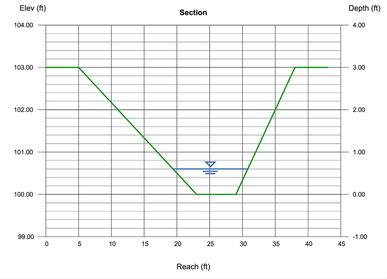
Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. — Thursday, May 6 2021

LOT 151 / OPEN SPACE STA. 4+16.81

Trapezoidal		Highlighted	
Bottom Width (ft)	= 6.00	Depth (ft)	= 0.60
Side Slopes (z:1)	= 6.00, 3.00	Q (cfs)	= 26.12
Total Depth (ft)	= 3.00	Area (sqft)	= 5.22
Invert Elev (ft)	= 100.00	Velocity (ft/s)	= 5.00
Slope (%)	= 3.04	Wetted Perim (ft)	= 11.55
N-Value	= 0.030	Crit Depth, Yc (ft)	= 0.70
		Top Width (ft)	= 11.40
Calculations		EGL (ft)	= 0.99
Compute by:	Known Q		
Known Q (cfs)	= 26.12		



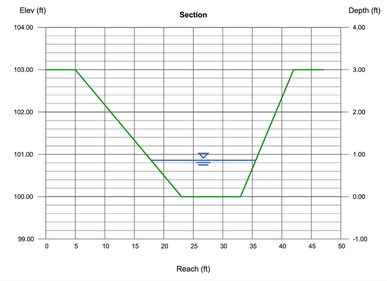
OFFSITE FLOW DIVERSION SWALE WATER SURFACE CALCS
(CALCS @ STA. 4+16.81, WATER SURFACE VARIES FROM STA. 0+00 TO 10+00)

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. — Thursday, May 6 2021

LOTS 10 / 11 STA. 7+15.59

Trapezoidal		Highlighted	
Bottom Width (ft)	= 10.00	Depth (ft)	= 0.86
Side Slopes (z:1)	= 6.00, 3.00	Q (cfs)	= 53.82
Total Depth (ft)	= 3.00	Area (sqft)	= 11.93
Invert Elev (ft)	= 100.00	Velocity (ft/s)	= 4.51
Slope (%)	= 1.47	Wetted Perim (ft)	= 17.95
N-Value	= 0.030	Crit Depth, Yc (ft)	= 0.85
		Top Width (ft)	= 17.74
Calculations		EGL (ft)	= 1.18
Compute by:	Known Q		
Known Q (cfs)	= 53.82		



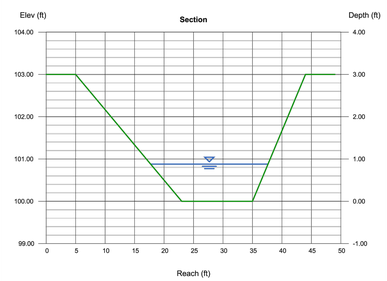
OFFSITE FLOW DIVERSION SWALE WATER SURFACE CALCS
(CALCS @ STA. 7+15.59, WATER SURFACE VARIES FROM STA. 0+00 TO 10+00)

Channel Report

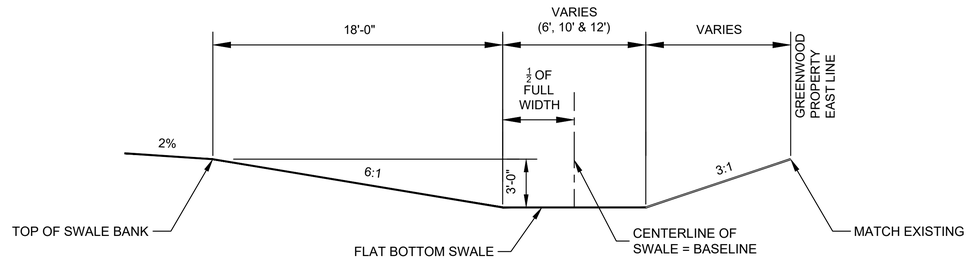
Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. — Thursday, May 6 2021

