

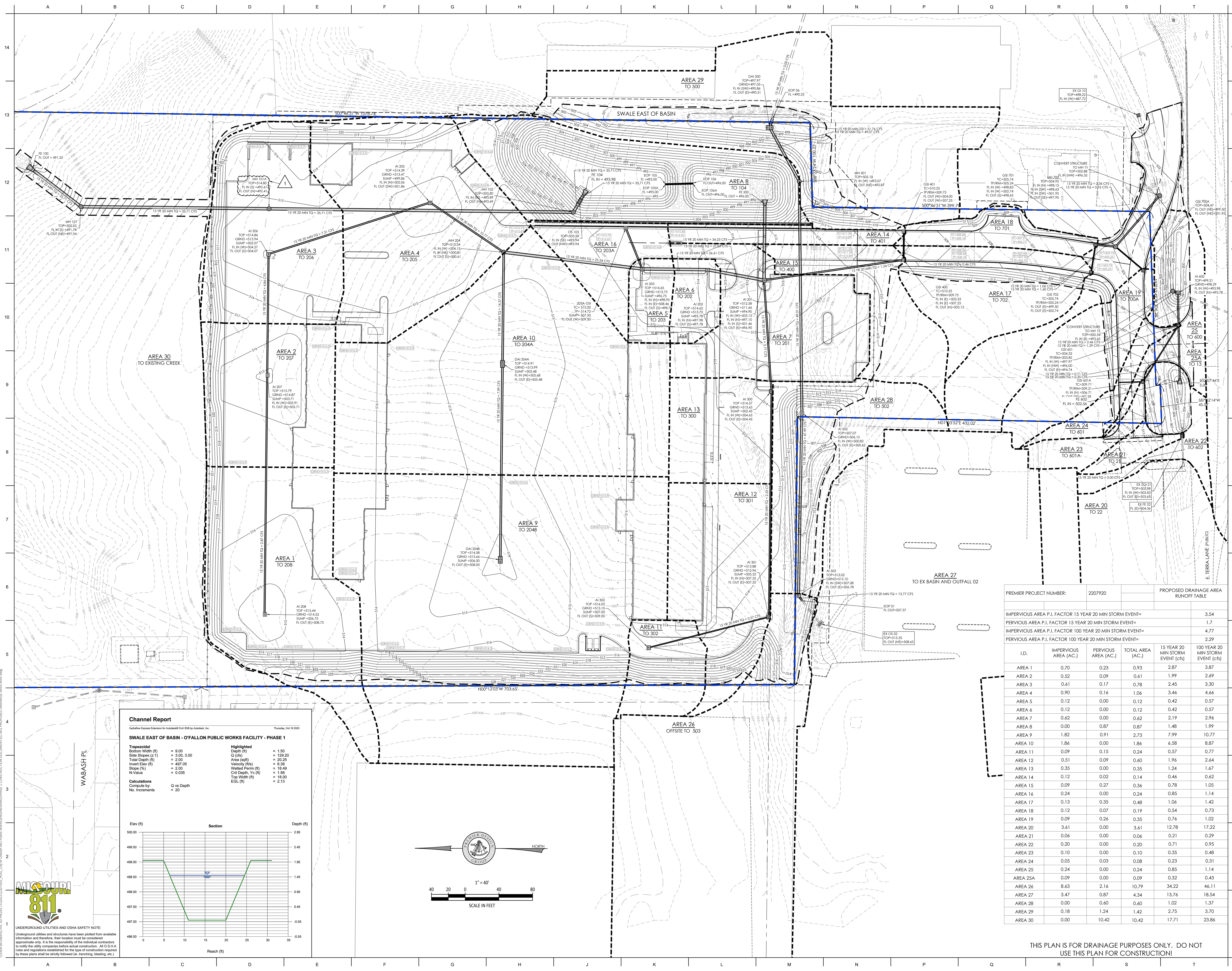
OWNER
CITY OF O'FALLON
100 NORTH MAIN STREET
O'FALLON, MO 63366
636.379.5590

PROJECT TEAM
CIVIL ENGINEER
PREMIER DESIGN GROUP
100 MIDLAND PARK DRIVE
WENTZVILLE, MO 63385
314.925.7444

MAINTENANCE CONSULTANT
HDR ENGINEERING, INC.
17725 KATY FREEWAY SUITE 102
HOUSTON, TX 77064
813.902.2700

STRUCTURAL ENGINEER
METTMEYER ENGINEERING
2225 W CHESTERFIELD BLVD., SUITE 300
SPRINGFIELD, MO 65807
417.890.8022

MEP ENGINEER
HENDERSON ENGINEERS, INC.
8345 LENEXA DR., #300
LENEXA, KS 66214
913.742.5000



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #01	10/5/2023
2	ADDED SWALE CALC PER CITY COMMENTS	10/24/2023

