (636) 916-0444				
Fax: (636) 916-3444				
STATE OF MISSOURI	REGISTERED PROFESSIONAL ENGINEER	NO.:	PROJECT NO.:	SHEET NO.:
AUG. 2017	14-1589	AUG. 2017	14-1589	1 OF 14

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and 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.



JEFFREY R. SMITH, P.E.
MO. P.E. # E-2001004672

PREPARED FOR:
125 JOSEPH TRUST & 131 JOSEPH TRUST
MR. PAUL JAMES
1278 JUNGERMANN ROAD, SUITE F
ST. PETERS, MISSOURI 63376
TELEPHONE: 636-262-4473
FAX:
E-mail: paul@stcharlesrent.com

P & Z No.
12-16.01 & 12-16.02
City No.
12-16.01 & 12-16.02

Page No. **1**



Underground facilities, structures and utilities have been plotted from available surveys, records and information, and therefore, do not necessarily reflect the actual existence, nor existence, size, type, number of, or location of these facilities, structures, and utilities. The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, and utilities, either shown or not shown on these plans. The underground facilities, structures, and utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMo.

GENERAL NOTES

- GN # 1 Driveway locations shall not interfere with the sidewalk handicap ramps, or curb inlet sumps
GN # 2 Sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved "American with Disabilities Act Accessibility Guidelines" (ADAAG) along with the required grades, construction materials, specifications and signage.
GN # 3 Truncated domes for curb ramps located in public right of way shall meet ADA requirements and shall be constructed using red pre cast truncated domes such as those manufactured by Armor Tile or approved equal.

EROSION CONTROL NOTES

- EN # 1 The Permittee shall assume complete responsibility for controlling all siltation and erosion of the project area. The Permittee shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fabric fences.
EN # 2 All erosion control systems are to be inspected and corrected weekly, especially within 48 hours of any rain storm resulting in one-half inch of rain or more.
EN # 3 Erosion control devices (silt fence, sediment basin, etc.) shall be in accordance with St. Charles County Soil and Water Conservation District Erosion and Sediment Control Guidelines.

GRADING NOTES

- GRN # 1 Developer must supply City construction inspectors with soil reports prior to and during site soil testing. The soil report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City:
1. Maximum dry density
2. Optimum moisture content
3. Maximum and minimum allowable moisture content
4. Curve must be plotted to show density from a minimum of 90% Compaction and above as determined by the "Modified AASHTO T-180 Compaction Test" (A.S.T.M.-D-1557) or from a minimum of 95% as determined by Modified AASHTO T-99, Method C (A.S.T.M.-D-698).
5. Curve must have at least 5 density points with moisture content and sample locations listed on document
6. Specific gravity
7. Natural moisture content
8. Liquid limit
9. Plastic limit
Be advised that if this information is not provided to the City's Construction Inspector the City will not allow grading or construction activities to proceed on any project site.

- GRN # 11 Site grading.
a. Within City right-of-way. Material is to be placed in eight (8) inch to twelve (12) inch loose lifts and compacted per the approved compaction requirements. One (1) compaction test will be performed every two hundred fifty (250) feet along the centerline for each lift.
b. Outside of City right-of-way. Material is to be placed in eight (8) inch to twelve (12) inch loose lifts and compacted per the approved compaction requirements. One (1) compaction test will be performed at two (2) foot vertical intervals and approximately every one thousand (1,000) cubic yards.

SANITARY SEWER NOTES

- SAN # 1 All sanitary sewer installation is to be in accordance with MSD 2000 standards and specifications except as modified by the City of O'Fallon Ordinances.
SAN # 2 Brick shall not be used in the construction of sanitary sewer structures. Pre cast concrete structures are to be used unless otherwise approved by the City of O'Fallon.
STM # 3 A 5/8" trash bar shall be installed horizontally in the center of the opening(s) in all curb inlets and area inlets.

STORM SEWER NOTES

- STM # 1 All Storm Sewer Installation is to be in accordance with M.S.D. 2007 standards and specifications except as modified by the City of O'Fallon Ordinances.
STM # 2 Brick shall not be used in the construction of storm sewer structures. Pre cast concrete structures are to be used unless otherwise approved by the City of O'Fallon.
STM # 3 A 5/8" trash bar shall be installed horizontally in the center of the opening(s) in all curb inlets and area inlets.

WATER NOTES

- WN # 1 Fire hydrants shall be a maximum of 500' apart. Local fire district approval is required this is all test.
WN # 2 Coordinate with the water company on the location of water meters.
WN # 3 All water main must have a minimum of 42" of cover. (City water mains)
WN # 4 Provide water valves to isolate the system.
WN # 5 All water mains shall be class 200 SDR 21 or equal with locator/tracer wires.

DISINFECTING

- Disinfecting shall be accomplished by placing sufficient hypo chlorite granule (HTH) in each section of pipe to achieve a chlorine residual in the pipeline, upon initial filling, of 50 mg/L (PPM). HT tablets will not be allowed. Following completion of the pipeline, it shall be slowly filled with water and a sample will be taken immediately and the chlorine residual must be 50 mg/L or greater. The solution shall be allowed to stand for 24 hours and a sample shall then be taken. The chlorine residual after 24 hours shall be 30 mg/L or greater. If the piping shows insufficient chlorine residuals in either test, the piping shall be re-chlorinated by the injection of hypo chlorite solution until satisfactory results are achieved. All disinfecting shall be done by the contractor. Only the testing to determine the chlorine residual will be done by the City.

WATER JETTING NOTES

- WJ # 1 Outside (beyond) the pavement limits, excavations shall be jetted with water and allowed to set for a length of time satisfactory to the City Engineer.
WJ # 2 Jetting. Granular materials and earth materials associated with new construction beyond the pavement may be jetted, taking care to avoid damage to newly laid sewers. The jetting shall be performed with a probe route on not greater than seven and one-half (7.5) foot centers with the jetting probe centered over and parallel with the direction of the pipes. Trench widths greater than ten (10) feet will require multiple probes every seven and one-half (7.5) foot centers.
WJ # 3 Depth. Trench backfill less than eight (8) feet in depth shall be probed to a depth extending to half the depth of the trench backfill, but not less than three (3) feet. Trench backfill greater than eight (8) feet in depth shall be probed to half the depth of the trench backfill but not greater than eight (8) feet.
WJ # 4 Equipment. The jetting probe shall be a metal pipe with an exterior diameter of one and one-half (1.5) to two (2) inches.

ROADWAY NOTES

- RN # 1 All paving to be in accordance with 2006 St. Charles County standards and specifications except as modified by the City of O'Fallon ordinances.
RN # 2 If the intersecting road does not have a curb, then the curb on the new entrance shall begin 10' from the edge of the existing road.
RN # 3 Provide 6" of concrete over 4" of MoDot type 1 or type 5 aggregate rock or asphalt equivalent for minor residential streets per City Code 405.370.
RN # 4 Multi-use trail (when required) Shall have a minimum of 3" Type "C" Asphalt over 4" aggregate base per City requirements.

RETAINING WALLS: TERRACED AND VERTICAL

- RW # 1 A permit is required for all retaining walls that are 48 inches tall in height, measured from the top of the footing to the top of the wall or for walls that support a surcharge load or that alters the channelized drainage of any lot or drainage area.
RW # 2 Retaining walls will not be allowed in public right-of-way without written approval from the City Engineer.
RW # 3 Any retaining wall more than thirty (30) inches tall which supports a walking surface that is within two (2) feet of the wall will require a guard on the retaining wall.
RW # 4 Retaining walls that alter the channelized drainage of any lot or drainage area shall not be constructed without prior approval and permitting from the City of O'Fallon Engineering Department regardless of the height of the wall.
RW # 5 See section 405.275 of the City code for additional design requirements.

FLOOD PLAIN INFORMATION

- FP # 1 Approval from the US Army Corps of Engineers and Missouri Department of Natural Resources is required for all work in the flood plain.

PROJECT TITLE: 125 & 131 JOSEPH ST. O'FALLON REQUIRED NOTES

MUSLER ENGINEERING COMPANY CIVIL ENGINEERING - PLANNING - LAND SURVEYING 32 Portwest Court, St. Charles, Missouri 63303 Telephone: (636) 916-0444 Fax: (636) 916-3444

DISCLAIMER OF RESPONSIBILITY I hereby certify that the documents intended to be authorized by my seal are limited to this sheet, and 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.



JEFFREY R. SMITH, P.E. MO. P.E. # E-2001004672

PREPARED FOR: 125 JOSEPH TRUST & 131 JOSEPH TRUST MR. PAUL JAMES 1278 JUNGERMANN ROAD, SUITE F ST. PETERS, MISSOURI 63376 TELEPHONE: 636-262-4473 FAX: paul@stcharlesrent.com

P & Z No. 12-16.01 & 12-16.02 City No. 12-16.01 & 12-16.02

GENERAL NOTES PERTINENT TO ALL CONSTRUCTION OPERATIONS

- 1. Underground utilities shown on these plans have been plotted from available records and information, and their locations shall be considered approximate only. The verification of the actual location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor(s) and the verification of the actual location shall be performed prior to beginning work.

