

SITE DEVELOPMENT PLAN OF LAND
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

DATE: FEBRUARY 8, 2018

Revised: April 10, 2018

July 6, 2018

July 25, 2018

Sept. 18, 2018

OWNER REFERENCE:
GLADY C. KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE
MAP 41, LOT 34B

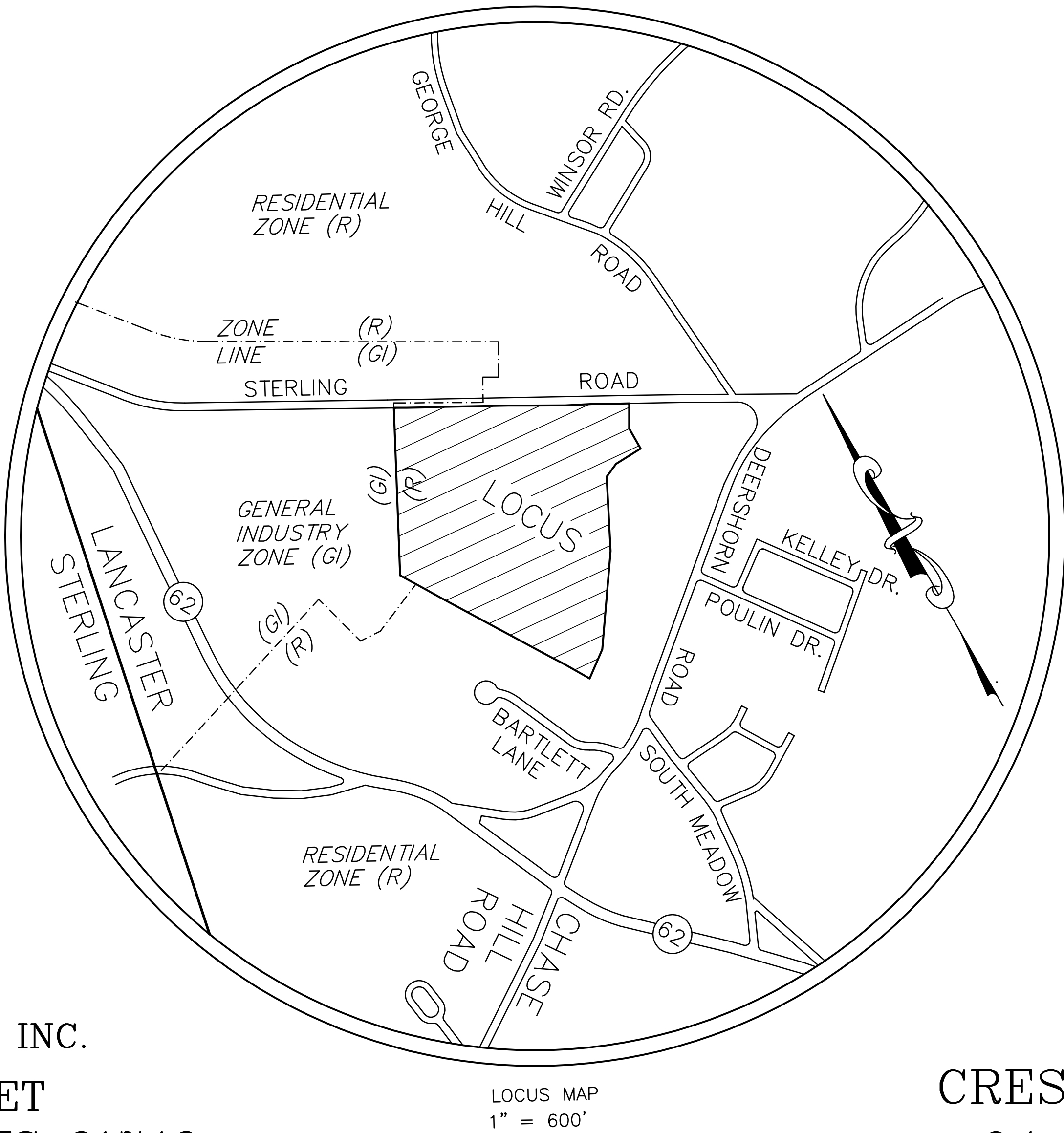
PLAN REFERENCE:
WORCESTER COUNTY REGISTRY
1) PLAN BOOK 466, PLAN No. 69
2) PLAN BOOK 422, PLAN No. 76
3) PLAN BOOK 539, PLAN No. 80
4) PLAN BOOK 763, PLAN No. 63

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:		
	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
	FRONT:	74 Feet (Arterial) 60 Feet (Collector) 55 Feet (Minor)
		20 Feet (Min)
SIDE:	20 Feet	10 Feet (Min)
	REAR:	20 Feet (Min)

NOTE:
THE ON-SITE DRAINAGE SYSTEM IS SUBJECT TO A
"STORMWATER MANAGEMENT OPERATION AND MAINTENANCE PLAN"
FOR: GOODRIDGE BROOK ESTATES
DATED: JULY 6, 2018

PREPARED BY:
GLM ENGINEERING
CONSULTANTS, INC.
19 EXCHANGE STREET
HOLLISTON, MASSACHUSETTS 01746
(508)429-1100 fax:(508)429-7160



PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
120 APARTMENT STYLE UNITS
182 TOTAL PROPOSED UNITS

PROJECT DENSITY:
LOT B1 TOTAL LOT AREA: 833,833 ± S.F. (19.14 ± AC) Uplands Area: 427,585 S.F. Wetland Area: 406,248 S.F.
LOT B2 TOTAL LOT AREA: 1,144,579 ± S.F. (26.25 ± AC) Uplands Area: 976,958 S.F. Wetland Area: 167,621 S.F.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER
2	PROJECT OVERVIEW
3	EXISTING CONDITIONS
4	MULTI-UNIT LAYOUT
5	MULTI-UNIT LAYOUT
6	MULTI-UNIT GRADING & UTILITIES
7	MULTI-UNIT GRADING & UTILITIES
8	LOT LAYOUT (1 OF 4)
9	LOT LAYOUT (2 OF 4)
10	LOT LAYOUT (3 OF 4)
11	LOT LAYOUT (4 OF 4)
12	SINGLE FAMILY-LAYOUT & GRADING
13	SINGLE FAMILY-LAYOUT & GRADING
14	SINGLE FAMILY-LAYOUT & GRADING
15	PLAN & PROFILE ROAD A
16	PLAN & PROFILE ROAD A
17	PLAN & PROFILE ROAD B
18	PLAN & PROFILE ROAD C
19	PLAN & PROFILE STERLING ROAD
20	EROSION CONTROL DETAILS
21	DETAILS STREET
22	DETAILS DRAIN
23	DETAILS DRAIN
24	DETAILS SEWER
25	DETAILS WATER
26	CDS TREATMENT UNIT DETAIL
27	SOIL LOGS

JOYCE E. HASTINGS P.L.S. DATE

PAUL E. TRUAX, P.E. DATE

PREPARED FOR:
CRESENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON, MA 01583

DATE: FEBRUARY 8, 2018
SHEET: 1 of 27
PLAN #: 27,147

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
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SIDE:	20 Feet	10 Feet (Min)
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TOTAL PARCEL AREA: 45.4 ACRES

PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
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182 TOTAL PROPOSED UNITS

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

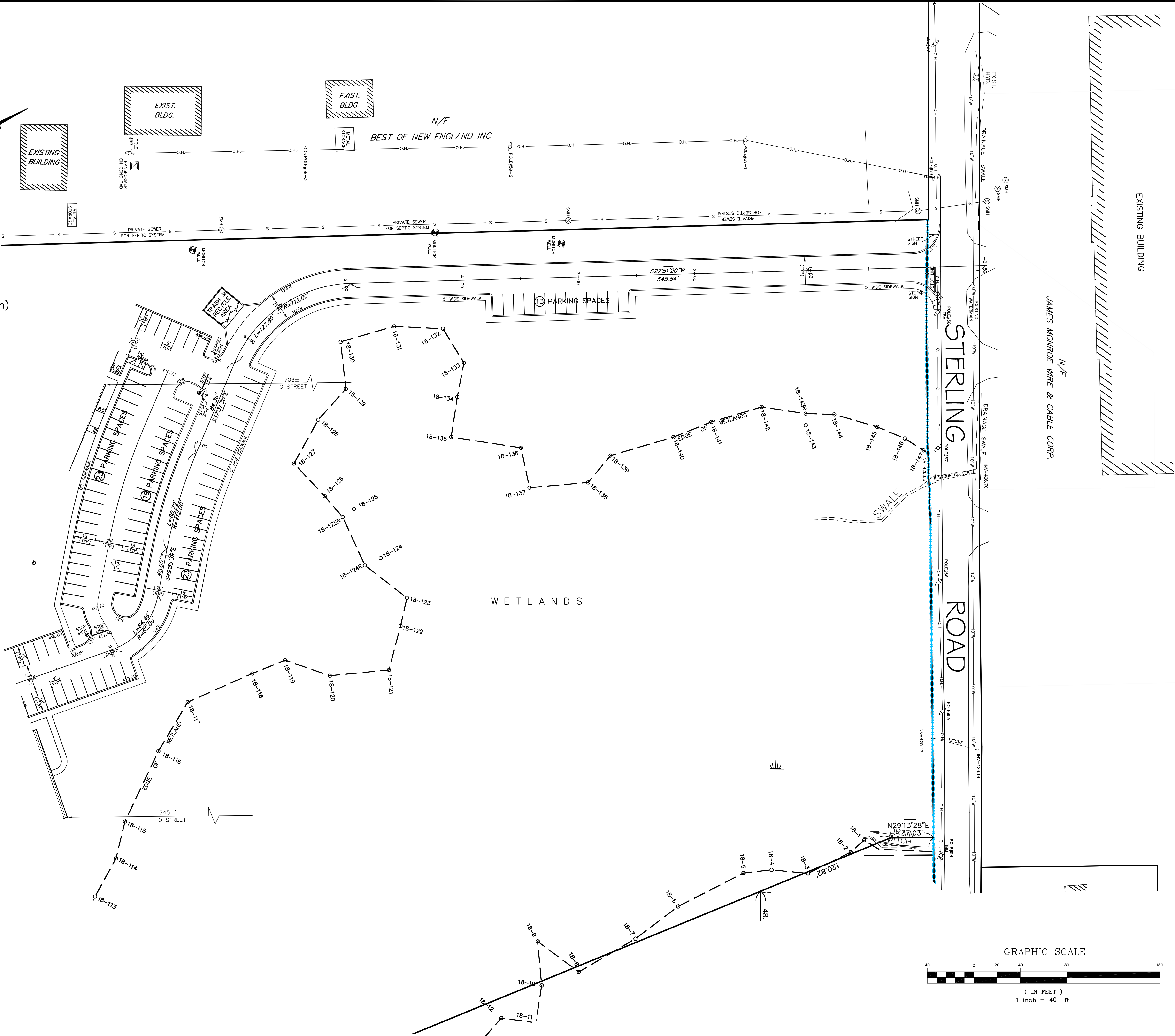
DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

PLAN REFERENCE:
WORCESTER COUNTY REGISTRY
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LEGEND	
	SEWER LINE (8" PVC TYP.)
	SEWER MANHOLE
	DRAINAGE LINE (12" CONC. TYP.)
	DRAINAGE MANHOLE
	CATCH BASIN
	WATER LINE
	WATERGATE
	HYDRANT
	WATER TEE
	CENTERLINE OF ROAD WAY
	MODIFIED CAPE COD BERM
	DENOTES CONC. BND. W/ D.H.
	100' BUFFER ZONE
	EDGE OF VEGETATED WETLANDS
	WETLAND FLAG NO.
	EROSION CONTROL BARRIER
	WETLANDS
	UTILITY POLE
	PROPOSED SPOT ELEVATION
	EXISTING CONTOUR
	PROPOSED CONTOUR
	STONE WALL
	PROPOSED LIMIT OF CLEARING
	DRILL HOLE
	IRON PIN
	DEEP TEST HOLE



SITE DEVELOPMENT PLAN
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Multi Unit & Single Family Subdivision Layout
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19 EXCHANGE STREET
HOLLISTON, MA 01746
P: 508-429-1100
F: 508-429-7160
www.GLMengineering.com

DRW.: RST	
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	5 of 27
PLAN #:	27,147

PLAN REFERENCE:

WORCESTER COUNTY REGISTRY
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DEED REFERENCE:

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BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP #1, LOT 34B

ZONING TABLE

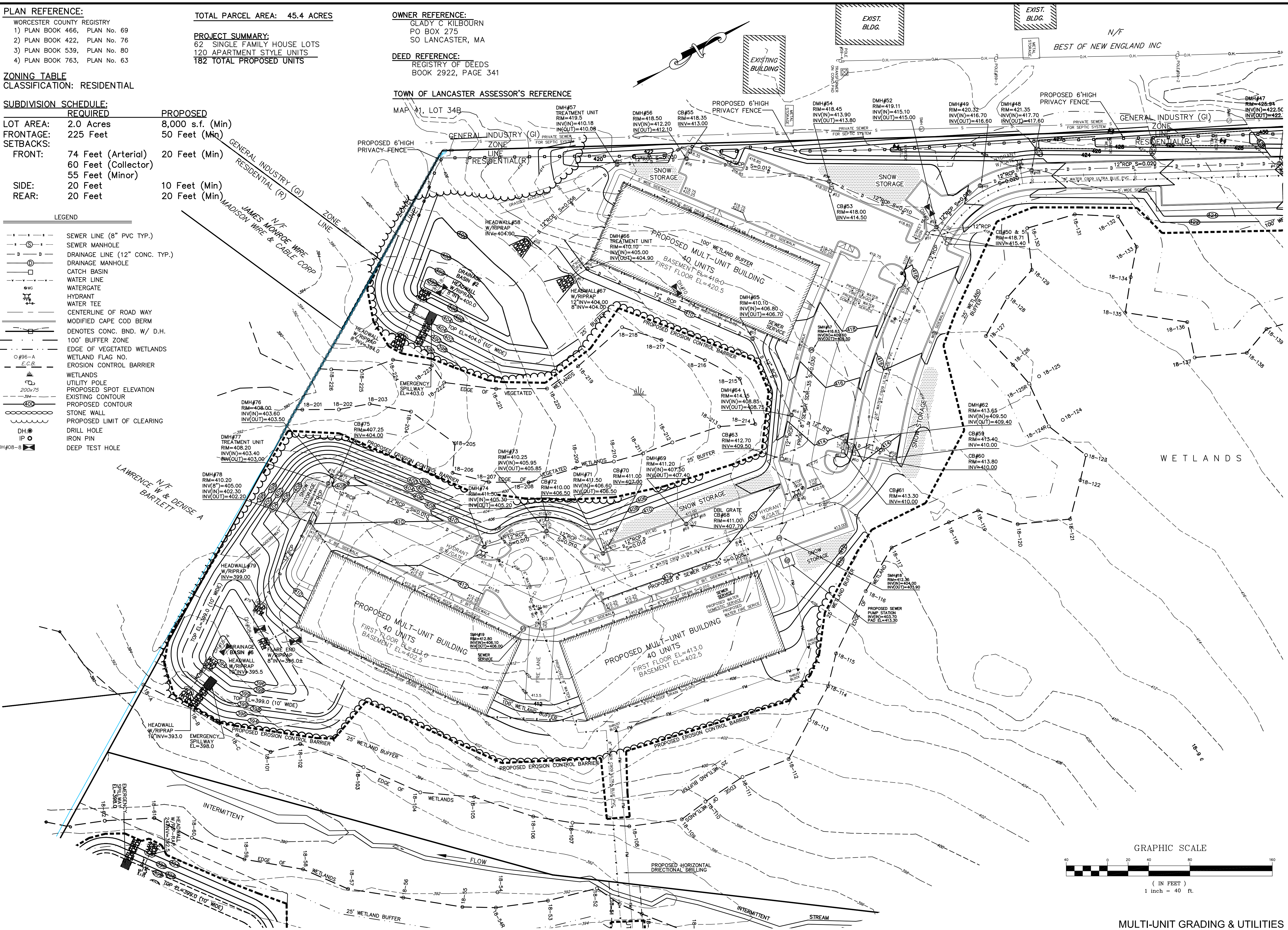
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SUBDIVISION SCHEDULE:

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LEGEND

- SEWER LINE (8" PVC TYP.)
- SEWER MANHOLE
- DRAINAGE LINE (12" CONC. TYP.)
- DRAINAGE MANHOLE
- CATCH BASIN
- WATER LINE
- WATERGATE
- HYDRANT
- WATER TEE
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- EROSION CONTROL BARRIER
- WETLANDS
- UTILITY POLE
- PROPOSED SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- STONE WALL
- PROPOSED LIMIT OF CLEARING
- DRILL HOLE
- IRON PIN
- DEEP TEST HOLE



GRAPHIC SCALE



MULTI-UNIT GRADING & UTILITIES

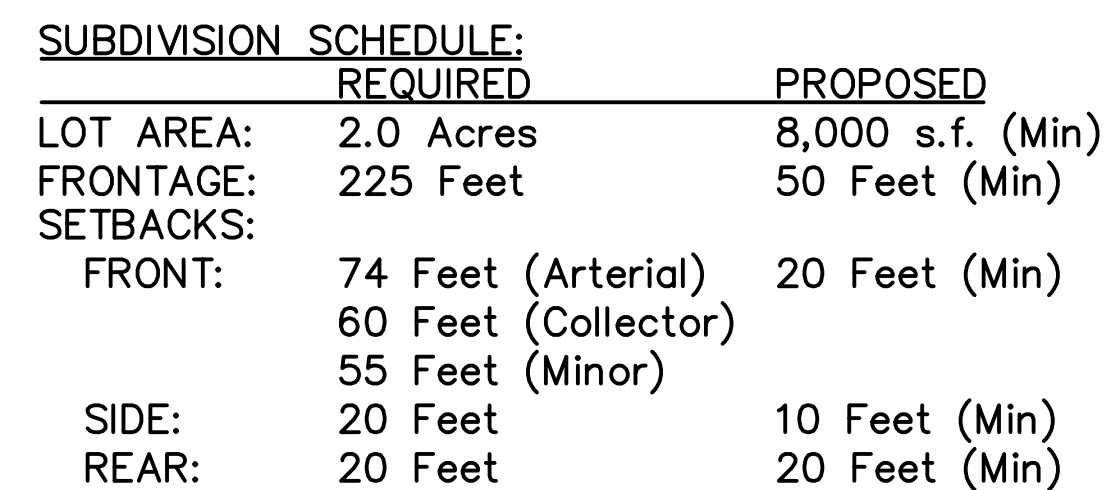
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DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: 1"= 40'
SHEET: 6 of 27
PLAN #: 27,147

NO.	DATE	DESCRIPTION
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS

PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01583



PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
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DEED REFERENCE:
REGISTRY OF DEEDS
 BOOK 2922, PAGE 341

MAP 41, LOT 34B

PLAN REFERENCE:

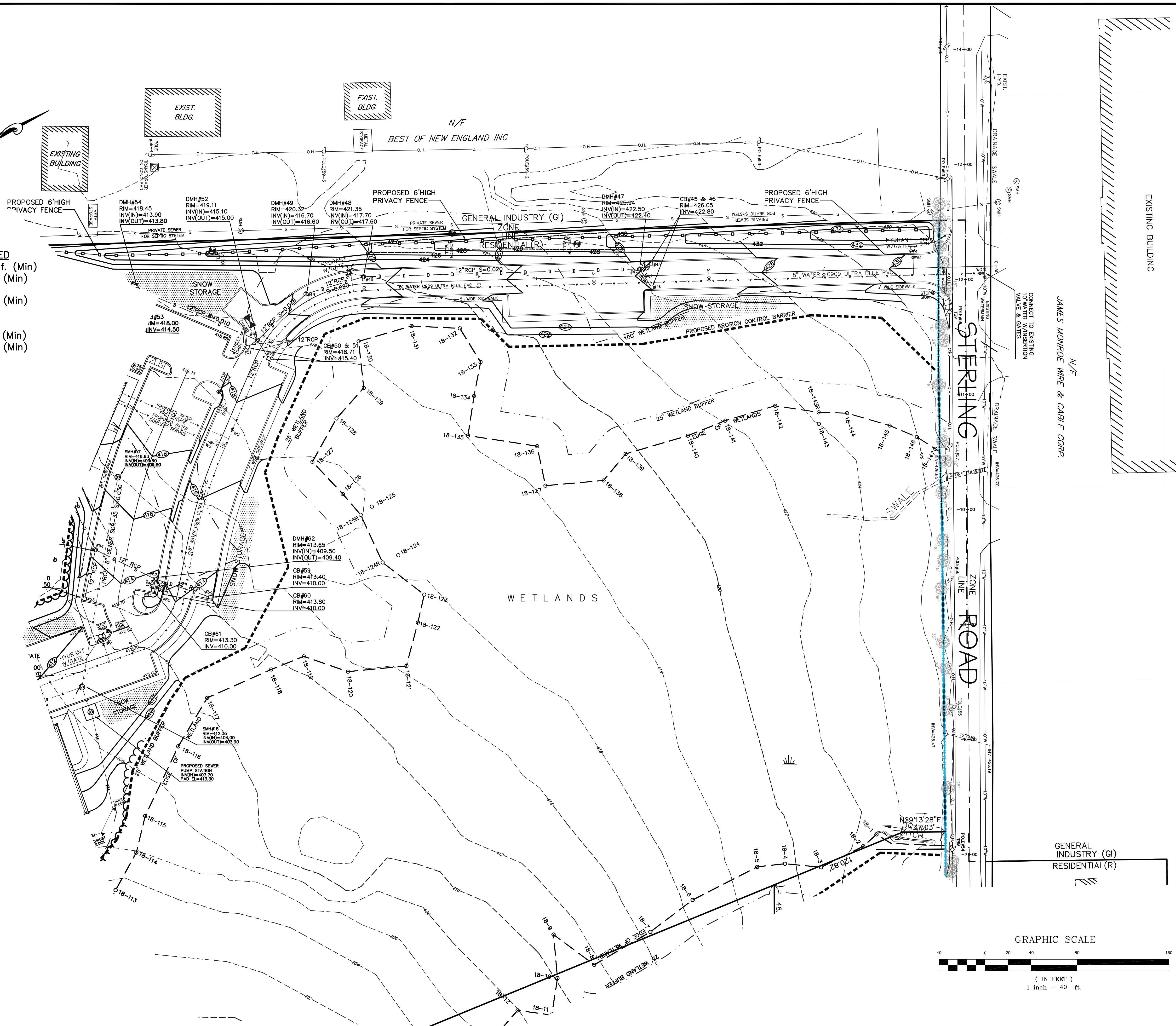
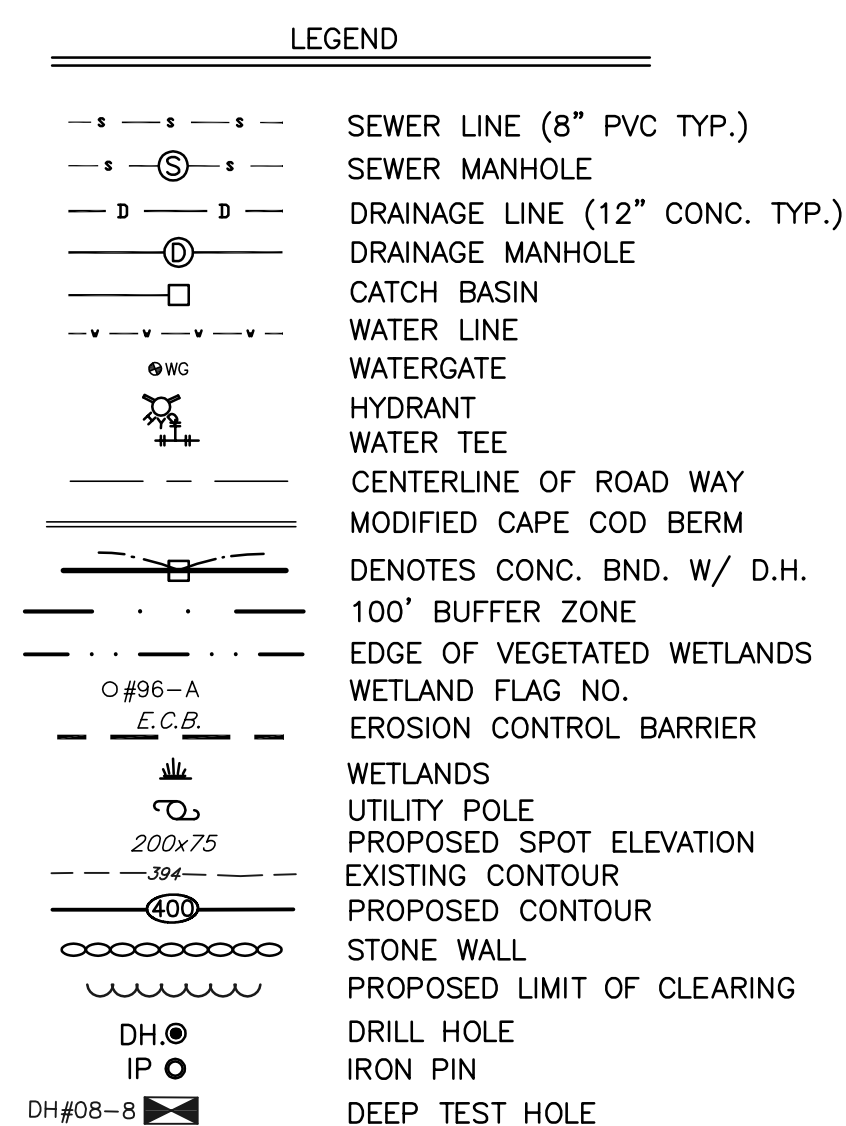
WORCESTER COUNTY REGISTRY

1) PLAN BOOK 466, PLAN No. 69

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3) PLAN BOOK 539, PLAN No. 80

4) PLAN BOOK 763, PLAN No. 63



REVISIONS		DESCRIPTION
No.	DATE	
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SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

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DRW.: RST

JOB No. 12,274

DATE: FEBRUARY 8, 2018

SCALE: 1"= 40'

SHEET: 7 of 27

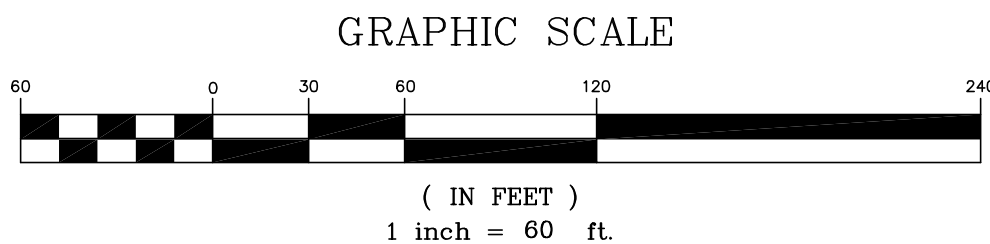
MULTI-UNIT GRADING & UTILITIES



SUBDIVISION SCHEDULE:		PROPOSED
	REQUIRED	
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
SETBACKS:		
FRONT:	74 Feet (Arterial)	20 Feet (Min)
	60 Feet (Collector)	
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TOWN CLERK

DATE : _____



DEED REFERENCE:
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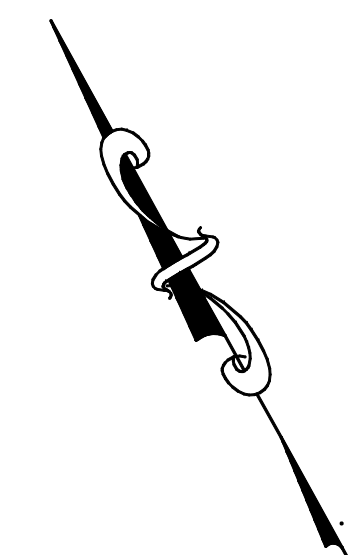
MAP 41, LOT 34B

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE
PROCEDURAL AND TECHNICAL STANDARDS FOR THE
PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH
OF MASSACHUSETTS.

LOT LAYOUT 1 OF 4

PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01583

PLAN #: 27.147



FOR REGISTRY OF DEEDS USE ONLY

I HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE LANCASTER ZONING BOARD OF APPEALS WAS RECEIVED AND RECORDED AT THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER SUCH RECEIPT OF RECORDING OF SAID NOTICE.

TOWN CLERK _____ DATE _____

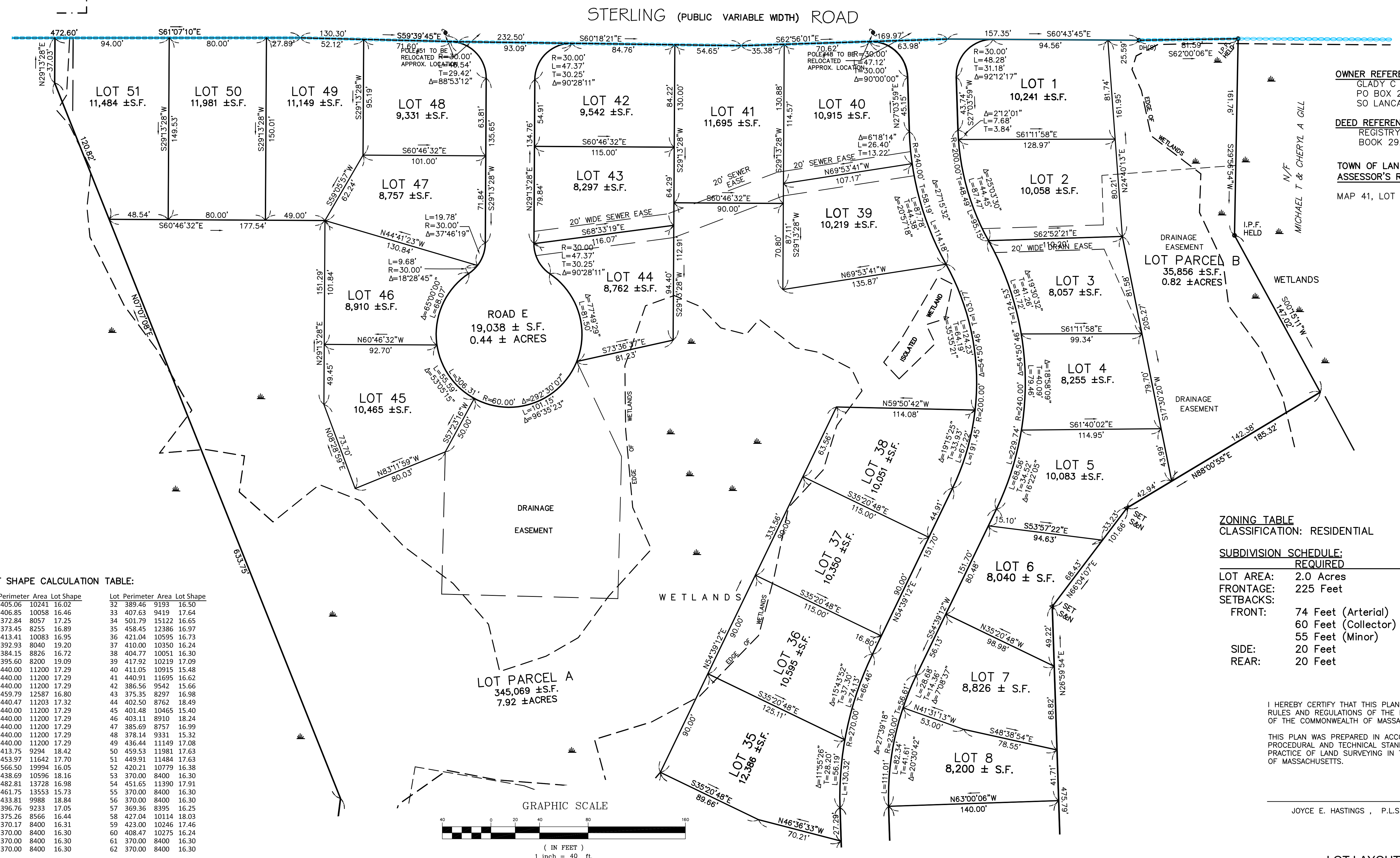
APPROVAL UNDER THE SUBDIVISION CONTROL LAW
LANCASTER BOARD OF APPEALS

DATE : _____

N/F
JOHN D &
SUSAN A ROSS

N/F
ERIC J & MELISSA J
MCLAUGHLIN

REVISIONS		DESCRIPTION
No.	DATE	
1	04/10/18	APARTMENTS 136 UNITS
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4	09/18/18	ENGINEERING COMMENTS



LOT SHAPE CALCULATION TABLE:

Lot	Perimeter	Area	Lot Shape	Lot	Perimeter	Area	Lot Shape
1	405.06	10241	16.02	32	389.46	9193	16.50
2	406.85	10058	16.46	33	407.63	9419	17.64
3	372.84	8057	17.25	34	501.79	15122	16.65
4	373.45	8255	16.89	35	458.45	12386	16.97
5	413.41	10083	16.95	36	421.04	10595	16.73
6	392.93	8040	19.20	37	410.00	10350	16.24
7	384.15	8826	16.72	38	404.77	10051	16.30
8	395.60	8200	19.09	39	417.92	10219	17.09
9	440.00	11200	17.29	40	411.05	10915	15.48
10	440.00	11200	17.29	41	440.91	11695	16.62
11	440.00	11200	17.29	42	386.56	9542	15.66
12	459.79	12587	16.80	43	375.35	8297	16.98
13	440.47	11203	17.32	44	402.50	8762	18.49
14	440.00	11200	17.29	45	401.48	10465	15.40
15	440.00	11200	17.29	46	403.11	8910	18.24
16	440.00	11200	17.29	47	385.69	8757	16.99
17	440.00	11200	17.29	48	378.14	9331	15.32
18	440.00	11200	17.29	49	436.44	11149	17.08
19	413.75	9294	18.42	50	459.53	11981	17.63
20	453.97	11642	17.70	51	449.91	11484	17.63
21	566.50	19994	16.05	52	420.21	10779	16.38
22	438.69	10596	18.16	53	370.00	8400	16.30
23	482.81	13728	16.98	54	451.65	11390	17.91
24	461.75	13553	15.73	55	370.00	8400	16.30
25	433.81	9988	18.84	56	370.00	8400	16.30
26	396.76	9233	17.05	57	369.36	8395	16.25
27	375.26	8566	16.44	58	427.04	10114	18.03
28	370.17	8400	16.31	59	423.00	10246	17.46
29	370.00	8400	16.30	60	408.47	10275	16.24
30	370.00	8400	16.30	61	370.00	8400	16.30
31	370.00	8400	16.30	62	370.00	8400	16.30

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

**TOWN OF LANCASTER
ASSESSOR'S REFERENCE**
MAP 41, LOT 34B

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION SCHEDULE:		
	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)
FRONTAGE:	225 Feet	50 Feet (Min)
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REAR:	20 Feet	20 Feet (Min)

I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS.

JOYCE E. HASTINGS , P.L.S. DATE _____

SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01583

GLM Engineering Consultants, Inc. 19 EXCHANGE STREET HOLLISTON, MA 01746 P: 508-429-1100 F: 508-429-7160 www.GLMengineering.com	
DRW.: RST	
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	1"= 40'
SHEET:	9 of 27
PLAN #:	27,147

FOR REGISTRY OF DEEDS USE ONLY

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TOWN CLERK

DATE

APPROVAL UNDER THE SUBDIVISION CONTROL LAW
LANCASTER BOARD OF APPEALS

DATE :

ZONING TABLE
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PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE
MAP 41, LOT 34B

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JOYCE E. HASTINGS , P.L.S.

DATE

N/F
DAVID KILBOURN

PLAN BOOK 422, No. 76

SITE DEVELOPMENT PLAN
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Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

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19 EXCHANGE STREET
HOLLISTON, MA 01746
P: 508-429-1100
F: 508-429-7160
www.GLMengineering.com

DRW.: RST

JOB No. 12,274

DATE: FEBRUARY 8, 2018

SCALE: 1"= 40'

SHEET: 10 of 27

PLAN #: 27,147

LOT LAYOUT 3 OF 4

FOR REGISTRY OF DEEDS USE ONLY

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LANCASTER BOARD OF APPEALS

TOWN CLERK

DATE

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OWNER REFERENCE:

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DRW.: RST

JOB No. 12,274

DATE: FEBRUARY 8, 2018

SCALE: 1"= 40'

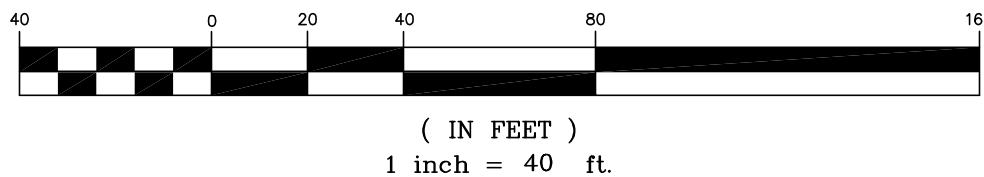
SHEET: 11 of 27

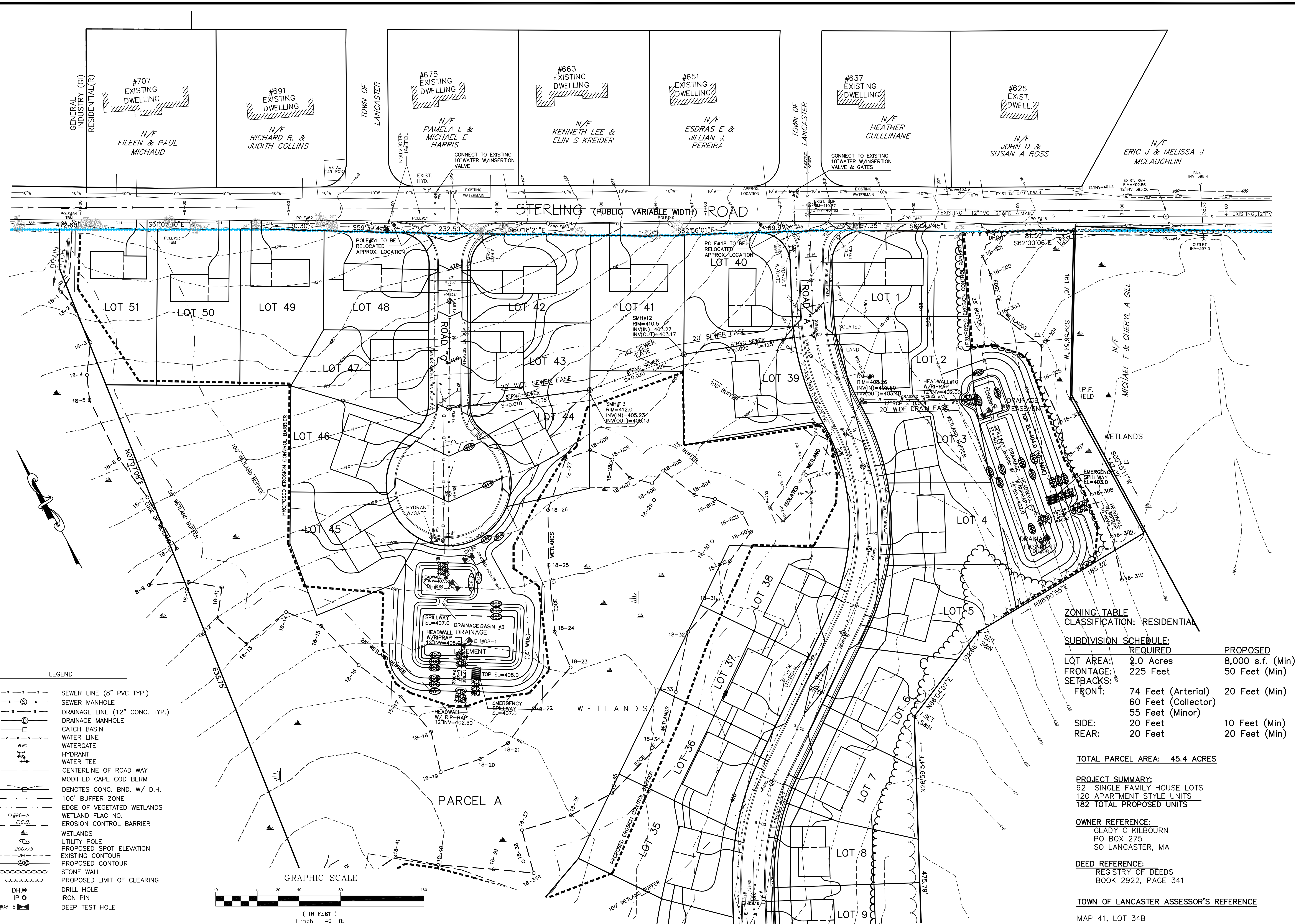
PLAN #: 27,147

LOT SHAPE CALCULATION TABLE:

Lot	Perimeter	Area	Lot Shape	Lot	Perimeter	Area	Lot Shape
1	405.06	10241	16.02	32	389.46	9193	16.50
2	406.85	10058	16.46	33	407.63	9419	17.64
3	372.84	8057	17.25	34	501.79	15122	16.65
4	373.45	8255	16.89	35	458.45	12386	16.97
5	413.41	10083	16.95	36	421.04	10595	16.73
6	392.93	8040	19.20	37	410.00	10350	16.24
7	384.15	8826	16.72	38	404.77	10051	16.30
8	395.60	8200	19.09	39	417.92	10219	17.09
9	440.00	11200	17.29	40	411.05	10915	15.48
10	440.00	11200	17.29	41	440.91	11695	16.62
11	440.00	11200	17.29	42	386.56	9542	15.66
12	459.79	12587	16.80	43	375.35	8297	16.98
13	440.47	11203	17.32	44	402.50	8762	18.49
14	440.00	11200	17.29	45	401.48	10465	15.40
15	440.00	11200	17.29	46	403.11	8910	18.24
16	440.00	11200	17.29	47	385.69	8757	16.99
17	440.00	11200	17.29	48	378.14	9331	15.32
18	440.00	11200	17.29	49	436.44	11149	17.08
19	413.75	9294	18.42	50	459.53	11981	17.63
20	453.97	11642	17.70	51	449.91	11484	17.63
21	566.50	19994	16.05	52	420.21	10779	16.38
22	438.69	10596	18.16	53	370.00	8400	16.30
23	482.81	13728	16.98	54	451.65	11390	17.91
24	461.75	13553	15.73	55	370.00	8400	16.30
25	433.81	9988	18.84	56	370.00	8400	16.30
26	396.76	9233	17.05	57	369.36	8395	16.25
27	375.26	8566	16.44	58	427.04	10114	18.03
28	370.17	8400	16.31	59	423.00	10246	17.46
29	370.00	8400	16.30	60	408.47	10275	16.24
30	370.00	8400	16.30	61	370.00	8400	16.30
31	370.00	8400	16.30	62	370.00	8400	16.30

GRAPHIC SCALE





REVISIONS		DESCRIPTION
No.	DATE	
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS

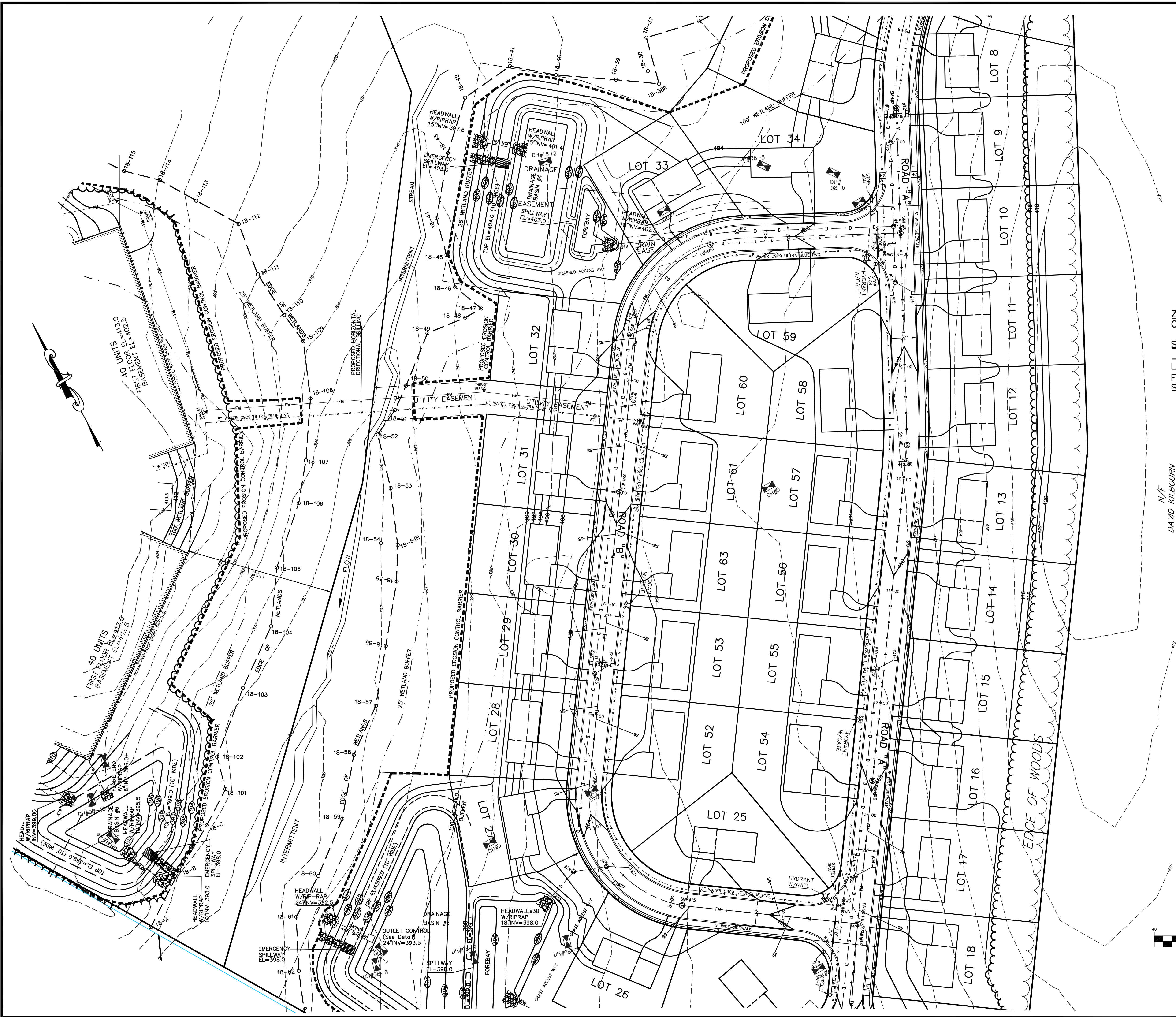
SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

PREPARED FOR:

CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01563

 **GLM** Engineering
Consultants, Inc.
19 EXCHANGE STREET
HOLLISTON, MA 01746
P: 508-429-1100
F: 508-429-7160
www.GLMengineering.com

DRW.: RST	
JOB No.	12,274
DATE: FEBRUARY 8, 2018	
SCALE:	1"= 40'
SHEET:	12 of 27
PLAN #:	27,147



TOTAL PARCEL AREA: 45.4 ACRES

PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
120 APARTMENT STYLE UNITS
182 TOTAL PROPOSED UNITS

OWNER REFERENCE:
GLADY C KILBOURN
PO BOX 275
SO LANCASTER, MA

DEED REFERENCE:
REGISTRY OF DEEDS
BOOK 2922, PAGE 341

TOWN OF LANCASTER ASSESSOR'S REFERENCE

MAP 41, LOT 34B

PLAN REFERENCE:
WORCESTER COUNTY REGISTRY
1) PLAN BOOK 466, PLAN No. 69
2) PLAN BOOK 422, PLAN No. 76
3) PLAN BOOK 539, PLAN No. 80
4) PLAN BOOK 763, PLAN No. 63

ZONING TABLE
CLASSIFICATION: RESIDENTIAL

SUBDIVISION	SCHEDULE:	REQUIRED	PROPOSED
LOT AREA:	2.0 Acres	8,000 s.f. (Min)	
FRONTAGE:	225 Feet	50 Feet (Min)	
SETBACKS:			
FRONT:	74 Feet (Arterial) 60 Feet (Collector) 55 Feet (Minor)	20 Feet (Min)	
SIDE:	20 Feet	10 Feet (Min)	
REAR:	20 Feet	20 Feet (Min)	

LEGEND	
	SEWER LINE (8" PVC TYP.)
	SEWER MANHOLE
	DRAINAGE LINE (12" CONC. TYP.)
	DRAINAGE MANHOLE
	CATCH BASIN
	WATER LINE
	WATERGATE
	HYDRANT
	WATER TEE
	CENTERLINE OF ROAD WAY
	MODIFIED CAPE COD BERM
	DENOTES CONC. BND. W/ D.H.
	100' BUFFER ZONE
	EDGE OF VEGETATED WETLANDS
	WETLAND FLAG NO.
	EROSION CONTROL BARRIER
	WETLANDS
	UTILITY POLE
	PROPOSED SPOT ELEVATION
	EXISTING CONTOUR
	PROPOSED CONTOUR
	STONE WALL
	PROPOSED LIMIT OF CLEARING
	DRILL HOLE
	IRON PIN
	DEEP TEST HOLE

GRAPHIC SCALE



SINGLE FAMILY - LAYOUT & GRADING

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DRW.: RST

JOB No. 12,274

DATE: FEBRUARY 8, 2018

SCALE: 1"= 40'

SHEET: 13 of 27

PLAN #: 27,147

TOTAL PARCEL AREA: 45.4 ACRES

PROJECT SUMMARY:
62 SINGLE FAMILY HOUSE LOTS
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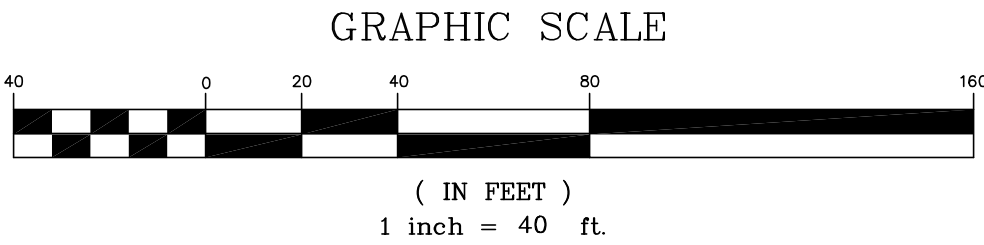
DEED REFERENCE:
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- LEGEND
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 - SEWER MANHOLE
 - DRAINAGE LINE (12" CONC. TYP.)
 - DRAINAGE MANHOLE
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 - PROPOSED SPOT ELEVATION
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - STONE WALL
 - PROPOSED LIMIT OF CLEARING
 - DRILL HOLE
 - IRON PIN
 - DEEP TEST HOLE

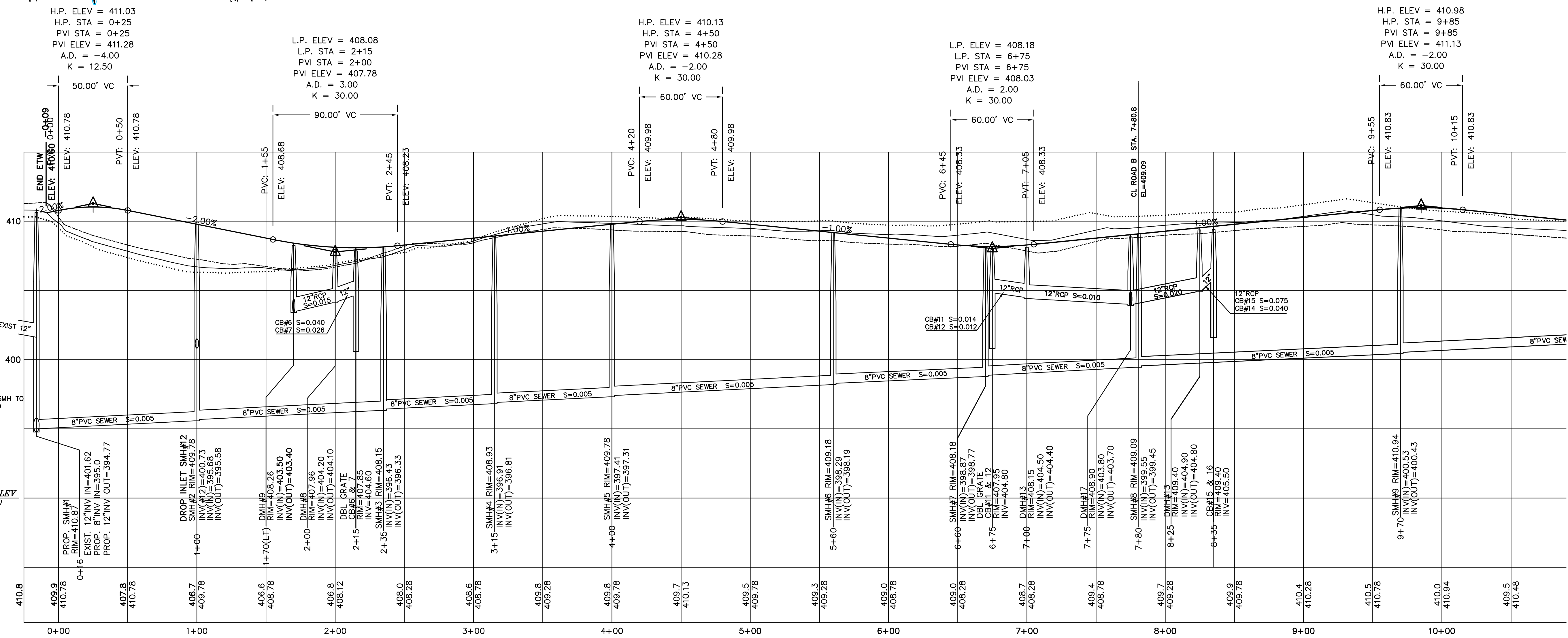
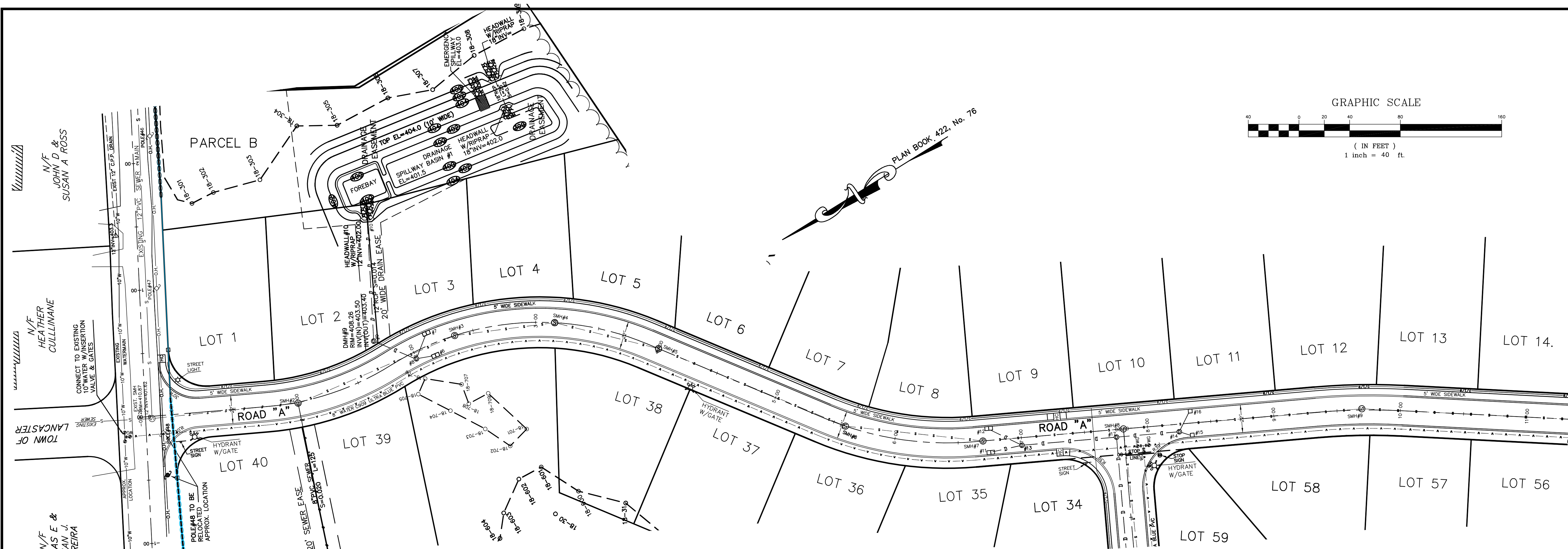


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DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: 1"= 40'
SHEET: 14 of 27
PLAN #: 27,147

REVISIONS		DESCRIPTION
No.	DATE	
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
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SINGLE FAMILY - PLAN & PROFILE ROAD A

REVISIONS		DESCRIPTION
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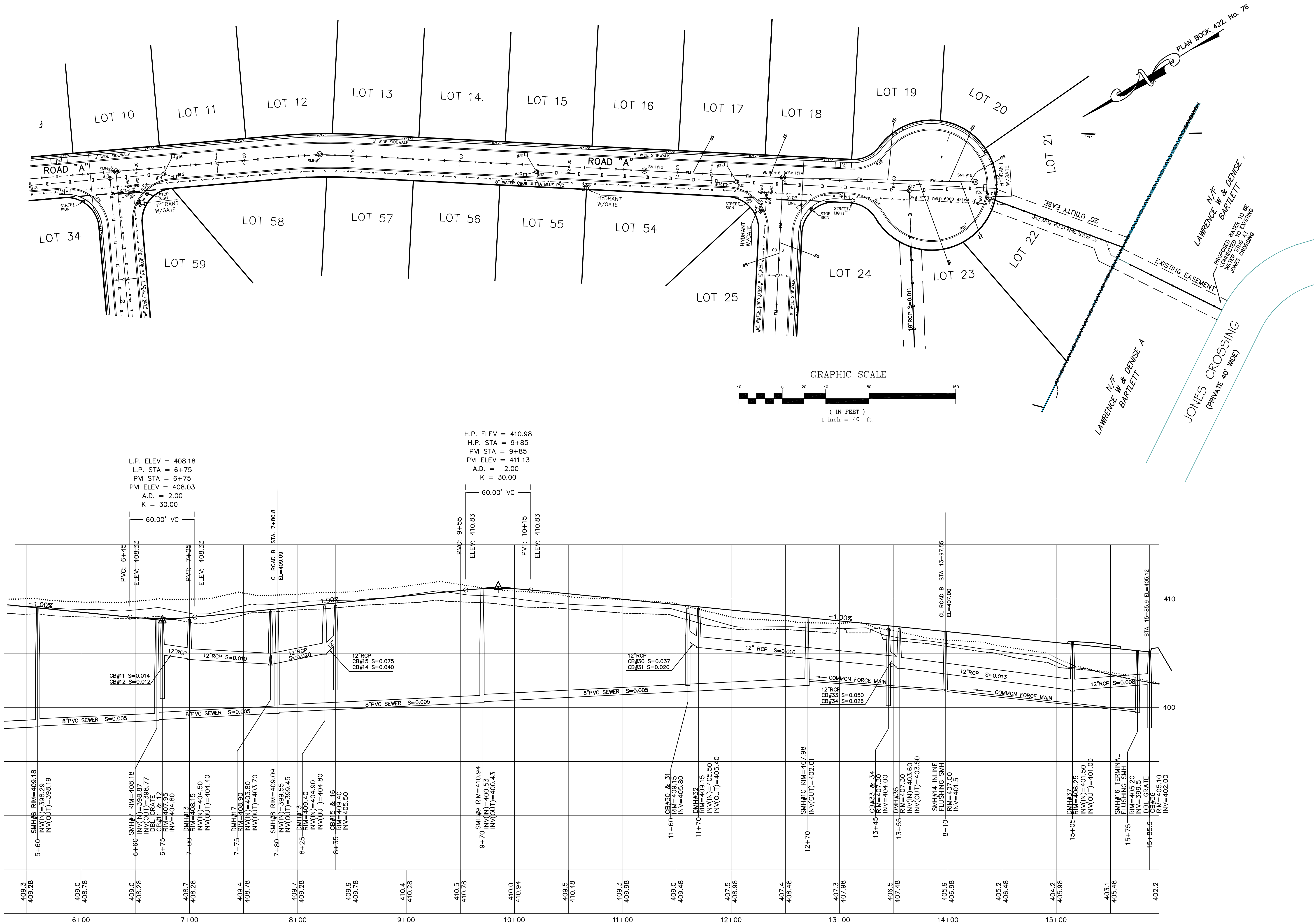
SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
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LANCASTER, MASSACHUSETTS

