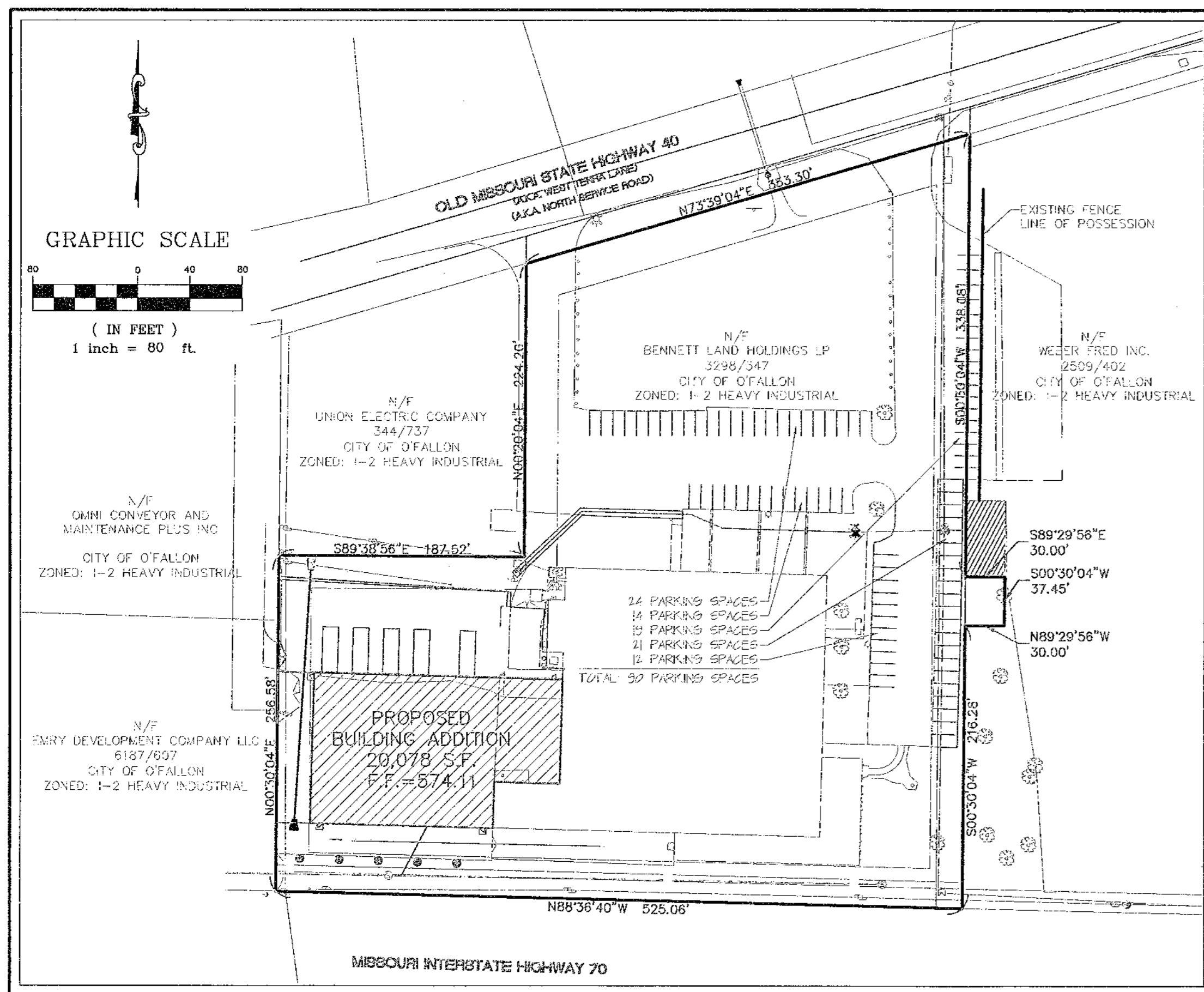
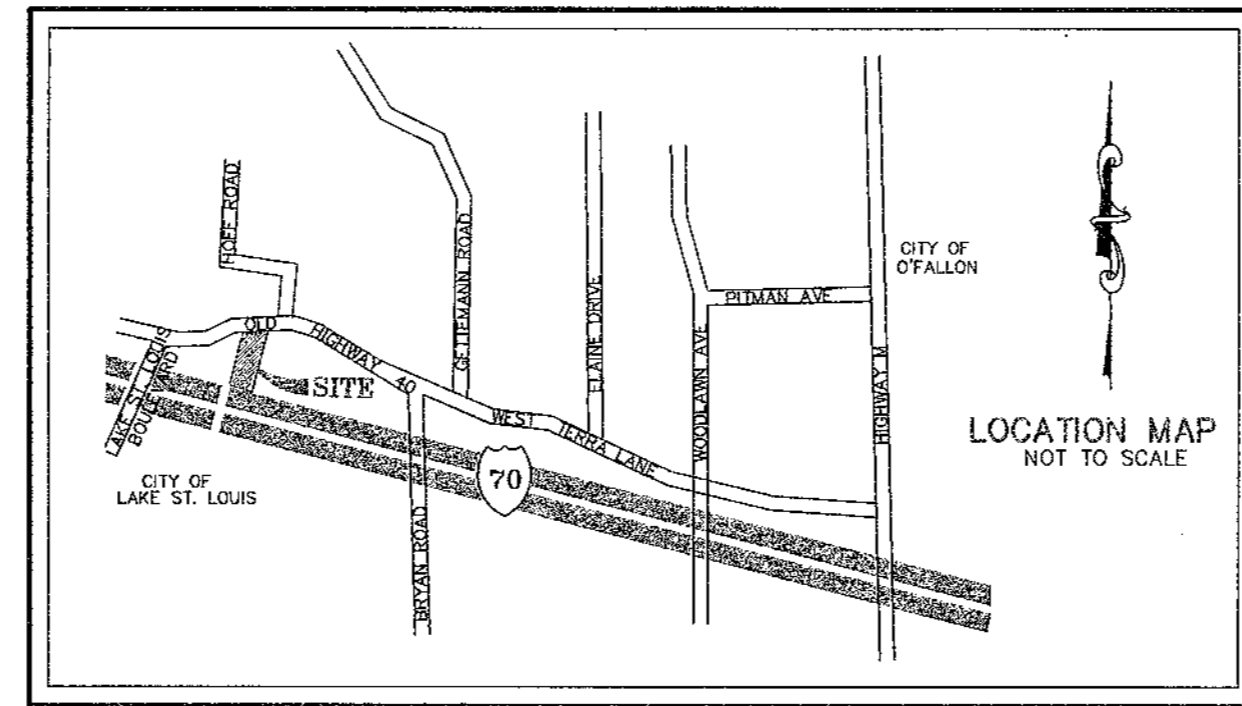


A SET OF AS-BUILT PLANS FOR C. Bennett Building Addition

A TRACT OF LAND BEING PART OF U.S. SURVEY 1780
TOWNSHIP 47 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN
CITY OF O'FALLON
ST. CHARLES COUNTY, MISSOURI



Plan View



LOCATION MAP
NOT TO SCALE

Drawing Index

- 1 COVER SHEET
- 2 NOTES
- 3 DEMOLITION PLAN
- 4 SITE PLAN
- 5 GRADING PLAN
- 6 EXISTING DRAINAGE AREA MAP
- 7 PROPOSED DRAINAGE AREA MAP
- 8 DETAILS

Development Notes:

1. AREA OF TRACT: 5.31 ACRES
0.99 ACRES (DISTURBED)
2. THIS PROPERTY IS A PART OF THE PROPERTY REFERENCED AS PARCEL I.D. NUMBER 4-0053-1780-00-0010.1000000 OF THE ST. CHARLES COUNTY ASSESSOR'S OFFICE.
3. EXISTING ZONING: I-2 HEAVY INDUSTRIAL DISTRICT, CITY OF O'FALLON
4. PROPOSED USE: BUILDING ADDITION
5. OWNER: BENNETT LAND HOLDINGS L.P.
1700 WEST TERRA LANE
O'FALLON, MO 63366
6. SITE COVERAGE:
SITE = 231,222 SQ. FT. (5.31 ACRES)
TOTAL BUILDING = 67,235 SQ. FT. = 29%
PROPOSED PAVEMENT = 74,608 SQ. FT. = 32%
PROPOSED GREENSPACE = 89,378 SQ. FT. = 39%
7. WE HAVE DETERMINED THE HORIZONTAL LOCATION OF THIS TRACT OF LAND IN ST. CHARLES COUNTY, MISSOURI, BY SCALING THE PROPERTY IN REFERENCE TO THE FOLLOWING FLOOD INSURANCE RATE MAP (FIRM), ST. CHARLES COUNTY, MISSOURI AND INCORPORATED AREAS, MAP NUMBER 29183C0220G DATED: JANUARY 20, 2016 THIS PROPERTY LIES IN ZONE "X".

