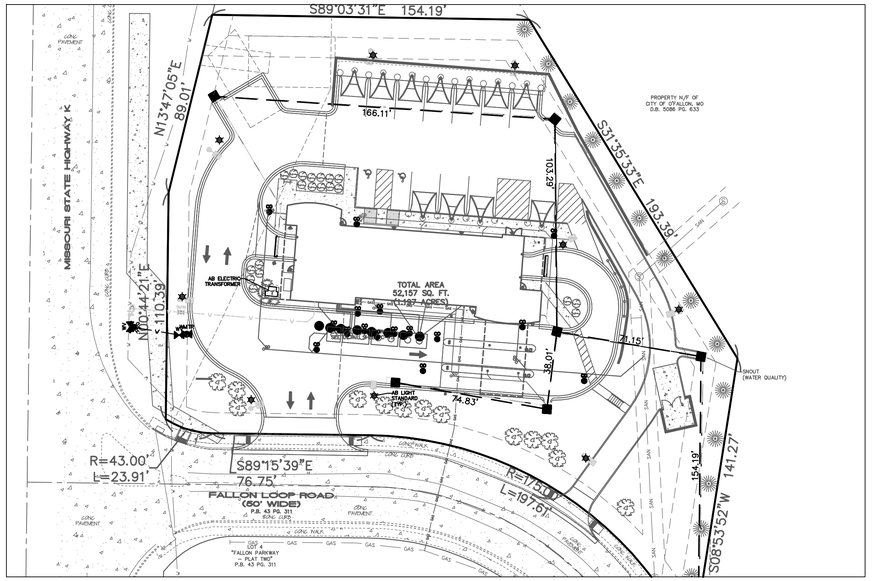
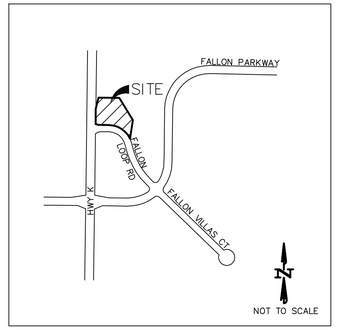
A SET OF AS-BUILT PLANS FOR TOMMY'S EXPRESS CAR WASH

A TRACT OF LAND BEING ALL OF LOT 5 OF "FALLON PARKWAY - PLAT TWO" PLAT BOOK 43 PAGE 311 TOWNSHIP 46 NORTH, RANGE 3 EAST CITY OF O'FALLON ST. CHARLES COUNTY, MISSOURI



Plan View



Locator Map

Utility Contacts

Sanitary Sewers
Duckett Creek Sanitary District
3550 Highway K
O'Fallon, MO. 63368
636-441-1244

Water
Public Water Supply District No. 2
P.O. Box 967
O'Fallon, MO. 63366
636-561-3737

Storm Sewer
City of O'Fallon
100 N. Main St.
O'Fallon, MO. 63366
636-240-2000

Electric
Ameren Missouri
200 Callahan Road
Wentzville, MO. 63385
636-639-8312

Gas
Spire Gas
6400 Graham Road
St. Louis, MO. 63134
314-522-2297

Telephone
CenturyLink
1151 Century Tel Dr.
Wentzville, MO. 63385
636-332-7261

Fire District
O'Fallon Fire Protection District
111 Laura K Dr.
O'Fallon, MO. 63366
636-272-3493

Conditions of Approval From Planning and Zoning

1. PROVIDE BILLBOARD MAINTENANCE AGREEMENT.
2. PROVIDE AN EXHIBIT THAT VERIFIES THE ITEM B: RIBBED PANEL: ATAS 7.2-SILVERSMITH ON THE EXTERIOR ELEVATION'S MATERIAL LIST MEETS CODE SECTION 400.523(A)(3). https://ecode360.com/27636304
3. PROVIDE ACCESS FROM THE BUILDING TO THE TRASH ENCLOSURE AREA AS REVIEWED AND APPROVED ON THE CONSTRUCTION SITE PLANS.

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

1. Underground utilities have been plotted from available information and therefore location shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction of improvements.
2. Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
3. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
4. All fill including places under proposed storm and sanitary sewer lines and paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the "Modified AASHTO T-180 Compaction Test (ASTM D1557)". 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 proofrolling and compaction.
5. The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system. The contractor will be required to install a brick bulkhead on the downstream side of the first new manhole constructed when connecting into existing sewers.
6. All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
7. It is the responsibility of the contractor to adjust all sanitary sewer manholes (that are affected by the development) to finish grade.
8. Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
9. All sanitary sewer construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
10. The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination of inspection.
11. All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2.5 feet.
12. All sanitary sewer manholes shall be watertight in accordance with Missouri Dept. of Natural Resources specification 10 CSR 20-8.120(6)(F) 1.
13. All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe, Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe. Final backfill material shall be of suitable material removed from excavation except as other material is specified. Debris, frozen material, large rocks or stones, or other unstable materials shall not be used within 2 feet from top of pipe.
14. All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
15. All pipes shall have positive drainage through manholes. Flat invert structures not allowed.
16. Epoxy Coating shall be used on all sanitary sewer manholes that receive pressurized mains.
17. All creek crossings shall be lined with rip-rap as directed by District inspectors.
18. Brick shall not be used on sanitary sewer manholes.
19. Existing sanitary sewer service shall not be interrupted.
20. Maintain access to existing residential driveways and streets.
21. Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not be allowed.
22. Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
23. Type N' Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.
24. All sanitary sewer system work shall be conducted under the inspection of a representative of the District. All work may not require inspection but the Districts representative may designate specific areas that must be inspected before the wo 1s backfilled. All testing must be witnessed by the District's Inspector and the Contractor shall furnish all testing equipment as approved by the District. Testing shall include:
    - A mandrel test of all gravity sewers using a mandrel with a diameter that has a diameter 95% of the inside pipe diameter. If the mandrel test fails on any section of pipe, that section of pipe shall be uncovered and replaced. No expansion devices will be allowed to be used to "force" the pipe that is deformed back into round. Any string lines used in mandrel testing shall be removed after testing is completed. Deflection testing cannot be conducted prior to 30 days after final backfill.
    - An air pressure test of all gravity sewers to a pressure of 5 PSI with no observed drop in pressure during a test period of 5 minutes.
    - A vacuum test of all manholes for a period of 1 minute and the vacuum shall be 10 of mercury and may not drop below 9" of mercury at the end of the 1 minute test.