LOTS 12 / DETENTION TRACT STA. 8+65.80

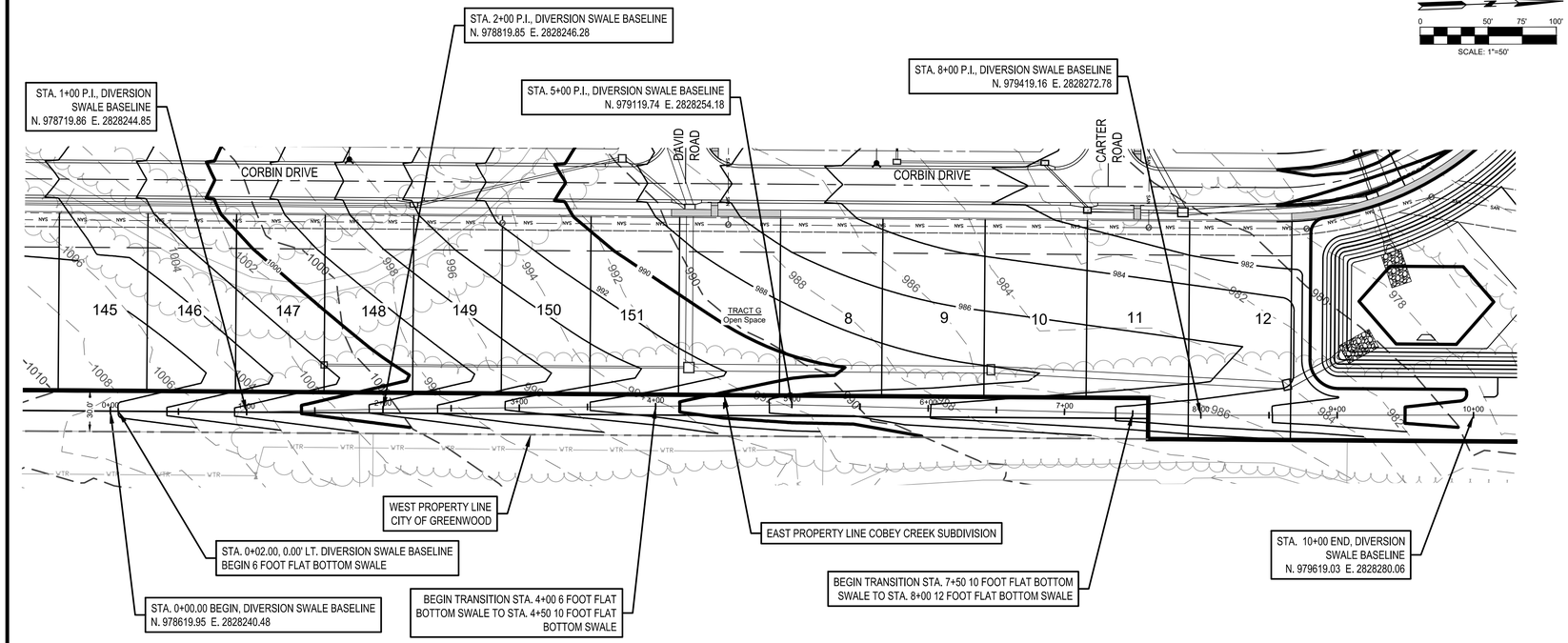
Trapezoidal		Highlighted	
Bottom Width (ft)	= 12.00	Depth (ft)	= 0.88
Side Slopes (z:1)	= 6.00, 3.00	Q (cfs)	= 76.84
Total Depth (ft)	= 3.00	Area (sqft)	= 14.04
Invert Elev (ft)	= 100.00	Velocity (ft/s)	= 5.47
Slope (%)	= 2.05	Wetted Perim (ft)	= 20.14
N-Value	= 0.030	Crit Depth, Yc (ft)	= 0.96
		Top Width (ft)	= 19.92
Calculations		EGL (ft)	= 1.35
Compute by:	Known Q		
Known Q (cfs)	= 76.84		