GRADING NOTES

- I. GENERAL
1. No area shall be cleared without authorization from the project engineer.
2. All grading work performed shall be within a 0.2 foot tolerance of the grades shown on the grading plan.
3. A Geotechnical Engineer shall be employed by the owner and be on site during grading operations.
4. 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.
5. Before the grading begins, the owner shall employ a competent, licensed surveyor to establish all lines and grades.
6. The contractor shall notify the Geotechnical Engineer at least two days in advance of the start of the grading operation.
7. The developer shall supply City construction inspectors with soil reports prior to or during site soil testing.
8. No slope shall be steeper than 3 (horizontal) to 1 (vertical).
9. No graded area is to remain bare for over 2 weeks.
10. All erosion control systems shall be inspected and necessary corrections made within 24 hours of a rainstorm resulting in one-half inch of rain or more.

II. SPECIFICATIONS

- 1. Site preparation includes the clearing 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 burned (after securing permits) and/or properly disposed of on site. Topsoil and grass in the fill areas shall be thoroughly disced prior to the placement of any fill. The Geotechnical Engineer shall approve the discing operation.
2. Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory rollers, or high speed impact type drum rollers acceptable to the Geotechnical Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
3. Observation and Testing: The Geotechnical Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of lift density tests will be determined of each lift of fill. Interim reports showing fill quality will be made to the owner at regular intervals.
4. The Geotechnical 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 Geotechnical Engineer of its acceptance prior to the placement of additional fill.
5. Placing and Compaction of Fill: All areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted to at least 85 percent of the maximum dry density as determined from the Modified Proctor Test (ASTM-D-1557). Natural slopes steeper than 1 vertical to 5 horizontal to receive fill will have horizontal benches, with minimum widths of 12 feet and maximum height of 5 feet, cut into the before the placement of any fill. 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 Geotechnical Engineer shall be responsible for determining the acceptability of the soils placed. Any unacceptable soils placed shall be removed at the contractor's expense.
6. The sequence of operation in the fill areas will be fill, compact, verify acceptable soil density, and repetition of the sequence.
7. The surface of the fill shall be finished so that it will not impound water. If at the end of a day's 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 should 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.
8. All fills shall be compacted to 90% of maximum density as determined by the Modified AASHTO T-1800 Compaction Test (ASTM D-1557).
9. Fills in rear yard areas only shall be compacted, but the compaction criteria may be reduced to 85% of maximum density as determined by the Modified AASHTO T-1800 Compaction Test (ASTM D-1557).

- 10. All fill placed under proposed storm and sanitary sewer, proposed roads, and/or paved areas shall be compacted to 95% of maximum density as determined by the Modified AASHTO T-180 Compaction Test or 100% of 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. 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 compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to placement of fill. Proof rolling may be required to verify soil stability at the discretion of the City of O'Fallon. All other trench backfills shall be water jetted.

SANITARY SEWER CONSTRUCTION

- I. GENERAL
1. No area shall be cleared without authorization from the project engineer.
2. The sanitary sewer contractor shall perform a complete installation 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 project engineer.
3. Before sewer construction begins, the owner shall employ a competent, licensed surveyor to establish the lines and grades of the sanitary sewer being constructed. The contractor shall pick up the cut sheets at the office of the surveyor.
4. The contractor shall notify the City of O'Fallon at least two days in advance of the start of construction. Contact City of O'Fallon, at telephone (636) 272-6244.

II. SPECIFICATIONS

- 1. All materials used shall meet the following specifications:
Plastic Pipe: Polyvinyl Chloride pipe conforming to the requirements of ASTM D-3034 Standard Specifications for the PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR 35.
Fittings: Fittings for PVC Pipe shall be of the same material and strength requirements as the sewer, as well as monolithic in construction.
Manholes: Precast reinforced concrete manholes, conforming to the standard specifications for precast reinforced concrete manhole sections, ASTM-C478, the approved Standard Details of Sewer Construction of the City of O'Fallon. The Portland cement used shall be Type II. Manhole cones shall be concentric and base sections shall have the base riser section integral with the floor. Manhole steps shall be cast into the full depth of the wall section. Connections for inlet and outlet pipes shall be of an approved patented compression type connection. The inside diameter for riser sections shall be 42 inches for pipe sizes 8 inch through 15 inch and be 48 inches for pipe sizes larger and for inside drop manholes.
Manhole Frames and Covers: Gray Iron Castings conforming to the requirements of the specifications for Gray Iron Castings, ASTM A48. All castings shall be clean and free of scale, adhesions or inclusions. They shall be fabricated of Class 30B cast iron. Bearing surfaces between manhole frames and covers shall be such that the cover shall seat in any position onto the frame without rocking.
Joints: Gasketed water tight O-ring type joints shall be used.
Bedding Aggregate: Bedding Aggregate shall conform to the following, and have a maximum percentage of "Fines" as follows:
Sieve % by Weight Passing
Maximum Minimum
1 inch 100 100
3/4 inch 100 90
1/2 inch 60 35
100 10 0

- Backfill Aggregate: Backfill Aggregate shall be crushed limestone and screenings and be 3/4 inch minus.
2. Pipe and appurtenances shall be new and unused. The type of pipe to be installed shall be shown on the drawings. Pipe and appurtenances shall be handled in such a manner as to insure delivery to the trench in sound, undamaged condition. Particular care shall be taken to prevent damage to any pipe coating.
3. The interior of the pipe shall be thoroughly cleaned of foreign material before being lowered into the trench and shall be kept clean during construction operations. When work is not in progress, the open ends of pipe shall be securely closed so that no foreign materials will enter the pipe. Any section of pipe found to be defective before or after laying shall be replaced with sound pipe, or repaired in a satisfactory manner.
4. Pipe shall be laid to line and grade as shown on the plans and as staked in the field. When connections are to be made to any existing manhole, pipe, or other improvement the actual elevation or position of which cannot be determined without excavation, the contractor shall excavate for and expose the existing patented compression type connection. The inside diameter for riser sections shall be 42 inches for pipe sizes 8 inch through 15 inch and be 48 inches for pipe sizes larger and for inside drop manholes.
5. Pipe shall be laid upgrade in a continuous operations from structure to structure, with the socket or collar ends of the pipe upgrade.
6. All PVC Sanitary Sewer Pipe shall be bedded with Bedding Aggregate. The bedding aggregate shall extend from 4 inches below the pipe to 12" above the pipe. All PVC Sanitary Sewer Pipe shall be backfilled with Aggregate Backfill; for non-paved areas the Aggregate Backfill shall extend from spring line of pipe to 6 inches over the pipe; for paved areas the Aggregate Backfill shall extend from spring line of pipe to the ground surface. Refer to detail "PIPE BEDDING CLASS 'C'" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE).

- 7. All trench backfills under paved areas shall be compacted to 90% of the maximum density as determined by the Modified AASHTO T-180 Compaction Test, or to 95% of 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. 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 compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill. Proof rolling may be required to verify soil stability at the discretion of the City of O'Fallon. All other trench backfills shall be water jetted.

STORM SEWER CONSTRUCTION

- I. GENERAL
1. No area shall be cleared without authorization from the project engineer.
2. The storm sewer contractor shall perform a complete installation as shown on the plans, and notes as interpreted by the project engineer, stated in these notes, or reasonably implied.
3. Before sewer construction begins, the owner shall employ a competent, licensed surveyor to establish the lines and grades of the storm sewers being constructed. The contractor shall pick up the cut sheets at the office of the surveyor.
4. The contractor shall notify the City of O'Fallon at least two days in advance of the start of construction. Contact the City of O'Fallon, at telephone (636) 379-5599.

II. SPECIFICATIONS

- 1. All materials used shall meet the following specifications:
Concrete Pipe: Concrete pipe shall be precast and shall conform to the requirements of the Specifications for Concrete Sewer Pipe, ASTM C14. The interior surface of the pipe shall be a true cylindrical surface free from undulations or corrugations. Cement shall meet all requirements of the Specifications for Portland Cement, ASTM C150, Type II.
Reinforced Concrete Pipe: Reinforced Concrete Pipe shall be precast and shall conform to the requirements of the Specifications for Reinforced Concrete Culvert, Storm Drain and Sewer Pipe, ASTM C76, with shell thickness designated "Wall B" and with Circular Reinforcement in Circular Pipe or to the requirements of Reinforced Concrete Elliptical Culvert Storm Drain and Sewer Pipe, ASTM C507.
Strength class or classes shall be as noted on the Project Plans. The interior surfaces of the pipe shall be a smooth true cylindrical surface free from undulations or corrugations. Lifting holes when provided, shall be cast in the wall of the pipe to receive a pre-cast truncated conical concrete plug of such sizes as will allow 1/8 inch cementing material on the sides of the joining surfaces of the plug and will fill at least 50% of the lifting hole depth. Cement shall meet all the requirements of the Specifications for Portland Cement, ASTM C150, Type II. Cut pipe for curved alignments shall be of uniform cut and length along the same curve, and otherwise meet the same requirements as for straight pipe.
Storm Manholes: Storm Manholes shall be precast reinforced concrete manholes conforming to the standard specifications for precast reinforced concrete manhole sections, ASTM-C478. The Portland cement used shall be Type II. Manhole cones shall be concentric and base sections shall have the base riser section integral with the floor. Manhole steps shall be cast into the full depth of the wall section. Connections for inlet and outlet pipes shall be of an approved patented compression type connection. The inside diameter for riser sections shall be 42 inches for pipe sizes 8 inch through 15 inch and be 48 inches for pipe sizes larger and for inside drop manholes.
Curb Inlets and Area Inlets: Curb inlets and Area Inlets and the precast top units for some shall conform to the Standard Construction Specifications for Sewers and Drainage Facilities of the Metropolitan St. Louis Sewer District, 1986.
Manhole Frames and Covers: Gray Iron Castings shall conform to the requirements of the specifications for Gray Iron Castings, ASTM A48. All castings shall be clean and free of scale, adhesions or inclusions. They shall be fabricated of Class 30B cast iron. Bearing surfaces between manhole frames and covers shall be such that the cover shall seat in any position onto the frame without rocking.
Joints: Gasketed water tight O-ring type joints shall be used.