PREPARED FOR:

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DRW.: RST	
JOB No.	12,274
DATE: FEBRUARY 8, 2018	
SCALE:	1"= 40'
SHEET:	15 of 27
PLAN #:	27,147



SCALE: Horiz: 1"=40'; Vert: 1"=4'

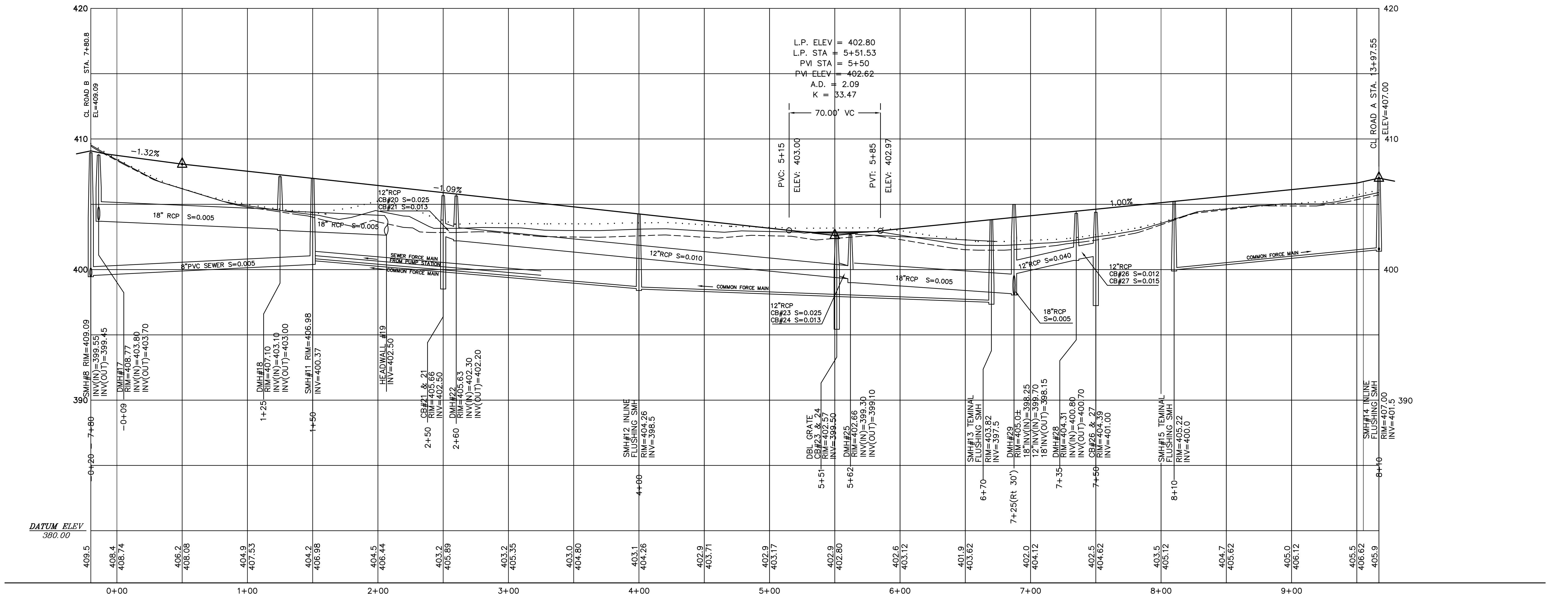
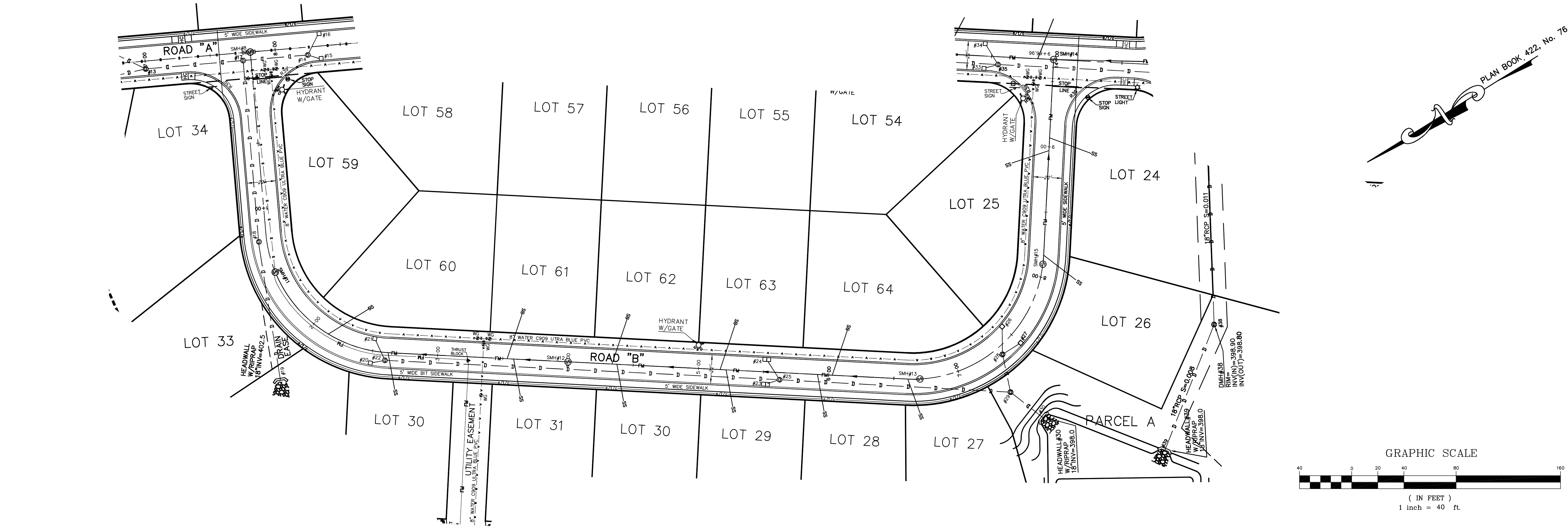
SINGLE FAMILY - PLAN & PROFILE ROAD A

REVISIONS		DESCRIPTION
No.	DATE	
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JOB No.	12,274
DATE: FEBRUARY 8, 2018	
SCALE:	1"= 40'
SHEET:	16 of 27
PLAN #:	27,147



SCALE: Horiz: 1"=40'; Vert: 1"=4'

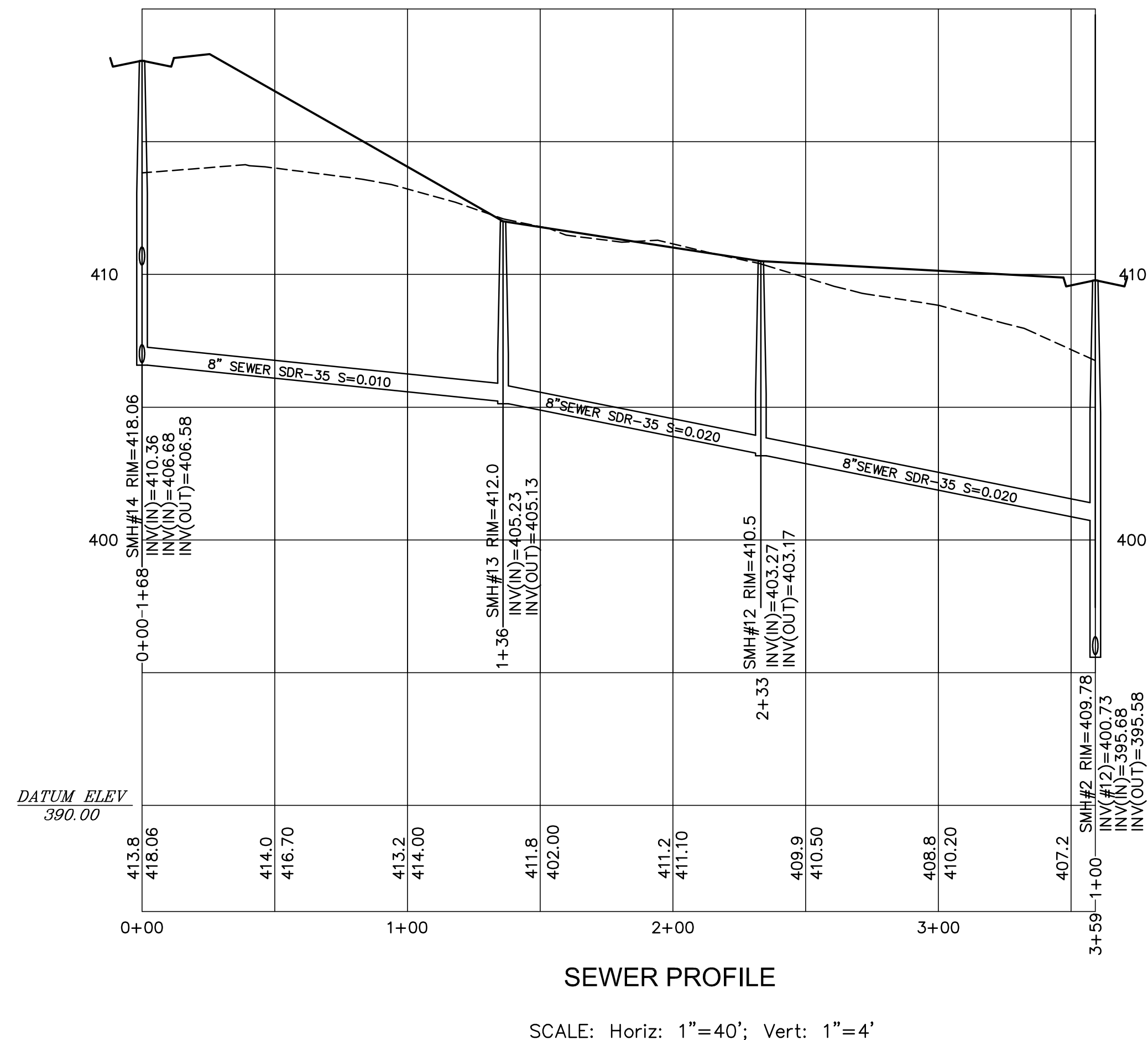
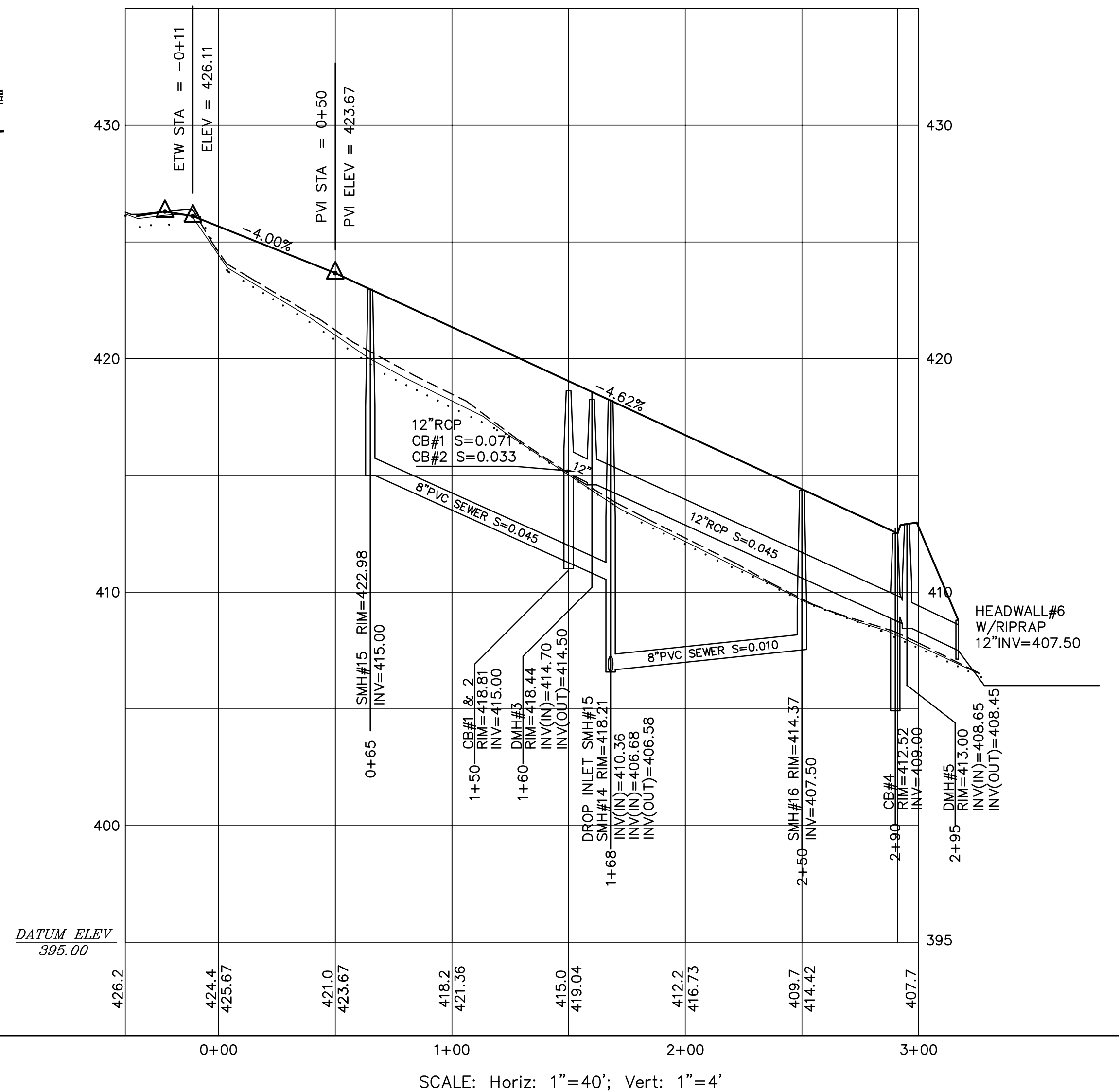
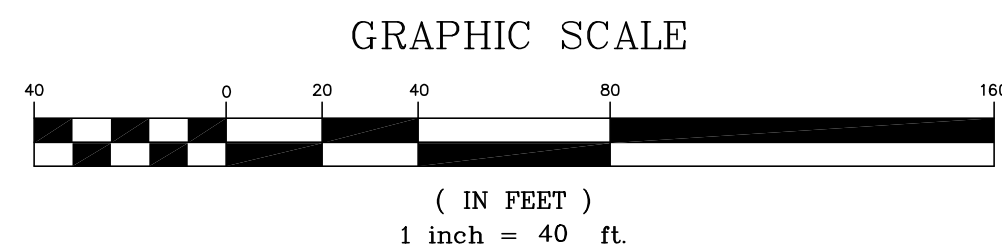
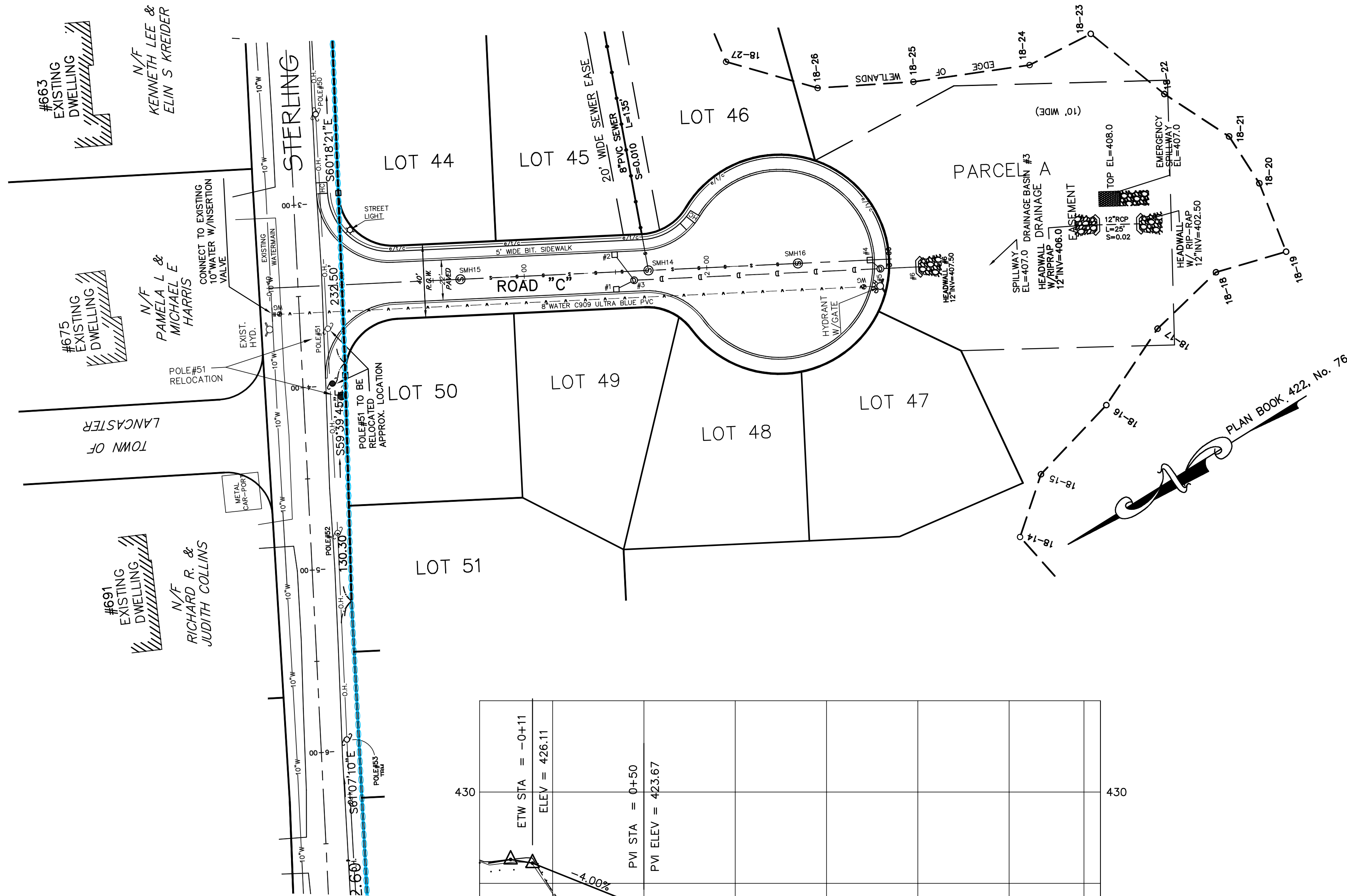
SINGLE FAMILY - PLAN & PROFILE ROAD B

REVISIONS		DESCRIPTION
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SHEET:	17 of 27
PLAN #:	27,147



SCALE: Horiz: 1"=40'; Vert: 1"=4'