AS-BUILT LEGEND

- AS-BUILT STORM MANHOLE
- AS-BUILT CURB/GRATED INLET
- AB DENOTES AS-BUILT
- AS-BUILT SANITARY MANHOLE
- AS-BUILT FIRE HYDRANT
- AS-BUILT WATER VALVE
- FHC AS-BUILT FIRE HOSE CONNECTION
- AS-BUILT LIGHT STANDARD
- CO AS-BUILT CLEANOUT

GRADING QUANTITIES:

1,585 C.Y. CUT (INCLUDES SUBGRADES)
2,345 C.Y. FILL (INCLUDES 8% SHRINKAGE)
760 C.Y. SHORT

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

Drawing Index

LANDSCAPING REQUIREMENTS:.

STREET TREE REQUIREMENTS:
1 TREE FOR EVERY 40' OF FRONTAGE
FALLON LOOP ROAD - 298.27' OF RIGHT-OF-WAY FRONTAGE = 298.27/40=7.46 ~ 8 STREET TREES REQUIRED
HIGHWAY K - 199.4' OF RIGHT-OF-WAY FRONTAGE = 199.4/40=4.99 ~ 5 STREET TREES REQUIRED. DUE TO UNRECORDED BILLBOARD SIGHT DISTANCE EASEMENT THESE TREES HAVE BEEN MOVED TO FALLON LOOP ROAD.
13 STREET TREES PROVIDED

INTERIOR LANDSCAPING REQUIRED:
NOT LESS THAN 6% OF INTERIOR PARKING LOT SHALL BE LANDSCAPED.
5 SPACES X 270 = 1,350 X 6% = 81 SQ.FT. LANDSCAPING REQUIRED
425 SQ.FT LANDSCAPING PROVIDED INCLUDING 20 SHRUBS
* BUFFER YARD REQUIREMENT ELIMINATED PER VARIANCE 18-003343 DATED JUNE 14, 2018.

* City of O'Fallon Construction work hours per City Ordinance 3429 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
7:00 A.M. to 8:00 P.M. Saturday and Sunday

* The area of this phase of development is 1.20 ACRES.
The area of land disturbance is 1.14 ACRES
Number of proposed lots is 1
Building setback information. Front 25 FEET
Side 0 FEET
Rear 0 FEET

* The estimated sanitary flow in gallons per day is 90 g.p.d.
* Tree preservation calculations - NO TREES ARE BEING CLEARED

Benchmarks

Project

BENCHMARK:
THE HORIZONTAL COORDINATES WERE ESTABLISHED AND VERIFIED BY GPS OBSERVATIONS USING A CELLULAR EQUIPPED TRIMBLE R8 GNSS ROVER AND TRIMBLE TSC3 DATA COLLECTOR AND BASED ON THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUS OPERATING REFERENCE STATIONS, WHICH UTILIZES THE NAD83(2011) EPOCH 2010.00 GPS NETWORK.

THE OBSERVED HORIZONTAL CHECK STATION UTILIZED IS LISTED ON WWW.NGS.NOAA.GOV AS DESIGNATION "SC 06" WITH A PID OF AA8597 AND A PUBLISHED VALUE OF N: 330208.467M, E: 237061.492M AND A CHECK VALUE OF N: 330208.482M, E: 237061.522M.

A SITE GRID AZIMUTH AND COMBINED GRID FACTOR WAS CALCULATED UTILIZING THE TRIMBLE TSC3 DATA COLLECTOR SURVEY CONTROLLER SOFTWARE ON FIELD CONTROL POINT 1.

PROJECT COORDINATES ARE MODIFIED "MISSOURI COORDINATE SYSTEM OF 1983, EAST ZONE" COORDINATES AND WERE GENERATED BY SCALING THE COORDINATES BY THE INVERSE OF SAID COMBINED GRID FACTOR (1.0000834538) ABOUT ONSITE POINT 1. THE COORDINATES WERE THEN CONVERTED TO FEET BY MULTIPLYING THE METRIC VALUES BY 3.280833333 (39.37 INCHES PER METER/12 INCHES PER FOOT).

THE GEOID UTILIZED TO OBTAIN PROJECT COORDINATES IS G12BUS.

TO THE BEST OF OUR KNOWLEDGE, THE MODIFIED MISSOURI STATE PLANE, EAST ZONE, COORDINATES MEET THE ACCURACY STANDARDS OF THE CURRENT MISSOURI STANDARDS FOR PROPERTY BOUNDARY SURVEYS (2 CSR 90-60) AS AN URBAN CLASS SURVEY.

PROJECT ELEVATIONS UTILIZE THE NAVD 88 VERTICAL DATUM AND WERE GENERATED BY GPS OBSERVATIONS USING A CELLULAR EQUIPPED TRIMBLE R8 GNSS ROVER AND TRIMBLE TSC3 DATA COLLECTOR AND ARE BASED ON THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUS OPERATING REFERENCE STATIONS.