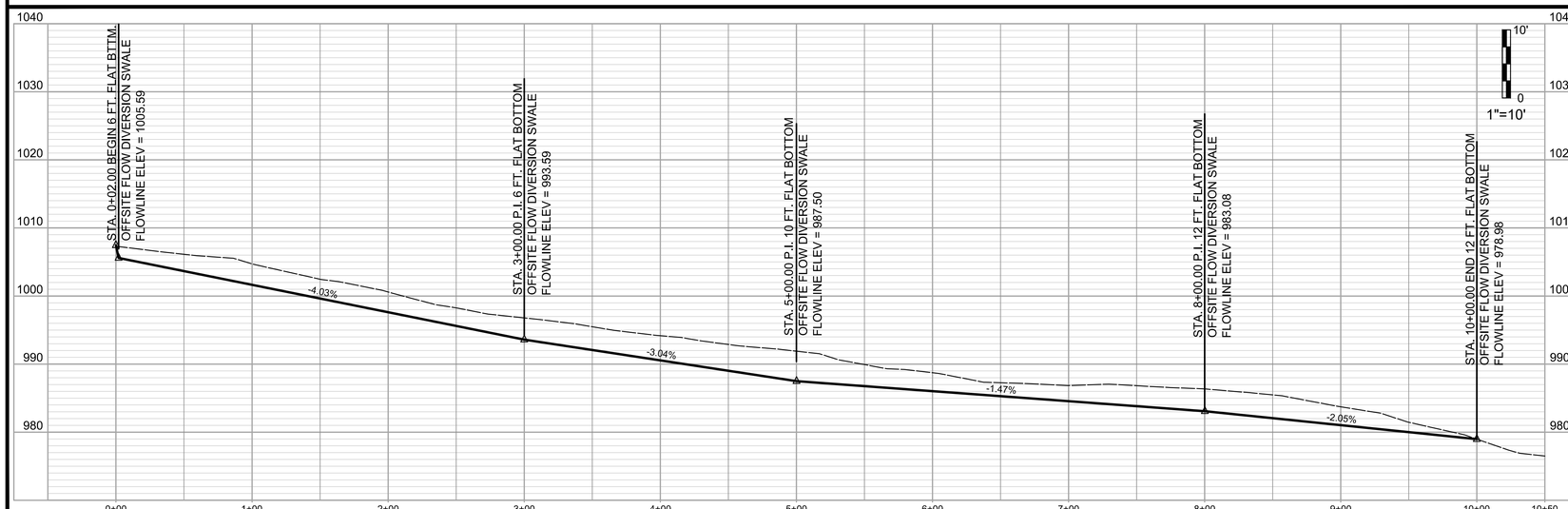


OFFSITE FLOW DIVERSION SWALE WATER SURFACE CALCS
(CALCS @ STA. 8+65.80, WATER SURFACE VARIES FROM STA. 0+00 TO 10+00)



OFFSITE FLOW DIVERSION SWALE
NOT TO SCALE
6' WIDE FROM STA. 0+00 TO 4+00
10' WIDE FROM STA. 4+50 TO 7+50
12' WIDE FROM STA. 8+00 TO 10+00





CENTERLINE PROFILE CENTER OF 6 FOOT FLAT BOTTOM DIVERSION SWALE

NO.	REVISION	DATE	BY	CK/APP
1	PER ACCORD DRAINAGE EASEMENT FROM CITY OF GREENWOOD	05/07/21	SPW	RKS
	SUBMITTAL TO CITY OF LEES SUMMIT	12/16/20	SPW	RKS

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STATE OF MISSOURI — RICHARD KEVIN STERRETT — NUMBER 26440 — REGISTERED PROFESSIONAL ENGINEER

R. KEVIN STERRETT | MO E-26440
May 7, 2021

Consult Inc engineers planners
11010 Haskell Street, Suite 210, Kansas City, Kansas 66109
CORPORATE LICENSE No. E2010005?3 (MO.) / E-1?36 (KS.)