SINGLE FAMILY - PLAN & PROFILE ROAD C

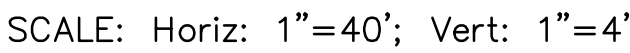
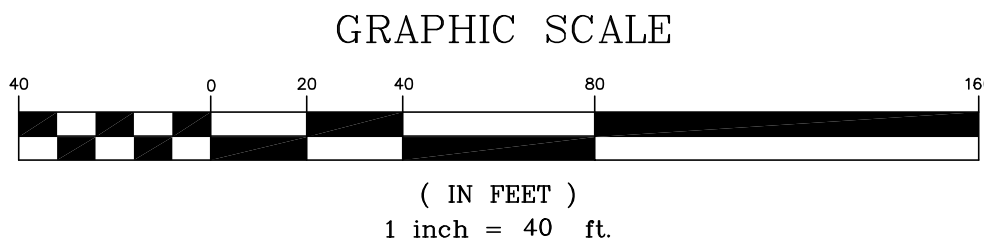
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REVISIONS	No.	DATE	DESCRIPTION
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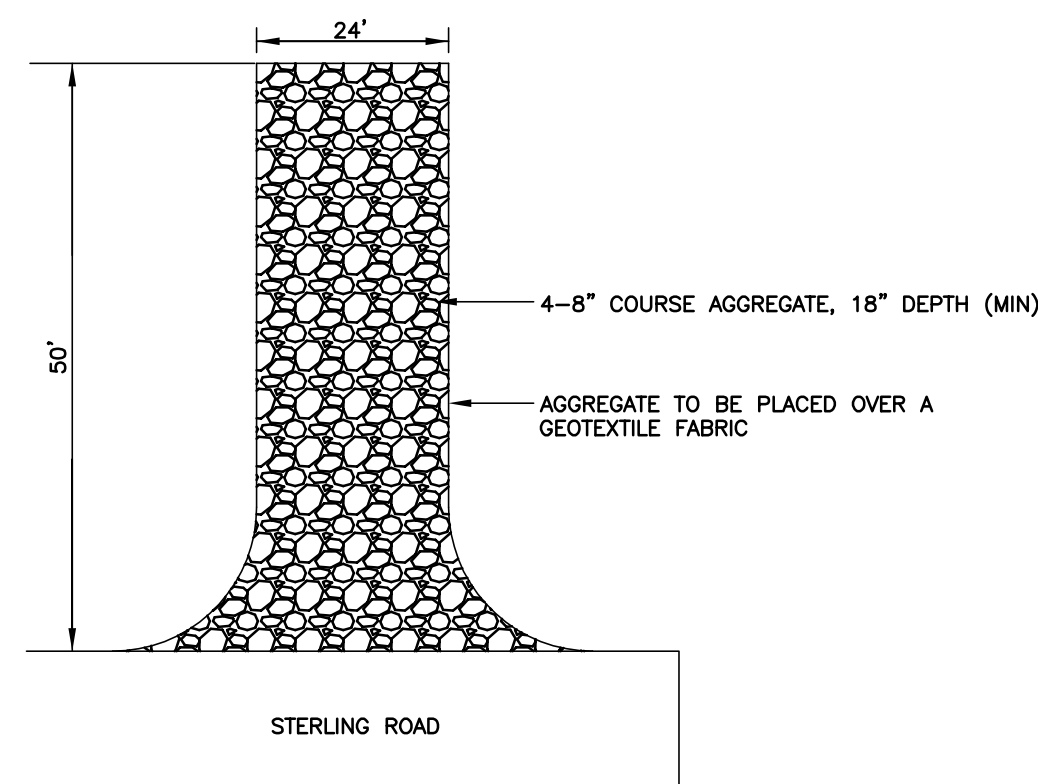
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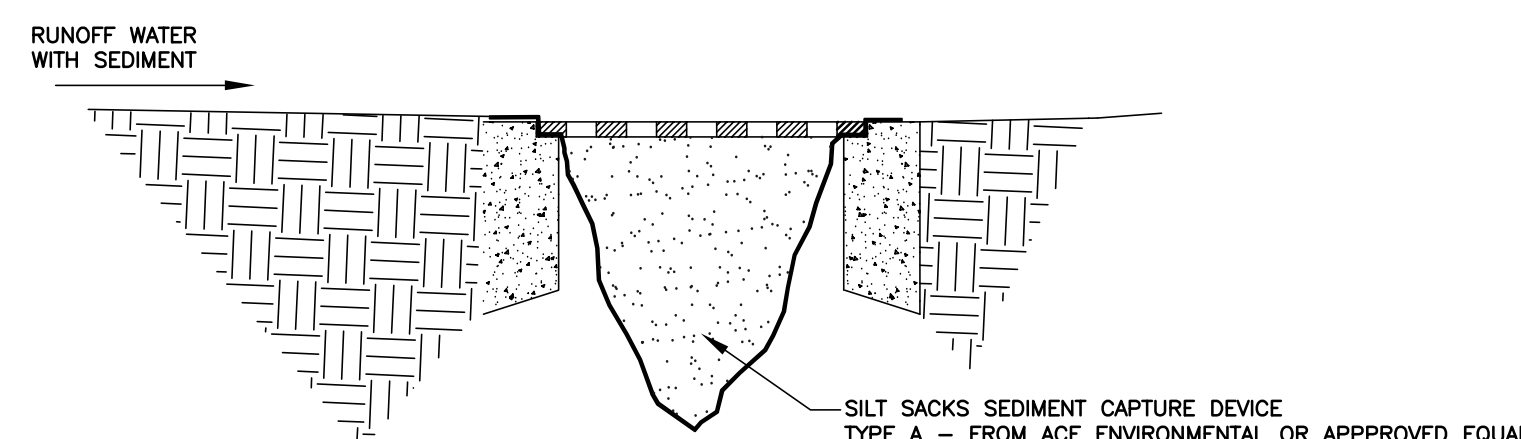
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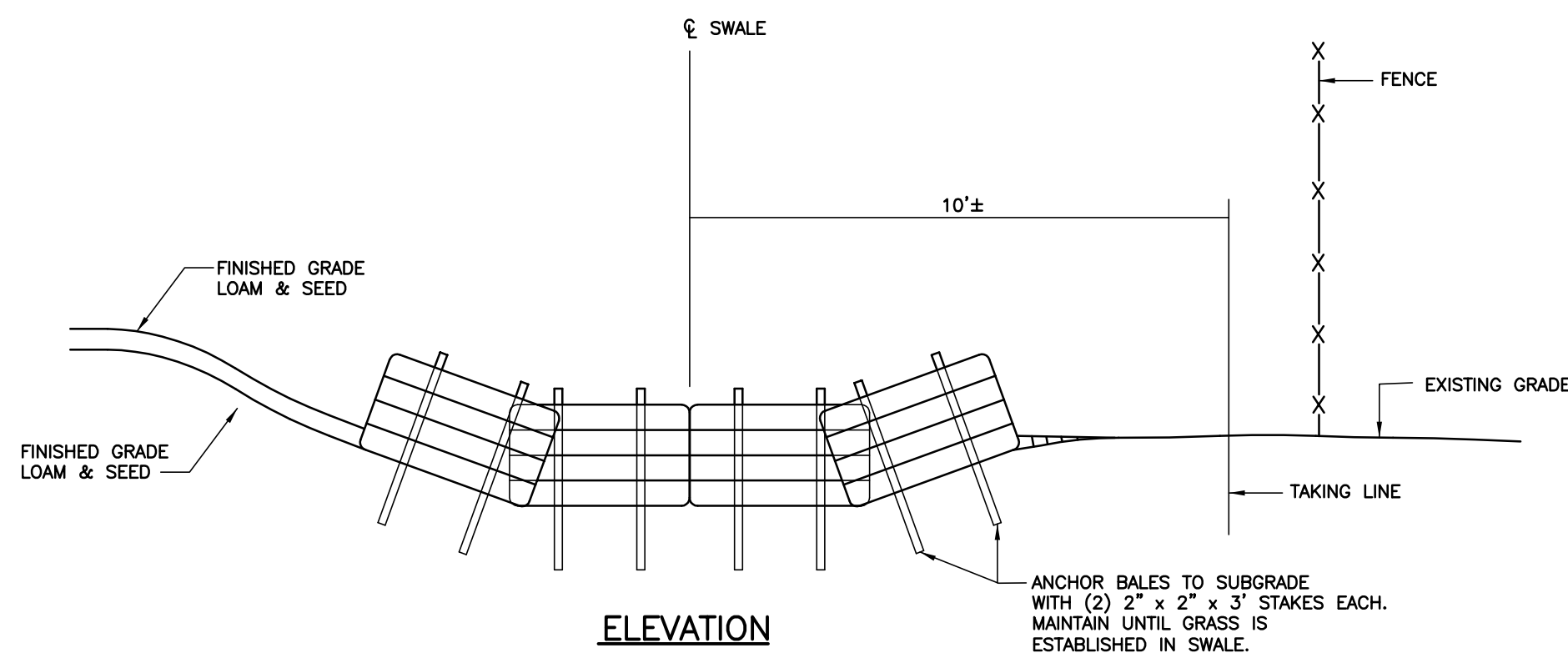
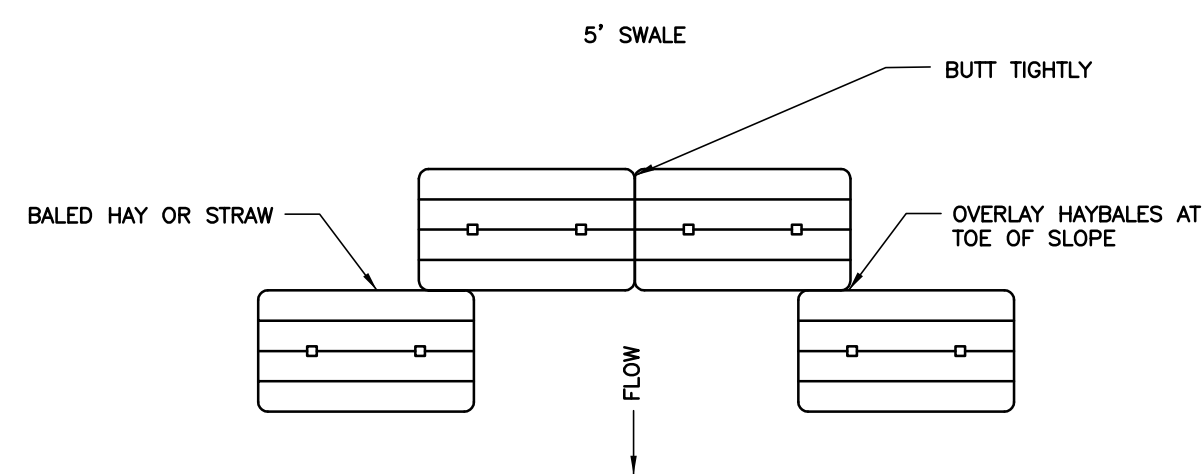
DRW.: RST	
JOB No.	12,274
DATE: FEBRUARY 8, 2018	
SCALE:	1"= 40'
SHEET:	19 of 27
PLAN #:	27,147



TRAP ROCK APRON
CONSTRUCTION ENTRANCE
NOT TO SCALE



SILT SACK CATCH BASIN INLET
NOT TO SCALE

ELEVATION

PLAN

SEDIMENT CHECK DAM DETAIL
N.T.S.

N.T.S.

EROSION CONTROL MAINTENANCE:

THE CONTRACTOR SHALL HAVE ON THE SITE, AN ADEQUATE QUANTITY OF SUPPLEMENTAL FILTER MITT AND STAKES TO BE USED FOR CONTROL OF EMERGENCY EROSION PROBLEMS. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER A STORM EVENT OF 1" INCH OR GREATER.

DEWATERING:

PUMPING AND DEWATERING SHALL BE DONE IN A MANNER WHICH WILL NOT DISCHARGE ANY SILT AND SEDIMENT INTO A RESOURCE AREA. DISCHARGES FROM A DEWATERING CONSTRUCTION PROCEDURE WILL BE FILTERED THROUGH A SILTATION BASIN CONSTRUCTED UPLAND FROM THE WORK SITE. THE SILTATION BASIN SHALL BE A DEPRESSION SURROUNDED BY A HAYBALE DIKE OR SILT FENCE. OVERFLOW FROM THE BASIN SHALL BE PLANNED TO BE LOCATED OVER THICKLY AND NATURALLY MULCHED UPLAND AREA. ALL BASINS SHALL BE LOCATED AT LEAST 100 FEET UPSLOPE FROM ANY WETLAND RESOURCE AREA.

STOCKPILING.

ALL STOCKPILES AREAS SHALL BE SECURED AROUND THE PERIMETER WITH FILTER MITT BARRIER.

EROSION AND SEDIMENTATION CONTROL:

1. PRIOR TO ANY DISTURBANCE OR ALTERATIONS ON ANY AREA ON THE SITE, THE FILTER MITT SEDIMENT BARRIER SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE SITE PLAN.

2. BARRIERS SHALL BE CONSTRUCTED AS SHOWN ON THE FILTER MITT
DETAIL WITH CONSTRUCTION FENCE DETAIL ABOVE.

3. ONCE INSTALLED, THE FILTER MITT SEDIMENT BARRIERS SHALL BE MAINTAINED IN PLACE UNTIL ALL AREAS UPGRAIDENT FROM THE BARRIERS HAVE BEEN STABILIZED AS SPECIFIED HEREIN. UPON COMPLETION AND STABILIZATION OF THE PROJECT, THE FILTER MITT AND FENCE SHALL BE REMOVED.

4. THE SILT FENCE IS INTENDED TO ACT AS A LIMIT OF DISTURBANCE. ANY LAND DOWN GRADIENT FROM THE FENCE ACCIDENTALLY DISTURBED SHALL BE IMMEDIATELY REPAIRED AND RESTORED TO ORIGINAL CONDITION.

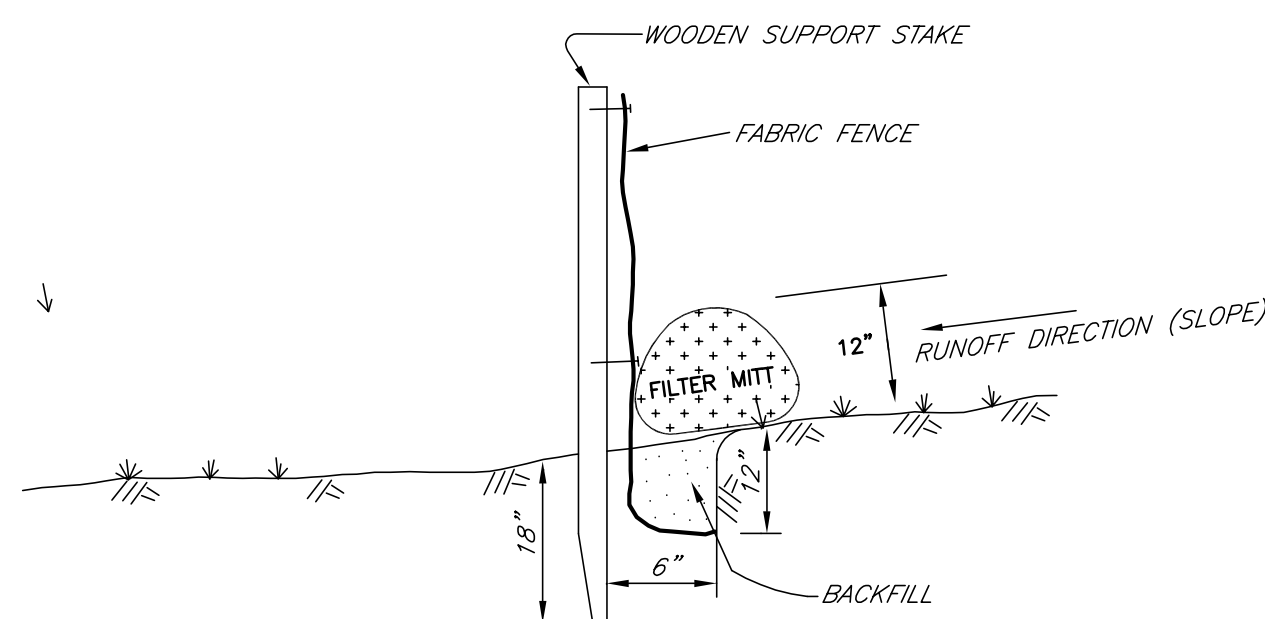
5. EROSION CONTROL MEASURES SHALL BE MONITORED ON A DAILY BASIS, OR AS NEEDED, AND BE REINFORCED, REPAIRED, OR REPLACED WHEN NEEDED, PER JUDGEMENT OF THE SITE FOREMAN AND/OR TOWN OF LANCASTER REPRESENTATIVE.

6. TEMPORARY VEGETATION COVER SHALL BE ESTABLISHED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES TEMPORARILY CEASE FOR AT LEAST 30 DAYS. AREAS SHALL BE STABILIZED WITH TEMPORARY SEED. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A VEGETATIVE COVER, DISTURBED AREAS SHALL BE MULCHED AND THEN SEEDED WHEN WEATHER CONDITIONS ALLOW.

7. THE FIRST ONE-HUNDRED (100) FEET OF THE PROPOSED DRIVEWAY ENTRANCE AT STERLING ROAD SHALL BE COVERED WITH TWELVE (12) INCHES OF 4 - 8 INCH CRUSHED STONE TO STABILIZE THE AREA.

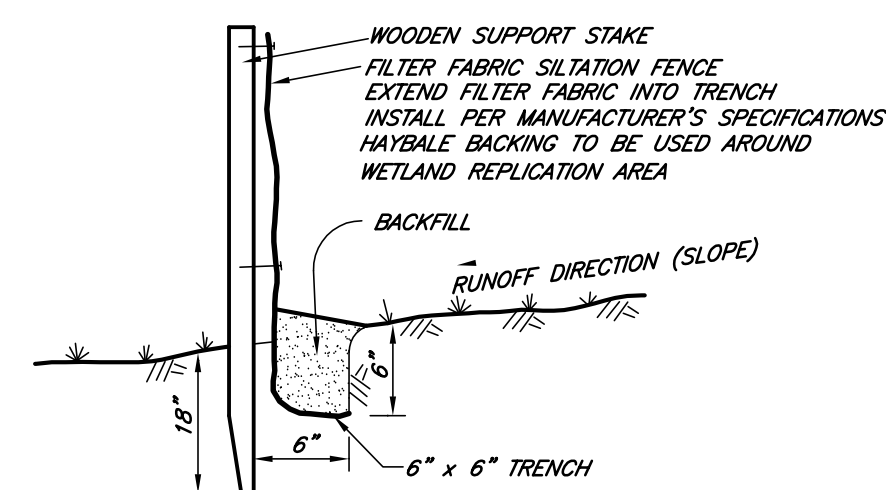
8. WATER SPRAYING SHALL BE UTILIZED ON ALL DISTURBED AREAS DURING DRY WEATHER TO PREVENT DUST. A WATER TRUCK SHALL BE KEPT ON SITE AT ALL TIMES DURING THE DURING THE SUMMER MONTHS OF CONSTRUCTION.

