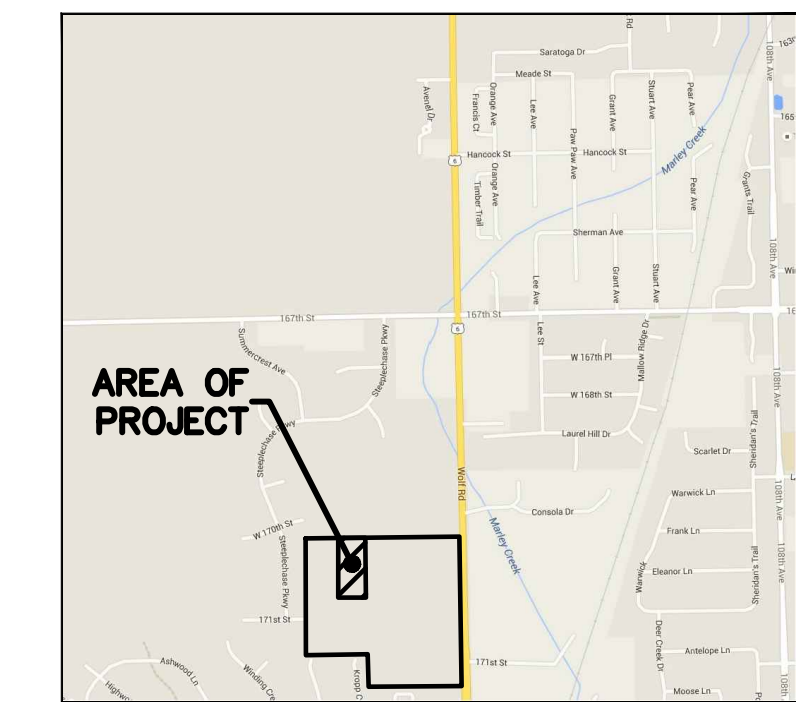
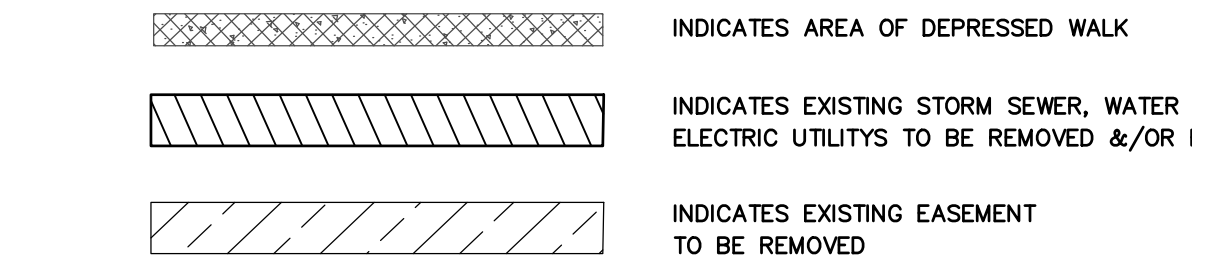
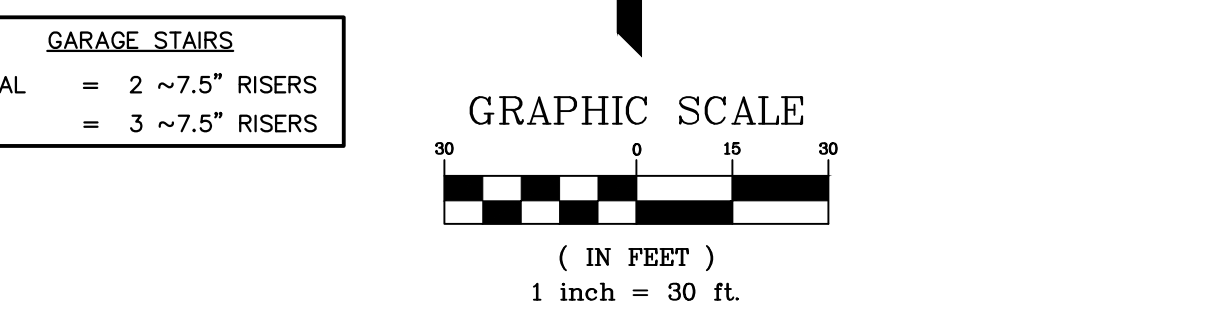


PRELIMINARY ENGINEERING
FOR
T.H. ALTERNATIVE AT BLUFF POINTE S.F. LOTS 13-18
ORLAND PARK, ILLINOIS



LOCATION MAP
NOT TO SCALE



Runoff Curve Number (CN)

Soil Name and Hydrologic Group (Appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ² Table C-2	CN ² Table C-3	CN ² Table C-4	Area	Product of CN x Area
C	Pervious - TH Lots	74			3,027	224,014
C	Impervious - TH Lots	98			3,063	300,153
C	Pervious - SF Lots @ 55%	74			3,148	232,968
C	Impervious - SF Lots @ 45%	98			2,576	252,427
C	Pervious - ROW	74			0,755	55,882
C	Impervious - ROW, Roadway, Sidewalk, Aprons	98			2,679	262,582
C	Detention Basin-NWL	99			0,745	73,777
C	Open Space lawn surrounding detention basin	74			1,715	126,893
					Totals =	17,709
					Totals =	1,528,694

* Use only one CN source per line.

$$CN \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{1528.69}{17,7095} = 86.3$$
 ; use CN = 86

TOTAL IMPERVIOUS AREA = 8,318

TOTAL NEW IMPERVIOUS AREA = 8.32 ACRES
 VOLUME CONTROL REQUIRED = 0.67 AC. FT.
 ORIGINAL DESIGN PROVIDED VOLUME CONTROL @ 0.67 AC. FT.
 ACTUAL AS-BUILT VOLUME = 0.84 AC. FT.