ZONE X - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

Legend

40000	EXISTING LABELS	EXIST. SINGLE CURB INLET
60000	PROPOSED LABELS	EXIST. AREA INLET
CI	SINGLE CURB INLET	PROPOSED SINGLE CURB INLET
DCI	DOUBLE CURB INLET	PROPOSED AREA INLET
AI	AREA INLET	PROPOSED GRATE INLET
DAI	DOUBLE AREA INLET	EXIST. SANITARY MANHOLE
GI	GRATE INLET	EXIST. STORM MANHOLE
DGI	DOUBLE GRATE INLET	PROPOSED MANHOLE
MH	MANHOLE	POWER POLE
FE	FLARED END SECTION	GUY WIRE
EP	END PIPE	LIGHT STANDARD
CP	CONCRETE PIPE	FIRE HYDRANT
RCP	REINFORCED CONCRETE PIPE	WATER METER
CMP	CORRUGATED METAL PIPE	WATER VALVE
CPP	CORRUGATED PLASTIC PIPE	GAS VALVE
PVC	POLY VINYL CHLORIDE (PLASTIC)	TELEPHONE PEDESTAL
CO	CLEAN OUT	SIGN
.....	SLOPE LIMITS	TREE
---	DRAINAGE SWALE	TO BE REMOVED
---	EXISTING STORM SEWER	USE IN PLACE
---	EXISTING SANITARY SEWER	
---	EXISTING WATER LINE	
---	EXISTING FIBER OPTIC LINE	
---	EXISTING GAS LINE	
---	EXISTING UNDERGROUND ELECTRIC	
---	EXISTING OVERHEAD ELECTRIC	
---	EXISTING CABLE TV LINE	
---	EXISTING TELEPHONE LINE	
---	PROPOSED STORM SEWER	
---	PROPOSED SANITARY SEWER	
---	FENCE LINE	
---	SAWCUT LINE	

Utility Contacts

Sanitary Sewer
City of O'Fallon
100 N. Main St.
O'Fallon, MO 63366
Contact: 636-281-2858

Water
Public Water Supply District No. 2
P.O. Box 967
O'Fallon, MO 63366
636-561-3737 Ext. 131

Electric
Ameren UE
200 Collohan Road
Wentzville, MO 63385
636-639-8312

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

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

Charter Communications
941 Charter Commons
Town & Country, MO 63017
636-387-6633

Fire Department
O'Fallon Fire Protection District
119 E. Elm St.
O'Fallon, MO 63366
636-272-3493

Landscape Legend

	QTY. (5) PINK PRINCESS CRABAPPLE	MALUS "PARRISI"	MINIMUM 2-1/2" CALIPER
ALL TREES SHALL BE DECIDUOUS AT MIN. CALIPER MEASURED 1 FOOT ABOVE GRADE AT 2.5 INCHES. LANDSCAPING AS DEPICTED IS SUBJECT TO FINAL DESIGN BY A QUALIFIED LANDSCAPE DESIGNER			

Conditions of Approval From Planning and Zoning

1. A photometric plan shall be provided before Construction Plan approval.
2. Provide a calculation to ensure that the metal accents make up no more than 75% of the new building facade fronting I-70.
3. Provide a parking calculation for the entire building.
4. Fabric will not be permitted as a screening method on the fencing.
5. An offsite construction easement will be required for the proposed paving work done offsite.
6. The applicant shall abide by the Municipal Code Requirements listed above.

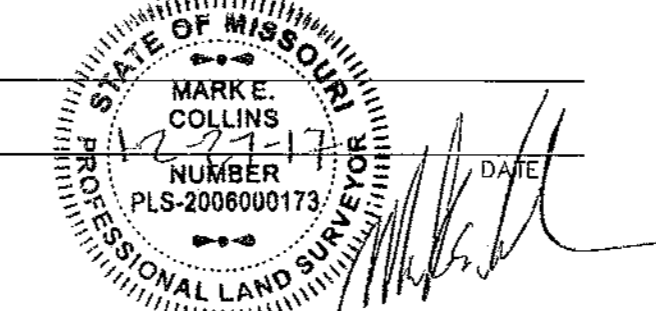
AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

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.
- FIRE HYDRANTS
- WATER VALVES

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

SIGNED:
P.E./L.S.



CITY OF O'FALLON
COMMUNITY DEVELOPMENT DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: *Janice Shultz* DATE: 01/16/2018
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

* 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 5.31 acres.
The area of land disturbance is 0.99 Acres
Number of proposed lots is one.

Building setback information: Front = 30 feet
Side = 25 feet
Rear = 50 feet

Minimum Lot Width = 75 feet
Minimum Lot Area = 5 acres, unless Industrial District
Maximum Lot Coverage = 50% by structure
Maximum Height = 50 feet

* The estimated sanitary flow in gallons per day is 1,125

* Parking calculations
Warehouse & Storage Facility: 1 space per employee
1 space per 1,000 sq. ft. floor area
Office: 1 space per 300 sq. ft. floor area

11 employees x 1 space = 11 spaces
62,400 sq. ft./1,000 sq. ft. X 1 space = 63 spaces
4,800 sq. ft./300 sq. ft. X 1 space = 16 spaces

Required parking spaces = 90 spaces
Provided parking spaces = 90 spaces (existing)

Loading Spaces: 1 space for gross floor area exceeding 5,000 sq. ft. and
1 space per additional 20,000 sq. ft. gross floor area
1 space + (57,800 sq. ft. - 5,000 sq. ft.)/20,000 sq. ft. x 1 space = 4 spaces

Required loading spaces = 4 spaces
Provided loading spaces = 5 spaces

* Tree preservation calculations
Tree Preservation Requirements: 20% of existing trees or 15 trees per acre (whichever is greater) shall be preserved.
No existing trees within developed area. No tree preservation provided.

* Landscaping Requirements:

1 tree per 40 feet street frontage
164.84 feet developed street frontage/40 feet x 1 tree
Required Trees = 5 trees
Provided Trees = 5 trees

Benchmarks Project

RM45 ELEV. 526.16
CHISELED SQUARE ON THE SOUTHEAST WINGWALL OF THE LAKE ST. LOUIS BOULEVARD BRIDGE OVER THE SPILLWAY OF LAKE ST. LOUIS.

Site

ELEV 545.65
"O" IN OPEN ON TOP OF FIRE HYDRANT AT THE NORTHEAST CORNER OF THE ADJACENT PROPERTY.

Grading Quantities:

1300 C.Y. CUT (INCLUDES SUBGRADE)
400 C.Y. FILL (INCLUDES 8% SHRINKAGE)
900 C.Y. SHORT

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

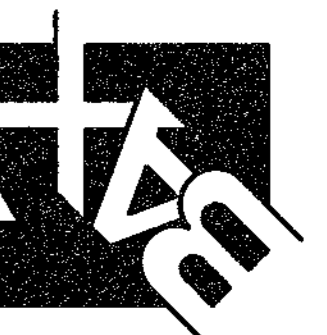


CALL BEFORE
YOU DIG!
1-800-DIG-RITE

City approval of any construction site plans 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 improvement 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.

PROJECT TITLE:
AS-BUILT PLANS FOR
C. BENNETT BUILDING
ADDITION
1700 W. TERRA LANE
O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366
Bax Project # 03-12266C Issue Date: 12/01/2017

ENGINEERING
PLANNING
SURVEYING



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

Bax Engineering Company, Inc.
Missouri State Certificate of Authority
Engineering #00025
Missouri State Certificate of Authority
Surveying #000144

REVISIONS	

Developer / Owner:
SHOCKLEY COMMERCIAL
501 FIRST CAPITOL DRIVE, SUITE 5
ST. CHARLES, MISSOURI 63301
(636) 946-9753
COVER SHEET

P+Z No. #4503.01.03
Approved 07-07-16
City No. #16-010181
Page No. 1 of 8

COMMERCIAL

GENERAL NOTES

- GN # 1 Driveway locations shall not interfere with the sidewalk handicap ramps, or curb inlet ramps
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 per pavement details.
GN # 4 Any proposed pavilions or playground areas will need a separate permit from the Building Division.
GN # 5 The Contractor is responsible to call Missouri One Call and The City of O'Fallon for the location of utilities.
GN # 6 All proposed utilities and/or utility relocations shall be located underground.
GN # 7 All proposed fencing requires a separate permit through the Planning and Development Division.
GN # 8 All construction operations and work zone traffic control within the right of way will follow MoDOT or M.U.T.C.D. standards whichever is more stringent.
GN # 9 All free standing signs shall be located a minimum of ten (10) feet away from any right of way line and/or property line and a minimum of three (3) feet from the back of curbing or sidewalk.
GN # 10 All subdivision identification or directional sign(s) must have the locations and sizes approved and permitted separately through the Planning and Development Division.
GN # 11 Materials such as trees, organic debris, rubble, foundations, and other deleterious material shall be removed from the site and disposed of in compliance with all applicable laws and regulations.
GN # 12 Twenty-four (24) hours prior to starting any of the work covered by the above plans and after approval thereof, the developer shall make arrangements with the Construction Inspection Office to provide for inspection of the work, sufficient in the opinion of the City Engineer, to assure compliance with the plans and specifications as approved.
GN # 13 The City Engineer or their duly authorized representative shall make all necessary inspections of City infrastructure, escrow items or infrastructure located on the approved plans.

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 (possible methods of control are detailed in the plan).
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.
EN # 4 This development is required to provide long term post construction BMP's such as: low impact design, source control and treatment controls that protects water quality and controls run off to maximum extent practical in compliance with Phase III Illicit Storm Water Discharge Guidelines.
EN # 5 Graded areas shall be seeded and mulched (strawed) within 14 days of stopping land disturbance activities.

Grading Notes

- GRN #1 Developer must supply City construction inspectors with soil reports prior to and during site grading. 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-1157) or from a minimum of 95% as determined by the "Standard Proctor Test ASSHTO T-99, Method C" (A.S.T.M.-D-698).
GRN #2 All fill placed in areas other than proposed storm sewers, sanitary sewers, proposed roads, and paved areas shall be compacted from the bottom of the fill up in 8" lifts and compacted to 90% maximum density as determined by Modified AASHTO T-180 compaction test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99.
GRN #3 The surface of the fill shall be finished so it will not impound water.
GRN #4 All sediment and detention basins are to be constructed during the initial phase of the grading operation or in accordance with the approved SWPPP.
GRN #5 When grading operations are complete or suspended for more than 14 days, permanent grass must be established at sufficient density to provide erosion control on site.
GRN #6 No slopes shall exceed 3 (horizontal): 1 (vertical) unless otherwise approved by the soils report and specifically located on the plans and approved by the City Engineer.
GRN #7 All low places whether on site or off shall be graded to provide drainage with temporary ditches.
GRN #8 All existing wells on site shall be capped per DNR standards.

Grading Notes Continued

- GRN #10 All trench back fills under paved areas shall be granular back fill, and compacted mechanically. All other trench back fills may be earth material (free of large clods, or stones) and compacted using either mechanical or water jetting.
a) Depth, Trench back fills less than 8 feet deep shall be probed to a depth extending half the depth of the trench back fill, but not less than 3 feet.
b) Equipment, The jetting probe shall be a metal pipe with an interior diameter of 1.5 to 2 inches.
c) Method, Jetting shall be performed from the lowest surface topographic point and proceed toward the highest point, and from the bottom of the trench back fill toward the surface.
d) Surface Bridging, The contractor shall identify the locations of the surface bridging (the tendency for the upper surface to crust and arch over the trench rather than collapse and consolidate during the jetting process).
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.
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.