Site

BENCHMARK:
SITE BENCHMARK (NAVD 88)- CHISELED SQUARE IN SOUTHWEST PART OF CONCRETE ISLAND AT THE INTERSECTION OF FALLON LOOP ROAD AND MISSOURI HIGHWAY K. (ELEVATION=535.77) AND IS LOCATED AS SHOWN HEREON.

Legend

600.00	EXISTING LABELS		EXIST. SINGLE CURB INLET
600.00	PROPOSED LABELS		EXIST. AREA INLET
CI	SINGLE CURB INLET		PROPOSED SINGLE CURB INLET
DCI	DOUBLE CURB INLET		
AI	AREA INLET		PROPOSED AREA INLET
DAI	DOUBLE AREA INLET		PROPOSED GRATE INLET
GI	GRATE INLET	S	EXIST. SANITARY MANHOLE
DGI	DOUBLE GRATE INLET	D	EXIST. STORM MANHOLE
MH	MANHOLE		PROPOSED MANHOLE
FE	FLARED END SECTION		POWER POLE
EP	END PIPE		GUY WIRE
CP	CONCRETE PIPE		LIGHT STANDARD
RCP	REINFORCED CONCRETE PIPE		FIRE HYDRANT
CMP	CORRUGATED METAL PIPE	WMTR	WATER METER
CPP	CORRUGATED PLASTIC PIPE	WV	WATER VALVE
PVC	POLY VINYL CHLORIDE (PLASTIC)	GV	GAS VALVE
CO	CLEAN OUT		TELEPHONE PEDESTAL
	SLOPE LIMITS		SIGN
	DRAINAGE SWALE		TREE
STM	EXISTING STORM SEWER		
SAN	EXISTING SANITARY SEWER		
W	EXISTING WATER LINE		
FO	EXISTING FIBER OPTIC LINE		
GAS	EXISTING GAS LINE		
UGE	EXISTING UNDERGROUND ELECTRIC		
OHW	EXISTING OVERHEAD ELECTRIC		
CTV	EXISTING CABLE TV LINE		
T	EXISTING TELEPHONE LINE		
	PROPOSED STORM SEWER		
	PROPOSED SANITARY SEWER		
X	FENCE LINE		
	SAWCUT LINE		

AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

THE FOLLOWING UTILITIES HAVE BEEN LOCATED AND MEASURED AND THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS:

- STORM SEWERS, STORM SEWER LENGTHS, STORM SEWER PIPE SIZES, STORM SEWER FLOWLINES AND DEPTHS OF STORM SEWER STRUCTURES.
- SANITARY SEWERS, SANITARY SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES.
- FIRE HYDRANTS
- WATER VALVES
- LIGHT STANDARDS

ALL PUBLIC UTILITIES SHOWN HEREON AS BEING AS-BUILT ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS.

STATE OF MISSOURI
MARK E. COLLINS
NUMBER PE-2006000173
PROFESSIONAL ENGINEER
01-05-21
DIRECTOR OF PUBLIC WORKS

SIGNED: _____
P.E./L.S.
_____ DATE

City approval of any construction site plan does not mean that any building can be constructed on the lots without meeting the building setbacks as required by the zoning codes.

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, they shall make such changes at their 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 Inspector.

Lighting values will be reviewed on site prior to the final occupancy inspection.

VEGETATION ESTABLISHMENT For Urban Development Sites APPENDIX A

SEEDING RATES:

PERMANENT:
Tall Fescue - 150 lbs./ac.
Smooth Brome - 100 lbs./ac.
Combined - Fescue @ 75 lbs./ac. AND Brome @ 50 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 1000 sq. ft. (4,356 lbs. per ac.)

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

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

MISSOURI ONE CALL SYSTEM, INC. 811 OR 1-800-344-7483 STOP! CALL BEFORE YOU DIG!

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

*FIBER OPTICS ARE PRESENT

CITY OF O'FALLON
ENGINEERING DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: Jamie Greenlee DATE 01/11/2021
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

PROJECT TITLE:
TOMMY'S EXPRESS CAR WASH
101 FALLON LOOP RD.
O'FALLON MISSOURI 63368

Box Project # 96-67911A Issue Date: 12/11/2020

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

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.

REVISIONS

01/04/21	COMMENTS PER CITY

Developer / Owner:
DOWLING ENTERPRISES LLC - BILL DOWLING
5 BRIDLE LANE
FRONTENAC, MISSOURI 63131
314-614-4294

COVER SHEET

P+Z No. #19-009654
Approval Date: 11-7-19
City No. #

Page No.
1 of 16

LANDSCAPE LEGEND

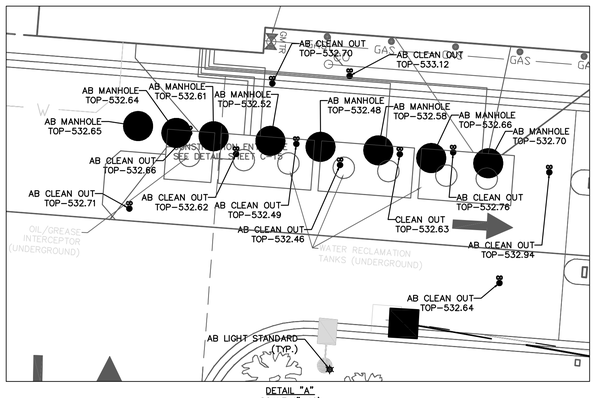
QTY. (13) ~	INDICATES EASTERN REDBUD (MATURE HEIGHT = 20–30 FT TALL) (MIN. 4" CALIPER & 8' IN HEIGHT)
QTY. (20) ~	INDICATES WINTERGREEN BOXWOOD (MATURE HEIGHT = 2–4 FT TALL)
QTY. (14) ~	INDICATES WHITEPINE (MINIMUM HEIGHT = 6 FT TALL)
QTY. (4) ~	INDICATES MORNING LIGHT TALL GRASS (MATURE HEIGHT = 4–6 FT TALL)