LEGEND

EXISTING	PROPOSED

BENCHMARKS

INITIAL BENCHMARKS

CORS STATION IL-FRANKFORT, STATION CODE ILF2, BEING A STATIONARY GPS STATION LOCATED ON TOP OF THE BUILDING LOCATED AT 9455 ENTERPRISE DRIVE, MOKENA, IL. ELEVATION: 763.86 (NAVD 88)

NGS CONTROL MONUMENT DN4691, BEING ROD IN A FLOATING BRONZE DISK LOCATED 39 FT (11.9 M) WEST OF THE CENTERLINE OF WLL/COOK ROAD, 54 FT SOUTH OF THE CENTERLINE OF 167TH STREET, 10 FT WEST OF A TRAFFIC SIGNAL HAND HOLE AND 1 FT NORTHEAST OF AN ORANGE CARSONITE MARKER. ELEVATION: 751.92 (NAVD 88)

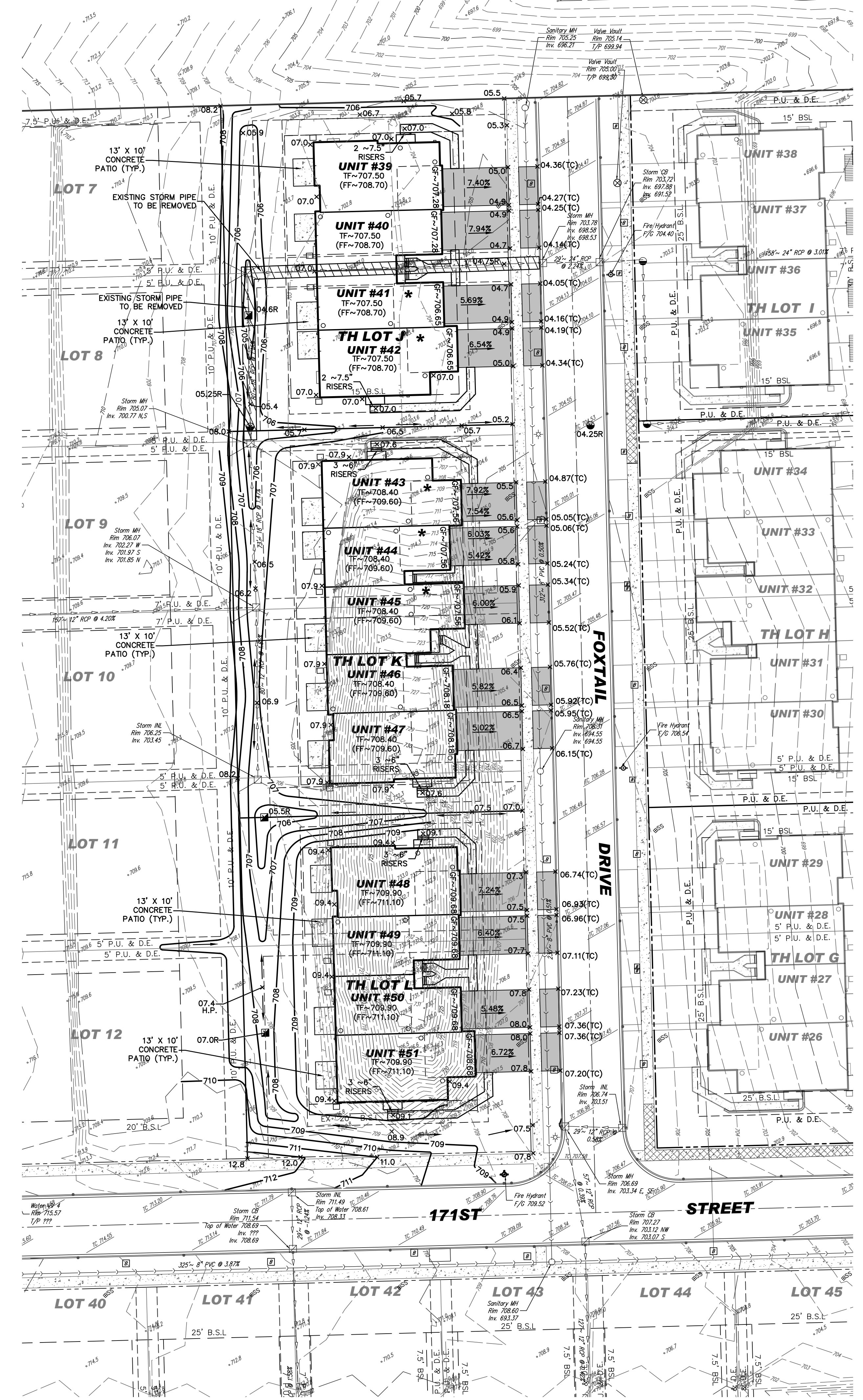
SITE BENCHMARKS:

NORTHEAST BONNET BOLT OF FIRE HYDRANT LOCATED ON THE NORTH SIDE OF THE END OF 171ST STREET. ELEVATION: 722.60 (NAVD 88)

RAILROAD SPIKE IN POWER POLE LOCATED ±125' NORTH AND ±95' EAST OF THE NORTHEAST CORNER OF PROJECT. ELEVATION: 676.29 (NAVD 88)

NORTHWEST BONNET BOLT OF FIRE HYDRANT LOCATED ±61' NORTH OF THE END OF 171ST STREET. ELEVATION: 674.92 (NAVD 88)

NOTE: ADD 0.08' FOR NGVD DATUM

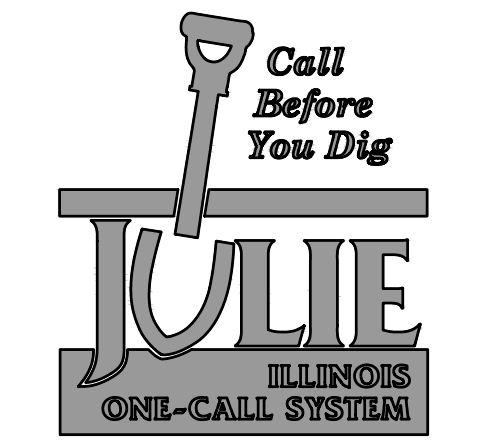


SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS
 COUNTY OF COOK

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THESE LOT IMPROVEMENTS OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE OWNER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTIES BECAUSE OF THE CONSTRUCTION OF THESE LOT IMPROVEMENTS.