Sanitary Sewer Notes

- SAN # 1 All sanitary 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.
SAN # 2 Brick shall not be used in the construction of sanitary sewer structures.
SAN # 3 Connections at all sanitary structures are to be made with A- Lock joint or equal
SAN # 4 All sanitary laterals shall be a minimum of 4" residential, 6" commercial diameter pipe.
SAN # 5 All sanitary mains shall be a minimum of 8" diameter pipe.
SAN # 6 All sanitary sewer line with a slope greater than 20% will require concrete cradle or concrete collar.
SAN # 7 All manholes built within the 100 year flood plain must have lock type watertight manhole covers.
SAN # 8 All sanitary sewer mains must have a minimum of 42" cover.
SAN # 9 When sanitary mains cross over storm line the sanitary main must be ductile iron pipe for 10 feet on each side of the crossing.
SAN # 10 Encase with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches above sanitary sewer.
SAN # 11 The sanitary sewers should run diagonally through the side yards to minimize any additional utility easements required.
SAN # 12 All sanitary sewer structures shall be waterproofed on the exterior in accordance to Missouri DNR specifications 10CSR-8.120 (7)(E).
SAN # 13 All sanitary sewer pipe shall be SDR35 or equal.
SAN # 14 All sanitary sewer manholes and pipes will be tested to the following specifications.
SAN # 15 Add 1" minus rock back fill to all sanitary sewer and all other utilities that lie within the 1:1 shear plane of the road.

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.
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.
STM # 4 HDPE pipe is to be N-12WT or equal and to meet ASTM F1417 water tight field test.
STM # 5 Encase with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches above sanitary sewer.
STM # 6 The storm sewers should run diagonally through the side yards to minimize any additional utility easements required.
STM # 7 All concrete pipes will be installed with O-ring rubber type gaskets.
STM # 8 Connections at all storm structures are to be made with A-lock joint or equal.
STM # 9 Pre cast concrete inlet covers are not to be used.
STM # 10 The swale in the detention basins shall have a minimum 1% longitudinal slope and be lined with a permanent erosion control blanket that will allow infiltration of storm water.
STM # 11 All storm sewer shall be reinforced concrete pipe or H.D.P.E. pipe. All structures and flared end sections must be concrete.
STM # 12 The discharge point of all flared end sections shall be protected by rip rap or other approved means.
STM # 13 Rip rap shown at flared end sections will be evaluated in the field by the Engineer, Contractor, and City Inspectors after installation for effectiveness and field modified, if necessary to reduce erosion on and off site.
STM # 14 Add 1" minus rock back fill to all storm sewer that lie within the 1:1 shear plane of the road.

Water Notes

- WN # 1 Fire hydrants shall be a maximum of 600' apart. Local fire district approval is required.
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.
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
WN # 6 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.
WN # 7 PRESSURE TESTING:
Immediately following disinfection, the piping shall be pumped to a pressure (at the lowest point in the project) of 150 psi or higher where the working pressure is higher than 150 PSI or determined by the City. In such cases, the pressure shall be as specified by the City and two pressure tests shall be conducted.
WN # 8 All tops for valves, meters, and manholes are to be constructed to within 1 inch (0.08") of finish grade.

Water Notes

- WN #10 BACTERIOLOGICAL TESTING:
After satisfactory disinfection and pressure testing, a sample shall be taken by the contractor in the presence of a City representative and submitted to a laboratory approved by the Missouri Department of Natural Resources and the City for bacteriological analysis.
After 24 hours, a second sample shall be taken in a like manner and submitted for analysis. The two samples taken on consecutive days a minimum of 24 hours apart, must be found to be "safe" by the testing laboratory, and copies of the test results must be supplied to the City.

Roadway Notes

- RN # 1 All paving (public and private) 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.
RN # 5 Type C (BP-1) Compaction requirements shall be 98% minimum density according to St. Charles Co. Standard Specifications.
RN # 6 Provide pavement striping at any point where the multi-use trail crosses existing or proposed pavement
RN # 7 All street sub-outs over 250' in length will require a temporary turnaround.
RN # 8 All sub grade in cut or fill will need to conform to the City of O'Fallon Compaction requirements
RN # 9 Material Testing And Frequency. Materials for construction shall be tested and inspected per the appropriate ASTM code or at the City Engineer's discretion.
1. Concrete.
a. Cylinders/compressive strength. One (1) set of four (4) cylinders within the first fifty (50) cubic yards and one (1) set per one hundred (100) cubic yards thereafter.
b. Percent air and temperature. First (1st) truck batch each day and two (2) thereafter until a consistency is encountered.
c. Slump. First (1st) truck batch each day and two (2) thereafter until a consistency is encountered.
d. If concrete is batched from more than one (1) plant, then the aforementioned guidelines will be applicable to each plant.
2. Sub grade and base.
a. Proof roll as described in Section 405.210(B).
b. One (1) compaction test per two hundred fifty (250) feet of mainline paving, three (3) tests per intersection, five (5) tests within cut-de-sacos and one (1) test per repair slab.
c. Gradation test for sub base material.
3. Asphalt.
a. One (1) set of compaction tests per two hundred fifty (250) feet of mainline. One (1) set includes three (3) tests across the paved lane at the same station.
b. One (1) bulk density test per paving operation.
RN # 10 Approval Of Sub grade And Base (Sub base). The City Engineer or representative shall approve the sub grade before any base is placed thereon and shall approve the base before concrete or surface course is placed.
RN # 11 In all fill areas in the roadways, soil tests shall be submitted and approved by the City Engineer for each foot of fill and at least one (1) test and an average of one (1) test within every two hundred fifty (250) feet.
RN # 12 No traffic will be allowed on new concrete pavement until it has cured for seven (7) days and it reaches three thousand five hundred (3,500) psi within 28 days.
RN # 13 Prior to placement of aggregate base material on sub grade and prior to placement of pavement on base material, the sub grade and base must be proof-rolled with a fully loaded (ten (10) ton load) tandem truck or equivalent tire vehicle with one (1) pass down each driving lane no faster than three (3) miles per hour.
RN # 14 Sub grade and base beneath pavements shall be compacted to St. Charles County Highway Department specifications.
RN # 15 The entire width and length will conform to line, grade and cross section shown on the plans or as established by the engineer.
RN # 16 Utility Work Prior To Base Construction. No base course work may proceed on any street until all utility excavations (storm and sanitary sewers, water, gas, electric, etc.) have been properly back filled with granular material, crushed stone or gravel mechanically tamped in ten (10) inch lifts.
RN # 17 Equipment calibration. The developer's contractors and subcontractors must have their equipment calibrated by the following minimum standards.
a. Air meter--weekly.
b. Cylinder compression--annually by independent calibration service.
c. Batch scales--monthly.
d. Nuclear testing devices--every six (6) months.
e. Proctor equipment--every six (6) months.
f. Slump cone--monthly.
RN # 18 All permanent traffic control will be per M.U.T.C.D. or MoDot standards.
RN # 19 All traffic signals, street signs, sign post, backs and bracket arms shall be painted black using Carboline Rust Bond Penetrating Sealer SG and Carboline 133 HB paint (or equivalent as approved by City of O'Fallon and MoDOT).

Flood plain Information

- FP # 1 A flood plain development application from the City is required for any work within the flood plain limits.

Retaining Walls: Terraced and Vertical

- RW # 1 A permit is required for all retaining walls that are 48 inches or taller 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.

PROJECT TITLE: AS-BUILT PLANS FOR C. BENNETT BUILDING ADDITION
221 Point West Blvd. St. Charles, MO 63301
636-928-6562 FAX 636-928-1718
OFALLON, ST. CHARLES COUNTY, MISSOURI, 63396
Box Project # 03-12266C Issue Date: 12/01/2017