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

P.W.S.D. #2 NOTES

1. IT'S THE CONTRACTORS RESPONSIBILITY TO OBTAIN ANY CITY OR MODOT PERMITS REQUIRED TO WORK ALONG THE ROADWAYS
2. THE WATER DISTRICT REQUIRES ONE (1) WEEK NOTICE BEFORE THE START OF CONSTRUCTION.
3. THE PROPOSED FIRE HYDRANT ASSEMBLY MUST BE TESTED PER THE WATER DISTRICTS SPECIFICATIONS BEFORE IT WILL BE ALLOWED INTO SERVICE.
4. THE DEVELOPER WILL BE REQUIRED TO DEDICATE THE PROPOSED FIRE HYDRANT BY WAY OF BILL OF SALE AFTER THE TESTING IS COMPLETE.

ANY DAMAGED AREAS OF THE EXISTING SIDEWALK ALONG FALLON LOOP ROAD ARE REQUIRED TO BE UPGRADED/REPLACED INCLUDING EXISTING ACCESSIBLE RAMPS.



DETAIL "A"
SCALE 1"=10'

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- FIRE HYDRANTS
- WATER VALVES
- LIGHT STANDARDS

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SIGNED: _____
P.E./L.S.

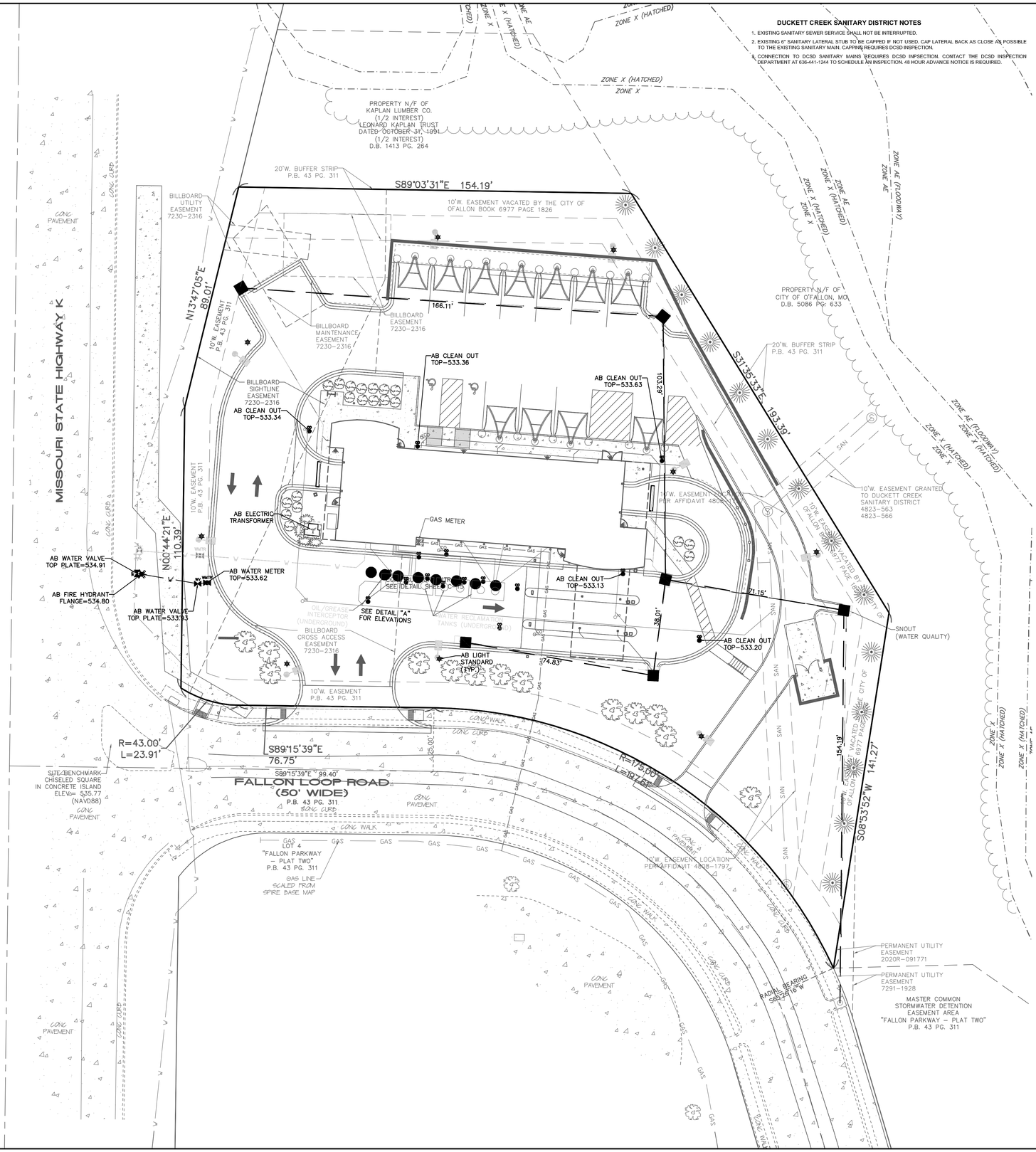
_____ DATE

STATE OF MISSOURI
MARK E. COLLINS
NUMBER PLS-2006000173
PROFESSIONAL LAND SURVEYOR
10-SEP-21

LEGEND

FLARED END SECTION	TREE
CURB/AREA INLET	BUSH
SANITARY SEWER MANHOLE	ROW MARKER
ELECTRIC BOX	BENCHMARK
TELEPHONE CABLE PEDESTAL	FOUND MONUMENT
TELEPHONE BOX	SET MONUMENT
ELECTRIC METER	CONCRETE
WATER METER	OVERHEAD UTILITIES
FIRE HYDRANT	BURIED GAS
SIGN	BURIED WATER
POWER POLE	SANITARY SEWER
LIGHT STANDARD	TELEPHONE VAULT

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.