9. FOLLOWING CONSTRUCTION OF THE CATCH BASIN STRUCTURES, A SILT SACK SHALL BE PLACED IN EACH STRUCTURE TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM. (SEE DETAIL)



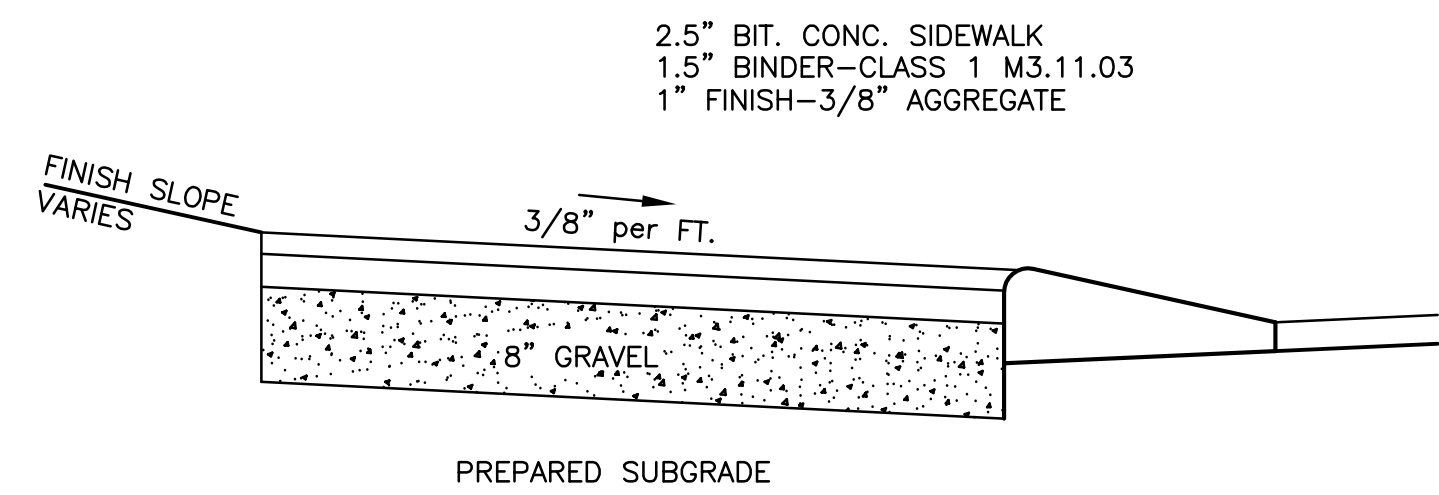
EROSION CONTROL BARRIER WITH FILTER MITT

TO BE USED IN AREAS WITHIN 25' OF WETLAND DELINEATION



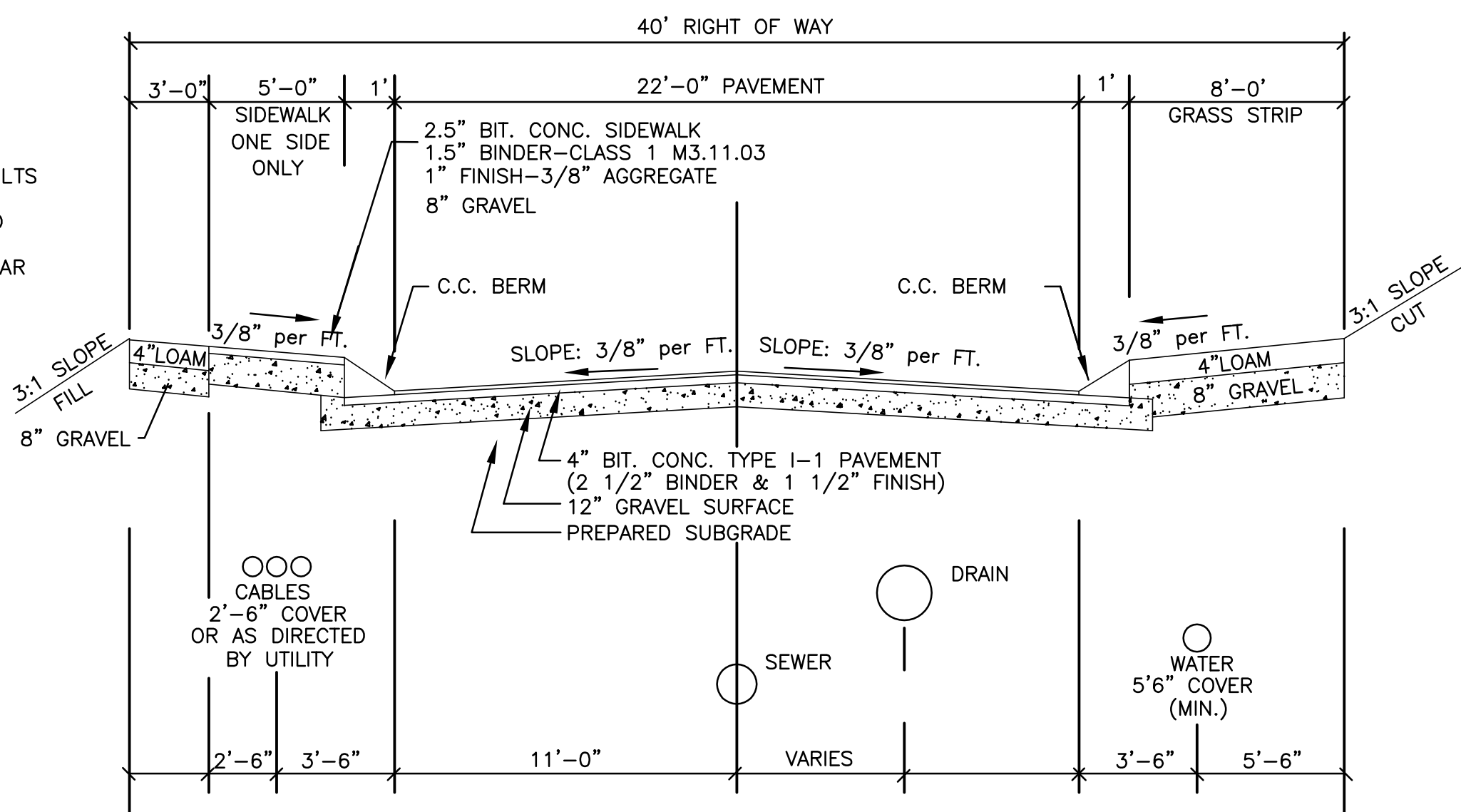
EROSION CONTROL BARRIER WITHOUT FILTER MITT

TO BE USED IN AREAS OUTSIDE OF 25'

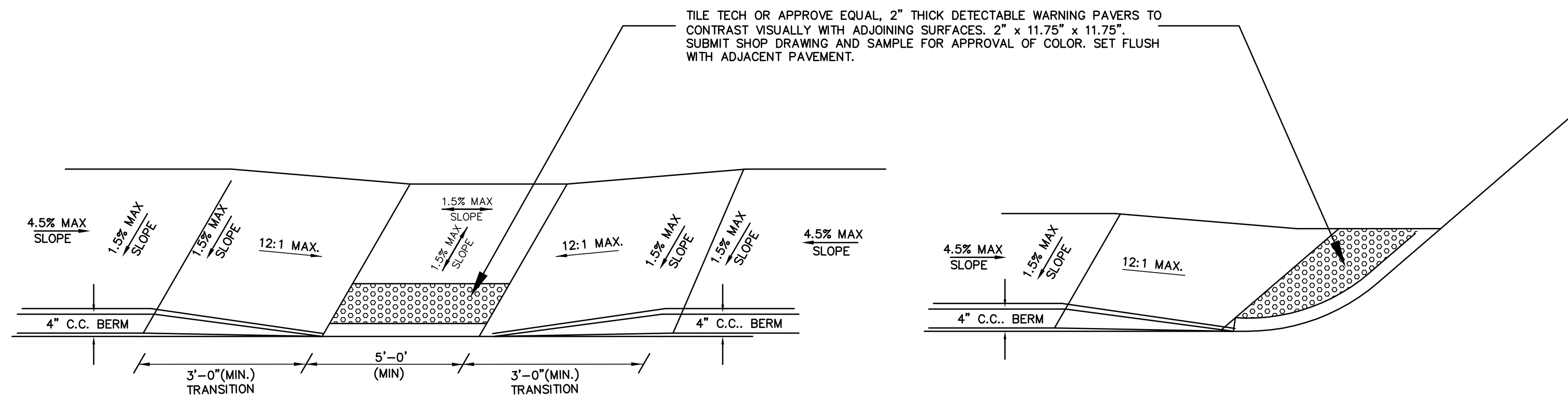


BITUMINOUS SIDEWALK DETAIL
NOT TO SCALE:

- NOTES:
1. FILL MATERIAL IF REQUIRED, SHALL MEET THE SPECIFICATIONS OF MSSHB M1.01.0, ORDINARY BORROW.
 2. GRAVEL SURFACE FOR ROADWAYS AND SIDEWALKS SHALL BE MSSHB M1.03.0, TYPE B.
 3. SIEVE TEST RESULTS SHALL BE SUBMITTED TO THE TOWN OF STERLING REPRESENTATIVE FOR THE GRAVEL.
 4. COMPACTION TEST MUST BE CONDUCTED AND RESULTS SUBMITTED FOR THE SUBBASE AND GRAVEL.
 5. NO PAVING IS ALLOWED BETWEEN NOVEMBER 1 AND APRIL 15.
 6. ALL PAVEMENT SHALL MEET MSSHB M3.11.03, SIMILAR TO THE SIDEWALK SPECIFICATIONS.

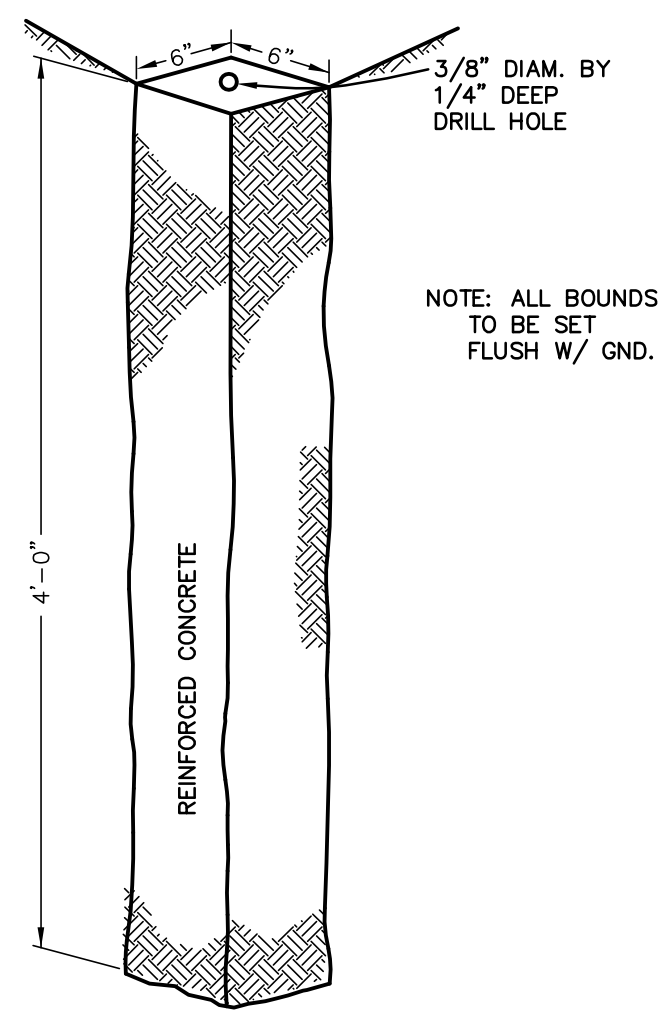


TYPICAL RIGHT OF WAY CROSS SECTION
LANCASTER, MASS.

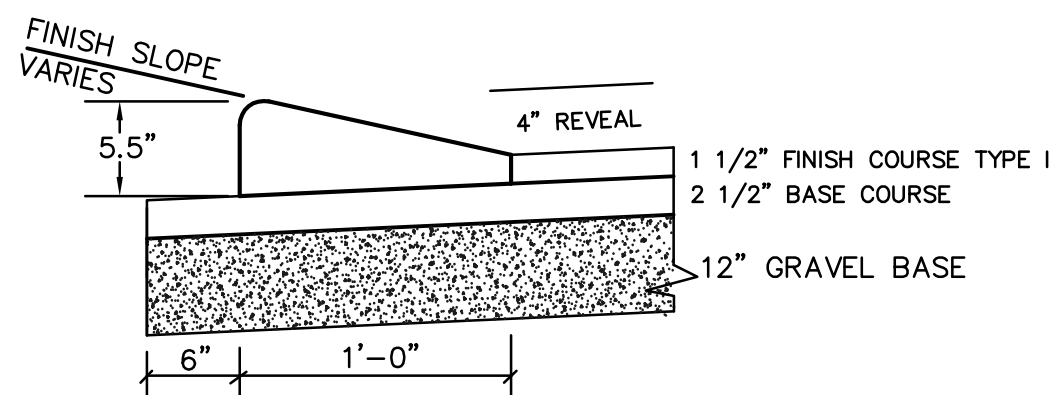


- NOTES:
1. THE DIMENSIONS SHOWN AT ROADWAY EDGE AREA FIXED DISTANCE.
 2. RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK
 3. BITUMINOUS PAVED RAMPS ARE TO BE PROVIDED.
 4. IN NO CASE ARE THE RAMPS TO BE PLACED BEHIND THE STOP LINE.
 5. THE DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD IN EXISTING APPURTENANCES OR CONDITIONS WILL MAKE THE RAMP LOCATIONS IMPRACTICAL OR UNSAFE. CONSULT CIVIL ENGINEER PRIOR TO MAKING ANY MODIFICATIONS.

HANDICAP SIDEWALK CURB CUT DETAIL
NOT TO SCALE



CONCRETE BOUND DETAIL
NOT TO SCALE:



CAPE COD BERM DETAIL
NOT TO SCALE:

DETAILS

REVISIONS		DESCRIPTION
No.	DATE	
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DRW.: RST	
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	nts
SHEET:	21 of 27
PLAN #:	27,147

PRUNE 1/3 OF CROWN BY THINNING AND SPACING BRANCHES. DO NOT CUT LEADER. DO NOT USE TREE PAINT.

3/4" REINFORCED RUBBER HOSE
3/16" GALVANIZED STEEL CABLE

2"x3"x10' WOOD STAKES
(3 PER TREE) NOTCH STAKES FOR WIRE

TREE WRAP W/30% OVERLAP

3" PINE BARK MULCH (MIN.)

6" SOIL SAUCER (MIN.)

TREE SHALL BE PLANTED SO AS TO MAINTAIN SAME RELATIONSHIP TO FINISHED GRADE AS IT PREVIOUSLY HAD.

PLANTING SOIL

REMOVE TOP 1/3 OF BURLAP BEFORE BACKFILLING

TAMPED SETTING BED

5'-0"

2'-0"

12"

12"

The image contains two architectural drawings of a bridge structure, labeled PLAN and ELEVATION.

PLAN View:

- Overall width: 20'-0"
- Overall depth: 48" max
- Bottom clearance: 4' min.
- Top reinforcement: 6" dia. Steel bollards conc. Filled (typ.)
- Internal width segments: 12' clearance min. (twice)
- Internal depth segments: 12' clearance min. (twice)
- Reinforcement: 6" conc. Slab
- Drop pin hole (typ.)
- Swing gate (typ.)
- Slope 1/4" per 1-ft. (indicated in two locations)

ELEVATION View:

- Overall height: 6'
- Base width: 14"
- Base depth: 8"
- Internal width segments: 12' clearance min. (twice)
- Internal depth segments: 12' clearance min. (twice)
- Reinforcement: Tie beam with 2-#5 rebar continuous
- Drop pin (typ.)
- Swing gate (typ.)
- 3000 p.s.i. Concrete slab with fiber mesh reinforcing - monolithic, min 6" thickness, 6'x6' / 10x10 w.w.F.
- 8"x16" concrete footing w/ 2- #5 continuous rebar (typ.)
- 1-#5 at 4' center

GRASSPAVERS
SLOPETAME2 OR EQUAL

LOAM & SEED

6" LOAM

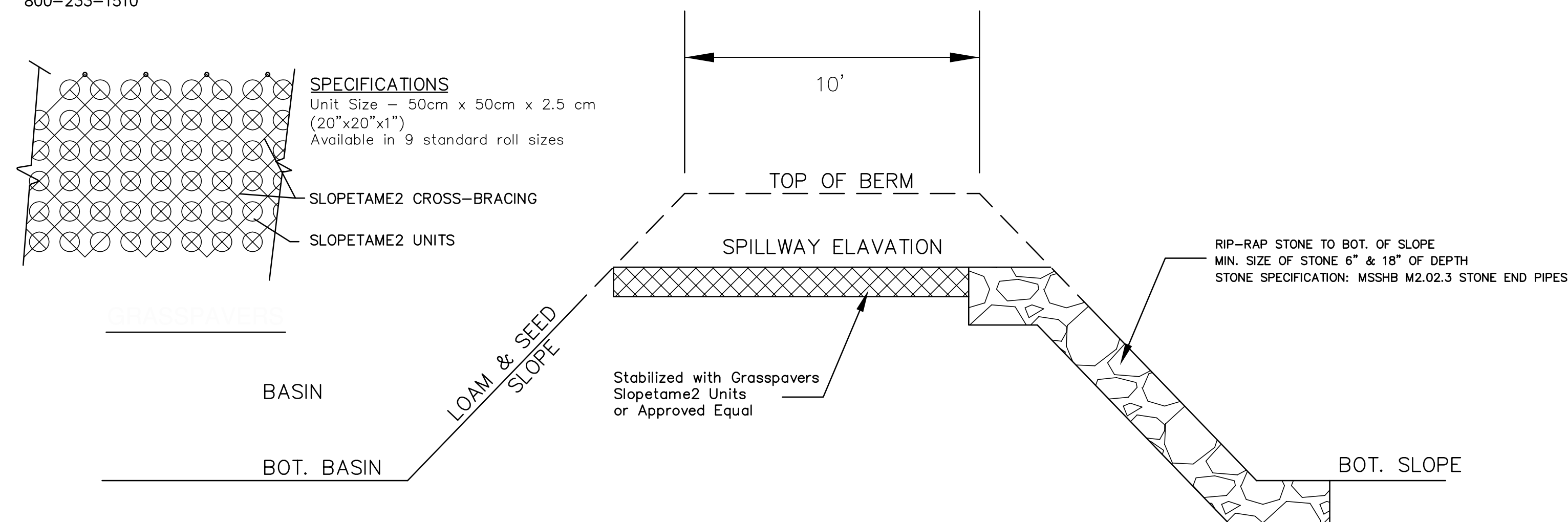
SPECIFICATIONS

Unit Size = 50cm x 50cm x 2.5 cm
(20"x20"x1")