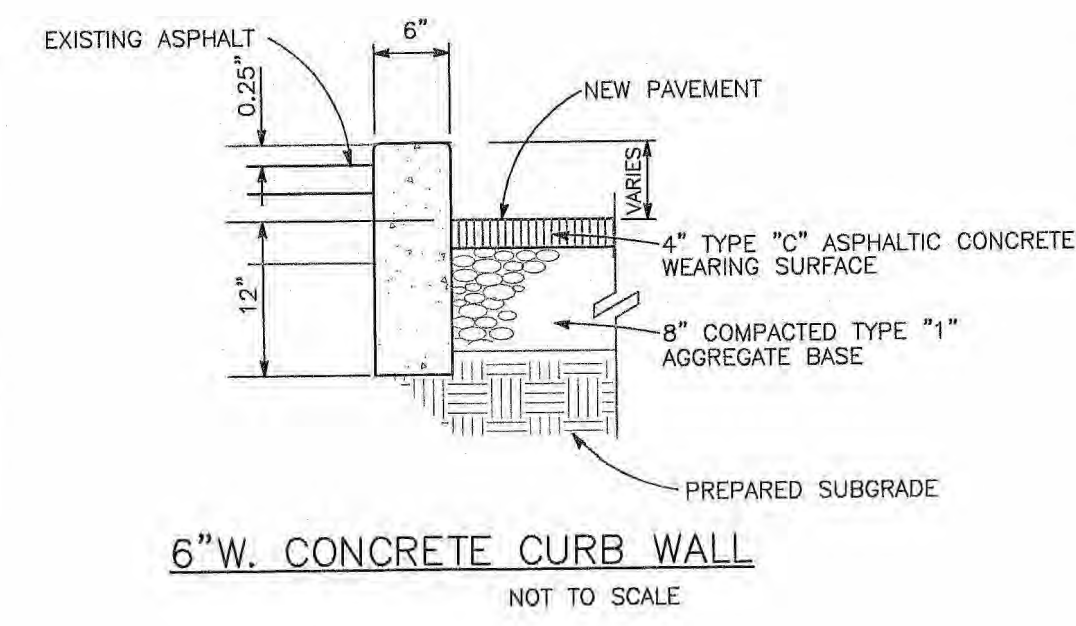
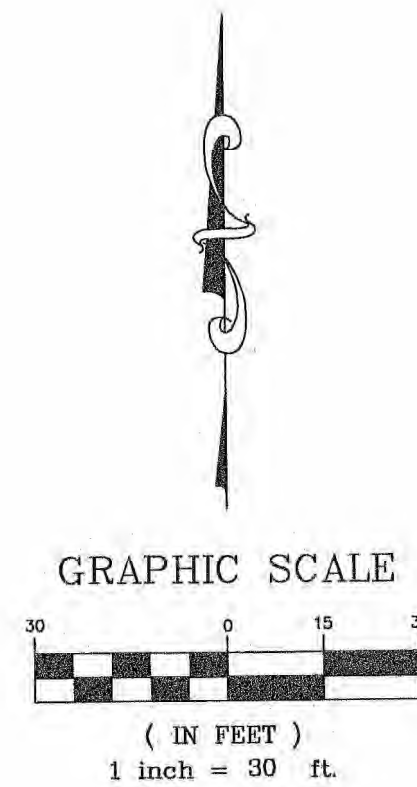
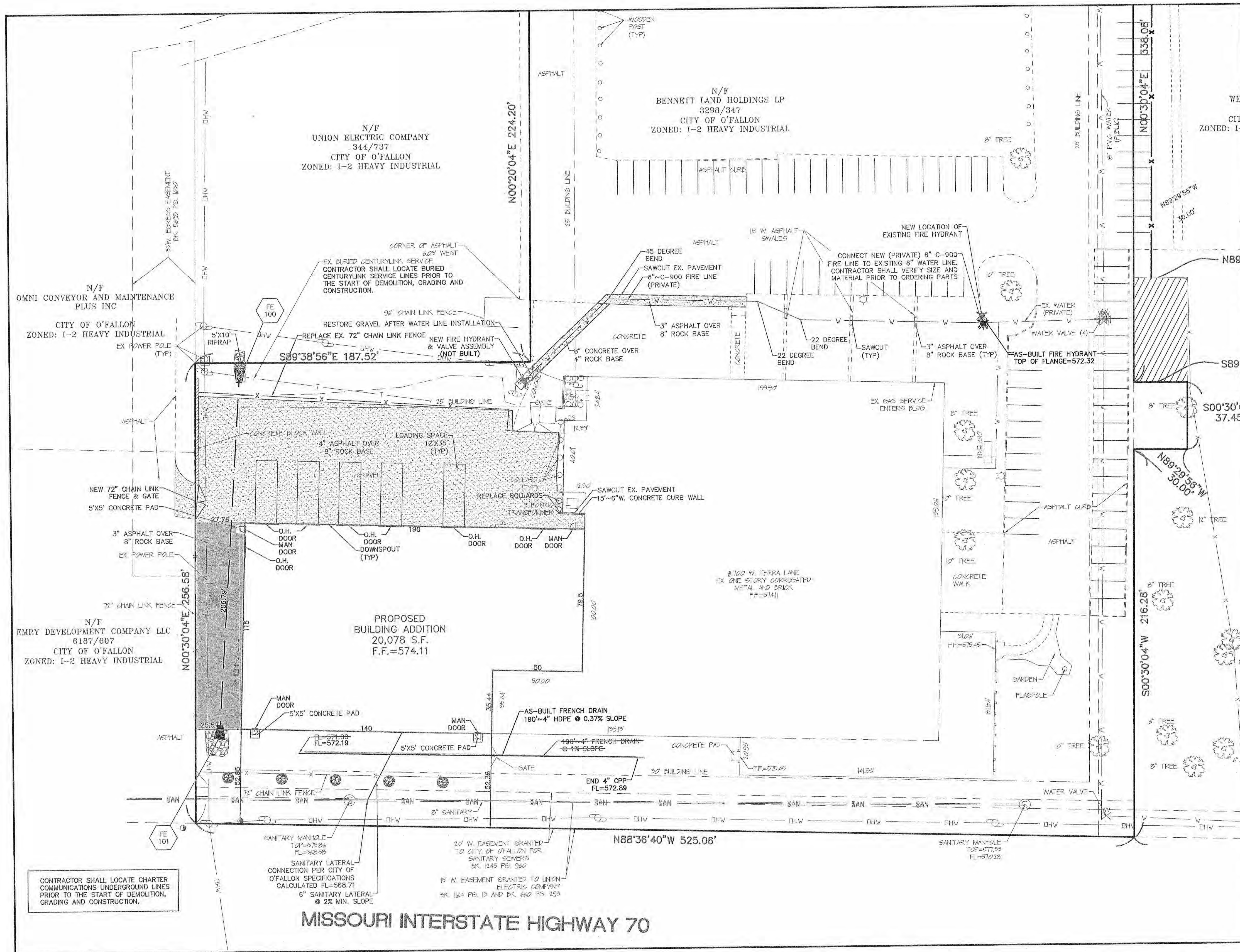
DISCLAIMER OF RESPONSIBILITY: I hereby certify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments existing or intended to be used for any part or parts of the architectural or engineering project or survey.

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

Table with 2 columns: REVISIONS, and empty rows for revision tracking.

Developer / Owner: SHOCKLEY COMMERCIAL 501 FIRST CAPITOL DRIVE, SUITE 5 ST. CHARLES, MISSOURI 63301 (636) 946-9753

P+Z No. #4503.01.03 Approved 07-07-16
City No. #16-010181
Page No. 2 of 8



AS-BUILT SUMMARY TABLE

AS-BUILT ITEM	TYPE	SIZE	LN. FT.	QTY.
WATER MAIN	HDPE	6"	XXX'	1
STORM SEWER MAIN	RCP	12"	206.79'	1
STORM FLARED END SECTION	-	-	-	2
WATER VALVES	-	-	-	0
FIRE HYDRANTS	-	-	-	2

AS-BUILT LEGEND

- AS-BUILT STORM FLARED END
- AS-BUILT FIRE HYDRANT

PROJECT TITLE:
AS-BUILT PLANS FOR
C. BENNETT BUILDING
ADDITION
 1700 W. TERRA LANE
 O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366
 Bax Project # 03-12266C Issue Date: 12/01/2017

ENGINEERING
PLANNING
SURVEYING
 221 Point West Blvd.
 St. Charles, MO 63301
 636-998-5562
 FAX 636-998-1718

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.

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

REVISIONS

NO.	DATE	DESCRIPTION

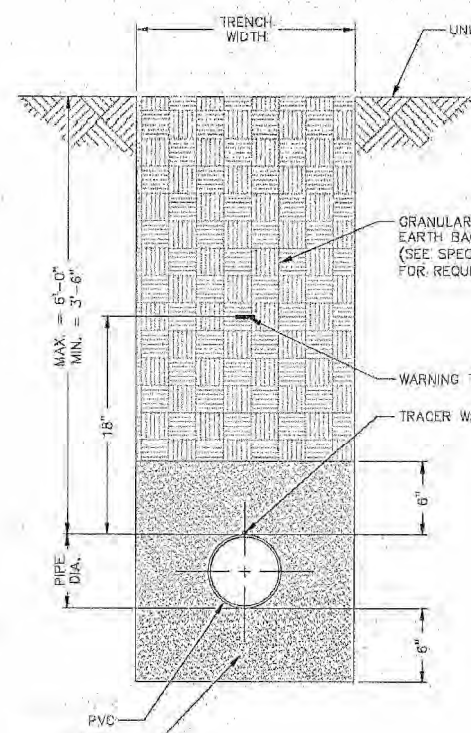
Developer / Owner:
SHOCKLEY COMMERCIAL
 501 FIRST CAPITOL DRIVE, SUITE 5
 ST. CHARLES, MISSOURI 63301
 (636) 946-9753

SITE PLAN

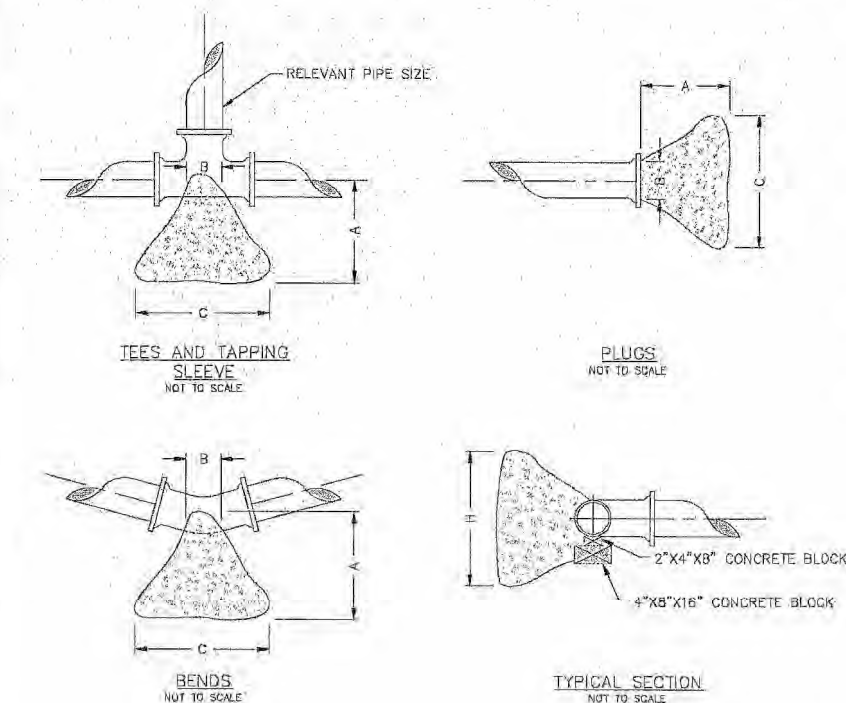
P+Z No. #4503.01.03
 Approved 07-07-16
City No. #16-010181

Page No.
 4 of 8

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.



