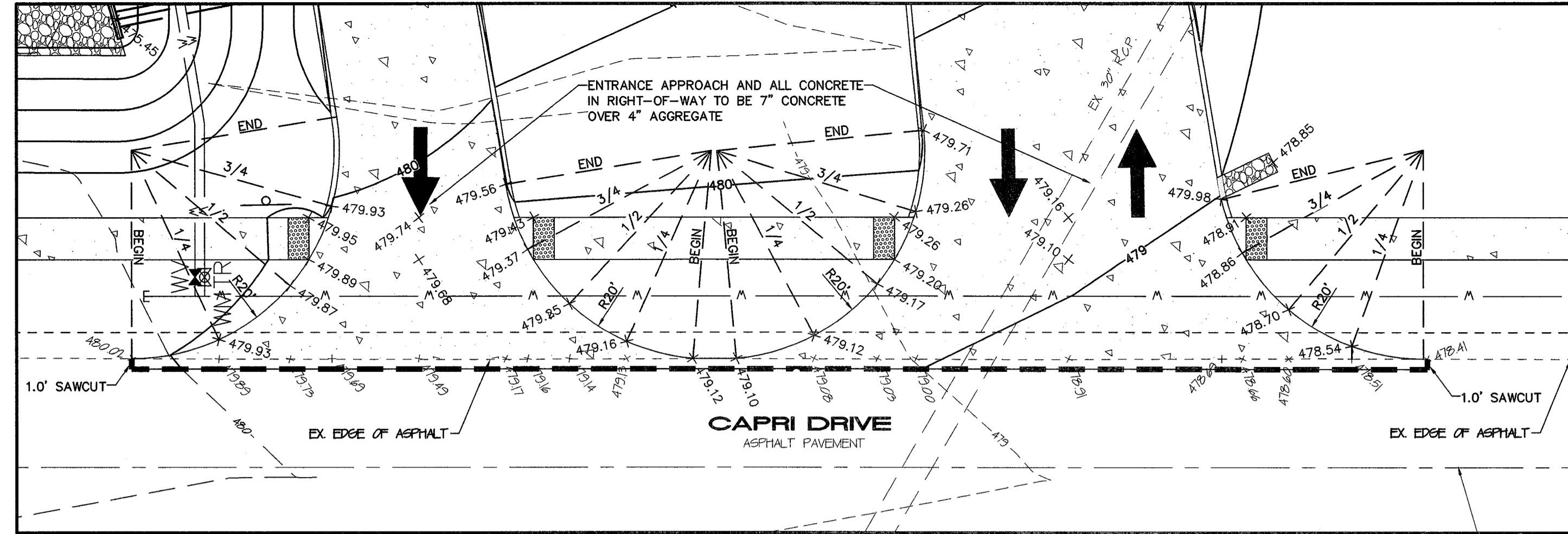


**GRINDER PUMP LINE PROFILE**  
HORIZONTAL SCALE: 1"=20'  
VERTICAL SCALE: 1"=10'



**ENTRANCE DETAILS**  
HORIZONTAL SCALE: 1"=10'

**Culvert Report**

Hydrowflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Jul 18 2017

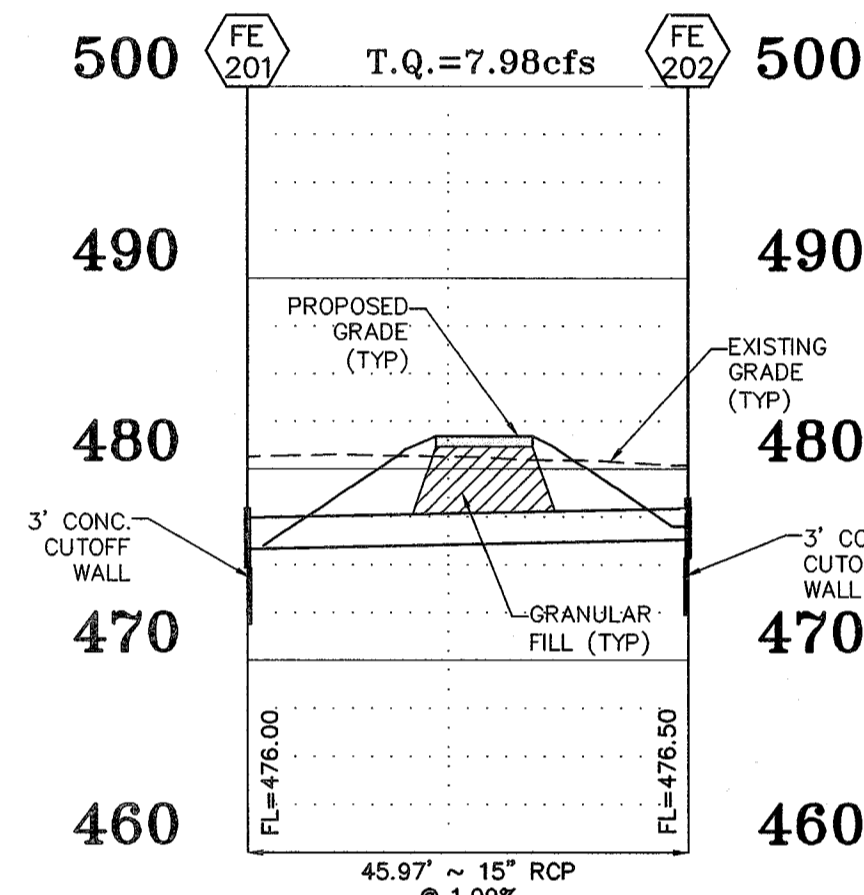
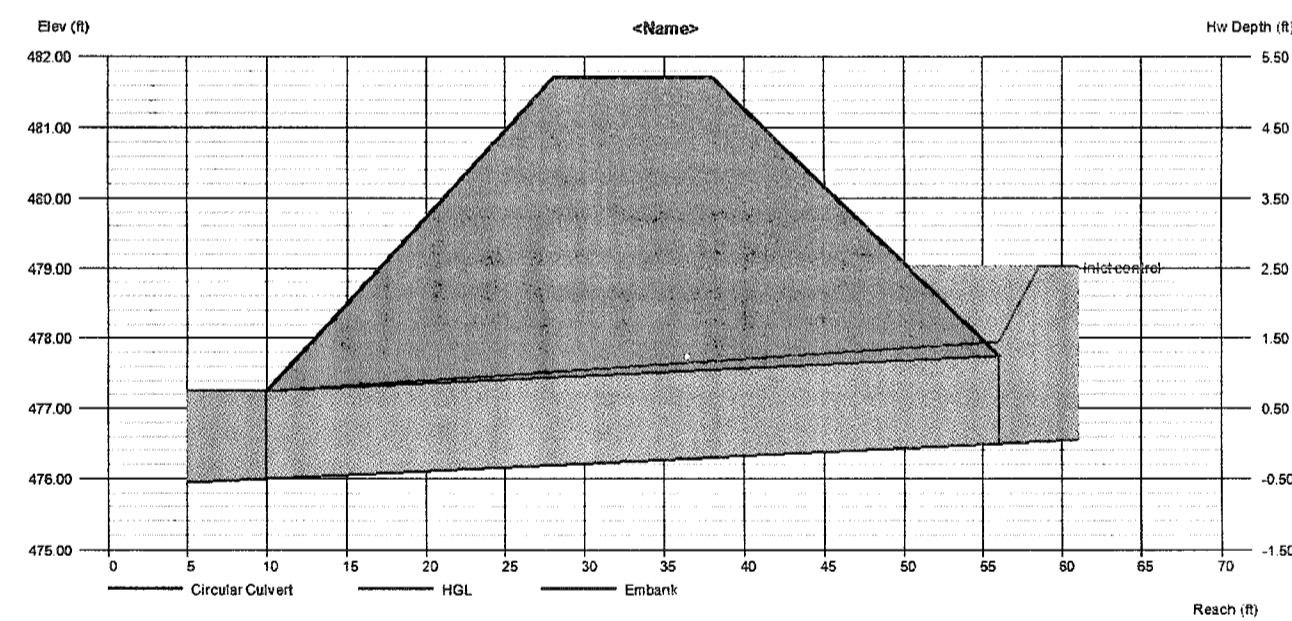
**Circular Culvert**

Invert Elev Dn (ft) = 476.00  
Pipe Length (ft) = 46.00  
Slope (%) = 1.09  
Invert Elev Up (ft) = 476.50  
Rise (in) = 15.0  
Shape = Circular  
Span (in) = 15.0  
No. Barrels = 1  
n-Value = 0.013  
Culvert Type = Circular Concrete  
Culvert Entrance = Square edge w/headwall (C)  
Coeff. K,M,c,Y,k = 0.0098, 2, 0.0398, 0.67, 0.5