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REVISIONS

01/04/21	COMMENTS PER CITY

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5 BRIDLE LANE
FRONTENAC, MISSOURI 63131
314-614-4294

FLAT PLAN

P+Z No. #19-009654
Approval Date: 11-7-19
City No. #

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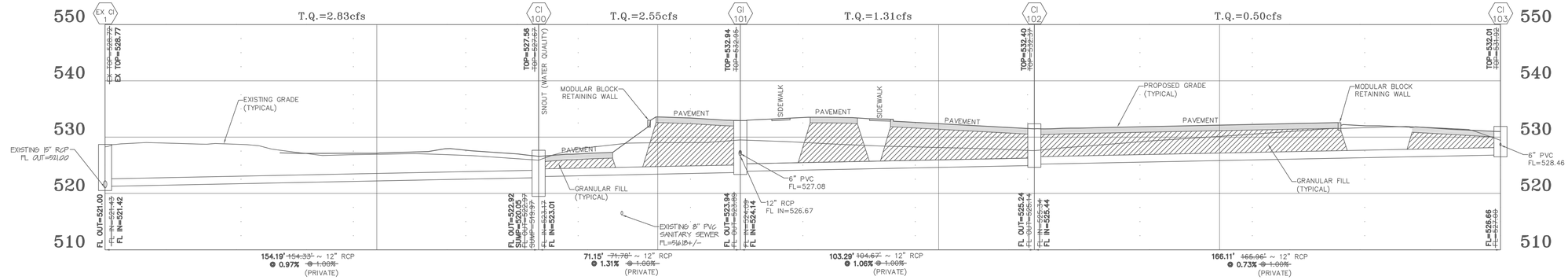
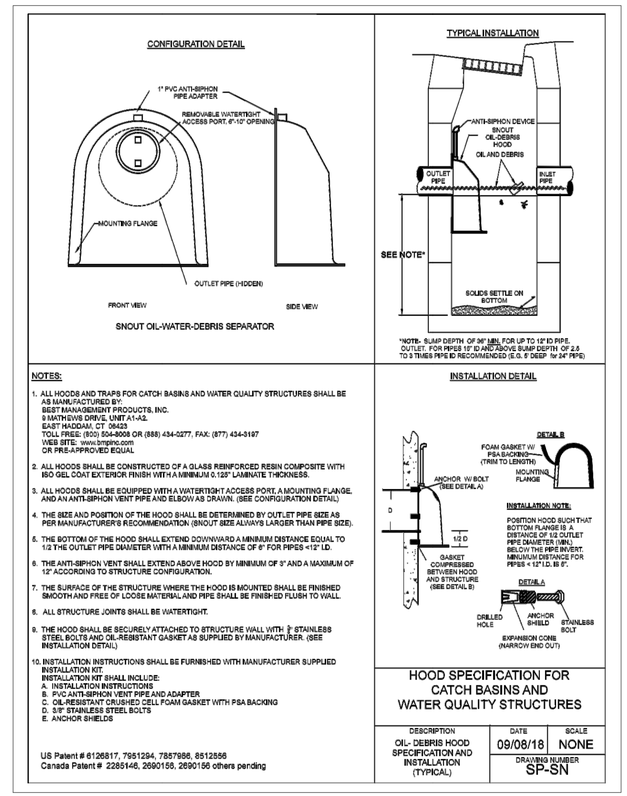
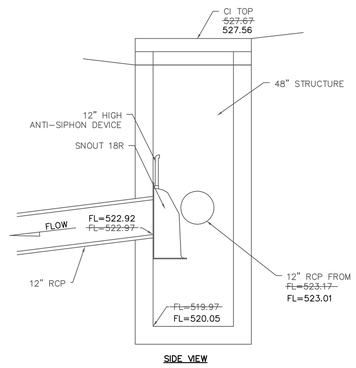


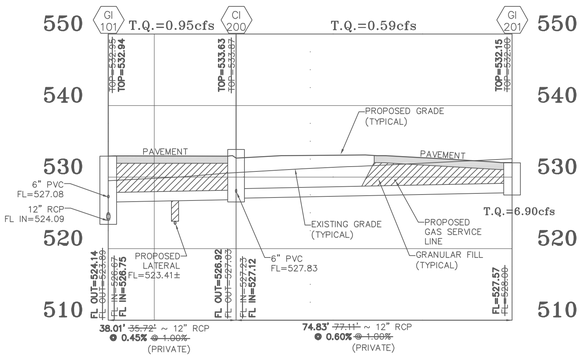
STORM SEWER PROFILE
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=10'