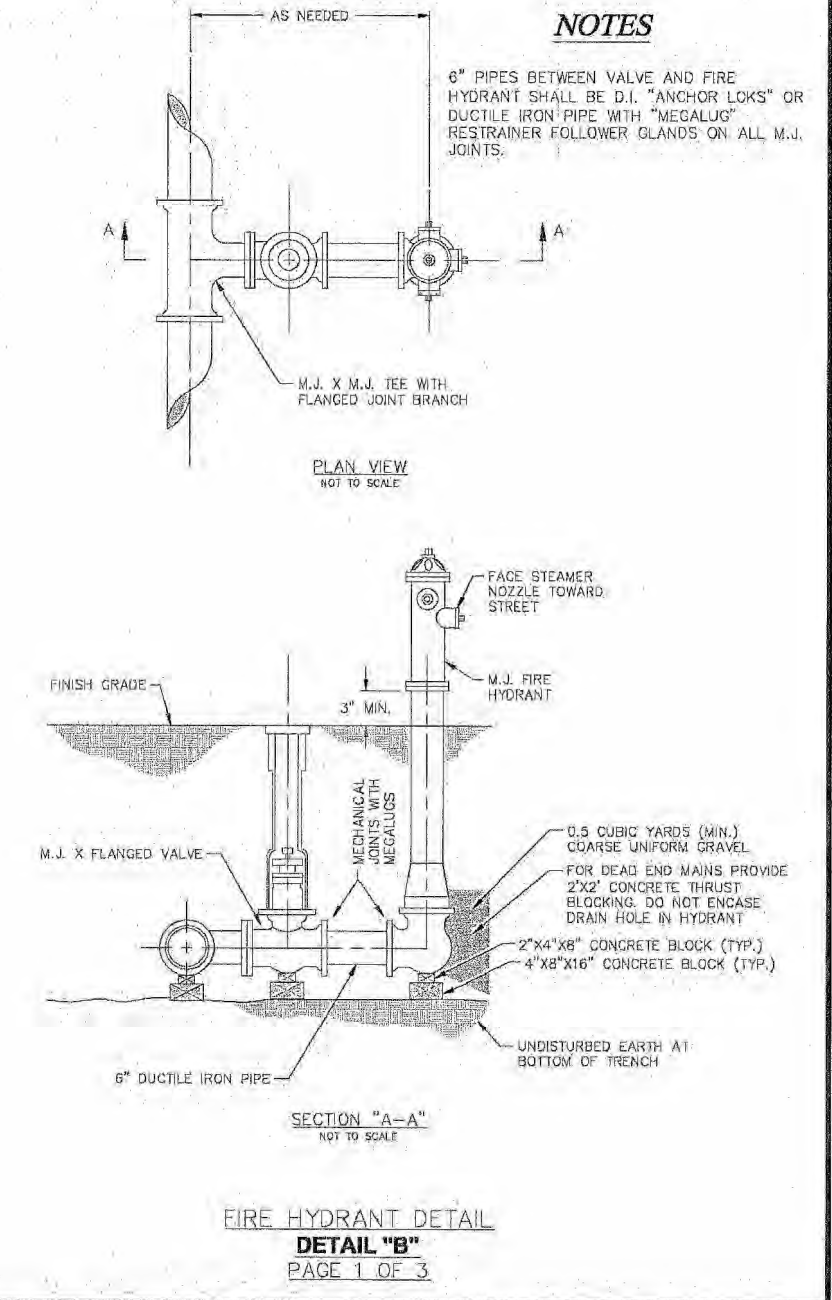
NOTES
 1) SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR BEDDING AND BACKFILL.
TYPICAL TRENCH SECTION FOR PVC PIPE
 NOT TO SCALE
DETAIL "A"
 PAGE 1 OF 2



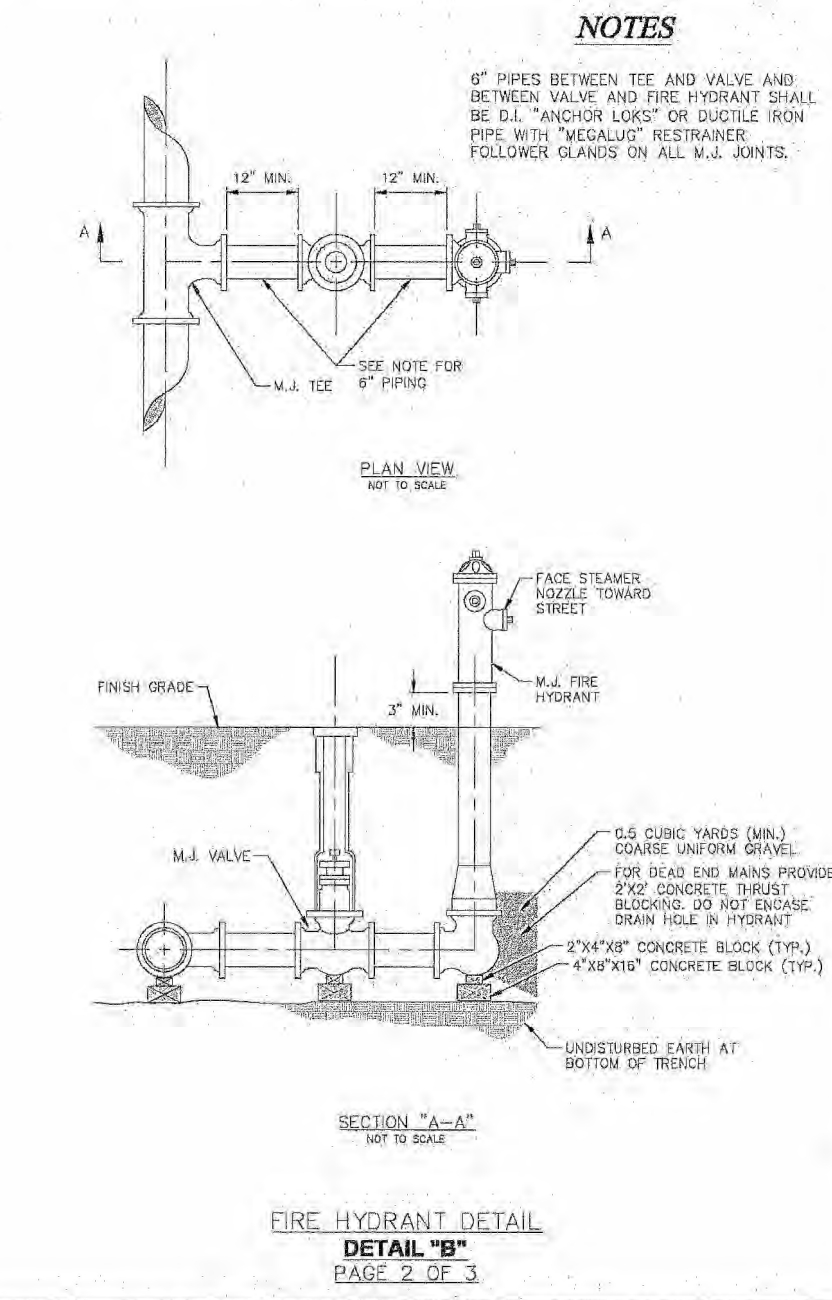
THRUST BLOCK DIMENSIONS - INCHES

PIPE DIA.	ALL FTGS.			90 DEGREE BEND		45 DEGREE BEND		22-1/2 DEGREE BEND		11-1/4 DEGREE BEND	
	A	B	C	H	H	H	H	H	H	H	H
4	15	4	20 1/2	12	20	18	12	12	12	12	12
6	18	6	24	16	24	20	18	18	18	18	18
8	20	8	26	18	26	24	20	20	20	20	20
10	22	10	28	20	28	26	22	22	22	22	22
12	24	12	30	22	30	28	24	24	24	24	24

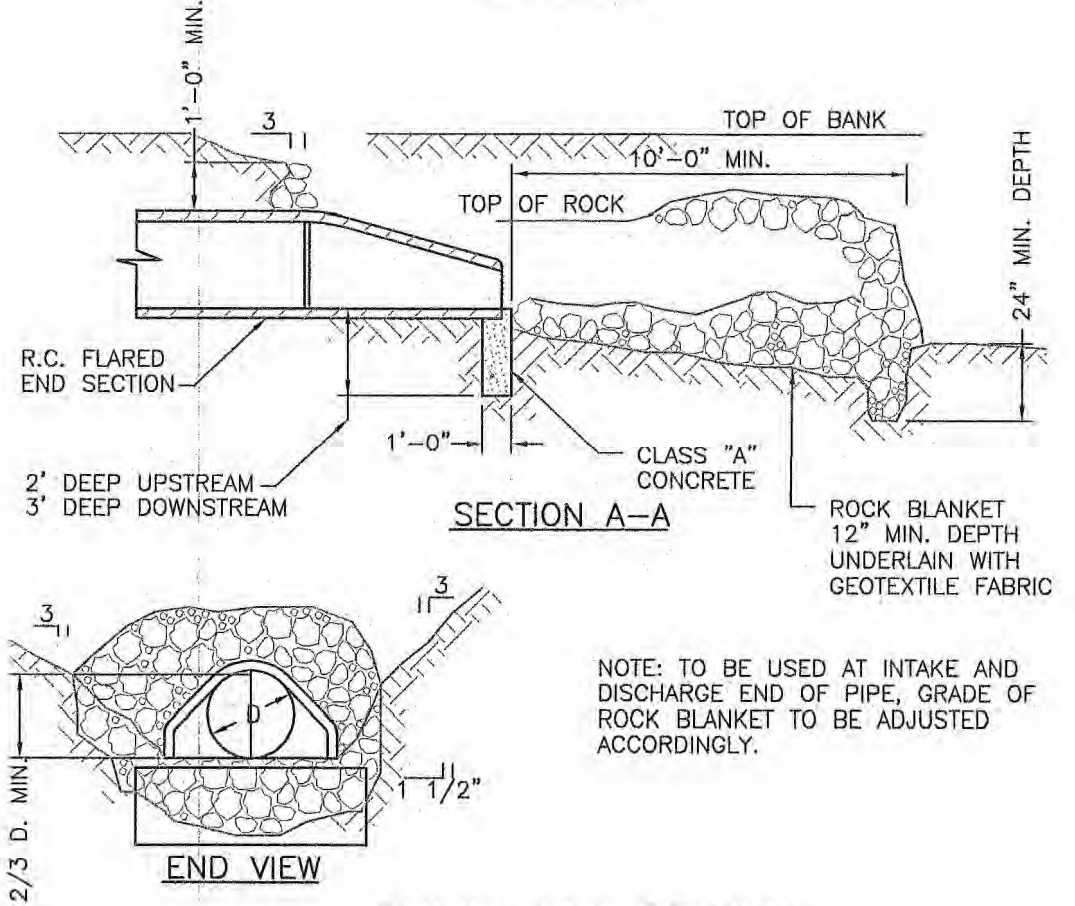
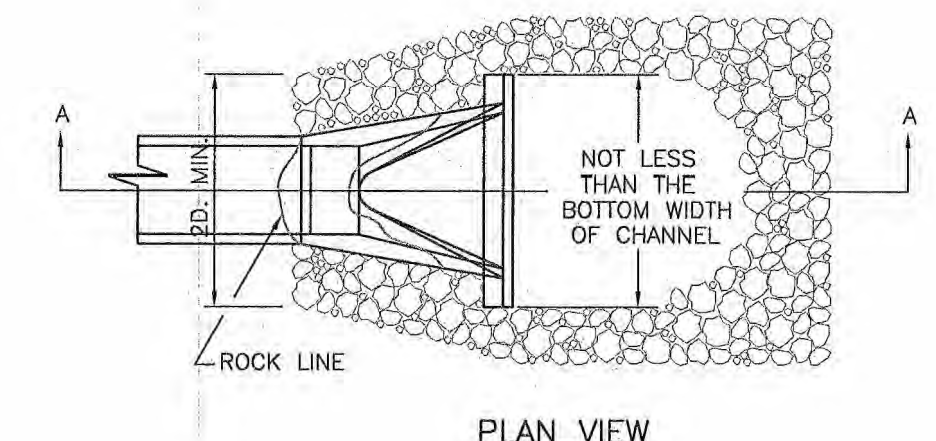
NOTE
 FOR FITTINGS LARGER THAN 12\"/>