Bedding Aggregate: Bedding Aggregate shall conform to the following:

Table with 3 columns: Sieve, Maximum, Minimum. Rows for 1 inch, 3/4 inch, 1/2 inch, # 100. Values for % by Weight Passing.

For Pipes 30 inch in diameter and larger:

Table with 3 columns: Sieve, Maximum, Minimum. Rows for 1-1/2 inch, 1 inch, 3/4 inch, 1/2 inch, 100. Values for % by Weight Passing.

Backfill Aggregate: Backfill Aggregate shall be crushed limestone and screenings and be 3/4 inch minus.

Rip-Rap: Rip-Rap shall conform to the following:

Table with 3 columns: Sieve, Maximum, Minimum. Rows for 12 inch, 6 inch, 1/2 inch. Values for % by Weight Passing.

Grout: All grout used for grouted rip-rap shall be high slump ready-mix concrete.

- 2. Pipe and appurtenances shall be new and unused. The type of pipe to be installed shall be as shown on the drawings. Pipe and appurtenances shall be handled in such a manner as to insure delivery to the trench in sound undamaged condition. Particular care shall be taken to prevent damage to any pipe coating.
3. The interior of the pipe shall be thoroughly cleaned of foreign material before being lowered into the trench and shall be kept clean during construction operations. When work is not in progress, the open ends of pipe shall be securely closed so that no foreign materials will enter the pipe. Any section of pipe found to be before or after laying shall be replaced with sound pipe or repaired in a satisfactory manner.
4. Pipe shall be laid to line and grade as shown on the plans and as staked in the field. When connections are to be made to any existing manhole, pipe, or other improvement, the actual elevation or position of which cannot be determined without excavation, the contractor shall excavate for and expose the existing improvement before laying the connecting pipe or conduit. When existing underground improvements may reasonably be expected to conflict with the line or grade established for the new sewer line, the contractor shall excavate as necessary to expose and locate such potentially conflicting underground improvements prior to laying the new pipe. Any adjustment in line or grade which may be necessary to accomplish the intent of the plans shall be made.

III. SPECIFICATIONS

- 5. Pipe shall be laid upgrade in a continuous operation from structure to structure, with the socket or collar ends of the pipe upgrade.
6. All trench backfills under paved areas shall be compacted to 90% of the maximum density as determined by the Modified AASHTO T-180 Compaction Test, or to 95% of 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. 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 compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill. Proof rolling may be required to verify soil stability at the discretion of the City of O'Fallon. All other trench backfills shall be water jetted.
7. All storm sewer pipe shall be bedded with bedding aggregate. The bedding aggregate shall extend from 4 inches below the pipe to the pipe springline.
8. All storm sewer construction shall be performed in accordance with the City of O'Fallon specifications. The contractor shall assist City personnel, or representatives in the inspection of the storm sewers.
9. All storm manhole, area inlet and curb inlet tops shall be built to the elevations shown on the plans. If no elevation is shown, contact the engineer for such information.

WATER MAIN CONSTRUCTION

- I. GENERAL
1. The water main contractor shall perform a complete installation 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 project engineer.
2. Before water main construction begins, the owner shall employ a competent, licensed surveyor to establish the lines of the mains being constructed, and shall be designed for a minimum working pressure.
3. The contractor shall notify the City of O'Fallon at least two days in advance of the start of construction. Contact City of O'Fallon, at telephone (636) 272-6244.

II. SPECIFICATIONS

- 1. All materials used shall meet the following specifications:
Polyvinyl Chloride (PVC) Pipe: PVC pipe shall be furnished in accordance with AWWA Standard C900 (latest revision).
Outside diameter (OD) of pipe shall be equivalent to that of DIP. Pipe sized 4" through 12" shall be Class 150, DR 18, except in those areas where the company has determined that pressures may exceed 100 psi, in which case the pipe shall be Class 200, DR 14. It shall be the responsibility of the contractor to check with the company prior to ordering any PVC pipe, in order to determine which class pipe shall be furnished. Pipe smaller than 4" shall be Class 200 SDR 21.

Copper: Copper tubing up to 2" shall be used for supplying service from the main to the meter valve or meter setting. The tubing shall be Type K and shall conform to standards set by ASTM B88 as referenced in AWWA Standard C800 (latest revision).

Fittings: All fittings shall be furnished in accordance with AWWA Standard C110 (latest revision), or alternatively AWWA Standard C13 (latest revision). All fittings shall be mechanical joint, cement-mortar lined asphaltic coated and shall have a minimum pressure rating of 250 psi for 12" and smaller, and 150 psi for 16" and larger.

Valves, Hydrants and Accessories:

a. Valves shall meet one of the following specifications:
Resilient Seated Gate: Resilient Seated Gate Valves shall be furnished in accordance with AWWA Standard C509 (latest revision). Valves shall be mechanical joint, have "O" ring seals, two inch square operating nuts, clockwise rotation to close, and shall be designed for a minimum working pressure of 200 psi.

Double Disc Gate: Double Disc Gate Valves shall be furnished in accordance with AWWA Standard C500 (latest revision). Valves shall be mechanical joint, non-rising stem, with "O" ring seals, two inch square operating nuts, clockwise rotation to close, of 200 psi.

Butterfly: Butterfly valves used will be 14" or larger and shall be furnished in accordance with AWWA Standard C504 (latest revision). Valves shall be mechanical joint, non-rising stem, with "O" ring seals, two inch square operating nuts, clockwise rotation to close, and shall be designed for a minimum working pressure of 200 psi.

Tapping: Valves for use with a tapping sleeve may be either of the Resilient Seated or Double Disc type gate valve, except that the end connections shall be flanged by mechanical joint. Diameter of valve opening shall be such that the tapping machine cutters shall not cause damage to the valve. Tapping sleeves shall be for 150 psi minimum working pressure.

b. Fire Hydrants: Fire hydrants shall be Mueller Centurian A-423 or American Darling B-62-B, and shall be yellow in color. Fire hydrants shall be furnished in accordance with AWWA Standard C502 (latest revision). Hose outlet connection threads will be National Standard Threads in all divisions except as otherwise indicated. Hydrants shall have replaceable "breakable" sections, inlet connection of 6" size mechanical joint shoe, with 4-1/2" valve opening minimum, 1-1/2" pentagon operating nut, clockwise rotation to close (5-1/4" valve opening may be used on all hydrants to the standard 4-1/2" valve opening. The 5-1/4" valve opening shall be used in all cases where local ordinances require). Hydrants shall have two hose outlets, and one steamer connection. Burial depths for hydrants will and may vary, but shall not be less than 4 feet. The steamer connection shall be less than 12" nor greater than 24" above finish grade. The contractor shall furnish and install all spool pieces as may be necessary to adjust hydrants to the proper height. Hydrants shall be located 2'-0" from back of curb.

c. Valve Boxes: Valve boxes shall be of cast iron, extension sleeve type suitable for a depth of cover of at least 4 feet. Valve boxes shall be not less than 5 inches in diameter, shall have a minimum thickness at any point of 3/16 inch, and shall be provided with suitable cast iron bases and covers. Covers shall have the word "Water" cast thereon. All parts of the valve boxes, bases and covers shall be coated by dipping in bituminous varnish. Valve boxes to be screw extension sleeve type.

d. Locating Wire: No. 8 coated solid copper wire and looped into valve boxes.
Polyethylene Encasement for "DIP", or Ductile Iron Pipe, Valves, and Fittings: Polyethylene encasement shall be furnished in accordance with AWWA Standard C105 (latest revision). Minimum thickness, strength, thickness, etc. shall be in accordance with this Standard. Polyethylene sheets or tubing shall be used for all pipe lengths, with a minimum of 12" overlap at each joint. Slack in the tubing shall be taken up to make snug fit. Excess material shall be folded back over top of pipe securing the fold at quarter points along the length of the pipe. Polyethylene encasement shall be used on all valves and fittings. Where polyethylene wrapped pipe, valves or fittings joins an adjacent pipe that is not wrapped, the polyethylene wrap shall be extended to cover the adjacent pipe for a distance of at least 3 feet. All polyethylene shall be secured in place with adhesive tape, designed for use on polyethylene. Contractor shall take care to insure that the pipe, valves and fittings are free from lumps of clay, mud, cinders, etc. prior to wrapping same.

STREET PAVEMENT CONSTRUCTION

- I. GENERAL
1. The paving contractor shall perform a complete installation 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 project engineer.
2. Before street paving begins, the owner shall employ a competent, licensed surveyor to establish the lines and grades of the street pavement being constructed.
3. The contractor shall notify the City Engineer at least two days in advance of the start of construction. Contact City of O'Fallon, at telephone (314) 272-6244.