STREET AND STORM SEWER PLANS
DIVERSION SWALE

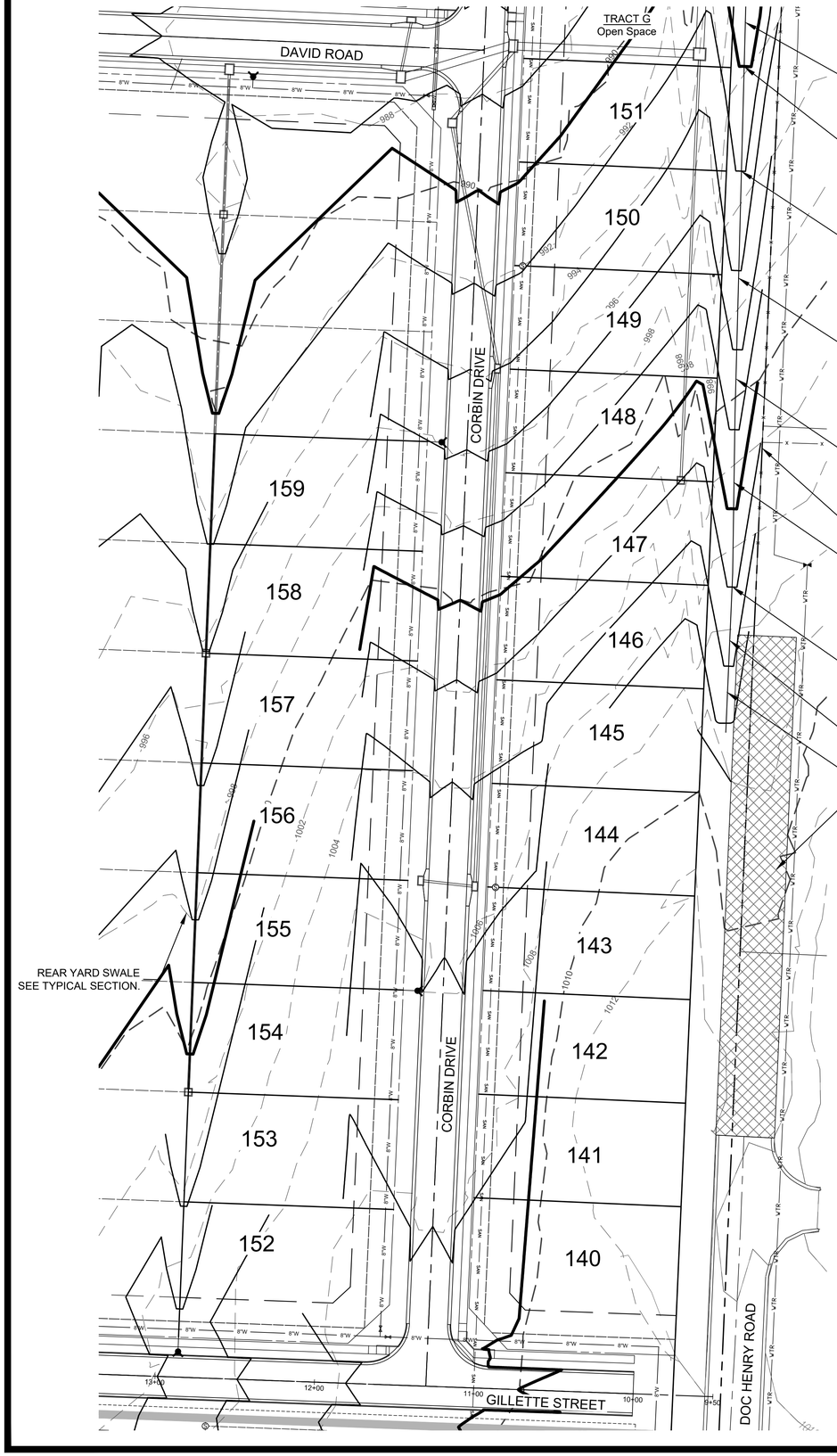
COBEY CREEK FIRST PLAT
PHASE I
CITY OF LEES SUMMIT, JACKSON COUNTY, MISSOURI

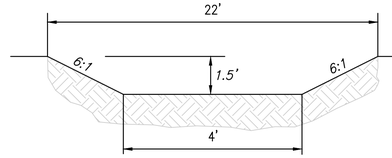
X-REF NO.
16-059 Base Phase I

DRAWING NO.
16-059 Phase I Street Plans

DATE
December 18, 2020

JOB NO.
16-059





TYPICAL REAR YARD SWALE DETAIL

(NO SCALE)

NOTE:
FOR TYPICAL REAR YARD SWALE:
REAR LOT CORNER ELEVATION + DEPTH = 100 YEAR WATER SURFACE ELEVATION

MBOE = 2 FEET PLUS THE 100 YEAR WATER SURFACE ELEVATION IF IT IS THE HIGHEST LOT CORNER ELEVATION

SWALE CAPACITY AT 2.0% SLOPE = 125 CFS

100 YEAR WATER DEPTH IN SWALE

LOTS: 1, 2, 18, 19, 20 & 21
DEPTH = 0.28'

LOTS: 22, 23, 24, 25, 152 & 153
DEPTH = 0.24'

LOTS: 3, 4, 5, 6, 7, 13, 14, 15, 16, 17, 154, 155, 156 & 157
DEPTH = 0.31'

LOTS: 26, 27, 28, 29, 30, 158 & 159
DEPTH = 0.34'

NOTES:

1) *Corner descriptions are oriented as if standing on the street facing the lot.*
2) *Conventional basement type indicates windows only above finished basement elevation.*
3) *Walkout basement type was determined by subtracting the 70' lot elevation from the 25' B/L elevaton. If the resulting elevation difference was greater than 6 feet it was determined that the buider could make the house a walkout by raising the top of foundation as needed. The intent of the designer was not to force these lots to be walkouts, only to suggest it was possible by raising the top of foundation.*
4) *Daylight basement type was determined by top of foundation being 2 feet above, and the back lot corner of the lot being 3 feet below the front right-of-way elevation on the high side of the lot.*
5) *Corner of house elevations based on top of foundation to be 1 foot above the high side front right-of-way elevation.*
6) *As-graded plot plans shall be required for the following lots: 1-30 and 140-159.*
7) *All proposed swales shall be established during Phase I construction and grading.*
8) *MBOEs are allowed to be interpolated from adjoining lot MBOEs where appropriate.*

Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
140	1008.0	1008.8	1012.8 E/F	1012.0 E/F	1014.8	CONVENTIONAL
141	1007.2	1008.0	1013.3 E/F	1012.8 E/F	1015.3	CONVENTIONAL
142	1006.5	1007.2	1013.0 E/F	1013.3 E/F	1015.3	CONVENTIONAL
143	1005.6	1006.5	1012.0 E/F	1013.0 E/F	1015.0	DAYLIGHT
144	1004.2	1005.6	1009.8 E/F	1012.0 E/F	1014.0	DAYLIGHT
145	1002.2	1004.2	1007.0 E/F	1009.8 E/F	1011.8	DAYLIGHT
146	999.5	1002.2	1004.6	1007.0 E/F	1009.0	DAYLIGHT
147	996.8	999.5	1001.9	1004.6	1006.6	DAYLIGHT*
148	994.2	996.8	999.0	1001.9	1003.9	DAYLIGHT*
149	991.8	994.2	996.7	999.0	1001.0	DAYLIGHT
150	989.6	991.8	995.1	996.7	998.7	DAYLIGHT
151	987.5	989.6	993.5	995.1	997.1	DAYLIGHT

ASBUILT Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
140	1008.1	1008.8	1012.8 E/F	1012.1 E/F	*	CONVENTIONAL
141	1007.3	1008.1	1013.4 E/F	1012.8 E/F	*	CONVENTIONAL
142	1006.4	1007.3	1013.1 E/F	1013.4 E/F	*	CONVENTIONAL
143	1005.6	1006.4	1012.1 E/F	1013.1 E/F	*	DAYLIGHT
144	1004.1	1005.6	1009.9 E/F	1012.1 E/F	*	DAYLIGHT
145	1002.3	1004.1	1007.0 E/F	1009.9 E/F	*	DAYLIGHT
146	999.6	1002.3	1004.6	1006.9	*	DAYLIGHT
147	996.8	999.6	1002.0	1004.6	*	DAYLIGHT
148	994.2	996.8	999.0	1002.0	*	DAYLIGHT
149	991.9	994.2	996.7	1000.4	*	DAYLIGHT
150	989.6	991.9	995.2	996.7	*	DAYLIGHT
151	987.5	989.6	993.6	995.2	*	DAYLIGHT

* = NO MBOE REQUIRED FOR LOT

Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
152	1008.8	1008.1	1004.9	1003.3	1010.8	DAYLIGHT
153	1008.1	1007.3	1003.2	1000.6	1010.1	DAYLIGHT
154	1007.3	1006.5	1000.6	999.0	1009.3	DAYLIGHT
155	1006.5	1005.6	999.0	997.9	1008.5	DAYLIGHT
156	1005.6	1004.1	997.9	996.0	1007.6	DAYLIGHT
157	1004.1	1001.8	996.0	994.0	1006.1	DAYLIGHT
158	1001.8	999.0	994.0	992.0	1003.8	DAYLIGHT
159	999.0	996.1	992.0	990.3	1001.0	DAYLIGHT

ASBUILT Minimum Building Opening Elevations

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
152	1008.8	1008.1	1005.0	1003.2	*	DAYLIGHT
153	1008.1	1007.4	1003.2	1000.6	*	DAYLIGHT
154	1007.4	1006.6	1000.6	999.0	*	DAYLIGHT
155	1006.6	1005.6	999.0	997.8	*	DAYLIGHT
156	1005.6	1004.0	997.8	996.0	*	DAYLIGHT
157	1004.0	1001.9	996.0	994.1	*	DAYLIGHT
158	1001.9	999.0	994.1	992.0	994.1	DAYLIGHT
159	999.0	996.2	992.0	990.4	992.4	DAYLIGHT