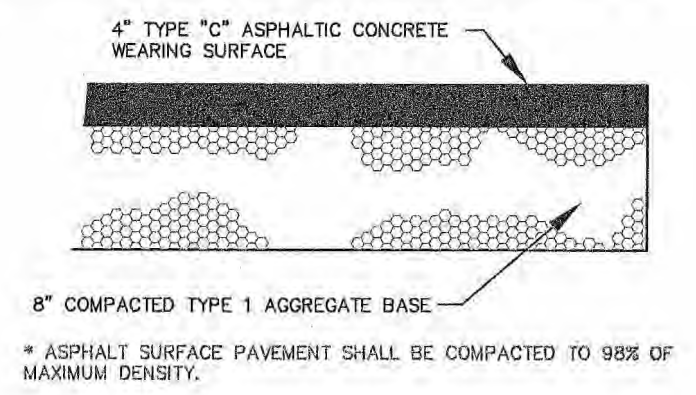
FIRE HYDRANT DETAIL
DETAIL "B"
 PAGE 1 OF 2



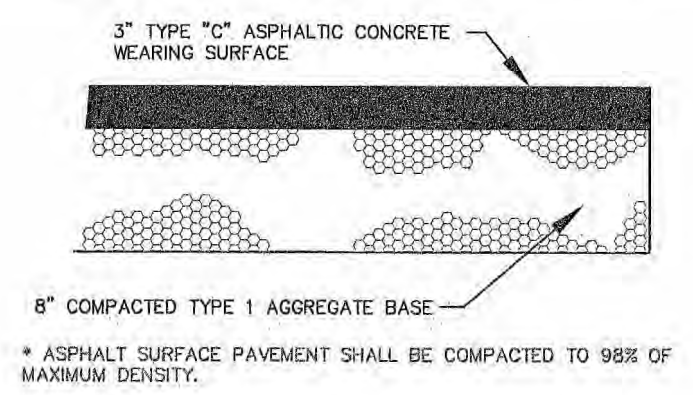
FIRE HYDRANT DETAIL
DETAIL "B"
 PAGE 2 OF 2