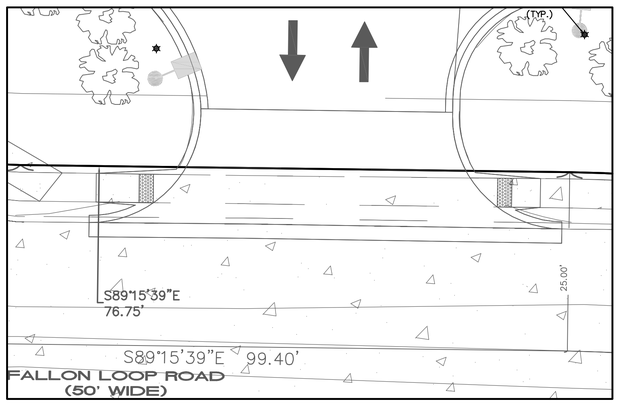


SNOUT DETAIL CI 100
NOT TO SCALE

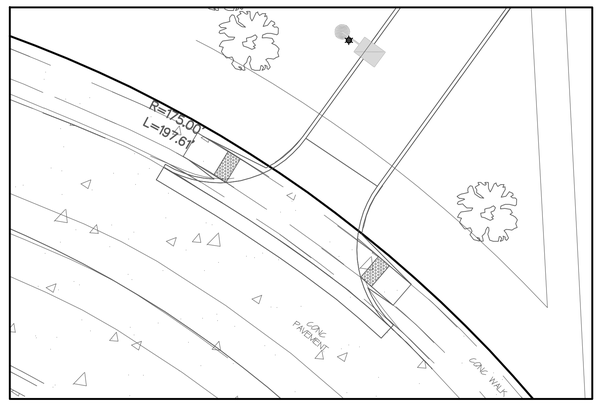
Snout Maintenance Recommendations:
1) Monthly monitoring for the first year of a new installation after the site has been stabilized is a recommended practice.
2) Measurements should be taken after each rain event of 0.5 inches or more, or monthly, as determined by local weather conditions.
3) Checking sediment depth and noting the surface pollutants in the structure will be helpful in planning maintenance.
4) The pollutants collected in SNOUT equipped structures will consist of floatable debris and oils on the surface of the captured water, and grit and sediment on the bottom of the structure.
5) It is best to schedule maintenance based on the solids collected in the sump.
6) Optimally, the structure should be cleaned when the sump is half full (e.g. when 2 feet of material collects in a 4 foot sump, clean it out).
7) Structures should also be cleaned if a spill or other incident causes a larger than normal accumulation of pollutants in a structure.
8) Maintenance is best done with a vacuum truck.
9) If Bio-Skirts are being used in the structure to enhance hydrocarbon capture, they should be checked on a monthly basis for the first year, and serviced or replaced when more than 2/3 of the boom is submerged, indicating a nearly saturated state. Assuming a typical pollutant-loading environment exists, Bio-Skirts should be serviced annually or replaced as necessary.
10) In the case of an oil spill, the structure should be checked and serviced and Bio-Skirts (if present) replaced or serviced immediately.
11) All collected wastes must be handled and disposed of according to local environmental requirements.
12) To maintain the SNOUT hoods, an annual inspection of the anti-siphon vent and access hatch are recommended. A simple flushing of the vent, or a gentle rodding with a flexible wire are all that's typically needed to maintain the anti-siphon properties. Opening and closing the access hatch once a year ensures a lifetime of trouble-free service.



STORM SEWER PROFILE
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=10'



MAIN ENTRANCE DETAIL
HORIZONTAL SCALE: 1"=10'



EXIT LANE ENTRANCE DETAIL
HORIZONTAL SCALE: 1"=10'

AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

THE FOLLOWING UTILITIES HAVE BEEN LOCATED AND MEASURED AND THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS:

- STORM SEWERS, STORM SEWER LENGTHS, STORM SEWER PIPE SIZES, STORM SEWER FLOWLINES AND DEPTHS OF STORM SEWER STRUCTURES.
- SANITARY SEWERS, SANITARY SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES.
- FIRE HYDRANTS
- WATER VALVES
- LIGHT STANDARDS

ALL PUBLIC UTILITIES SHOWN HEREON AS BEING AS-BUILT ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS.

SIGNED: _____
P.E./L.S.

_____ DATE

STATE OF MISSOURI
MARK E. COLLINS
NUMBER PLS-2006000173
PROFESSIONAL LAND SURVEYOR
10-25-21

PROJECT TITLE:
TOMMY'S EXPRESS CAR WASH
101 FALLON LOOP RD.
O'FALLON MISSOURI 63368

Bax Project # 96-879-11A Issue Date: 12/11/2020

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

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.

REVISIONS

01/04/21	COMMENTS PER CITY

Developer / Owner:
DOWLING ENTERPRISES LLC - BILL DOWLING
5 BRIDLE LANE
FRONTENAC, MISSOURI 63131
314-614-4294

STORM PROFILES, ENTRANCE DETAIL AND WATER QUALITY DETAILS

P+Z No. #19-009654
Approval Date: 11-7-19
City No. #

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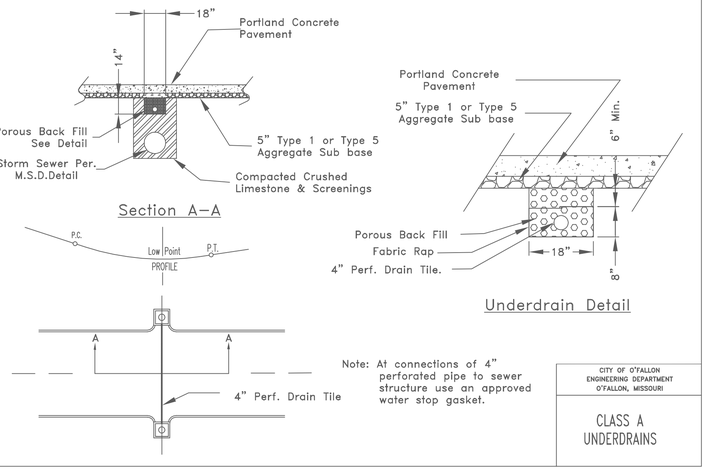


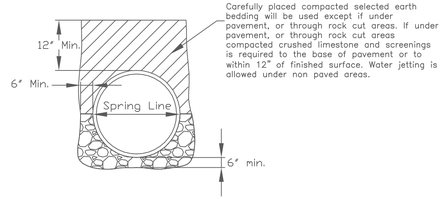
Note: At connections of 4" perforated pipe to sewer structure use an approved water stop gasket.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

CLASS A UNDERDRAINS

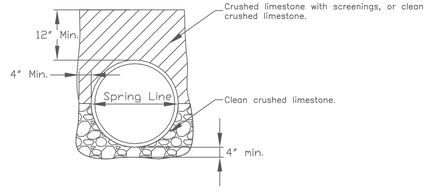
* All other Storm or Sanitary Sewer Details will be by M.S.D. Standards and Specifications.