Available in 9 standard roll sizes

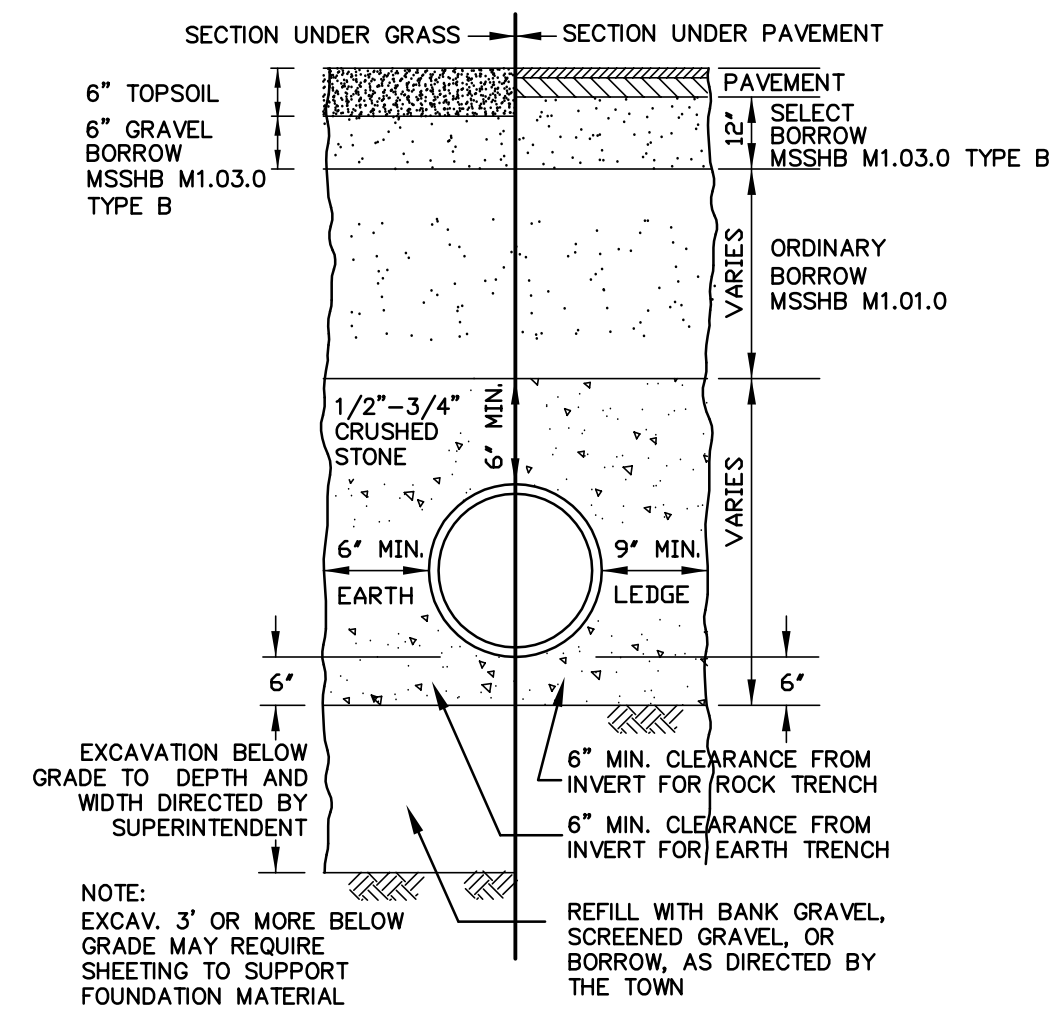
SLOPETAME2 CROSS-BRACING

SLOPETAME2 UNITS

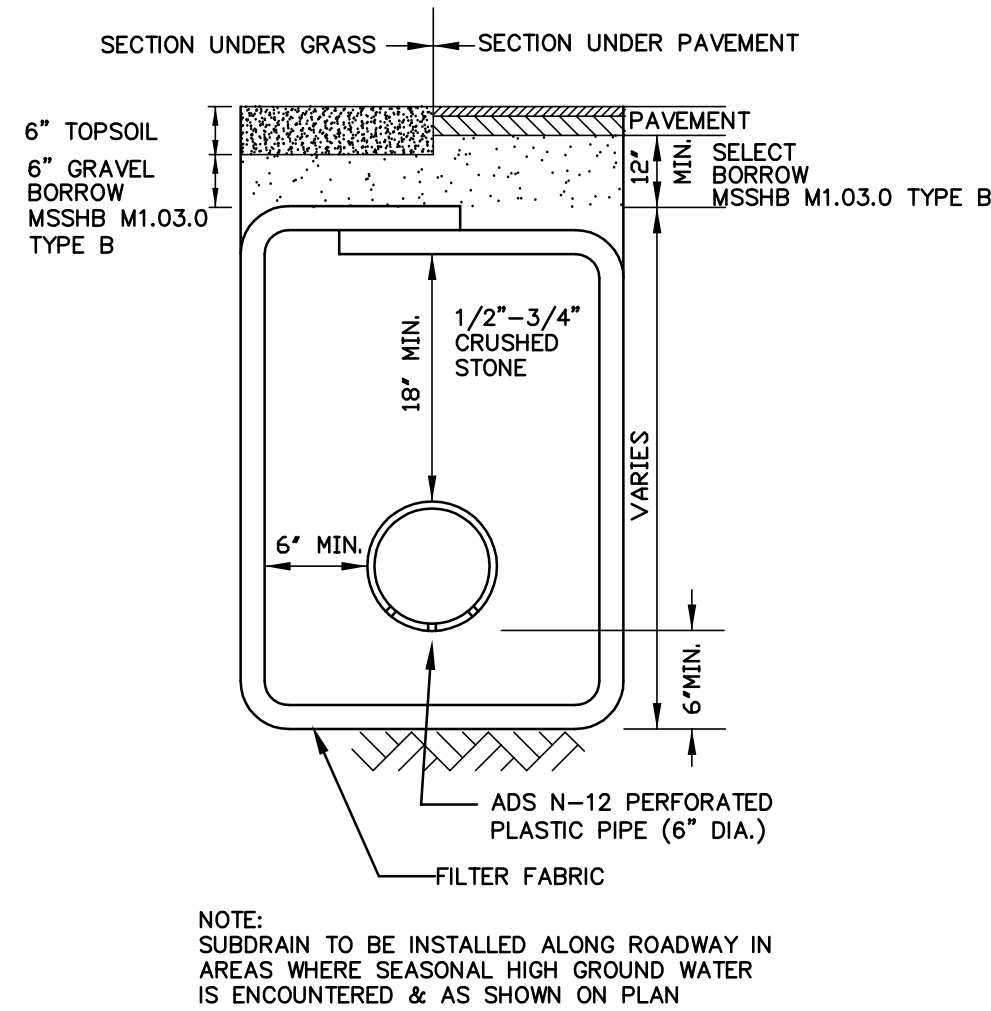


DETAILS

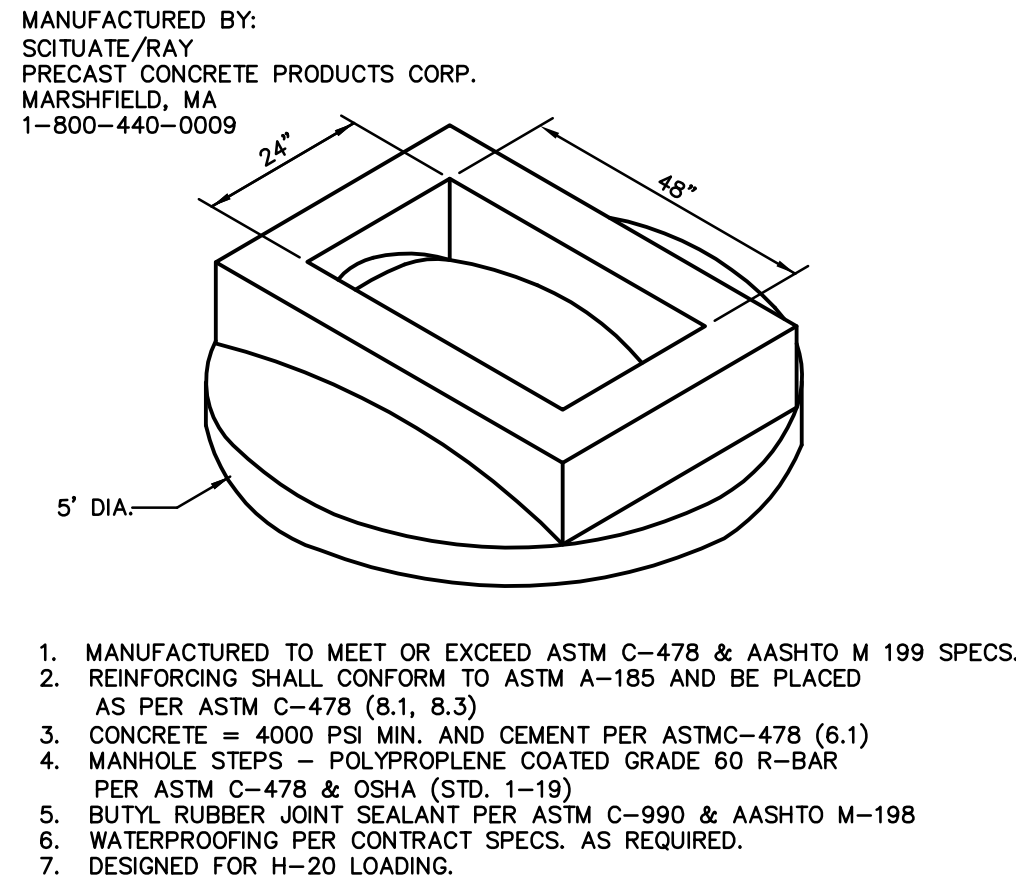
SITE DEVELOPMENT PLAN "GOODRIDGE BROOK ESTATES" Multi Unit & Single Family Subdivision Layout LANCASTER, MASSACHUSETTS PREPARED FOR: CRESCENT BUILDERS, INC. 94 NORTH MAIN STREET BOYLSTON MA 01583		REVISIONS	
		No.	DATE
		1	04/10/18
		2	07/06/18
		3	07/25/18
		4	09/18/18



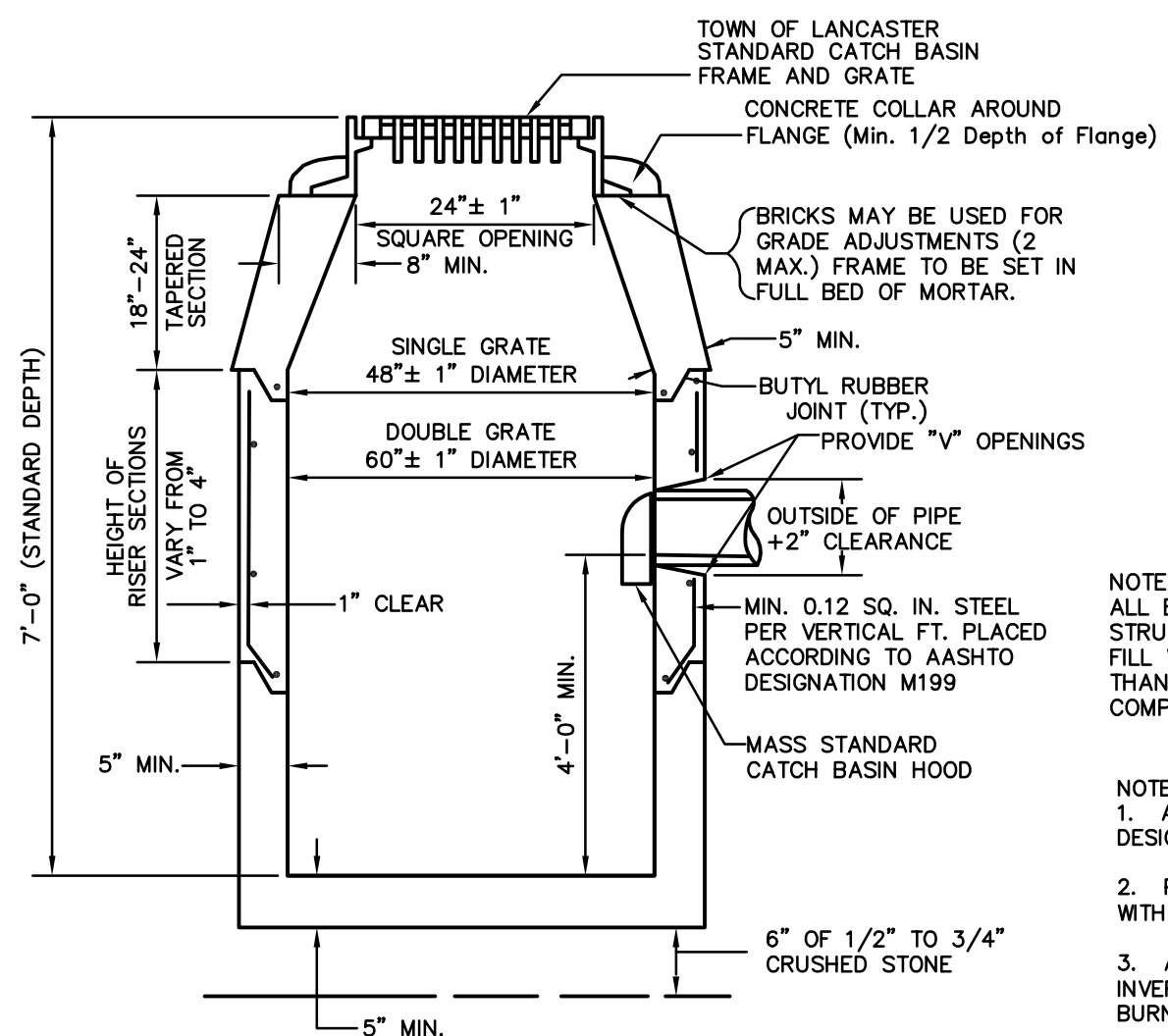
TYPICAL SECTION EARTH/ROCK TRENCH
DRAIN PIPES, SEWER MAINS, FORCE MAINS, & WATER MAINS
N.T.S.



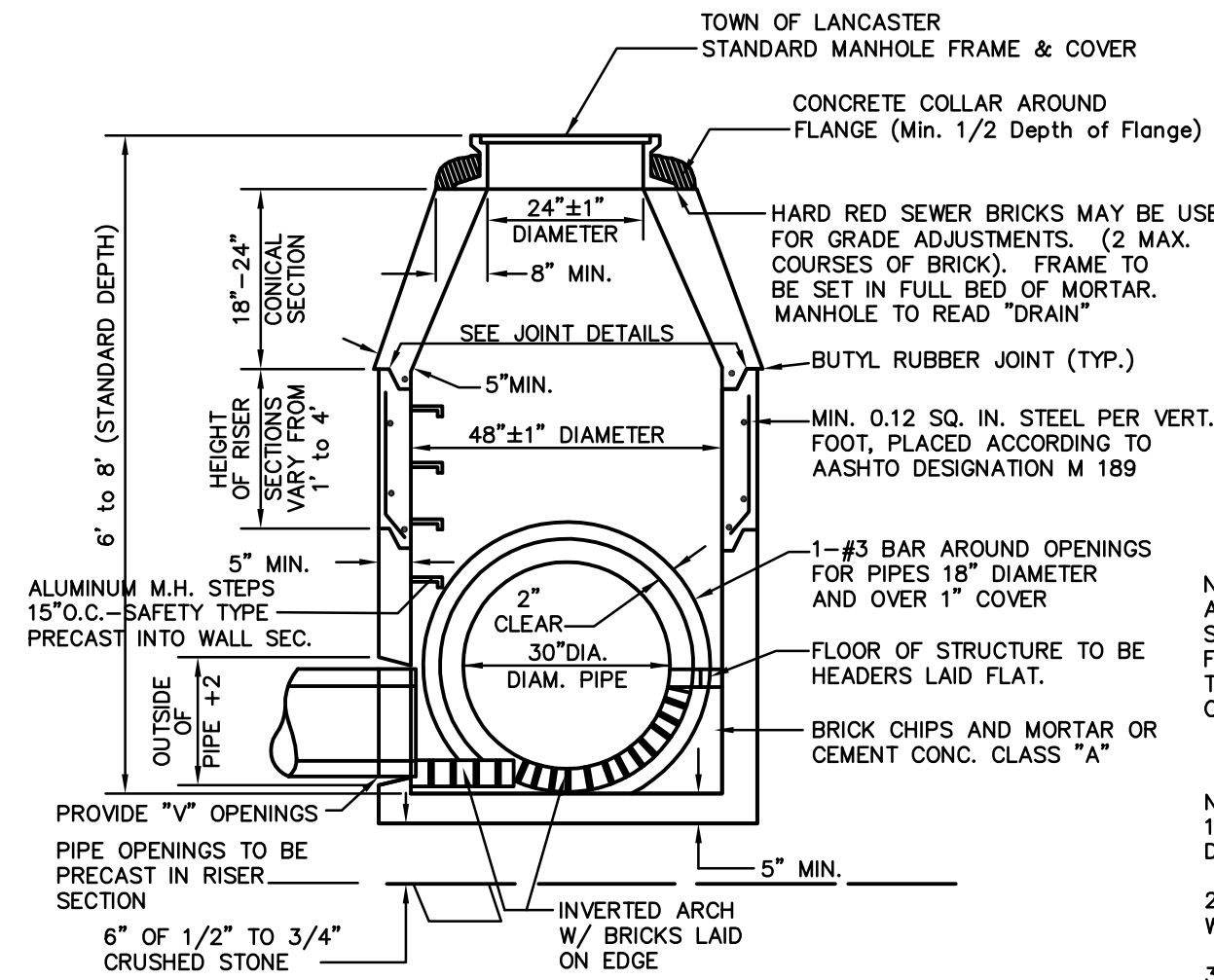
SUBDRAIN DETAIL
N.T.S.