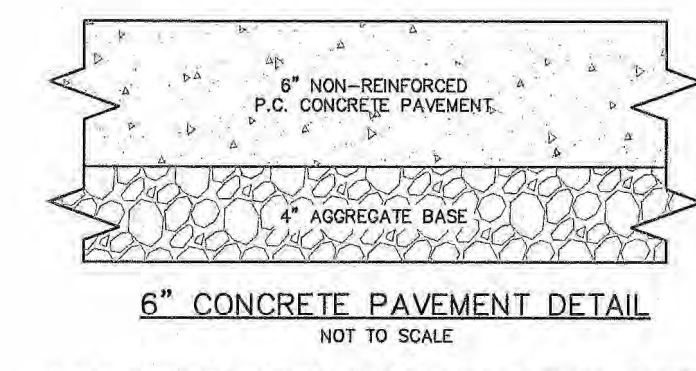
FLARED END SECTION



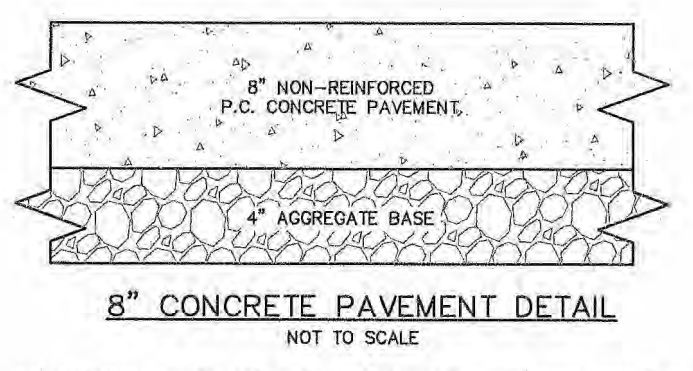
ASPHALT DRIVE AISLE PAVEMENT DETAIL
 NOT TO SCALE



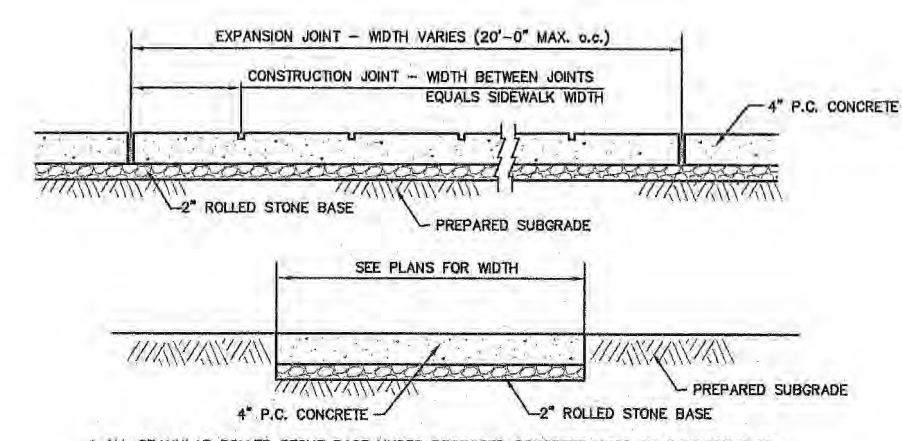
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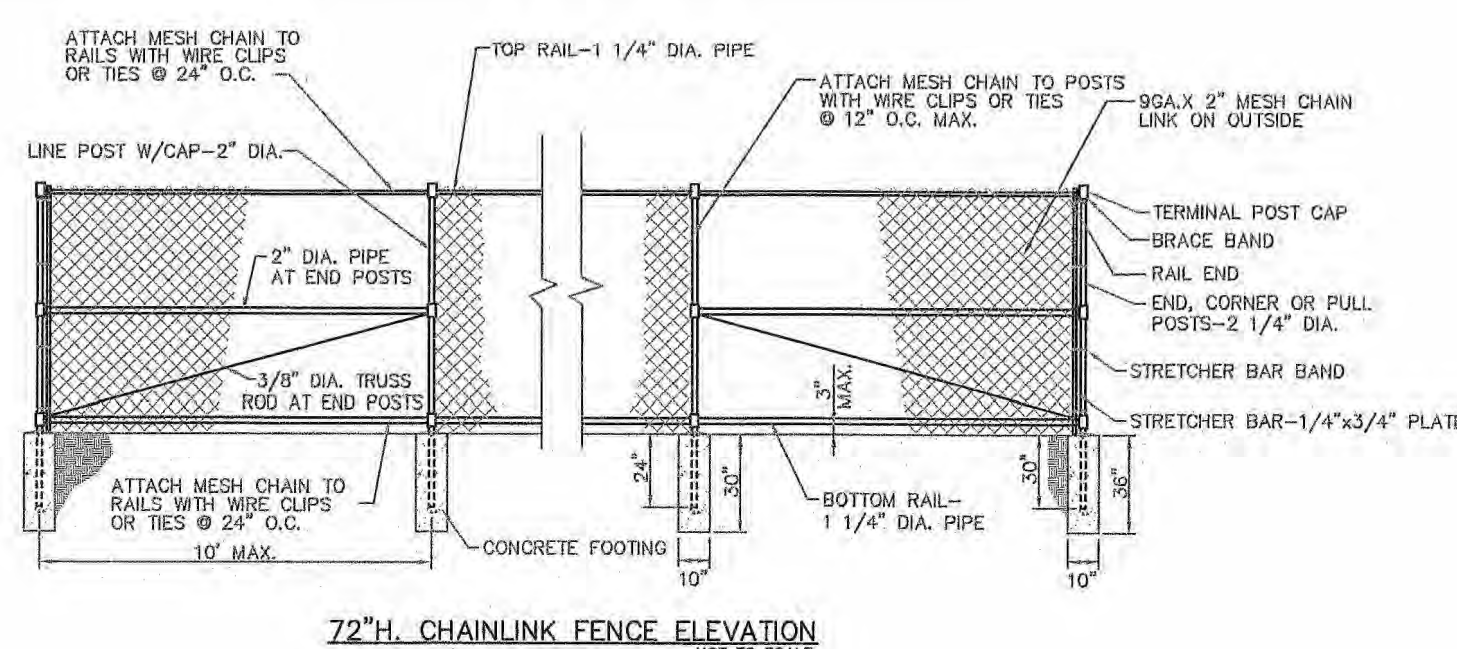
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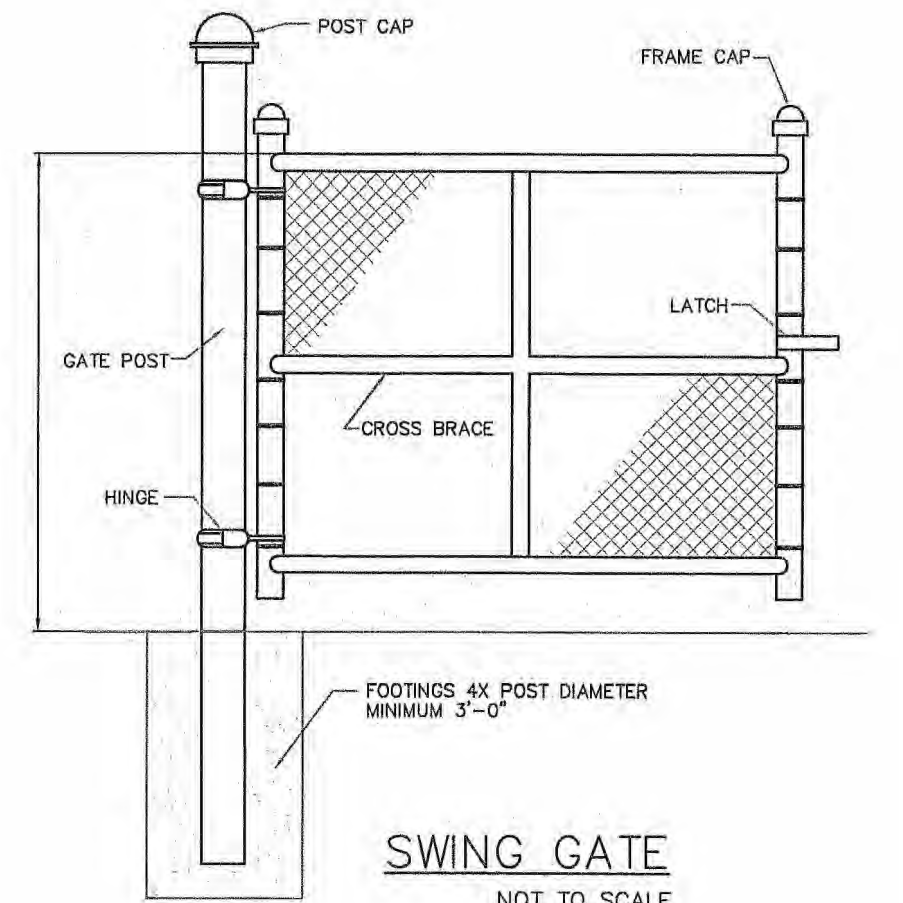
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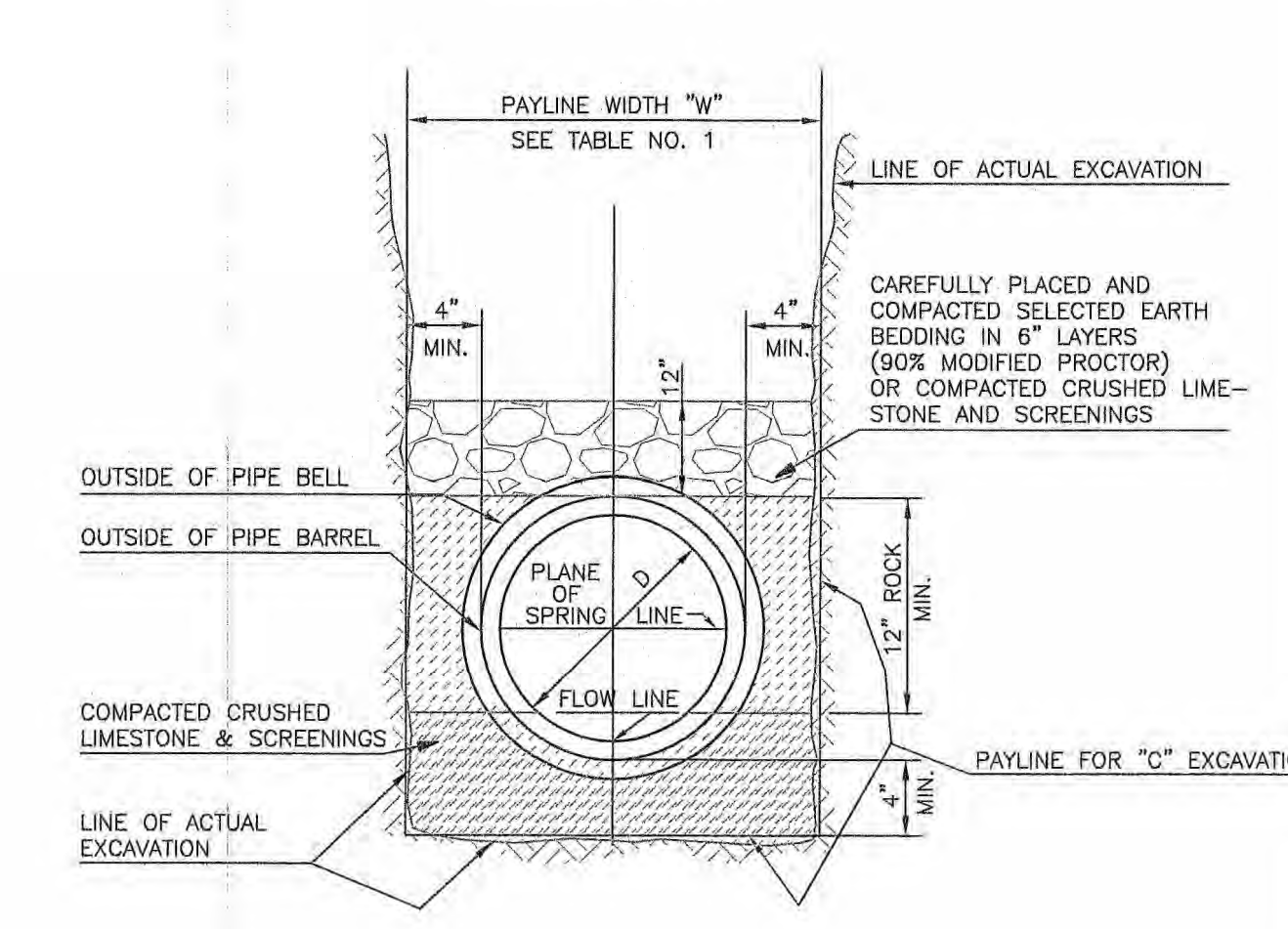
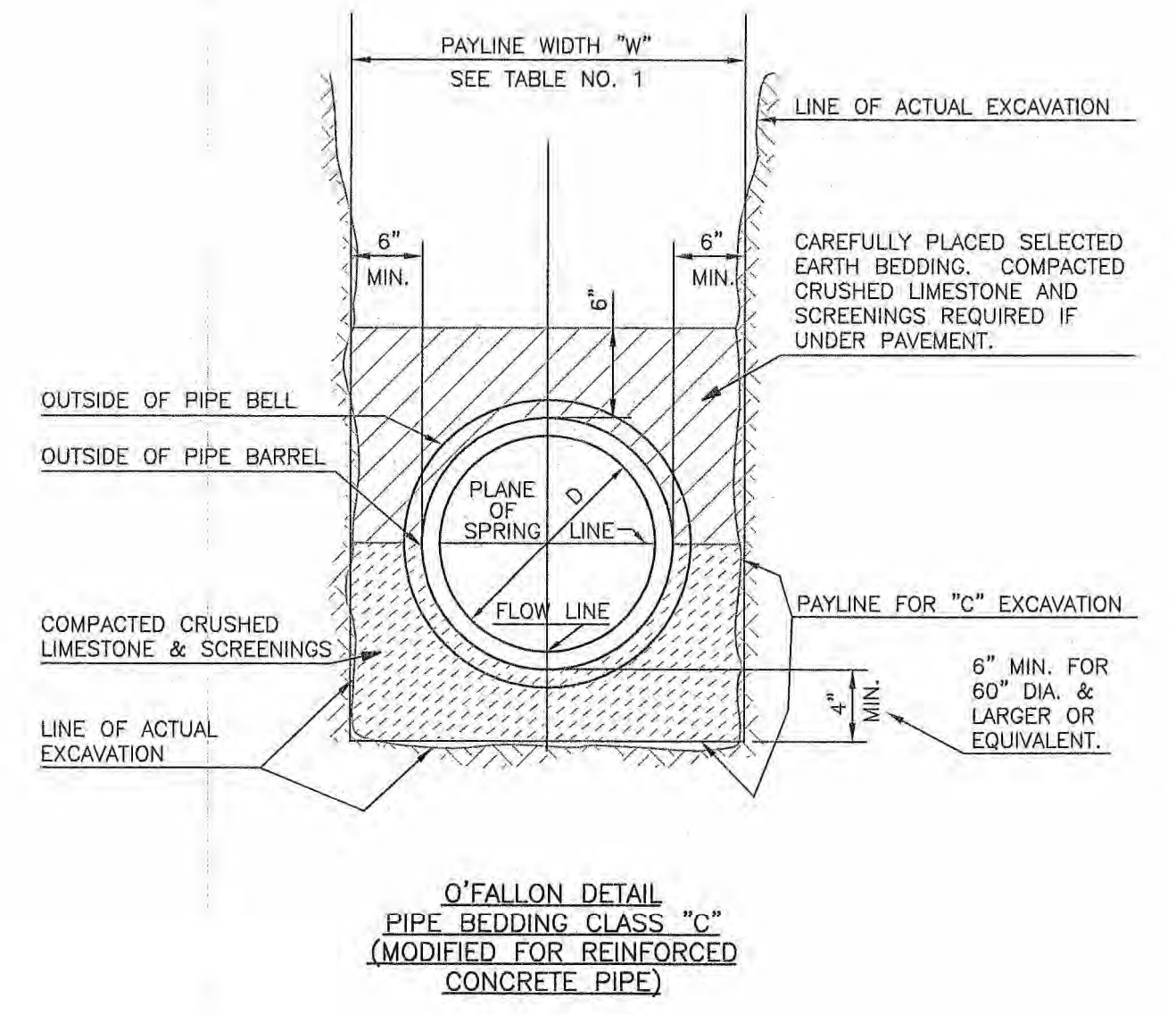
CONCRETE SIDEWALK DETAIL
 NOT TO SCALE