* = NO MBOE REQUIRED FOR LOT

E/F = EXISTING = PROPOSED DAYLIGHT = MBOE FOR WALKOUT WITH A WALKUP*

0 40' 60' 80'
SCALE: 1" = 40'

NO.	REVISION	DATE	BY	CK/APP
	PER AGURED EASEMENT FROM CITY OF GREENWOOD	05/07/21	SPW	RWS
3	PER CITYS COMMENTS	03/27/19	SPW	RWS
2	PER CITYS COMMENTS	03/06/19	SPW	RWS
1	SUBMITTAL TO CITY OF LEES SUMMIT	11/27/18	SPW	RWS

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STATE OF MISSOURI · NOTARY PUBLIC · ROBERT KEVIN STERRETT · NOTARY SEAL · REGISTERED PROFESSIONAL ENGINEER

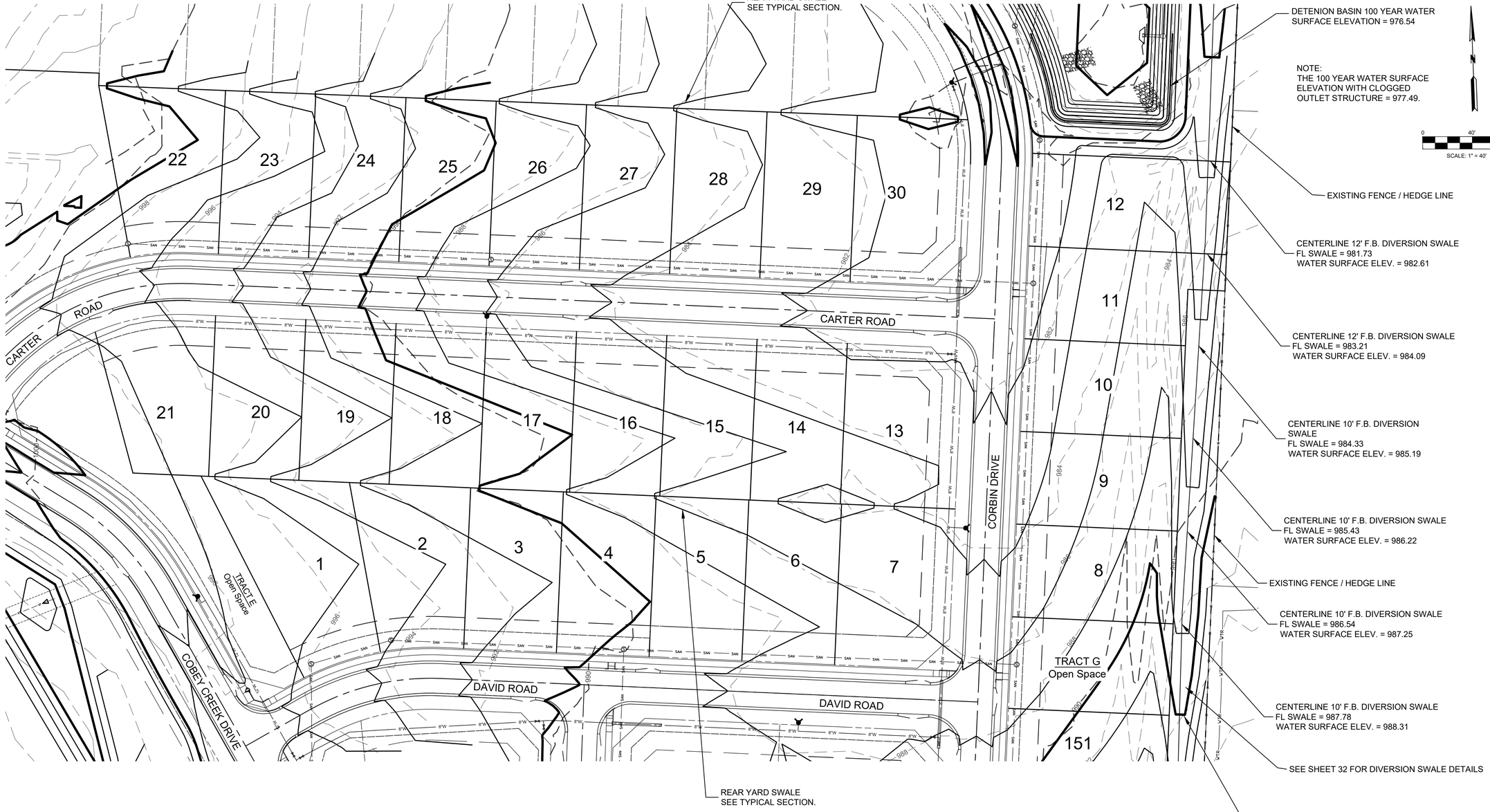
R. KEVIN STERRETT | MO E-26440
May 7, 2021

I&I Consult Inc engineers planners
11010 Haskell Street, Suite 210, Kansas City, Kansas 66109
CORPORATE LICENSE No. E2010005573 (MO.) / E-1736 (KS.)