II. SPECIFICATIONS

- 1. The paving contractor shall perform a complete installation 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 project engineer.
2. Before street paving begins, the owner shall employ a competent, licensed surveyor to establish the lines and grades of the street pavement being constructed.
3. The contractor shall notify the City Engineer at least two days in advance of the start of construction. Contact City of O'Fallon, at telephone (314) 272-6244.

II. SPECIFICATIONS

- 1. All materials used shall meet the following specifications:
Rolled Stone Base: Rolled Stone Base used shall meet the requirements for Type II Aggregate as specified in Section 1007 of the Missouri Standard Specifications for Highway Construction, 1986".
P.C. Concrete: P.C. Concrete used shall meet the requirements for Pavement Concrete as specified in Section 501 of the Missouri Standard Specifications for Highway Construction, 1986".
2. All areas to receive paving shall first have the earth subgrade prepared in accordance with the requirements of Section 209 of the Missouri Standard Specifications for Highway Construction, 1986".
3. Areas within the City Street rights-of-way shall have P.C. Concrete pavement installed on the earth subgrade in accordance with the requirements of the City of O'Fallon Standard Specification for Highway Construction.
4. All paving work shall be performed in accordance with the City of O'Fallon specifications. The contractor shall assist City personnel or City representatives in the inspection and testing of paving work.

PROJECT TITLE: 125 & 131 JOSEPH ST. PROJECT NOTES

MUSLER ENGINEERING COMPANY CIVIL ENGINEERING - PLANNING - LAND SURVEYING 32 Portwest Court, St. Charles, Missouri 63003 Telephone: (636) 916-0444 Fax: (636) 916-8444

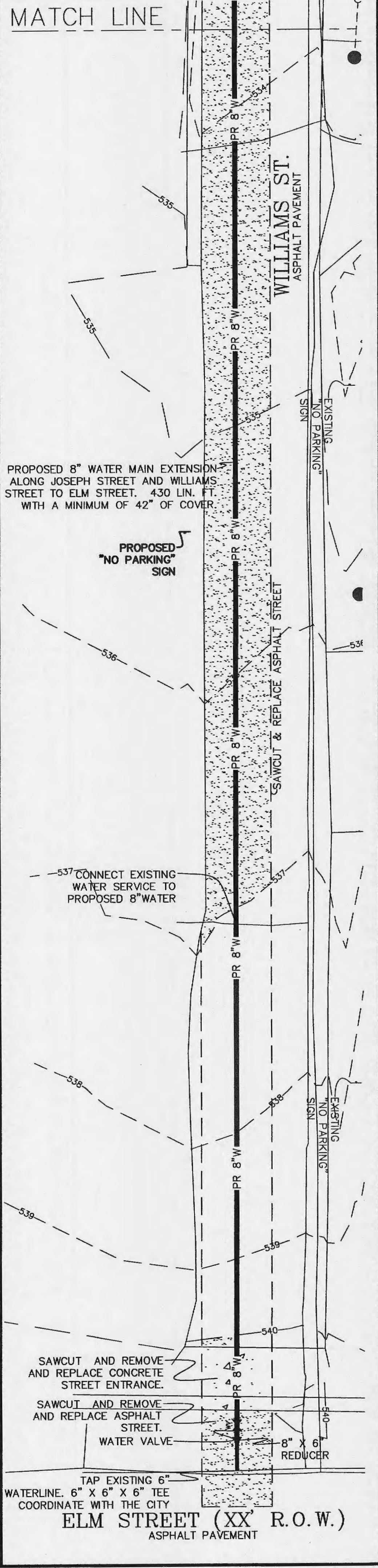
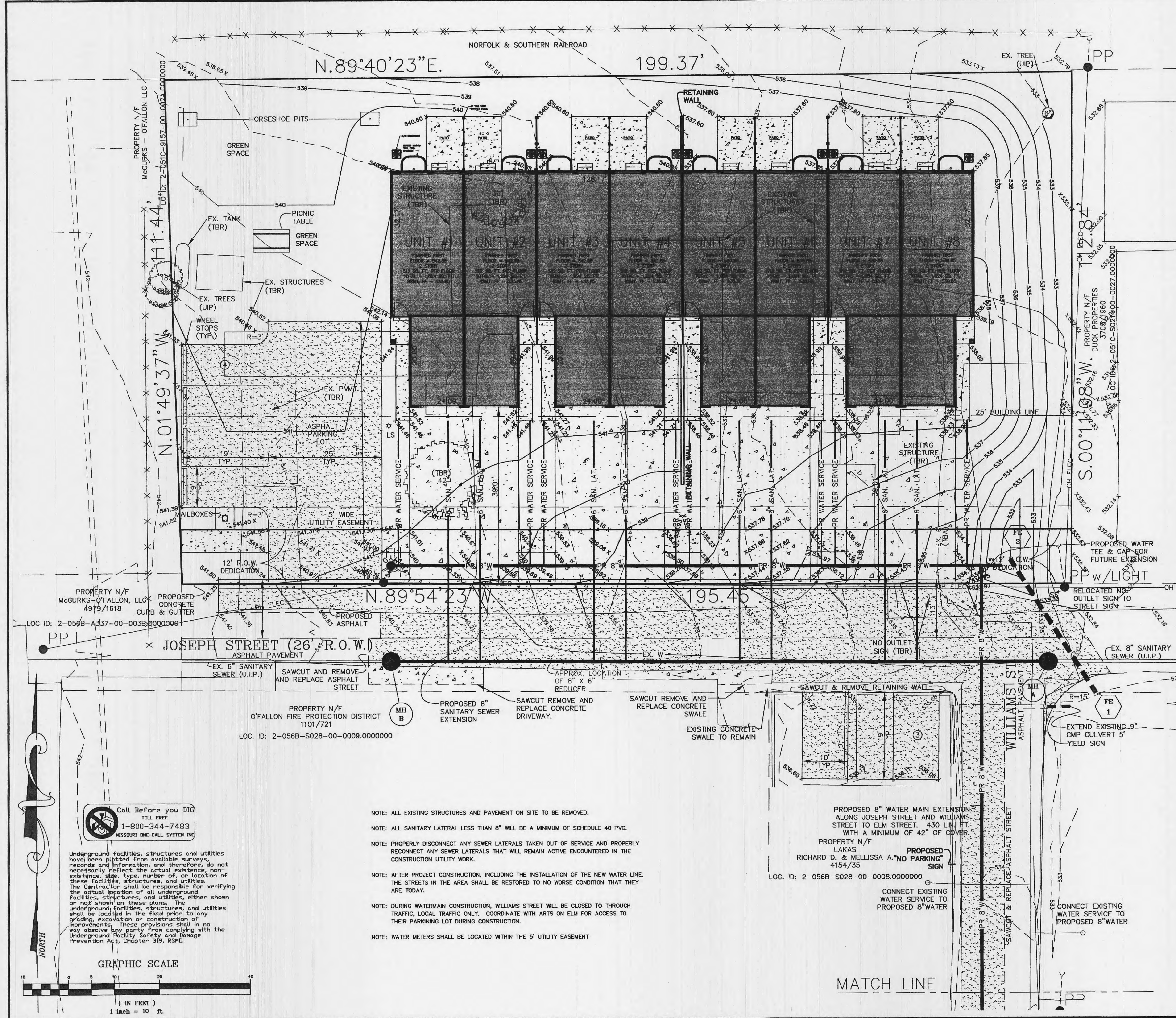
DISCLAIMER OF RESPONSIBILITY I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments of service or intended to be used for any part or parts of the architectural or engineering project or survey.



JEFFREY R. SMITH, P.E. MO. P.E. # E-2001004672

PREPARED FOR: 125 JOSEPH TRUST & 131 JOSEPH TRUST MR. PAUL JAMES 1278 JUNGERMANN ROAD, SUITE F ST. PETERS, MISSOURI 63376 TELEPHONE: 636-262-4473 FAX: E-mail: paul@stcharlesrent.com

P & Z No. 12-16.01 & 12-16.02 City No. 12-16.01 & 12-16.02



PROJECT TITLE:
125 & 131 JOSEPH ST.
SITE PLAN

REVISIONS:
 1/17/18 3 REVISE WATERMAIN CONNECTION
 1/17/17 2 CITY COMMENTS
 07/27/17 1 CITY COMMENTS
 DATE: 11/18/17
MUSLER ENGINEERING COMPANY
 CIVIL ENGINEERING - PLANNING - LAND SURVEYING
 82 Portwest Court, St. Charles, Missouri 63303
 Telephone: (636) 916-0444
 FAX: (636) 916-3444
 CERTIFICATE OF AUTHORITY: ENGINEERING: E-120-D, LAND SURVEYING: LS-284-D
 DATE: 08/14/14
 DRAWN: J.R.S.
 CHECKED: J.R.S.
 PROJECT NO.: 14-1580
 SHEET NO.: 4 OF 12

DISCLAIMER OF RESPONSIBILITY
 I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and 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.