PREMIER PROJECT NUMBER: 2207920
PROPOSED DRAINAGE AREA RUNOFF TABLE

IMPERVIOUS AREA P.I. FACTOR 15 YEAR 20 MIN STORM EVENT= 3.54
PERVIOUS AREA P.I. FACTOR 15 YEAR 20 MIN STORM EVENT= 1.7
IMPERVIOUS AREA P.I. FACTOR 100 YEAR 20 MIN STORM EVENT= 4.77
PERVIOUS AREA P.I. FACTOR 100 YEAR 20 MIN STORM EVENT= 2.29

I.D.	IMPERVIOUS AREA (AC.)	PERVIOUS AREA (AC.)	TOTAL AREA (AC.)	15 YEAR 20 MIN STORM EVENT (cfs)	100 YEAR 20 MIN STORM EVENT (cfs)
AREA 1	0.70	0.23	0.93	2.87	3.87
AREA 2	0.52	0.09	0.61	1.99	2.69
AREA 3	0.61	0.17	0.78	2.45	3.30
AREA 4	0.90	0.16	1.06	3.46	4.66
AREA 5	0.12	0.00	0.12	0.42	0.57
AREA 6	0.12	0.00	0.12	0.42	0.57
AREA 7	0.62	0.00	0.62	2.19	2.96
AREA 8	0.00	0.87	0.87	1.48	1.99
AREA 9	1.82	0.91	2.73	7.99	10.77
AREA 10	1.86	0.00	1.86	6.58	8.87
AREA 11	0.09	0.15	0.24	0.57	0.77
AREA 12	0.51	0.09	0.60	1.96	2.64
AREA 13	0.35	0.00	0.35	1.24	1.67
AREA 14	0.12	0.02	0.14	0.46	0.62
AREA 15	0.09	0.27	0.36	0.78	1.05
AREA 16	0.24	0.00	0.24	0.85	1.14
AREA 17	0.13	0.35	0.48	1.06	1.42
AREA 18	0.12	0.07	0.19	0.54	0.73
AREA 19	0.09	0.26	0.35	0.76	1.02
AREA 20	3.61	0.00	3.61	12.78	17.22
AREA 21	0.06	0.00	0.06	0.21	0.29
AREA 22	0.20	0.00	0.20	0.71	0.95
AREA 23	0.10	0.00	0.10	0.35	0.48
AREA 24	0.05	0.03	0.08	0.23	0.31
AREA 25	0.24	0.00	0.24	0.85	1.14
AREA 25A	0.09	0.00	0.09	0.32	0.43
AREA 26	8.63	2.16	10.79	34.22	46.11
AREA 27	3.47	0.87	4.34	13.76	18.54
AREA 28	0.00	0.60	0.60	1.02	1.37
AREA 29	0.18	1.24	1.42	2.75	3.70
AREA 30	0.00	10.42	10.42	17.71	23.86