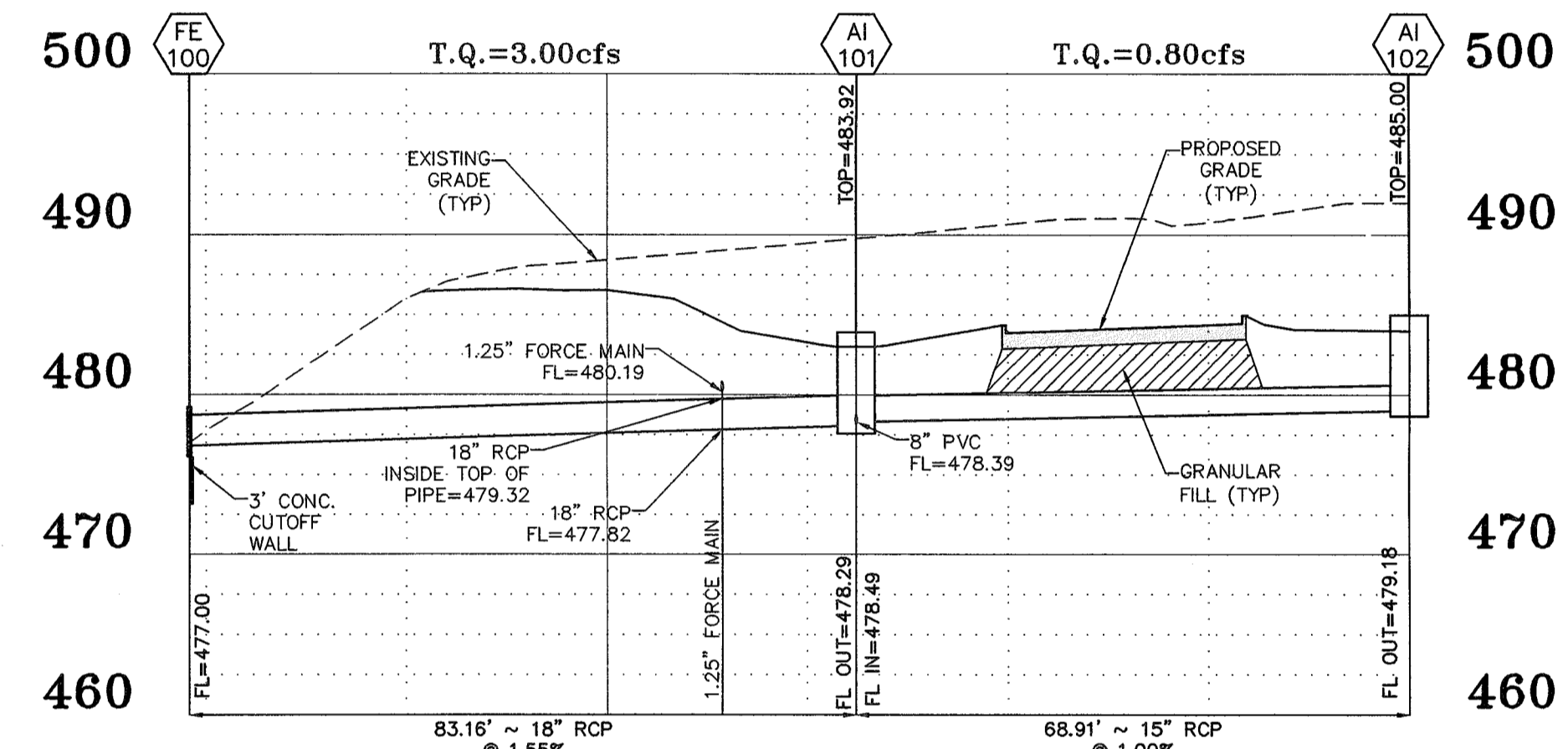
**Calculations**  
Qmin (cfs) = 7.98  
Qmax (cfs) = 7.98  
Tailwater Elev (ft) = 477.25

**Highlighted**  
Qtotal (cfs) = 7.98  
Qpipe (cfs) = 7.98  
Qovertop (cfs) = 0.00  
Veloc Dn (ft/s) = 6.50  
Veloc Up (ft/s) = 6.50  
HGL Dn (ft) = 477.25  
HGL Up (ft) = 477.95  
Hw Elev (ft) = 479.01  
Hw/D (ft) = 2.01  
Flow Regime = Inlet Control