DATED 10TH DAY OF AUGUST, 2022



Call 1-800-892-0123 or 811
 AT LEAST 48 HOURS (2 WORKING DAYS) BEFORE YOU DIG
 WWW.ILLINOISCALL.COM

REVISIONS

NO.	DATE	DESCRIPTION
1	02-11-22	PER VILLAGE REVIEW
2	08-10-22	PER CLIENT: SITE PLAN

McNAUGHTON DEVELOPMENT
 115220 JACKSON ST. Ste 101
 BURR RIDGE, ILLINOIS 60527
 (630) 325-3400

PRELIMINARY ENGINEERING FOR
 TOWNHOME ALTERNATIVE AT BLUFF POINTE
 ORLAND PARK, ILLINOIS

DESIGNTEK ENGINEERING, INC.
 CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
 9930 W. 190TH STREET, SUITE L
 MOKENA, ILLINOIS 60448
 (708) 326-4961
 FAX: (708) 326-4962
 IL PROF. LIC. NO.: 184 - 003740



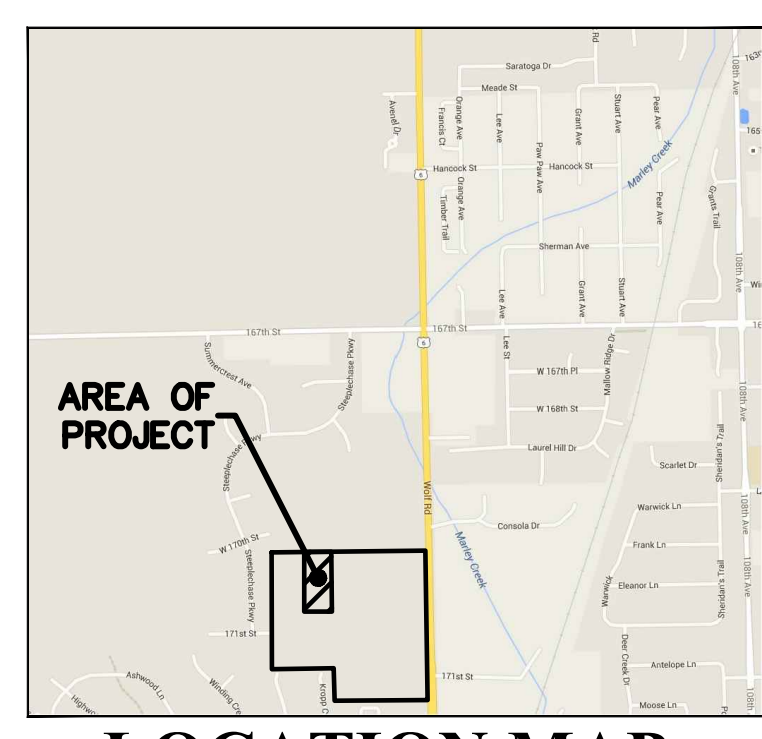
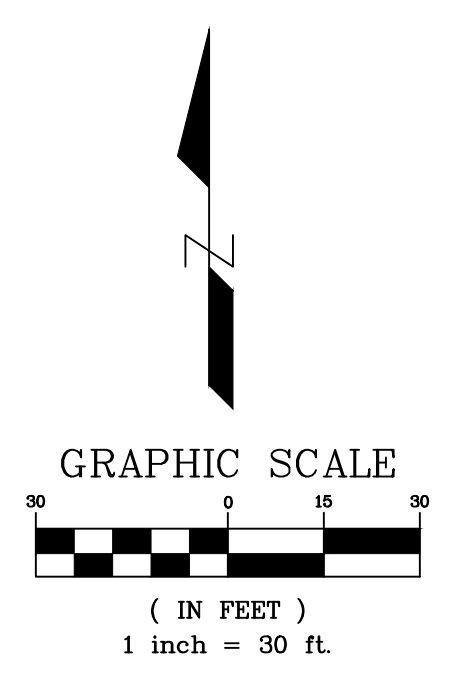
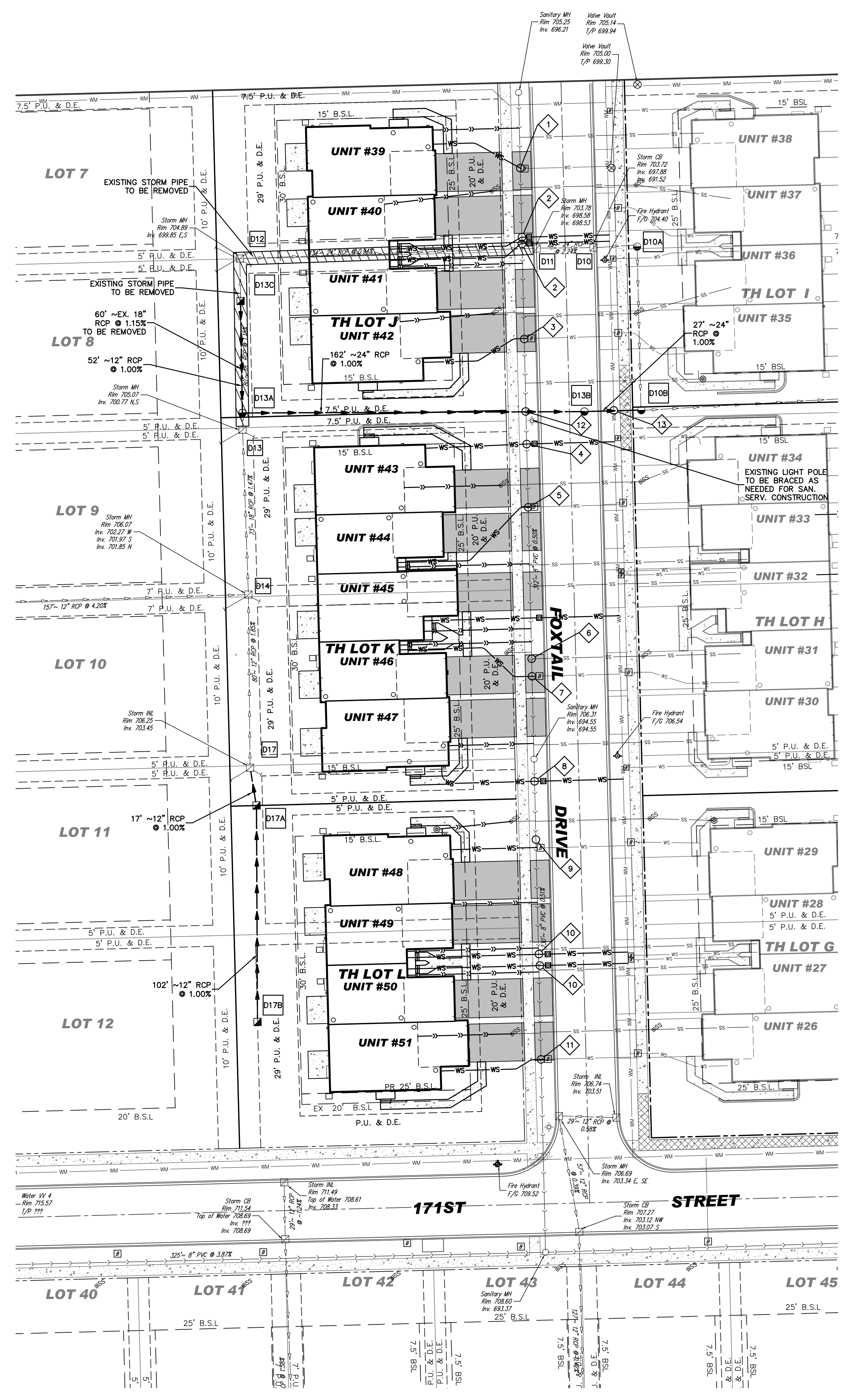
PROJECT INFORMATION