PROJECT NO: 2207920 DRAWN BY: A. JONES
DATE: 9-15-2023 REVIEWED BY: M. FOGARTY

PROFESSIONAL SEAL



PROJECT TITLE
O'FALLON PUBLIC WORKS FACILITY

PROJECT ADDRESS:
1101 OLD E TERRA LANE
O'FALLON, MO 63366

POST DEVELOPED DRAINAGE AREA MAP

C-901

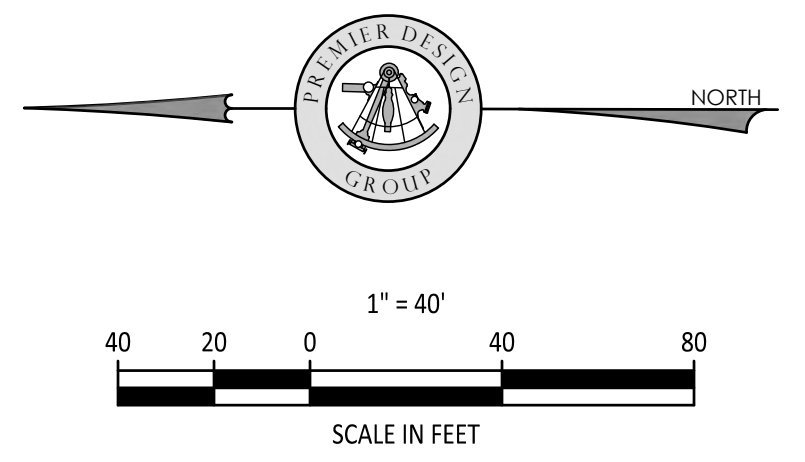
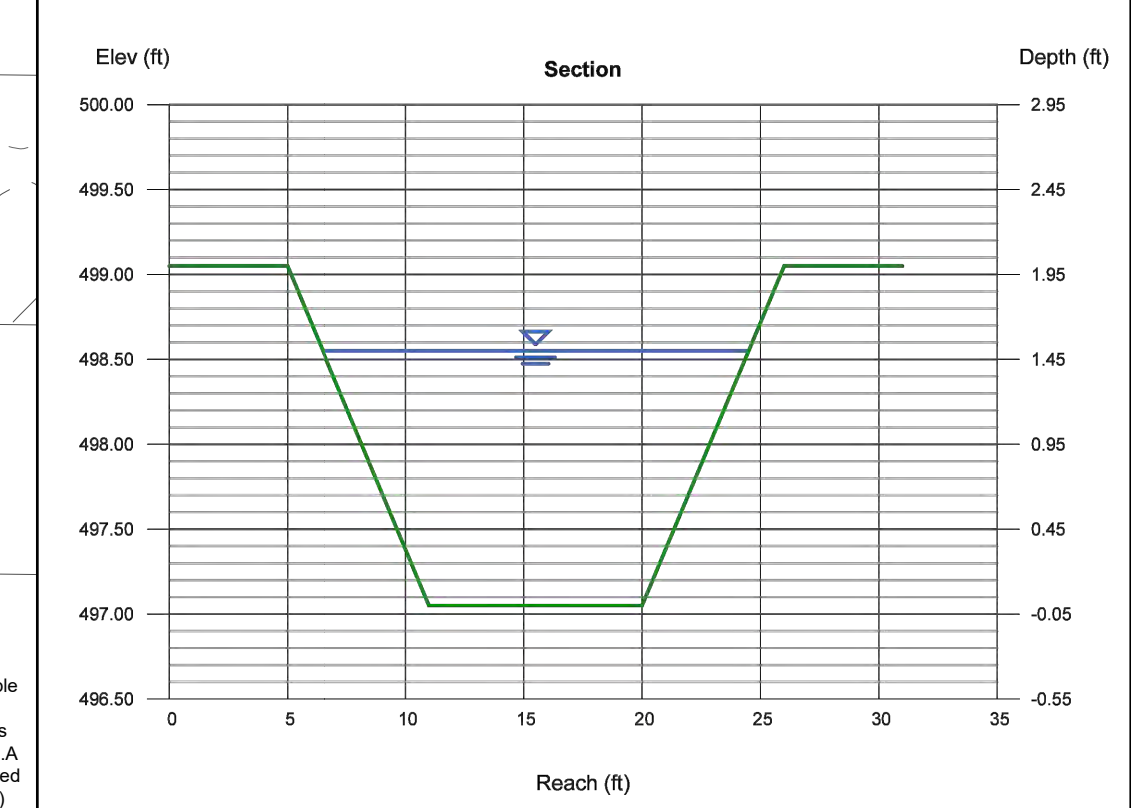
PERMIT SET

Channel Report
Hydrologic Express Extension for Autodesk Civil 3D® by Autodesk, Inc. Thursday, Oct 19 2023

SWALE EAST OF BASIN - O'FALLON PUBLIC WORKS FACILITY - PHASE 1

Trapezoidal Bottom Width (ft) = 9.00	Highlighted Depth (ft) = 1.50
Slope (ft) = 3:00, 3:00	Q (cfs) = 129.20
Total Depth (ft) = 2.00	Area (sqft) = 20.25
Invert Elev (ft) = 497.05	Velocity (ft/s) = 6.36
Slope (%) = 2.00	Wetted Perim (ft) = 18.49
N-Value = 0.035	Crit Depth, Yc (ft) = 1.56
	Top Width, Yt (ft) = 18.50
	EGL (ft) = 2.13

Calculations Compute by: Q vs Depth
No. Increments = 20



W:\Projects\Civil\PROJECTS\2023\2207920_100 City of O'Fallon MO Public Works Facilities\PHASE 1 CONSTRUCTION DOCUMENTS\GIS\PROPOSED DRAINAGE AREA MAP.ARG



UNDERGROUND UTILITIES AND OSHA SAFETY NOTE:
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction. All O.S.H.A. rules and regulations established for the type of construction required by these plans shall be strictly followed (i.e. trenching, blinding, etc.).