** All inlets shall have 5/8" trash bar centered with the opening(s).



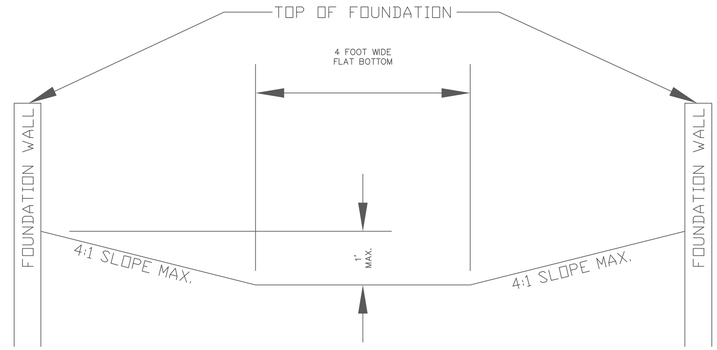
CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

STORM SEWER TRENCH DETAIL



CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

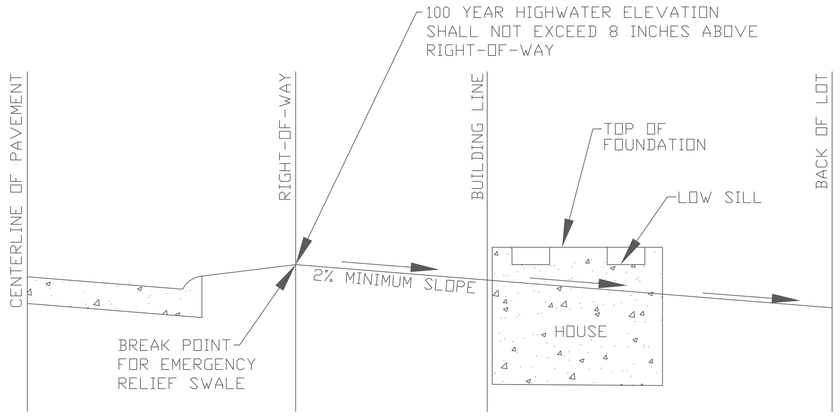
SANITARY SEWER TRENCH DETAIL



TYPICAL EMERGENCY RELIEF PATH SECTION

N.T.S.

NOTE:
THE 100 YEAR STORM WATER FLOW SHALL NOT EXCEED THE LOW SILL ELEVATION OF THE HOUSE OR WINDOW WELLS WILL BE REQUIRED.



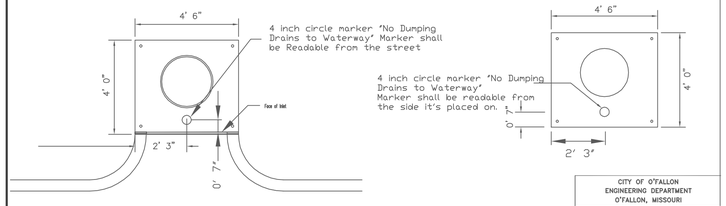
TYPICAL EMERGENCY RELIEF PATH PROFILE

N.T.S.

* The City of O'Fallon must be provided with a symbol/medallion for review and approval prior to installation. Contact the City if any information is needed.

Size	Style	Adhesive	Message (Part #)
3 7/8" TO 4"	Crystal Cap or Standard Style	Epoxy	No Dumping Drains to Waterway

City will also allow the precast inlet stone with a similar message as an approved alternate to the marker.



CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

STORM DRAIN MARKER LOCATION

Public or Private inlets

AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

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- WATER VALVES
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SIGNED: _____
P.E/L.S.

_____
DATE

STATE OF MISSOURI
MARK E. COLLINS
NUMBER PLS-2006000173
PROFESSIONAL LAND SURVEYOR
01-05-21

PROJECT TITLE:
TOMMY'S EXPRESS CAR WASH
101 FALLON LOOP RD.
O'FALLON MISSOURI 63368

Bax Project # 96-079H4 Issue Date: 12/11/2020

ENGINEERING
PLANNING
SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-5532
FAX 928-1718

REFERENCE DRAWINGS ONLY, LAND SURVEYORS SEAL DOES NOT APPLY TO THESE DETAILS

REVISIONS

01/04/21	COMMENTS PER CITY

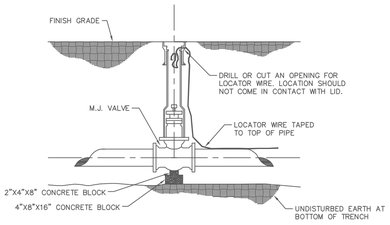
Developer / Owner:
DOWLING ENTERPRISES LLC - BILL DOWLING
5 BRIDLE LANE
FRONTENAC, MISSOURI 63131
314-614-4294

STORM AND SANITARY DETAILS

P+Z No. #19-009654
Approval Date: 11-7-19
City No. #

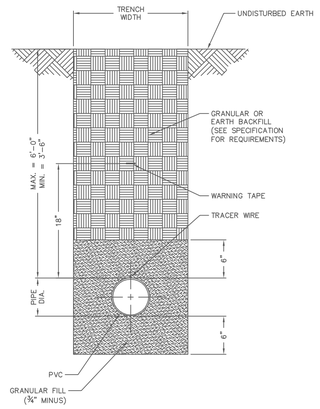
NOTE: THIS DETAIL IS FROM PWSD#2

Buffalo box is an acceptable product to use.
Tyler 562–S and 564–S are acceptable products.