Project No.: 16-0046 TH2
 Scale: 1" = 30'
 Date: 09-21-2021
 Design By: SDS
 Drawn By: NSM
 Checked By: SDS

PRELIMINARY ENGINEERING: GRADING

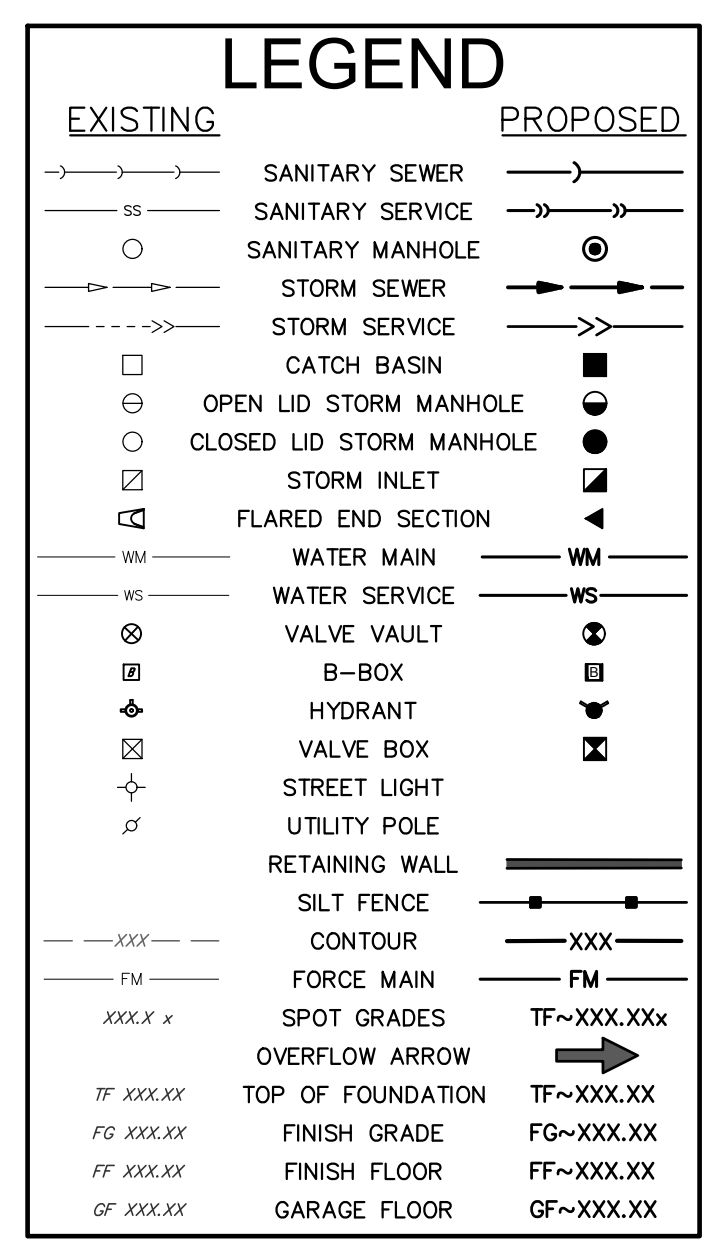
L:\Engineering\2016 Projects\16-0046\Engineering\16-0046-TH FE LOTS 13-18 REV. 03_BLDG03_U.K. & LARRY PHIL DATES 6/17/2022 6:54:57 PM BY:smc