STREET AND STORM SEWER PLANS
MASTER DRAINAGE PLAN
LOT AND FOUNDATION DATA - VILLA LOTS

COBEY CREEK FIRST PLAT
PHASE I
CITY OF LEES SUMMIT, JACKSON COUNTY, MISSOURI

X-REF NO.
16-059 Base Phase I
DRAWING NO.
16-059 Master Drainage
DATE
March 27, 2019
JOB NO.
16-059



SEE SHEET 34A FOR DESIGN AND AS-BUILT MINIMUM BUILDING OPENING ELEVATION TABLES

NOTES:

1) *Corner descriptions are oriented as if standing on the street facing the lot.*
2) *Conventional basement type indicates windows only above finished basement elevation.*
3) *Walkout basement type was determined by subtracting the 70' lot elevation from the 25' B/L elevaton. If the resulting elevation difference was greater than 6 feet it was determined that the buider could make the house a walkout by raising the top of foundation as needed. The intent of the designer was not to force these lots to be walkouts, only to suggest it was possible by raising the top of foundation.*
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6) *As-graded plot plans shall be required for the following lots: 1-30 and 140-159.*
7) *All proposed swales shall be established during Phase I construction and grading.*
8) *MBOEs are allowed to be interpolated from adjoining lot MBOEs where appropriate.*

NO.	BY	CK/APP	DATE	REVISION
3	SPW	RKS	05/07/21	PER ADJRED EASEMENT FROM CITY OF GREENWOOD
2	SPW	RKS	03/27/19	PER CITYS COMMENTS
1	SPW	RKS	03/06/19	PER CITYS COMMENTS
	SPW	RKS	11/27/18	SUBMITTAL TO CITY OF LEES SUMMIT

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R. KEVIN STERRETT | MO E-26440
May 7, 2021

Consult Inc engineers planners
11010 Haskell Street, Suite 210, Kansas City, Kansas 66109
CORPORATE LICENSE No. E2010005

STREET AND STORM SEWER PLANS
MASTER DRAINAGE PLAN
LOT AND FOUNDATION DATA - R-1 LOTS

COBEY CREEK FIRST PLAT
PHASE I

CITY OF LEES SUMMIT, JACKSON COUNTY, MISSOURI

X-REF NO.
16-059 Base Phase I

DRAWING NO.
16-059 Master Drainage

DATE
March 27, 2019

JOB NO.
16-059

Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
1	995.8	994.1	997.2	992.2	999.5	WALKOUT
2	994.1	992.4	992.2	990.2	996.4	WALKOUT
3	992.4	990.5	990.2	988.1	994.4	WALKOUT
4	990.5	989.2	988.1	986.0	992.5	WALKOUT
5	989.2	988.1	986.0	984.5	991.2	WALKOUT
6	988.1	987.3	984.5	983.2	990.1	WALKOUT
7	987.3	986.7	988.2	983.4	989.3	WALKOUT
8	983.6	985.2	989.7	991.7	993.3	DAYLIGHT*
9	982.5	983.6	988.3	989.7	991.5	DAYLIGHT*
10	981.8	982.5	986.8	988.3	990.3	DAYLIGHT*
11	981.0	981.8	987.3	986.8	988.6	DAYLIGHT
12	980.3	981.0	985.8	987.3	987.3	DAYLIGHT*

ASBUILT Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
1	995.9	994.2	997.2	992.2	*	WALKOUT
2	994.2	992.5	992.2	990.2	*	WALKOUT
3	992.5	990.6	990.2	988.1	*	WALKOUT
4	990.6	989.2	988.1	986.1	*	WALKOUT
5	989.2	988.1	986.1	984.5	*	WALKOUT
6	988.1	987.4	984.5	983.2	*	WALKOUT
7	987.4	986.7	983.2	983.5	*	WALKOUT
8	983.5	985.3	989.7	991.8	*	DAYLIGHT*
9	982.7	983.5	988.2	989.7	*	DAYLIGHT*
10	981.6	982.7	986.8	988.2	*	DAYLIGHT*
11	981.2	981.6	988.5	986.8	*	DAYLIGHT
12	980.3	981.2	985.7	988.5	*	DAYLIGHT*