STATE OF MISSOURI
 JEFFREY R. SMITH, P.E.
 PROFESSIONAL ENGINEER
 1.19.18

JEFFREY R. SMITH, P.E.
 MO. P.E. # E-2001004672

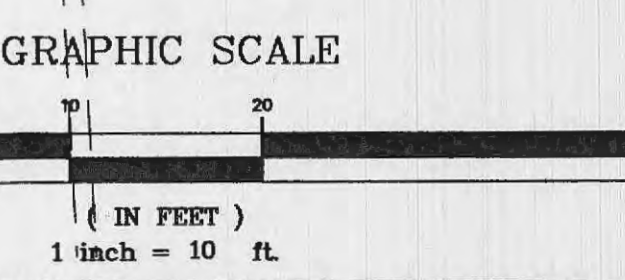
PREPARED FOR:
125 JOSEPH TRUST & 131 JOSEPH TRUST
MR. PAUL JAMES
1278 JUNGERMANN ROAD, SUITE F
ST. PETERS, MISSOURI 63376
TELEPHONE: 636-262-4473
FAX:
E-mail: paul@stcharlesrent.com

P & Z No.
 12-16.01 & 12-16.02
 City No.
 12-16.01 & 12-16.02

Page No.
4

Call Before you DIG
 TOLL FREE
 1-800-344-7483
 MISSOURI ONE-CALL SYSTEM INC.

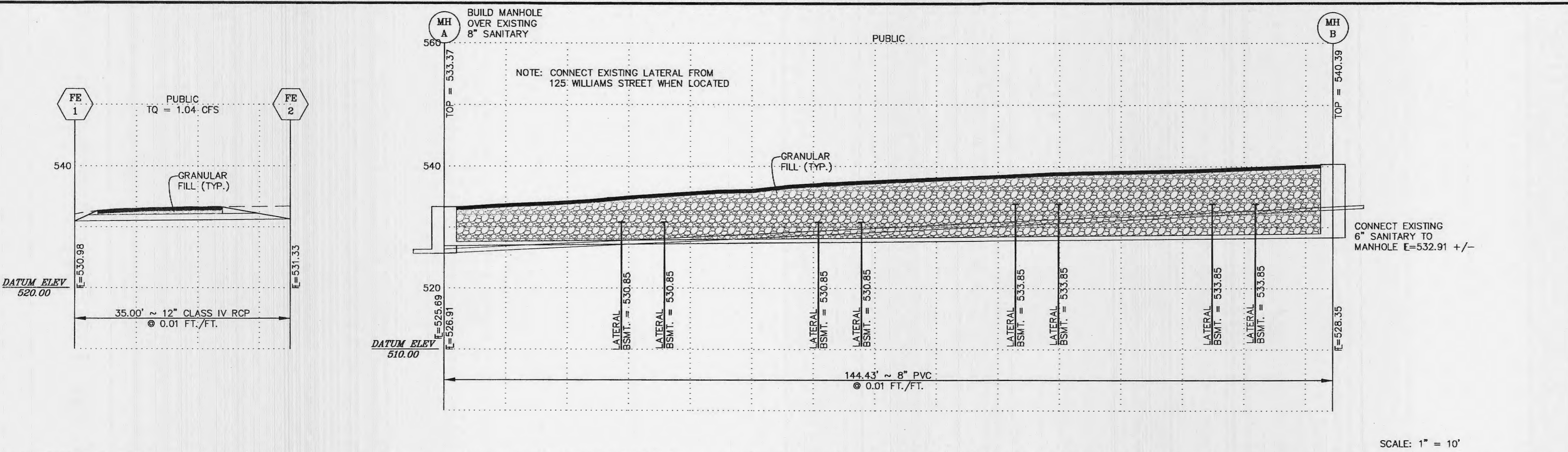
Underground facilities, structures and utilities have been plotted from available surveys, records and information, and therefore, do not necessarily reflect the actual existence, non-existence, size, type, number of, or location of these facilities, structures, and utilities. The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, and utilities, either shown or not shown on these plans. The underground facilities, structures, and utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMo.



- NOTE: ALL EXISTING STRUCTURES AND PAVEMENT ON SITE TO BE REMOVED.
- NOTE: ALL SANITARY LATERAL LESS THAN 8" WILL BE A MINIMUM OF SCHEDULE 40 PVC.
- NOTE: PROPERLY DISCONNECT ANY SEWER LATERALS TAKEN OUT OF SERVICE AND PROPERLY RECONNECT ANY SEWER LATERALS THAT WILL REMAIN ACTIVE ENCOUNTERED IN THE CONSTRUCTION UTILITY WORK.
- NOTE: AFTER PROJECT CONSTRUCTION, INCLUDING THE INSTALLATION OF THE NEW WATER LINE, THE STREETS IN THE AREA SHALL BE RESTORED TO NO WORSE CONDITION THAT THEY ARE TODAY.
- NOTE: DURING WATERMAIN CONSTRUCTION, WILLIAMS STREET WILL BE CLOSED TO THROUGH TRAFFIC, LOCAL TRAFFIC ONLY. COORDINATE WITH ARTS ON ELM FOR ACCESS TO THEIR PARKING LOT DURING CONSTRUCTION.
- NOTE: WATER METERS SHALL BE LOCATED WITHIN THE 5' UTILITY EASEMENT

PROPOSED 8" WATER MAIN EXTENSION ALONG JOSEPH STREET AND WILLIAMS STREET TO ELM STREET. 430 LIN. FT. WITH A MINIMUM OF 42" OF COVER.
 PROPERTY N/F LAKAS RICHARD D. & MELLISSA A. "NO PARKING" SIGN
 4154/35
 LOC. ID: 2-056B-S028-00-0008.0000000
 CONNECT EXISTING WATER SERVICE TO PROPOSED 8" WATER

TAP EXISTING 6" WATERLINE. 6" X 6" X 6" TEE COORDINATE WITH THE CITY
ELM STREET (XX' R.O.W.)
 ASPHALT PAVEMENT

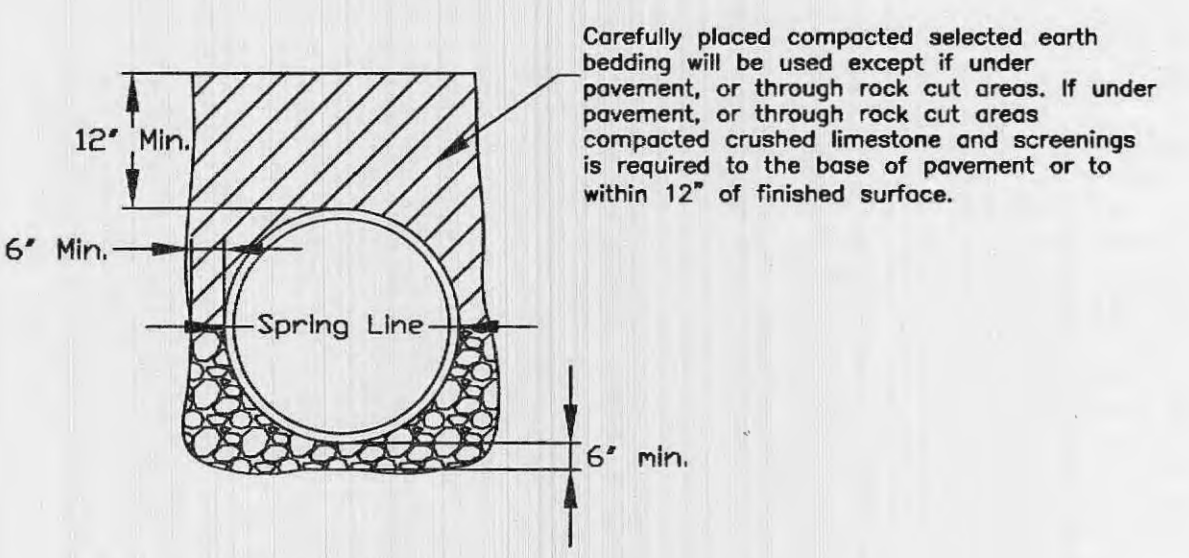


PROJECT TITLE:
125 & 131 JOSEPH ST.
SEWER PROFILES

REVISIONS:
 10/12/17
 10/12/17
 10/12/17

MUSLER ENGINEERING COMPANY
 CIVIL ENGINEERING - PLANNING - LAND SURVEYING
 32 Portwest Court, St. Charles, Missouri 63303
 Telephone: (636) 916-0444
 Fax: (636) 916-9444