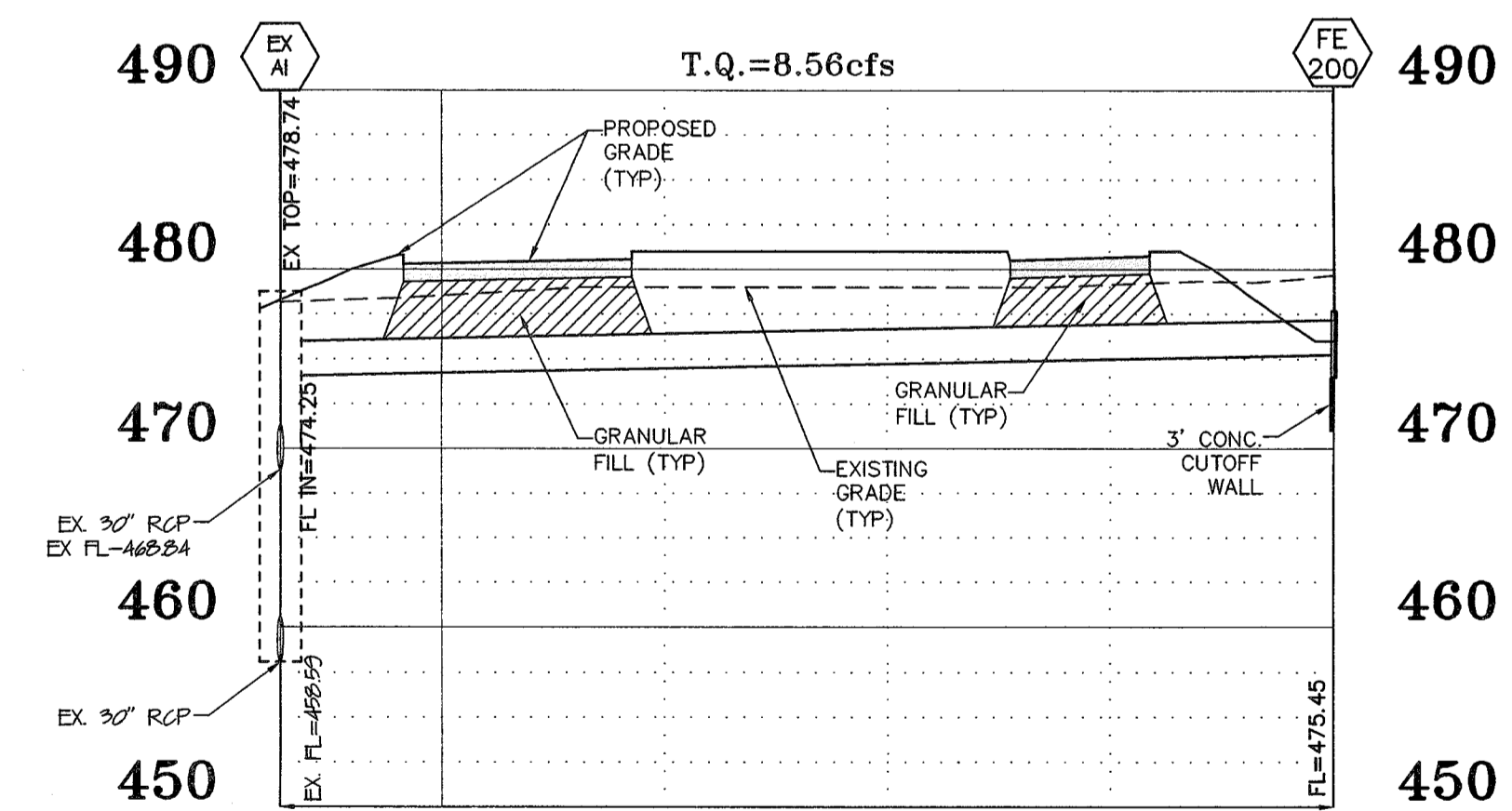
**Embankment**  
Top Elevation (ft) = 481.70  
Top Width (ft) = 10.00  
Crest Width (ft) = 1.00



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



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



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

BAX PROJECT NAME : 7632G  
BAX PROJECT NO. :  
DESIGN DATE :  
DESIGNED BY :  
SUBMITTED: FILENAME: 7632G

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 LOSS	TURN LOSS	CURVE LOSS	STR GRADE	INL CAP	DR AREA	PI	Q	TQ	PIPE CAP	LINE NUMBER	REMARKS
AI102	AI101	69	15	479.18	478.39	1.14	485.00	5.34	479.66	479.64	.00020	0.01	0.65	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	6.91	1	479
AI101	FE100	83	18	478.39	477.00	1.67	483.92	4.81	479.11	479.00	.00080	0.07	1.70	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	3.00	13.59	2	479	
FE200	EXAI	118	18	475.45	474.25	1.02	476.95	0.06	476.89	475.75	.00660	0.78	4.84	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00	8.56	10.59	3	475.75	

**PROJECT TITLE:**  
SCCAD BASE 18  
Bax Project #95-7632G

**ENGINEERING FIRM:**  
BAX ENGINEERING COMPANY, INC.  
291 Point West Blvd  
St. Charles, MO 63301  
636-928-6562  
FAX 636-928-1718



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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 project of the architectural or engineering profession.  
LARRY DAVID WALKER  
PROFESSIONAL ENGINEER  
08/15/17  
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Surveying Authority No. 000144  
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**REVISIONS**

8-15-17	CITY COMMENTS

**Developer / Owner:**  
ST. CHARLES COUNTY AMBULANCE DISTRICT  
4169 OLD MILL PARKWAY  
ST. PETERS, MISSOURI 63376

**P+Z No.** #04-16.02.01  
**City No.** #17-005139

**Page No.** 8 of 20

**SEWER PROFILES AND ENTRANCE DETAILS**