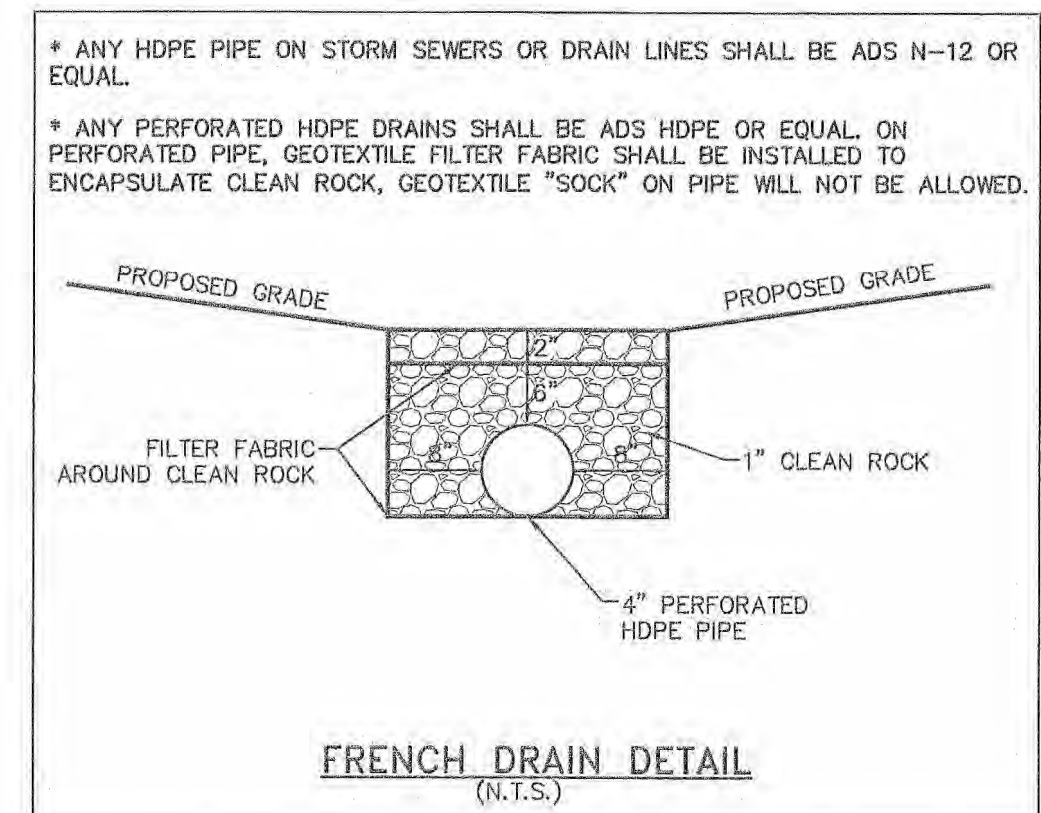
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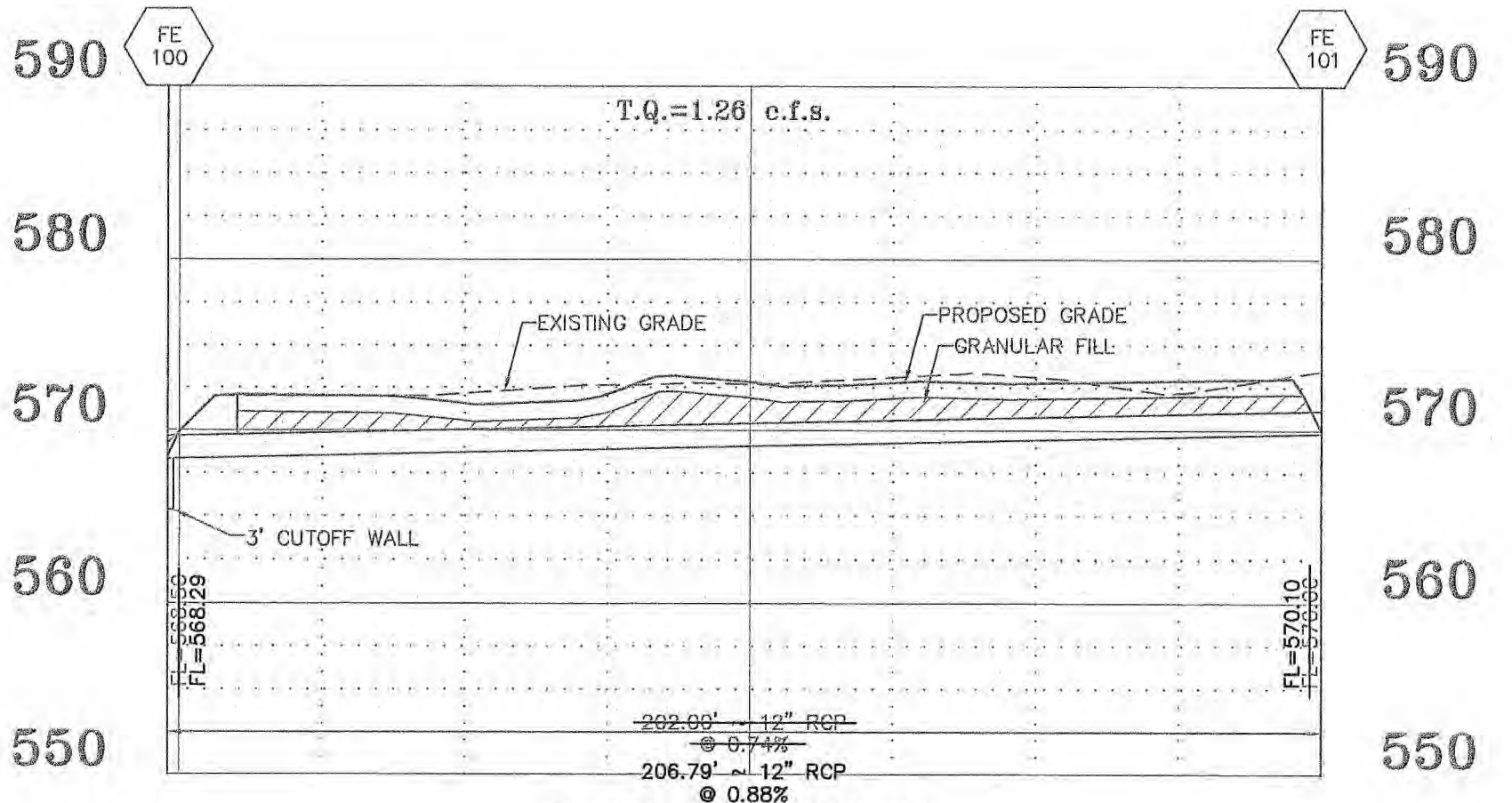
SWING GATE
 NOT TO SCALE



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



FRENCH DRAIN DETAIL (N.T.S.)



STORM SEWER PROFILE (PRIVATE)
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: 1"=10'

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

PIPE DIAMETER (INCHES)	ROUND PIPE		HORIZONTAL ELLIPTICAL PIPE				
	PAYLINE WIDTH OF TRENCH (INCHES)	PAY-QUANTITIES (CU. FT. PER FT.)	PAYLINE WIDTH OF TRENCH (INCHES)	PAY-QUANTITIES (CU. FT. PER FT.)			
4	30	2.50	3.08				
6	30	2.50	3.59				
8	30	2.50	3.87				
10	30	2.50	4.59				
12	30	2.50	4.55				
15	36	3.00	5.55				
18	36	3.00	6.77	14 x 23	41	3.42	5.94
21	39	3.55	6.61				
24	42	3.50	7.50	19 x 30	49	4.50	7.68
27	45	3.75	8.18	22 x 34	53	4.42	8.81
30	49	4.08	9.30	24 x 36	58	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	69	5.50	11.72
39	63	5.25	13.29	32 x 49	71	5.82	13.16
42	63	5.25	13.29	34 x 53	73	6.25	14.69
45	70	5.53	15.87	39 x 60	83	6.92	16.19
54	77	6.42	18.13	43 x 68	92	7.57	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	59 x 91	118	9.83	27.45
78	105	8.75	29.30	63 x 98	126	10.50	30.70
84	112	9.33	32.57	68 x 105	135	11.35	33.91
90	119	9.92	35.80	72 x 113	143	11.82	36.89
96	126	10.50	39.37	77 x 121	152	12.67	40.69
102	133	11.09	42.99	82 x 130	160	13.23	44.43
108	140	11.67	46.75	87 x 138	169	14.09	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	105 x 165	202	16.63	64.49
144	182	15.17	72.40	118 x 189	230	19.17	73.69

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

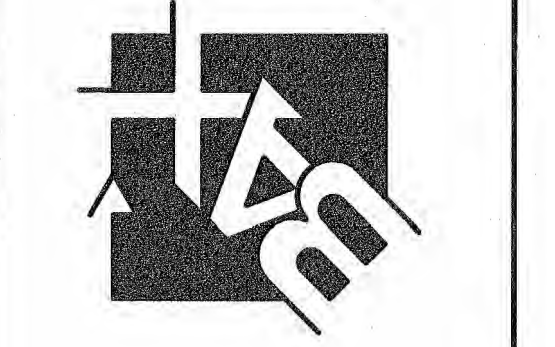
UPP STR	LOW STR	L DIA	UPPER FL LN	LOWER FL LN	PS	UPPER ST EL	DEPTH HY GR	UPPER HY EL	LOWER HY EL	HYDR GRADE	FR HEAD	VEL	VEL HEAD	JUNC	TURN	CURVE	STR	INL CAP	DR AREA	PI	Q	TQ	PIPE CAP	LINE NUMBER	REMARKS
FE101	FE100	202	12	570.00	568.50	0.74	571.00	0.56	570.44	569.50	0.00130	0.25	1.60	0.04	0.04	0.00	0.00	0.00	0.61	2.07	1.26	1.26	3.07	1	TIP=569.50

* INDICATES CRITICAL DEPTH

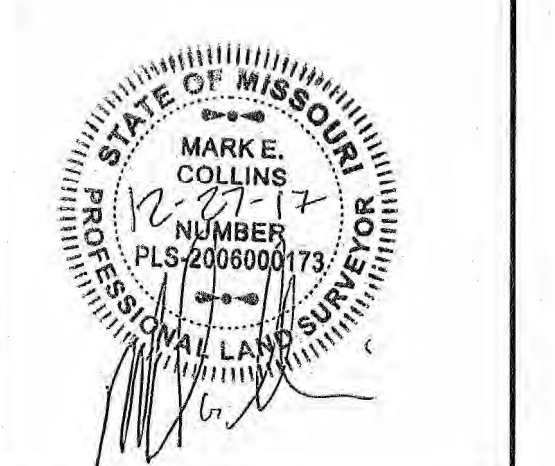
ENGINEERS SEAL DOES NOT APPLY TO O'FALLON, P.W.S.D. NO. 2, AND MSD DETAILS ON THIS SHEET.

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Box Engineering Company, Inc.
 Missouri State Certificate of Authority
 Engineering #000855
 Missouri State Certificate of Authority
 Surveying #000144

REVISIONS

NO.	DATE	DESCRIPTION

Developer / Owner:
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 501 FIRST CAPITOL DRIVE, SUITE 5
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P-1-Z No.
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