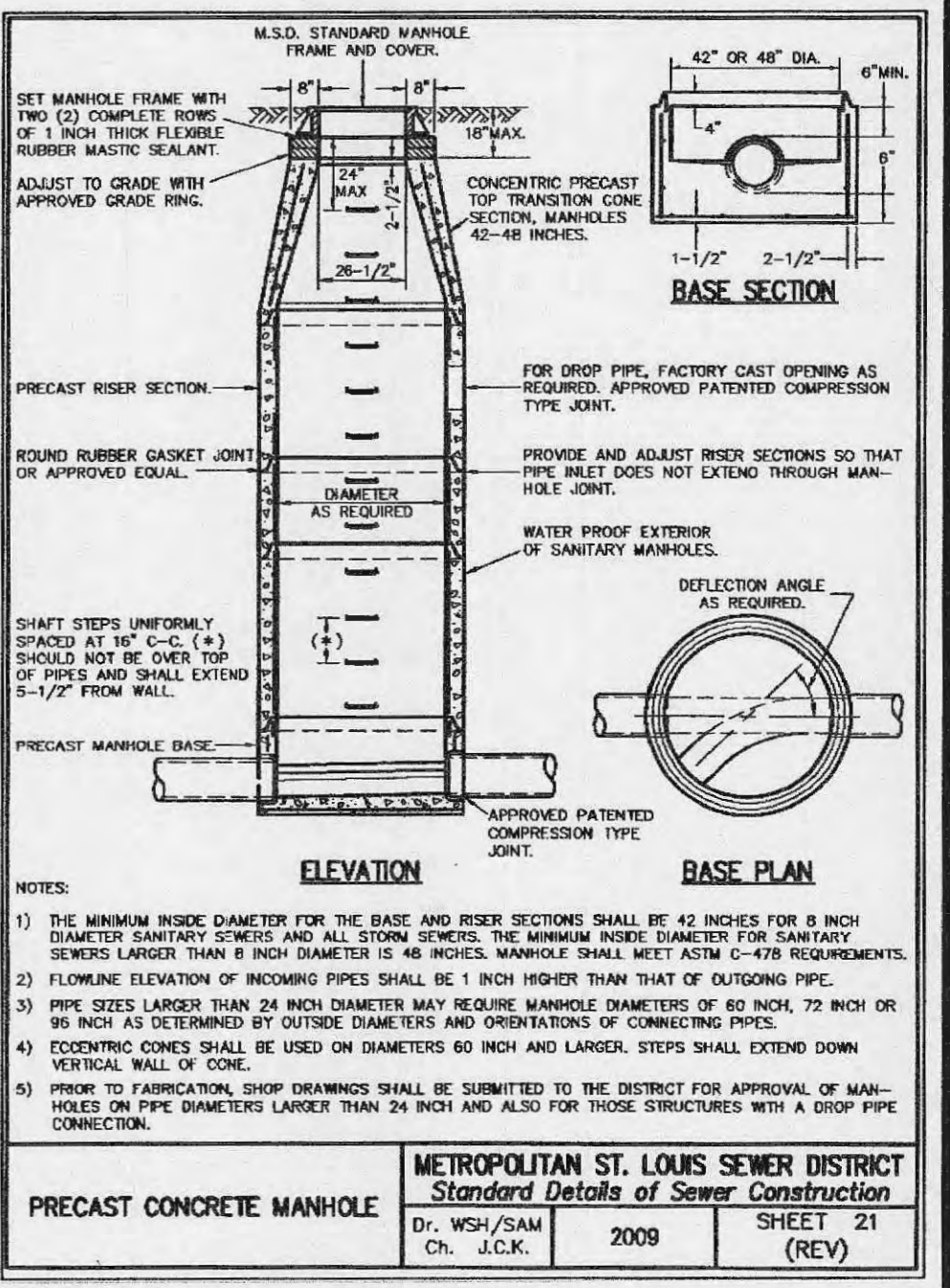
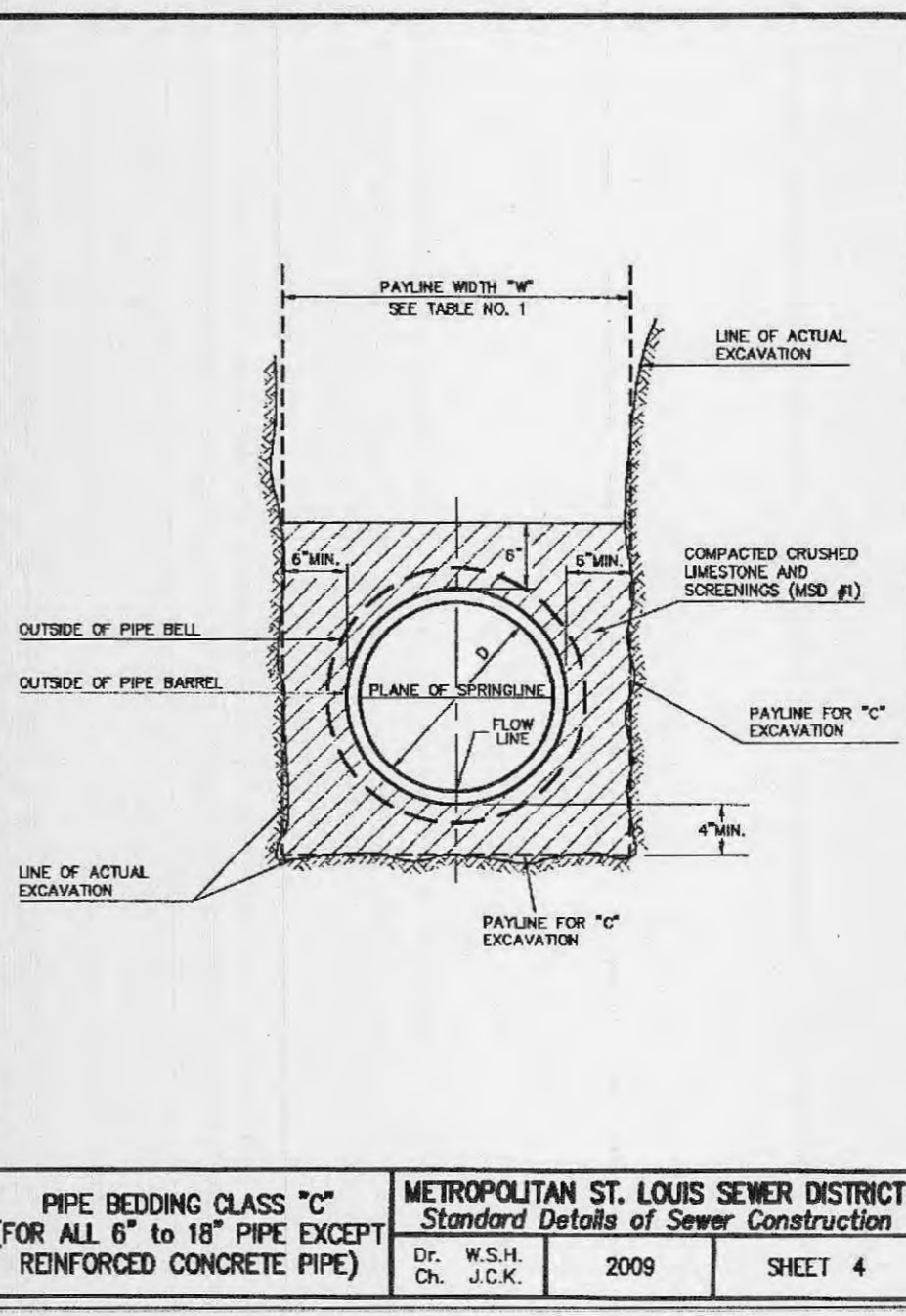
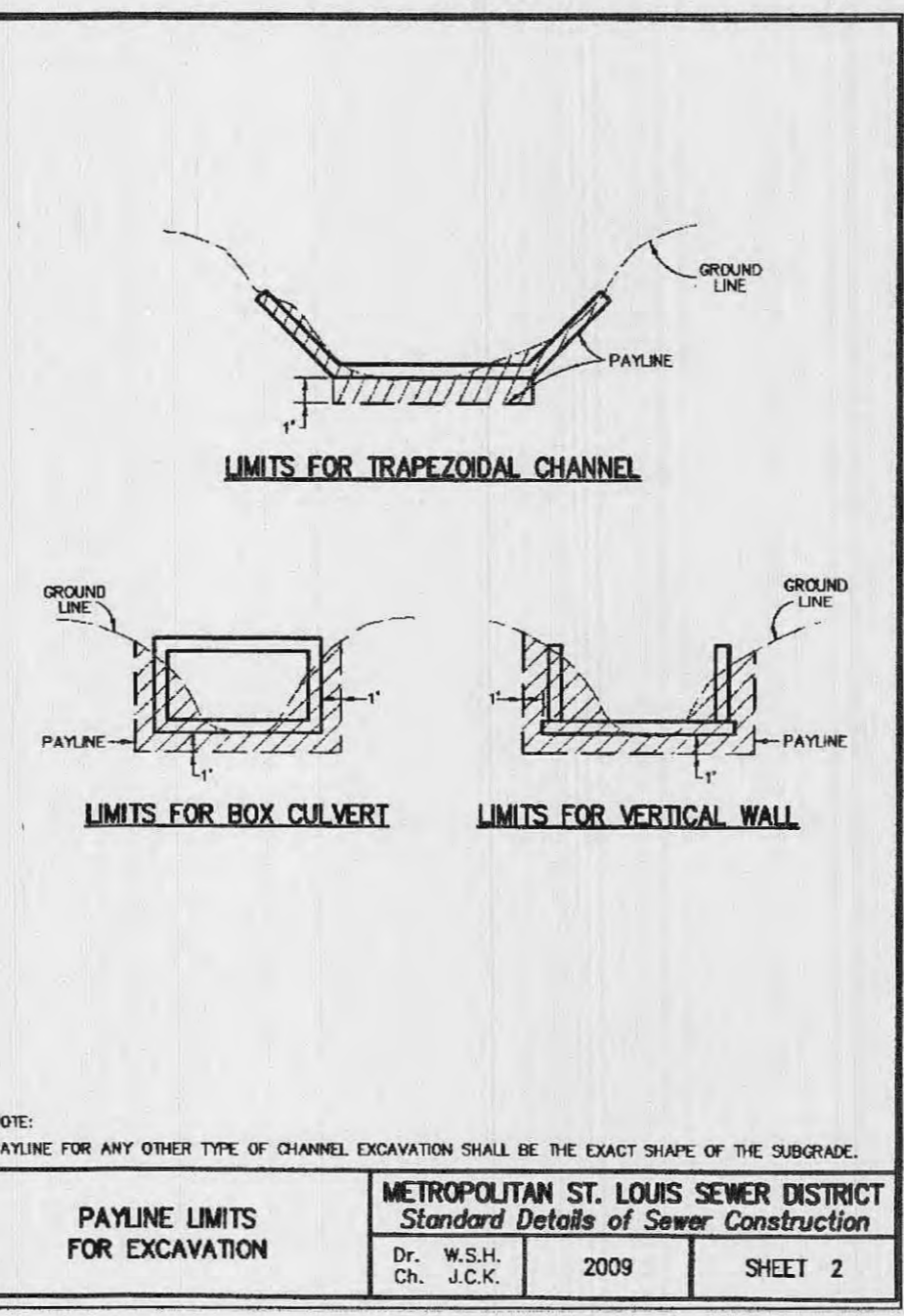
CERTIFICATE OF AUTHORITY: ENGINEERING E-1232-D, LAND SURVEYING LS-284-D
 DATE: 10/12/17
 DRAWN: J.R.S.
 CHECKED: J.R.S.
 PROJECT NO.: 14-1380
 SHEET NO.: 6 OF 12