PRELIMINARY ENGINEERING: UTILITY PLAN
FOR
T.H. ALTERNATIVE AT BLUFF POINTE S.F. LOTS 13-18
ORLAND PARK, ILLINOIS



LOCATION MAP
NOT TO SCALE

- INDICATES AREA OF DEPRESSED WALK
- INDICATES EXISTING STORM SEWER, WATER ELECTRIC UTILITIES TO BE REMOVED &/OR
- INDICATES EXISTING EASEMENT TO BE REMOVED



STORM SEWER STRUCTURES

- D10 EX. 48" C.B., O.L. RIM 703.72 INV 697.88 (W, 24" RCP) INV 691.52 (E, 24" RCP)
- D10A EX. 60" M.H., O.L. RIM 704.80 INV 690.92 (W&S, 24")
- D10B EX. 60" M.H., O.L. RIM 704.20 INV 689.40 (N&E, 24" RCP) INV 693.37 (W, 24" RCP)
- D11 EX. 48" M.H., O.L. RIM 703.78 EX. INV 698.58 (W, 24") EX. INV 698.53 (E, 24") PLUG
- D12 EX. M.H., O.L. (TO BE REMOVED) RIM 704.89 EX. INV 699.85 (E, 24") EX. INV 699.85 (S, 18")
- D13 EX. 48" M.H., O.L. RIM 705.07 INV 700.77 (N&S, 18" RCP)
- D13A 60" DIA. MANHOLE, O.L. RIM 705.25 INV 700.69 (S, EX. 18" RCP) INV 700.19 (E, PR. 24" RCP) INV 701.08 (N, PR. 12" RCP)
- D13B 60" DIA. MANHOLE, C.L. RIM 704.25 (WE) INV 698.57 (W, 24" RCP) INV ~694.00 (E, 24" RCP)
- D13C 24" DIA. INLET RIM 704.60 INV 701.60 (S, 12" RCP)
- D14 48" M.H., O.L. RIM 706.07 EX. INV 702.27 (W, 12" RCP) EX. INV 701.97 (S, 12" RCP) EX. INV 701.85 (N, 18" RCP)
- D17 EX. 24" DIA. INLET RIM 706.25 EX. INV 703.45 (N, 12" RCP) PR INV 703.45 (S, 12" RCP)
- D17A 24" DIA. INLET RIM 705.50 INV 703.62 (N&S, 12" RCP)
- D17B 24" DIA. INLET RIM 707.00 INV 704.64 (N, 12" RCP)

ID	BOTTOM OF PIPE	TOP OF PIPE	VERTICAL SEPARATION	CROSSING INFO.
1	698.63	696.79	1.84'	WATER SERVICE OVER SANITARY
2	698.47	696.60	1.87'	WATER SERVICE OVER SANITARY
3	698.63	696.37	2.26'	WATER SERVICE OVER SANITARY
4	699.03	696.11	2.92'	WATER SERVICE OVER SANITARY
5	699.38	695.95	3.43'	WATER SERVICE OVER SANITARY
6	699.88	695.67	4.21'	WATER SERVICE OVER SANITARY
7	700.18	695.52	4.66'	WATER SERVICE OVER SANITARY
8	700.63	695.26	5.37'	WATER SERVICE OVER SANITARY
9	701.01	695.10	5.91'	WATER SERVICE OVER SANITARY
10	701.53	694.82	6.71'	WATER SERVICE OVER SANITARY SERVICE
11	701.53	694.56	6.97'	WATER SERVICE OVER SANITARY
12	698.60	696.19	2.41'	STORM OVER SANITARY
13	697.73	696.12	1.61'	WATERMAIN OVER STORM

UTILITY CROSSING INFORMATION

- MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN WATERMAIN AND STORM/SANITARY SEWERS.
- DEPTHS OF EXISTING WM ARE ASSUMED AND MUST BE FIELD VERIFIED PRIOR TO START OF CONSTRUCTION.
- WHEN THE WM CROSSES BELOW A SEWER, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS THAT COMPLY WITH 35 IAC 653.119 OR ELSE EITHER PIPE MUST BE INSTALLED IN A CASING, THE PROTECTION MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WM TO THE SEWER IS AT LEAST 10 FEET. IN ADDITION, THE WM MUST BE LOCATED AT LEAST 18 INCHES BELOW THE SEWER. THIS 18 INCHES IS A STRUCTURAL PROTECTION TO PREVENT THE SEWER FROM SETTLING AND BREAKING THE WM.
- WHEN THE WM CROSSES ABOVE A SEWER AND IT IS NOT 18 INCHES ABOVE THE CROWN OF THE SEWER WHERE THE PIPE CROSSES, THE SEWER MUST BE CONSTRUCTED WITH WM QUALITY PIPE & JOINTS (COMPLIANCE SAME AS ABOVE) OR A CASING PIPE CAN BE INSTALLED AROUND THE WM OR THE SEWER. THE CASING PIPE MUST BE A MATERIAL THAT IS APPROVED FOR USE AS WM. CONCRETE IS NOT AN ACCEPTABLE ENCASUREMENT.
- WHEN THE ENCASUREMENT OPTION IS USED, IT SHALL BE ONE CONTINUAL SECTION (NO JOINTS).