GATE VALVE DETAIL
NOT TO SCALE
DETAIL "D"

NOTE: THIS DETAIL IS FROM PWSD#2

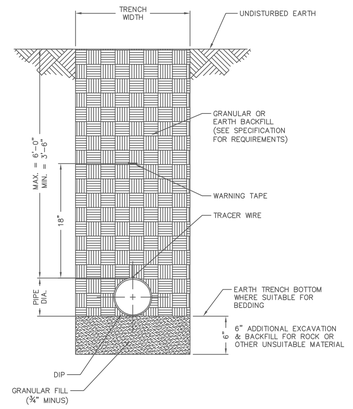


NOTES

1) SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR BEDDING AND BACKFILL.

TYPICAL TRENCH SECTION
FOR PVC PIPE
NOT TO SCALE
DETAIL "A"
PAGE 1 OF 2

NOTE: THIS DETAIL IS FROM PWSD#2



NOTES

1) POLYWRAP REQUIRED FOR DUCTILE IRON PIPE
2) SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR BEDDING AND BACKFILL.

TYPICAL TRENCH SECTION
FOR DUCTILE IRON PIPE
NOT TO SCALE
DETAIL "A"
PAGE 2 OF 2

TYPICAL WATER AND SEWER SEPARATION
NOT TO SCALE

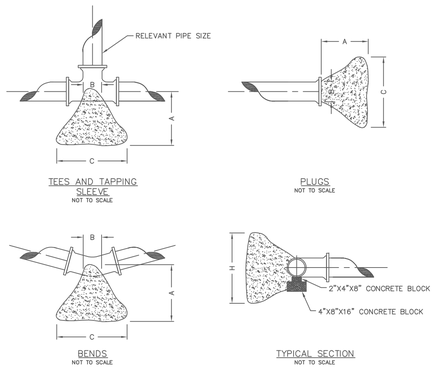
CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

WATER AND SEWER SEPARATION DETAIL

Ductile Iron Pipe installation shall follow the Ductile Iron Research Association (DIPRA) guide line.

The Installation of PVC Pipe shall follow the Uni–Bell PVC Pipe Association Handbook of PVC Design and Construction.

NOTE: THIS DETAIL IS FROM PWSD#2



THRUST BLOCK DIMENSIONS - INCHES

PIPE DIA.	ALL FTGS.		TEE PLUG TAPPING		90 DEGREE BEND		45 DEGREE BEND		22-1/2 BEND		11-1/4 BEND	
	A	B	C	H	C	H	C	H	C	H	C	H
4	14	4	24	12	26	15	18	12	12	12	12	12
6	16	6	36	18	36	24	30	18	24	12	12	12
8	20	8	36	30	42	36	36	24	24	18	18	12
10	20	10	48	36	66	36	36	36	28	24	18	18
12	24	12	68	36	82	42	52	36	40	24	28	18

NOTE

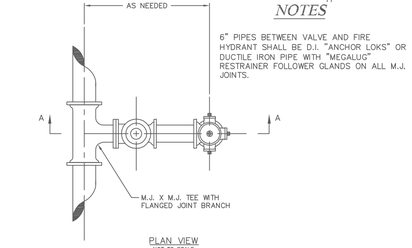
FOR FITTINGS LARGER THAN 12", SPECIAL RESTRAINT DESIGNS ARE REQUIRED.

HORIZONTAL THRUST BLOCKING
DETAIL "C"

NOTE: THIS DETAIL IS FROM PWSD#2

NOTES

6" PIPES BETWEEN VALVE AND FIRE HYDRANT SHALL BE D.I. "ANCHOR LOKS" OR DUCTILE IRON PIPE WITH "MEGALUG" RESTRAINER FOLLOWER GLANDS ON ALL M.J. JOINTS.

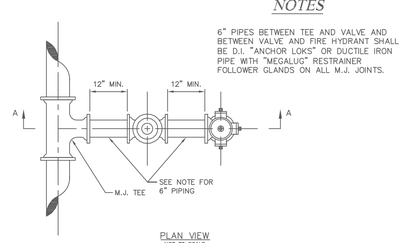


FIRE HYDRANT DETAIL
DETAIL "B"
PAGE 1 OF 3

NOTE: THIS DETAIL IS FROM PWSD#2

NOTES

6" PIPES BETWEEN TEE AND VALVE AND BETWEEN VALVE AND FIRE HYDRANT SHALL BE D.I. "ANCHOR LOKS" OR DUCTILE IRON PIPE WITH "MEGALUG" RESTRAINER FOLLOWER GLANDS ON ALL M.J. JOINTS.



FIRE HYDRANT DETAIL
DETAIL "B"
PAGE 2 OF 3

NOTE: MODIFIED DETAIL FROM PWSD#2

FIRE HYDRANT LOCATION
NOT TO SCALE

FIRE HYDRANT DETAIL
DETAIL "B"
PAGE 3 OF 3

PROJECT TITLE:
TOMMY'S EXPRESS CAR WASH
101 FALLON LOOP RD.
O'FALLON MISSOURI 63368

Box Project # 96-879H-1A Issue Date: 12/11/2020

ENGINEERING PLANNING SURVEYING
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St. Charles, MO 63301
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FRONTENAC, MISSOURI 63131
314-614-4294

WATER DETAILS

P+Z No. #19-009654
Approval Date: 11-7-19
City No. #

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