TRANCH DETAIL
 CITY OF FALLON
 ENGINEERING DEPARTMENT
 FALLON, MISSOURI

ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"H" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CONCRETE ENCASUREMENT (CU. FT. PER FT.)	INSIDE DIMENSIONS OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"H" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CONCRETE ENCASUREMENT (CU. FT. PER FT.)
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	14 x 23	41	3.42	3.84
21	39	3.25	6.81				
24	42	3.50	7.39	19 x 30	49	4.08	7.88
27	45	3.75	8.18	22 x 34	53	4.42	8.61
30	49	4.08	9.30	24 x 38	56	4.83	9.70
33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	58	4.87	11.43	29 x 45	66	5.50	11.73
39				DISCONTINUED			
42	63	5.25	13.38	32 x 49	71	5.92	13.14
45	70	5.83	15.67	34 x 53	75	6.25	14.00
48	75	6.42	18.15	38 x 60	83	6.82	16.18
54	77	6.42	18.15	43 x 68	92	7.67	18.01
60	84	7.00	20.73	48 x 76	101	8.43	21.89
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	118	9.92	35.90	72 x 113	143	11.92	36.99
96	126	10.50	39.37	77 x 121	152	12.67	40.89
102	133	11.08	42.99	82 x 128	160	13.33	44.45
108	140	11.67	46.75	87 x 136	169	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 168	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.59