NO.	DATE	DESCRIPTION
1	02-11-22	PER VILLAGE REVIEW
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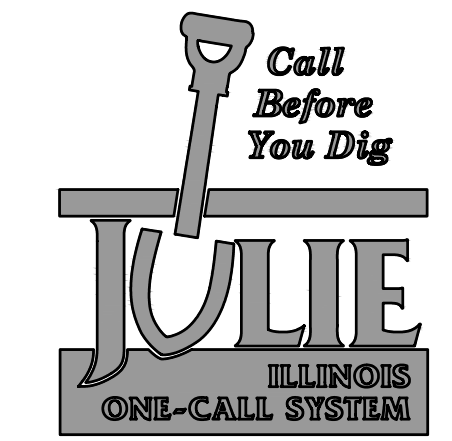
McNAUGHTON DEVELOPMENT
11S220 JACKSON ST. Ste 101
BURR RIDGE, ILLINOIS 60527
(630) 325-3400

PRELIMINARY ENGINEERING
FOR
TOWNHOME ALTERNATIVE
AT BLUFF POINTE
ORLAND PARK, ILLINOIS

DESIGNTEK ENGINEERING, INC.
CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
9930 W. 190TH STREET, SUITE L
MOKENA, ILLINOIS 60448
(708) 326-4961
FAX: (708) 326-4962
IL PROF. LIC. NO.: 184 - 003740

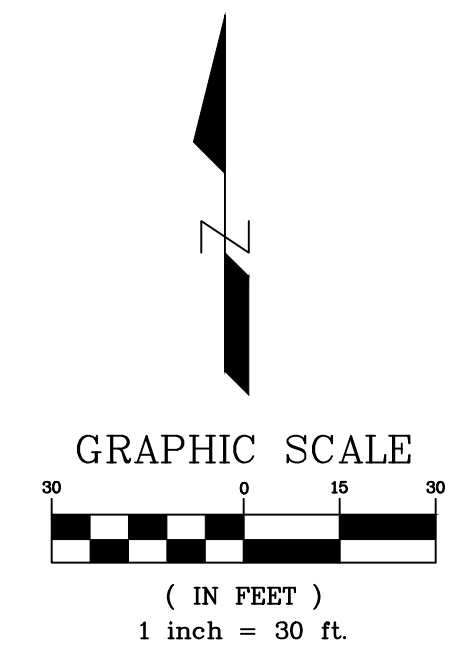
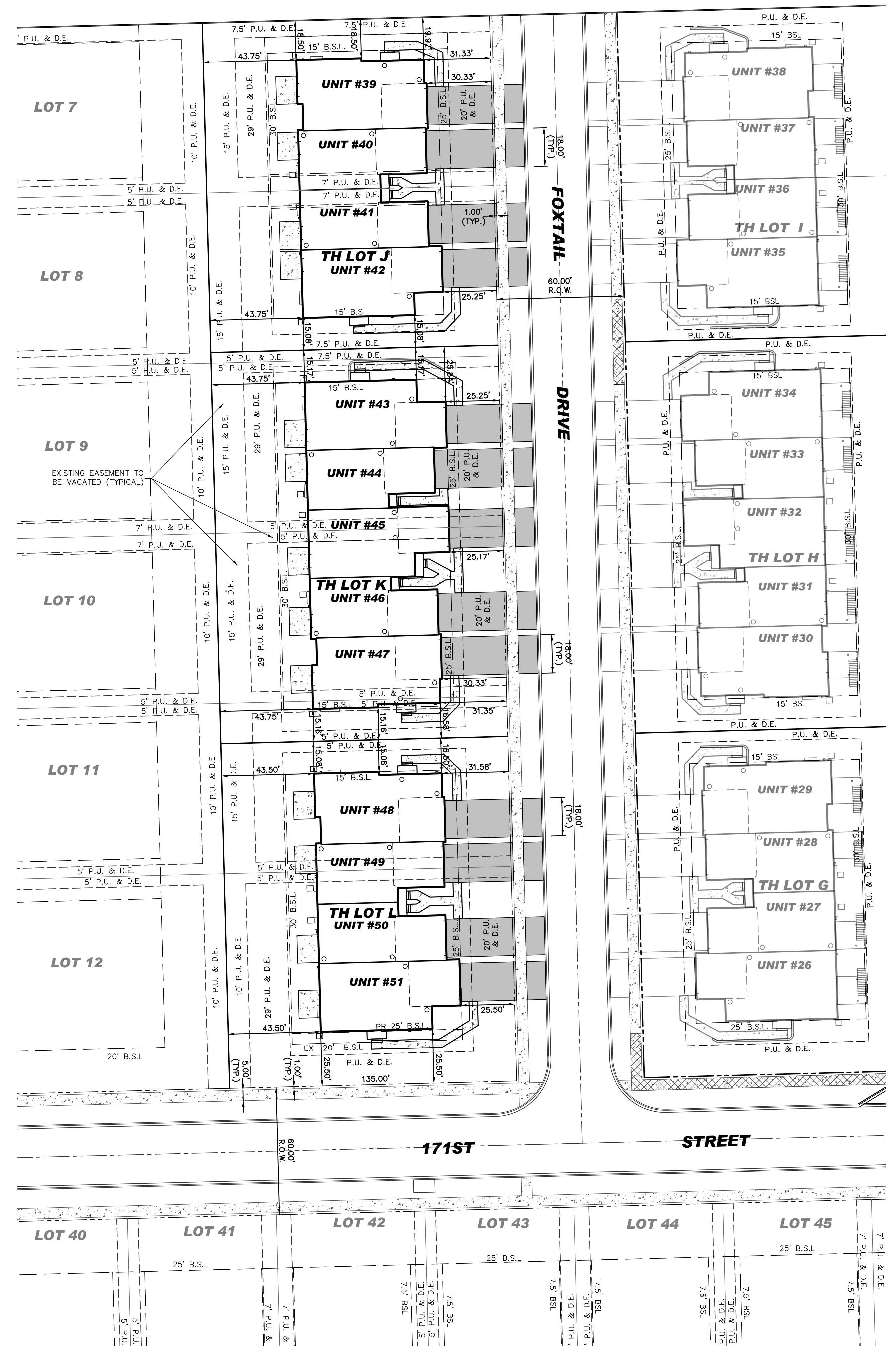