* = NO MBOE REQUIRED FOR LOT

Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
13	981.1	981.8	983.4	983.2	985.7	DAYLIGHT
14	981.8	982.7	983.2	984.5	986.8	DAYLIGHT
15	982.7	983.6	984.5	985.9	988.2	DAYLIGHT
16	983.6	984.5	985.9	987.9	990.2	DAYLIGHT
17	984.5	986.4	987.9	990.0	992.3	DAYLIGHT
18	986.4	989.1	990.0	991.6	993.9	DAYLIGHT
19	989.1	992.3	991.6	993.7	996.0	CONVENTIONAL
20	992.3	994.6	993.7	996.6	998.9	CONVENTIONAL
21	994.6	996.8	996.6	999.1	1001.4	CONVENTIONAL

ASBUILT Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
13	981.1	981.9	983.4	983.3	*	DAYLIGHT
14	981.9	982.8	983.3	984.5	*	DAYLIGHT
15	982.8	983.7	984.5	986.0	*	DAYLIGHT
16	983.7	984.6	986.0	988.0	*	DAYLIGHT
17	984.6	986.5	988.0	990.0	*	DAYLIGHT
18	986.5	989.2	990.0	991.7	*	DAYLIGHT
19	989.2	992.3	991.7	993.8	*	CONVENTIONAL
20	992.3	994.6	993.8	996.5	*	CONVENTIONAL
21	994.6	996.8	996.5	999.1	*	CONVENTIONAL

* = NO MBOE REQUIRED FOR LOT

Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
22	995.9	994.6	1000.3	996.7	1002.6	CONVENTIONAL
23	994.6	992.3	996.7	994.0	999.0	CONVENTIONAL
24	992.3	989.1	994.0	990.8	996.3	WALKOUT
25	989.1	986.4	990.8	988.1	993.1	WALKOUT
26	986.4	984.5	988.1	986.3	990.5	WALKOUT
27	984.5	983.6	986.3	983.9	988.7	WALKOUT
28	983.6	982.7	983.9	982.3	986.3	WALKOUT
29	982.7	981.8	982.3	980.8	984.7	DAYLIGHT*
30	981.8	981.0	980.8	980.3	983.8	DAYLIGHT*

ASBUILT Lot Corner Elevations and MBOEs

LOT	FRONT		REAR		M.B.O.E.	BASEMENT TYPE
No.	LEFT COR	RIGHT COR	LEFT COR	RIGHT COR		
22	996.6	994.7	1000.4	996.7	*	CONVENTIONAL
23	994.7	992.3	996.7	993.9	*	CONVENTIONAL
24	992.3	989.0	993.9	990.9	*	WALKOUT
25	989.0	986.5	990.9	988.1	*	WALKOUT
26	986.5	984.5	988.1	986.2	*	WALKOUT
27	984.5	983.7	986.2	984.0	*	WALKOUT
28	983.7	982.8	984.0	982.3	*	WALKOUT
29	982.8	981.8	982.3	980.7	*	DAYLIGHT*
30	981.8	980.9	980.7	980.3	*	DAYLIGHT*

* = NO MBOE REQUIRED FOR LOT

E/F = EXISTING = PROPOSED DAYLIGHT = MBOE FOR WALKOUT WITH A WALKUP*

NO.	DATE	REVISION	BY	CK/APP
3	05/07/21	PER ADJRED EASEMENT FROM CITY OF GREENWOOD	SPW	RKS
2	03/27/19	PER CITYS COMMENTS	SPW	RKS
1	03/08/19	PER CITYS COMMENTS	SPW	RKS
	11/27/18	SUBMITTAL TO CITY OF LEES SUMMIT	SPW	RKS

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STATE OF MISSOURI · RICHARD KEVIN STERRETT · NUMBER 26440 · REGISTERED PROFESSIONAL ENGINEER

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May 7, 2021

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STREET AND STORM SEWER PLANS
MASTER DRAINAGE PLAN
LOT AND FOUNDATION DATA - R-1 LOTS

COBEY CREEK FIRST PLAT
PHASE I
CITY OF LEES SUMMIT, JACKSON COUNTY, MISSOURI

X-REF NO.
16-059 Base Phase I

DRAWING NO.
16-059 Master Drainage

DATE
March 27, 2019

JOB NO.
16-059