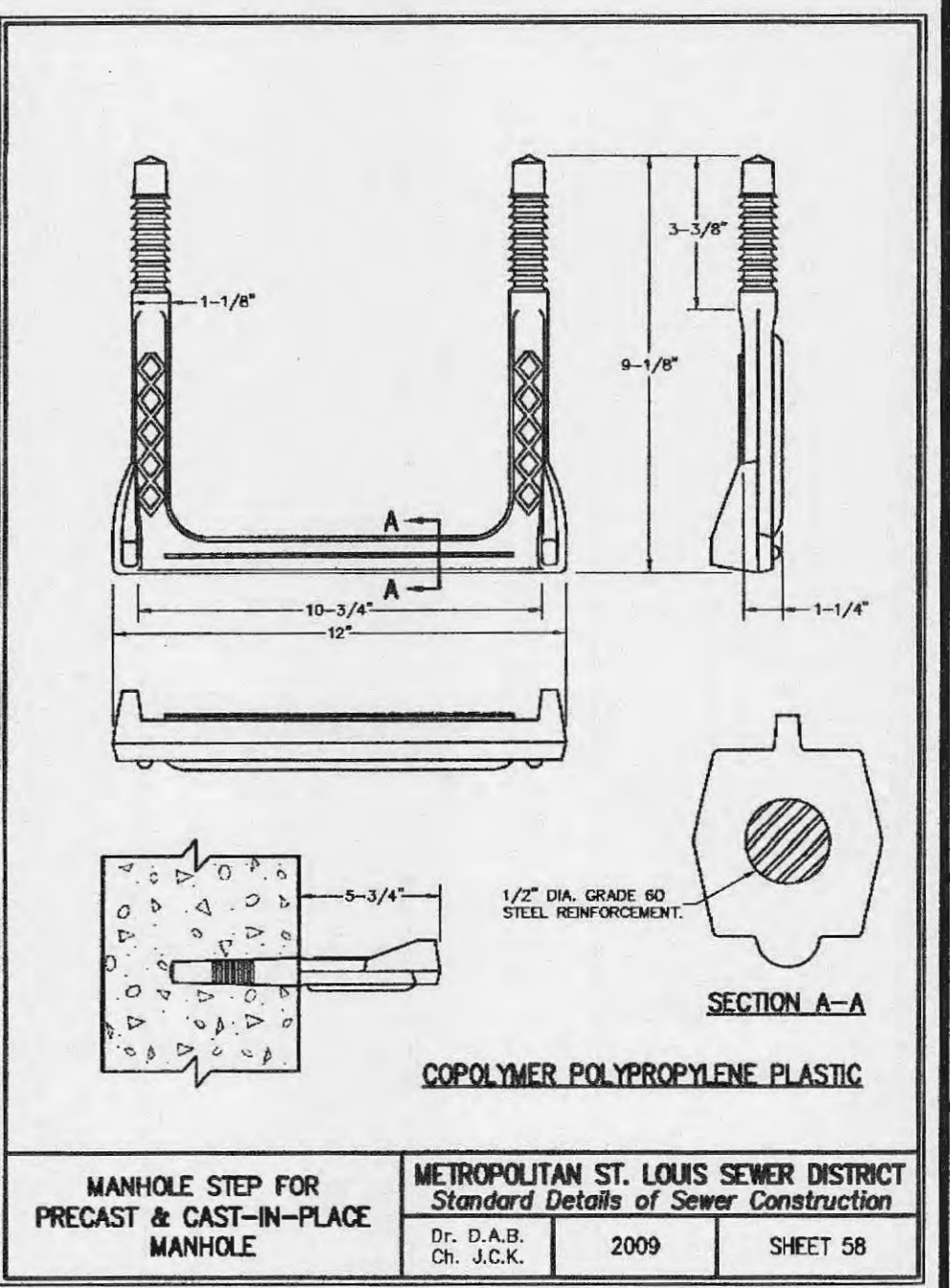
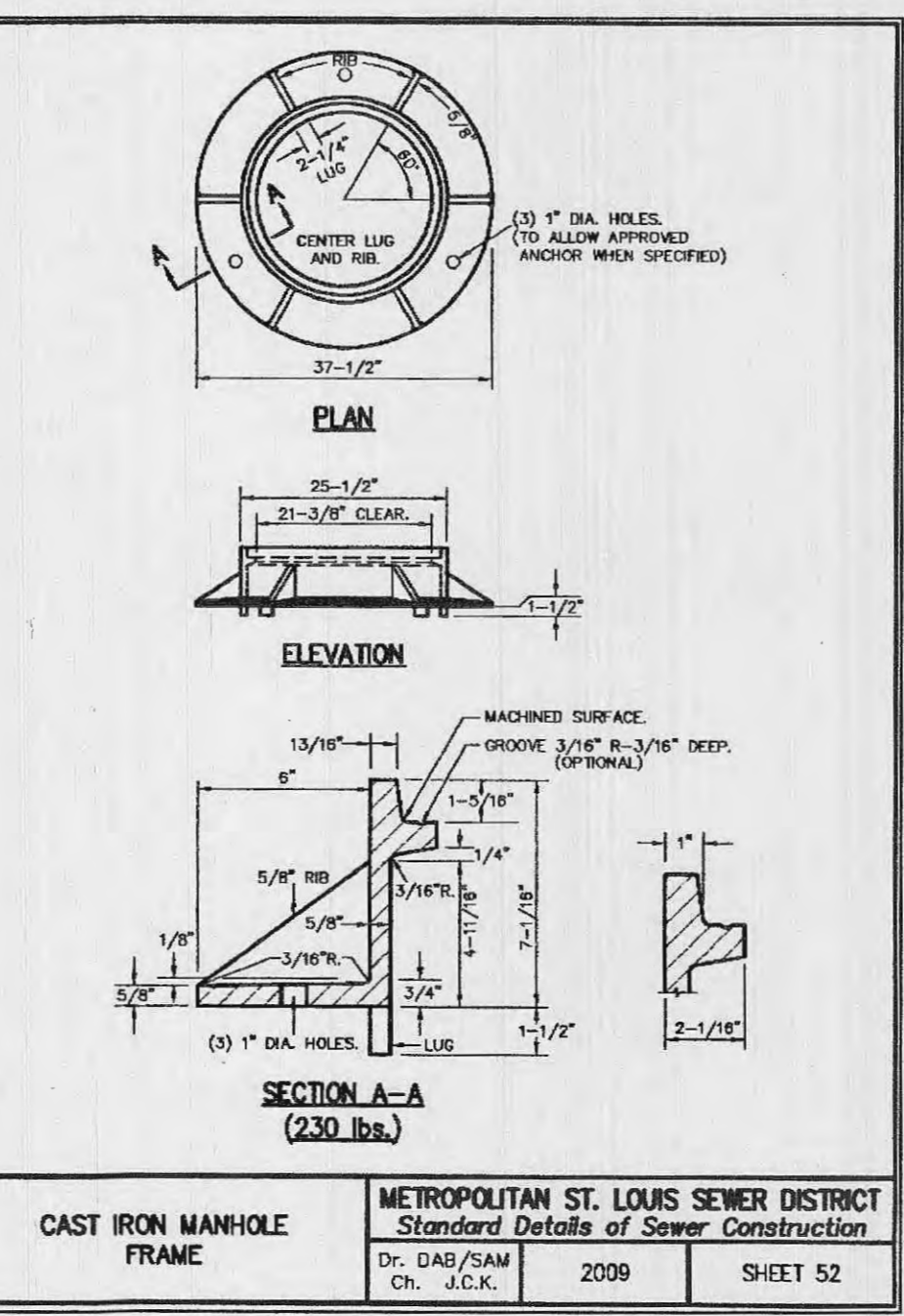
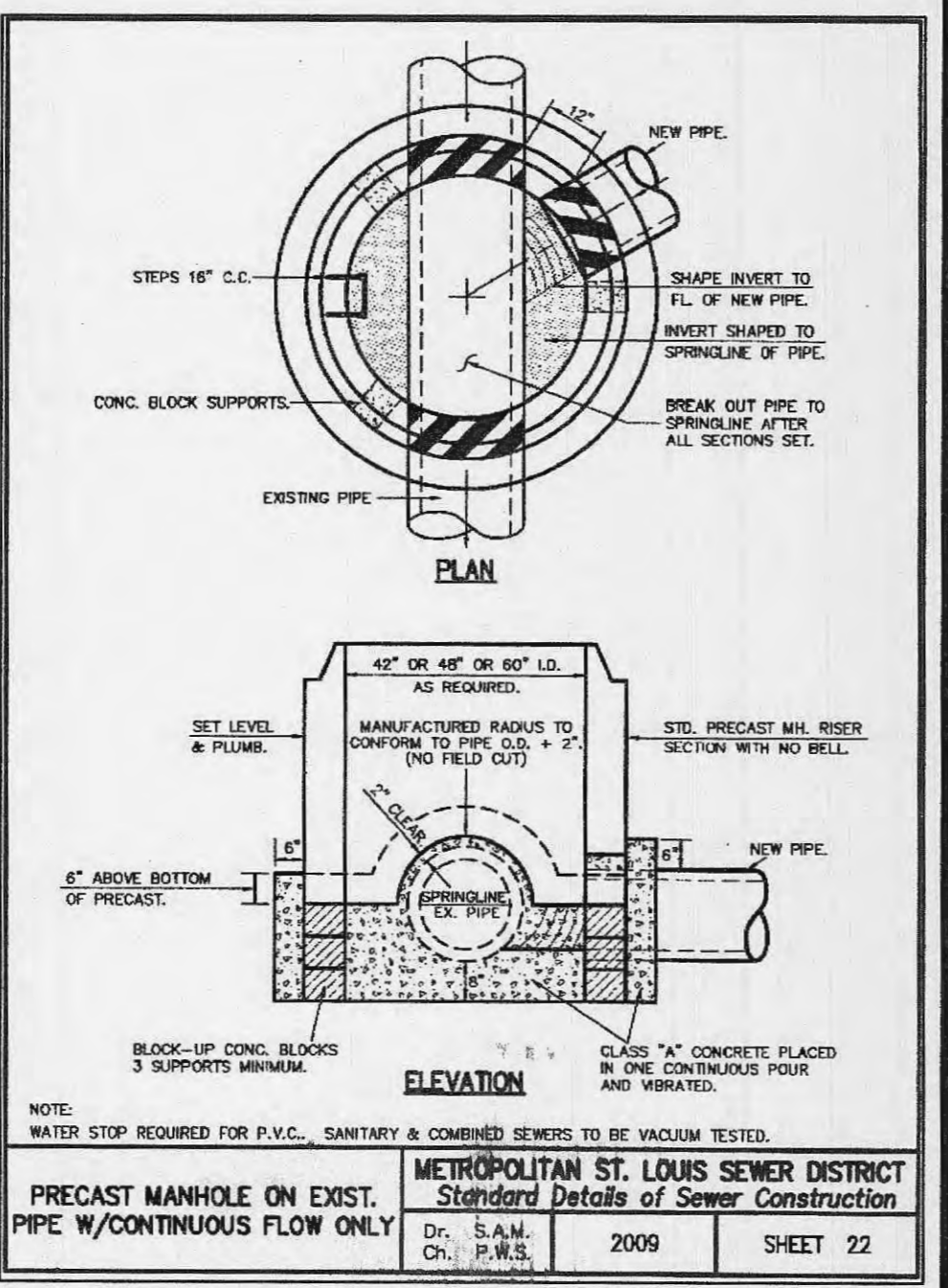
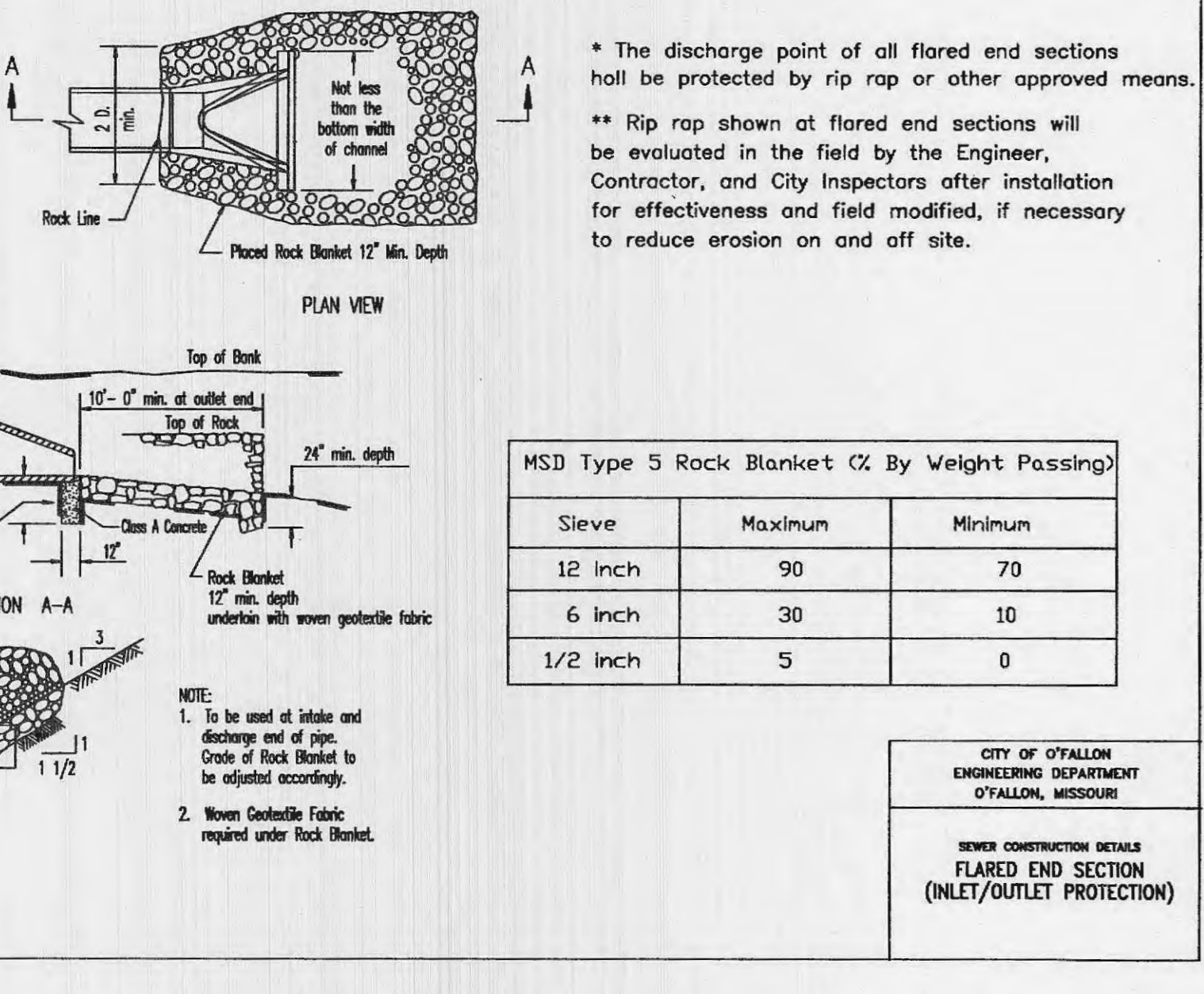
TABLE 1 PAYLINE WIDTHS OF TRENCH AND PAY-VOLUMES OF CONCRETE
 METROPOLITAN ST. LOUIS SEWER DISTRICT
 Standard Details of Sewer Construction
 Dr. B.E.B. Ch. J.C.K. 2009 SHEET 1



DISCLAIMER OF RESPONSIBILITY
 I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and 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.

JEFFREY R. SMITH, P.E.
 MO. P.E. # E-2001004672

1-19-18



PREPARED FOR:
125 JOSEPH TRUST & 131 JOSEPH TRUST
MR. PAUL JAMES
1278 JUNGERMANN ROAD, SUITE F
ST. PETERS, MISSOURI 63376
 TELEPHONE: 636-265-4473
 FAX: E-mail: paul@stcharlesrent.com

P & Z No.
 12-16.01 & 12-16.02
 City No.
 12-16.01 & 12-16.02

Page No. **5**