PROJECT INFORMATION
Project No.: 16-0046 TH2
Scale: 1" = 30'
Date: 09-21-2021
Design By: SDS
Drawn By: NSM
Checked By: SDS



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PRELIMINARY PLAT/P.U.D.
FOR
T.H. ALTERNATIVE AT BLUFF POINTE S.F. LOTS 13-18
ORLAND PARK, ILLINOIS



LOT COVERAGE

LOT #	AREA:	IMPERVIOUS COVERAGE
TH J	20,925	10,635/20,925 = 50.82%
TH K	24,829	13,108/24,829 = 52.79%
TH L	21,870	10,337/21,870 = 47.27%

LEGAL DESCRIPTION:

PARCEL 1:
 THE NORTH 1/2 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPT THAT PART FALLING IN BROOK HILLS P.U.D. UNIT ONE, BEING A SUBDIVISION OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 36 NORTH, RANGE 12) ALL IN COOK COUNTY, ILLINOIS.

PARCEL 2:
 THE NORTH 1/2 OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 30, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPTING THEREFROM THAT PART TAKEN FOR WOLF ROAD RIGHT OF WAY), IN COOK COUNTY, ILLINOIS.

PARCEL 3:
 THE SOUTH 685.92 OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SECTION 30, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, (EXCEPTING THEREFROM THAT PART TAKEN FOR WOLF ROAD RIGHT OF WAY), IN COOK COUNTY, ILLINOIS.

LEGEND

EXISTING	PROPOSED

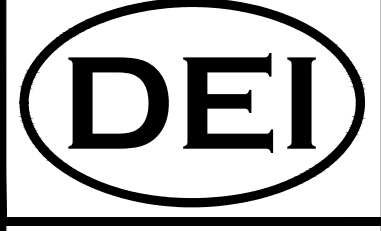
REVISIONS

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McNAUGHTON DEVELOPMENT
 11S220 JACKSON ST. Ste 101
 BURR RIDGE, ILLINOIS 60527
 (630) 325-3400

PRELIMINARY PLAT
FOR
TOWNHOME ALTERNATIVE
AT BLUFF POINTE
ORLAND PARK, ILLINOIS

DESIGNTEK ENGINEERING, INC.
 CONSULTING, CIVIL ENGINEERING & LAND SURVEYING
 9930 W. 190TH STREET, SUITE L
 MOKENA, ILLINOIS 60448
 (708) 326-4961
 FAX: (708) 326-4962
 ILL. PROF. LIC. NO.: 184 - 003740



PROJECT INFORMATION
 Project No.: 16-0046 TH2
 Scale: 1" = 30'
 Date: 09-21-2021
 Design By: SDS
 Drawn By: NSM
 Checked By: SDS



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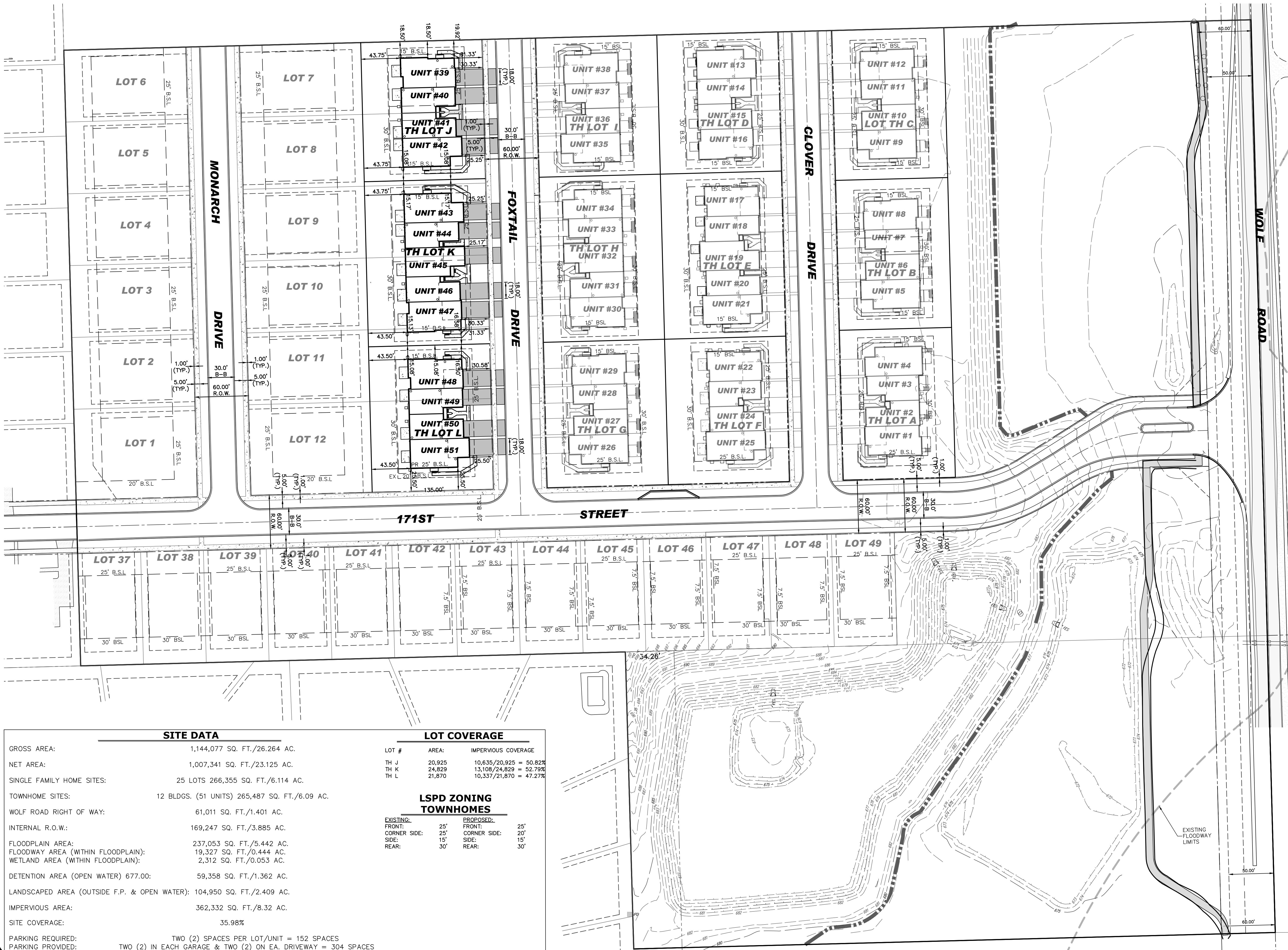
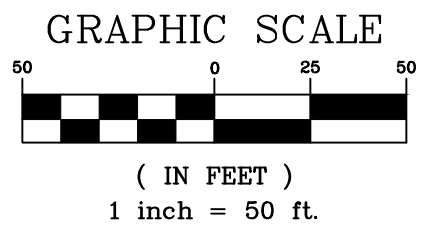
L:\Engineering\2016 Projects\16-0046\Engineering\2021\Drawings\16-0046-TH FE LOTS 13-18 REV. 03. BLDG. (J.K. & L.S.) Plot Date: 6/17/2022 4:58:12 PM By: jkennedy

PRELIMINARY SITE PLAN

FOR

T.H. ALTERNATIVE AT BLUFF POINTE S.F. LOTS 13-18

- NOTES:**
1. PROPOSED SIDEWALKS TO UNITS ARE TO BE 3' WIDE (TYPICAL).
 2. PROPOSED RETAINING WALLS WILL BE LESS THAN 3' HIGH (TYPICAL).
 3. ON-STREET PARKING IS RESTRICTED TO THE WEST SIDE OF THE STREET ALONG CLOVER DRIVE & FOXTAIL DRIVE UNTIL AT SOME TIME IN THE FUTURE THEY ARE EXTENDED.
 4. IRRIGATION SYSTEM SHALL BE EQUIPPED WITH RAIN SENSING SHUT OFF SYSTEMS. THIS WILL PROVIDE FOR AN ADDITIONAL 5% LOT COVERAGE ALLOWANCE PER SECTION 6-205.F.3.g OF THE ORLAND PARK ZONING ORDINANCE.



LOT DATA

LOT #	SQ. FT.
LOT 1	13,633
LOT 2	10,820
LOT 3	10,831
LOT 4	10,843
LOT 5	10,854
LOT 6	10,865
LOT 7	10,800
LOT 8	10,800
LOT 9	10,800
LOT 10	10,800
LOT 11	10,800
LOT 12	13,624
LOT 37	8,764
LOT 38	8,750
LOT 39	8,750
LOT 40	8,750
LOT 41	8,750
LOT 42	8,750
LOT 43	8,750
LOT 44	8,750
LOT 45	8,750
LOT 46	8,750
LOT 47	8,750
LOT 48	8,750
LOT 49	8,750
LOT TH A	20,871
LOT TH B	20,872
LOT TH C	20,872
LOT TH D	20,925
LOT TH E	24,829
LOT TH F	21,870
LOT TH G	21,870
LOT TH H	24,829
LOT TH I	20,925
LOT TH J	20,925
LOT TH K	24,829
LOT TH L	21,870

SITE DATA		LOT COVERAGE	
GROSS AREA:	1,144,077 SQ. FT./26.264 AC.	LOT #	AREA: IMPERVIOUS COVERAGE
NET AREA:	1,007,341 SQ. FT./23.125 AC.	TH J	20,925 10,635/20,925 = 50.82%
SINGLE FAMILY HOME SITES:	25 LOTS 266,355 SQ. FT./6.114 AC.	TH K	24,829 13,108/24,829 = 52.79%
TOWNHOME SITES:	12 BLDGS. (51 UNITS) 265,487 SQ. FT./6.09 AC.	TH L	21,870 10,337/21,870 = 47.27%
WOLF ROAD RIGHT OF WAY:	61,011 SQ. FT./1.401 AC.	LSPD ZONING TOWNHOMES	
INTERNAL R.O.W.:	169,247 SQ. FT./3.885 AC.	EXISTING:	PROPOSED:
FLOODPLAIN AREA:	237,053 SQ. FT./5.442 AC.	FRONT:	25' FRONT: 25'
FLOODWAY AREA (WITHIN FLOODPLAIN):	19,327 SQ. FT./0.444 AC.	CORNER SIDE:	25' CORNER SIDE: 20'
WETLAND AREA (WITHIN FLOODPLAIN):	2,312 SQ. FT./0.053 AC.	SIDE:	15' SIDE: 15'
DETENTION AREA (OPEN WATER) 677.00:	59,358 SQ. FT./1.362 AC.	REAR:	30' REAR: 30'
LANDSCAPED AREA (OUTSIDE F.P. & OPEN WATER):	104,950 SQ. FT./2.409 AC.		
IMPERVIOUS AREA:	362,332 SQ. FT./8.32 AC.		
SITE COVERAGE:	35.98%		
PARKING REQUIRED:	TWO (2) SPACES PER LOT/UNIT = 152 SPACES		
PARKING PROVIDED:	TWO (2) IN EACH GARAGE & TWO (2) ON EA. DRIVEWAY = 304 SPACES		

REVISIONS

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PROJECT INFORMATION
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Scale: 1" = 50'
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Design By: SDS
Drawn By: NSM
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