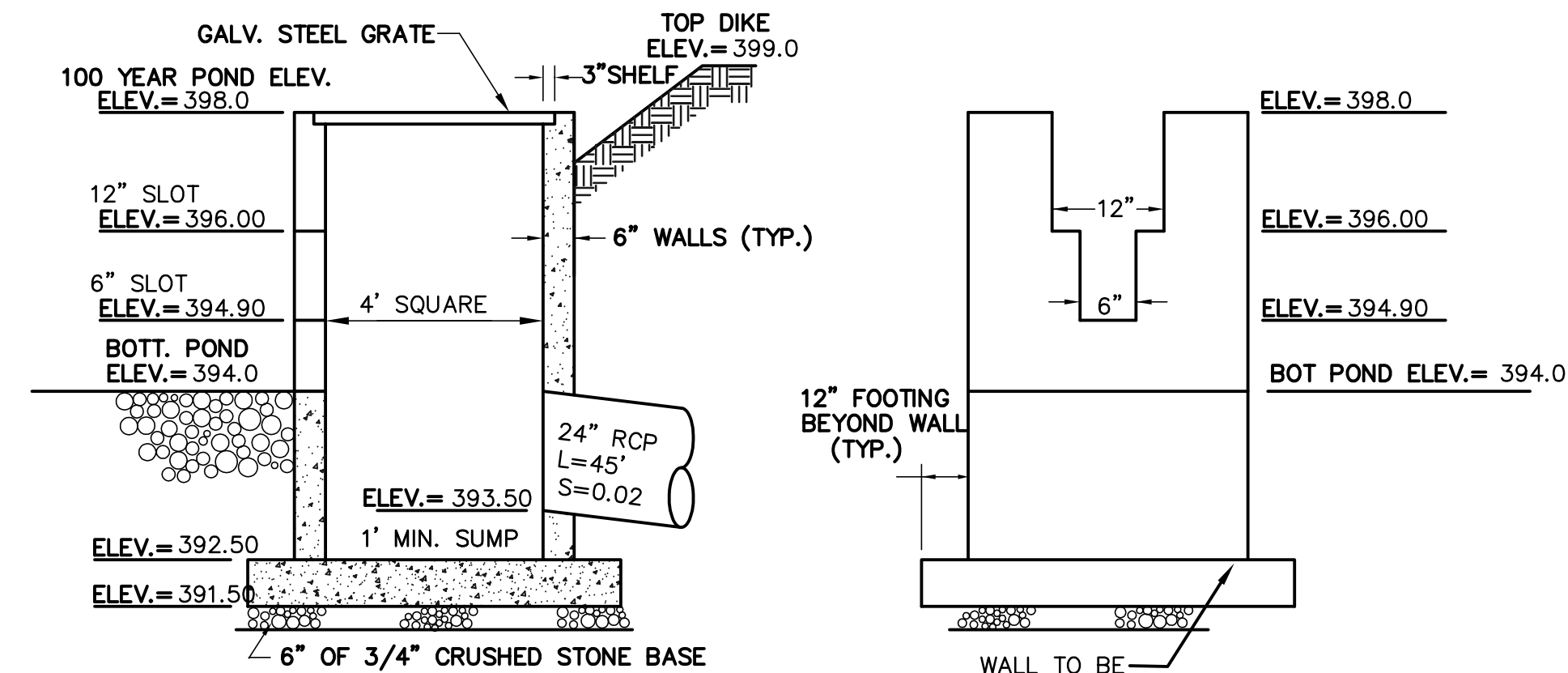
DOUBLE OPEN CATCH BASIN DOME TOP
NOT TO SCALE



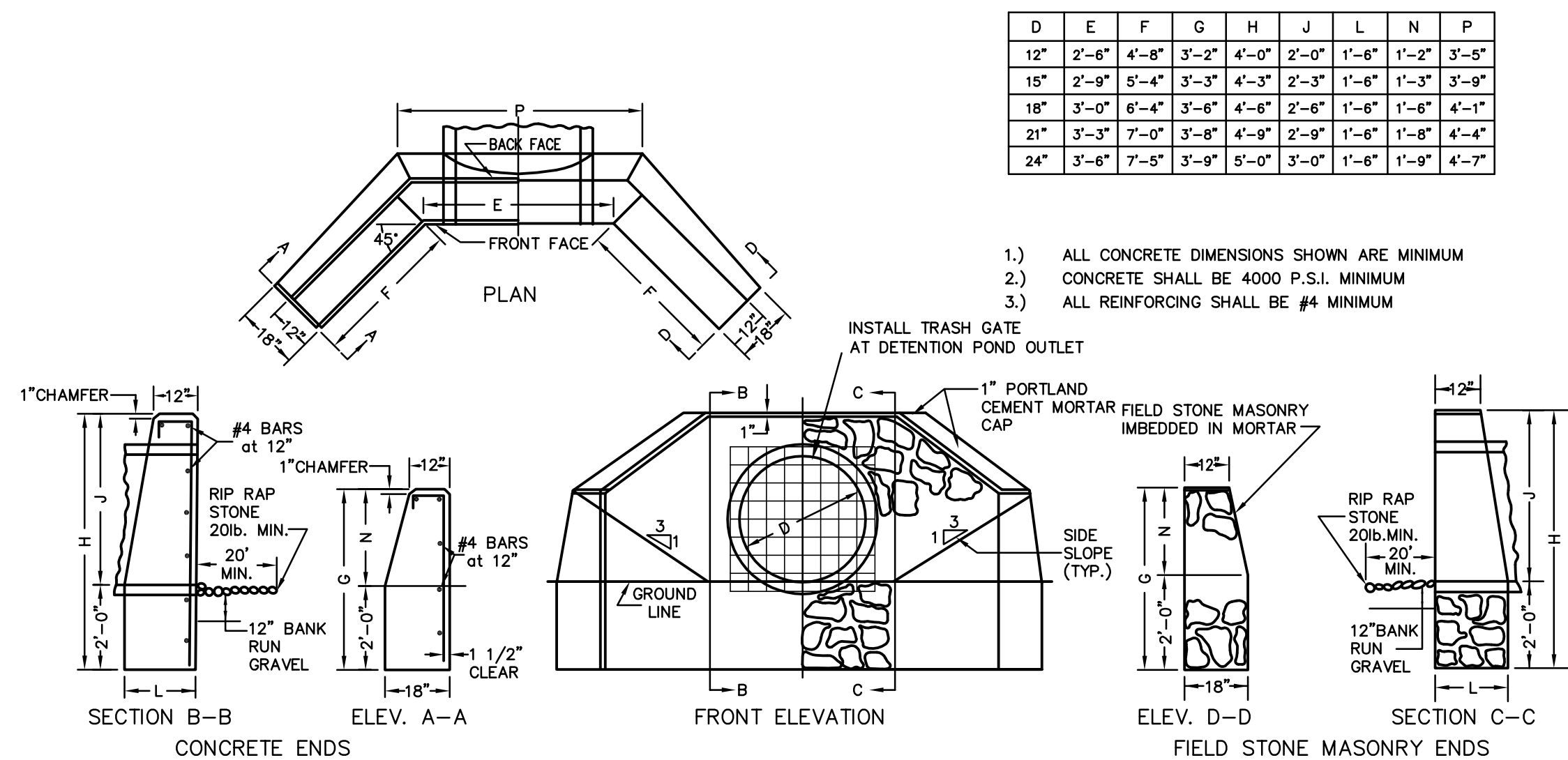
PRECAST CONCRETE CATCH BASIN DETAILS
NOT TO SCALE



PRECAST CONCRETE MANHOLE DETAILS
NOT TO SCALE

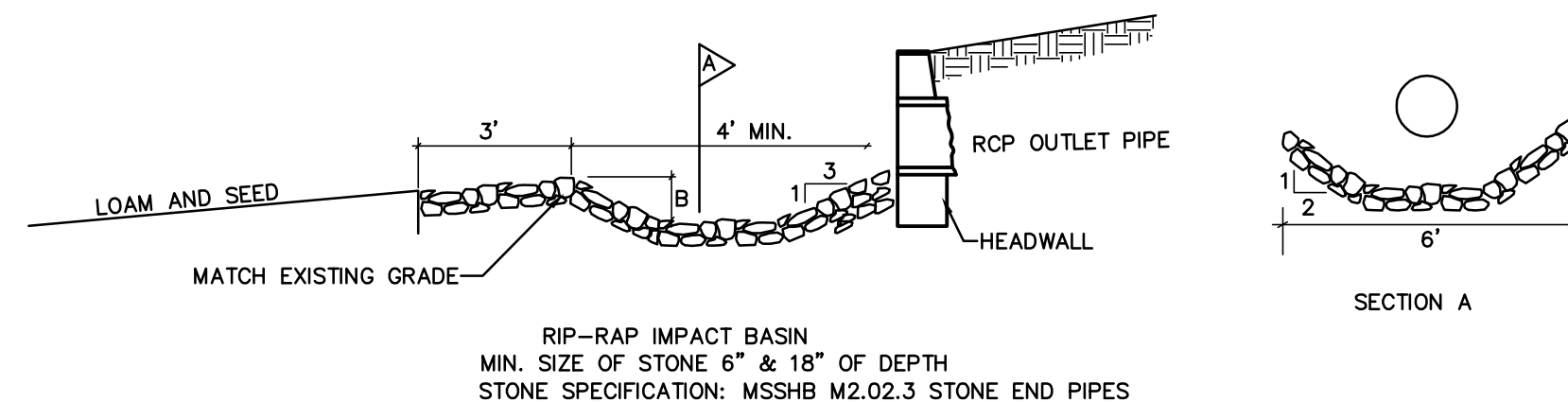


PROPOSED OUTLET CONTROL STRUCTURE DRAINAGE BASIN#5
(PRECAST CONCRETE STRUCTURE)
NOT TO SCALE



CONCRETE AND FIELD STONE MASONRY HEADWALL DETAILS
NOT TO SCALE

IMPACT BASIN SIZING		
FLARED END #	DEPTH "B" (INCHES)	RIP-RAP SIZE D50 (IN.)
1	18.00	6.00
2	18.00	6.00
3	18.00	6.00



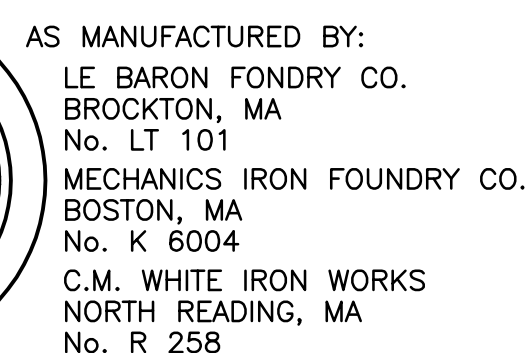
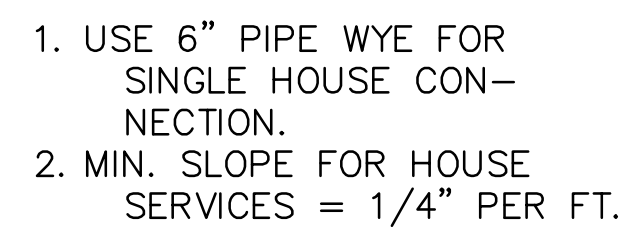
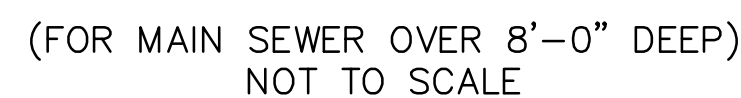
RIP-RAP IMPACT BASIN AT HEADWALLS
NOT TO SCALE

REVISIONS		DESCRIPTION
No.	DATE	
1	04/10/18	APARTMENTS 136 UNITS
2	07/06/18	PLAN LAYOUT & DRAINAGE
3	07/25/18	WATER SYSTEM COMMENTS
4	09/18/18	ENGINEERING COMMENTS

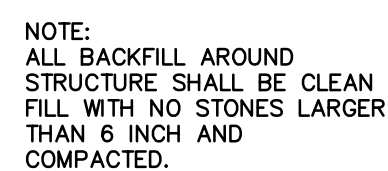
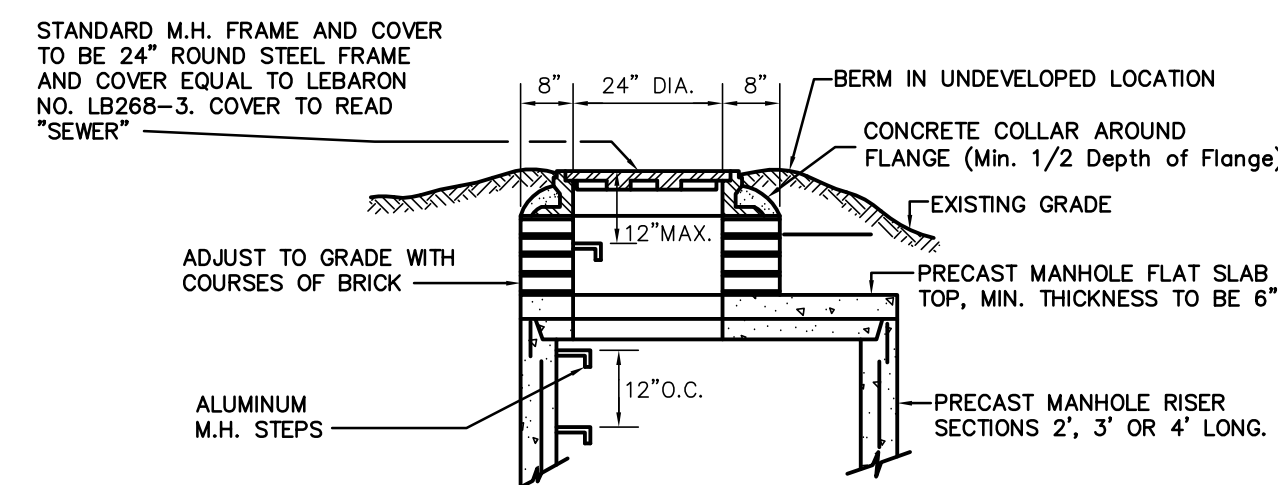
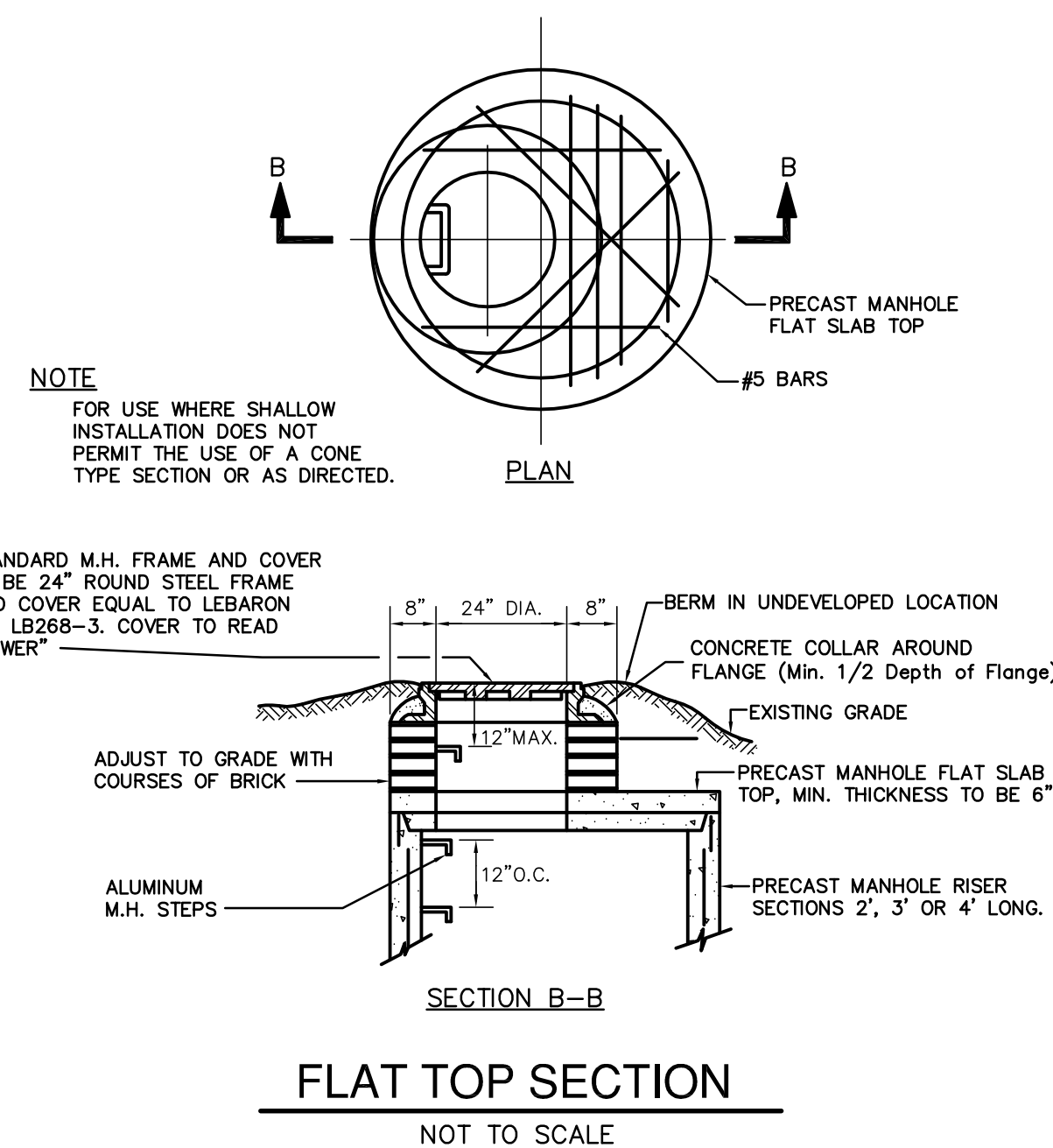
SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS
PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01583

GLM Engineering Consultants, Inc.
19 EXCHANGE STREET
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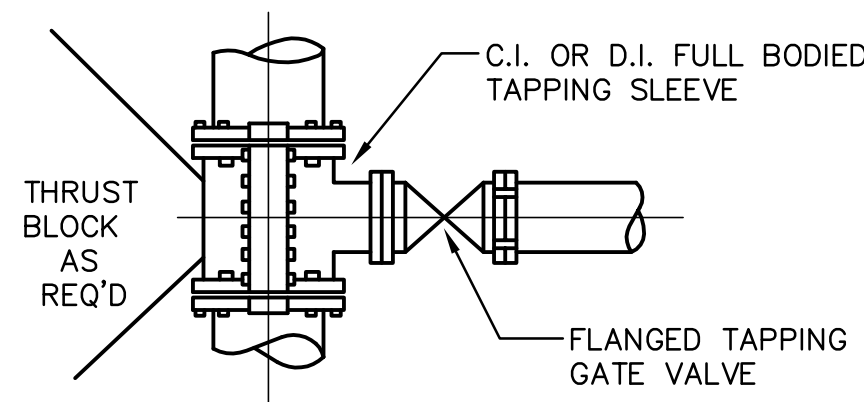
DRW.: RST	
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	nts
SHEET:	23 of 27
PLAN #:	27,147



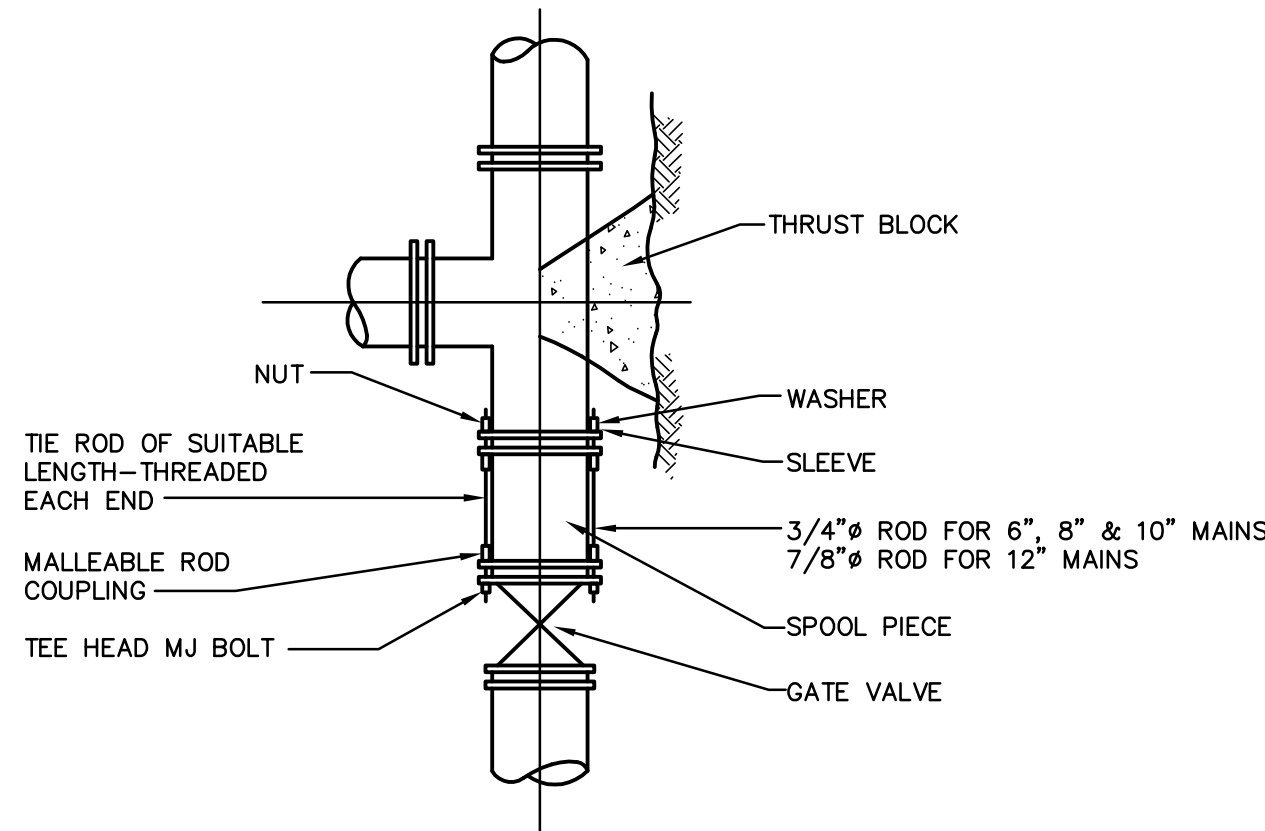
NOTE:
FOR WATERTIGHT APPLICATIONS
USE THE FOLLOWING CASTINGS:
LE BARON FOUNDRY CO.
WATERTIGHT M.H. FRAME & COVER
No. LBW268-2
OR
LE BARON FOUNDRY CO.
BOLTED & GASKETED FRAME & COVER
No. LBB268-2
OR APPROVED EQUAL

DIGSAFE 1-888-DIGSAFE
DETAILS

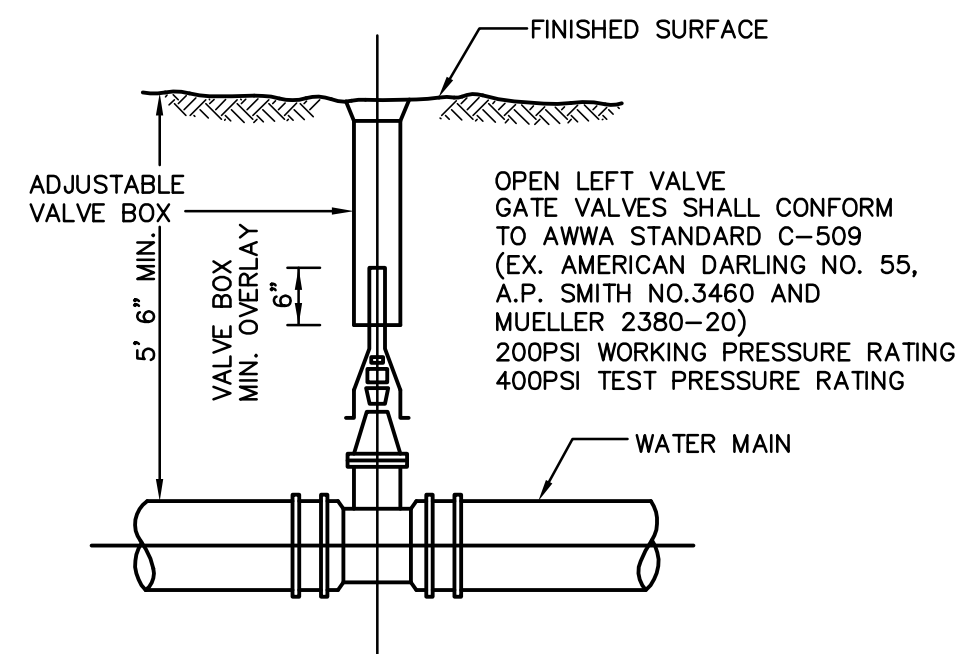
DRW.: RST	
JOB No.	12,274
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SCALE:	nts
SHEET:	24 of 27
PLAN #:	27,147



TAPPING SLEEVE AND
VALVE DETAIL
NOT TO SCALE



TYPICAL TIED MECHANICAL JOINT
VALVE CONNECTION DETAILS
NOT TO SCALE

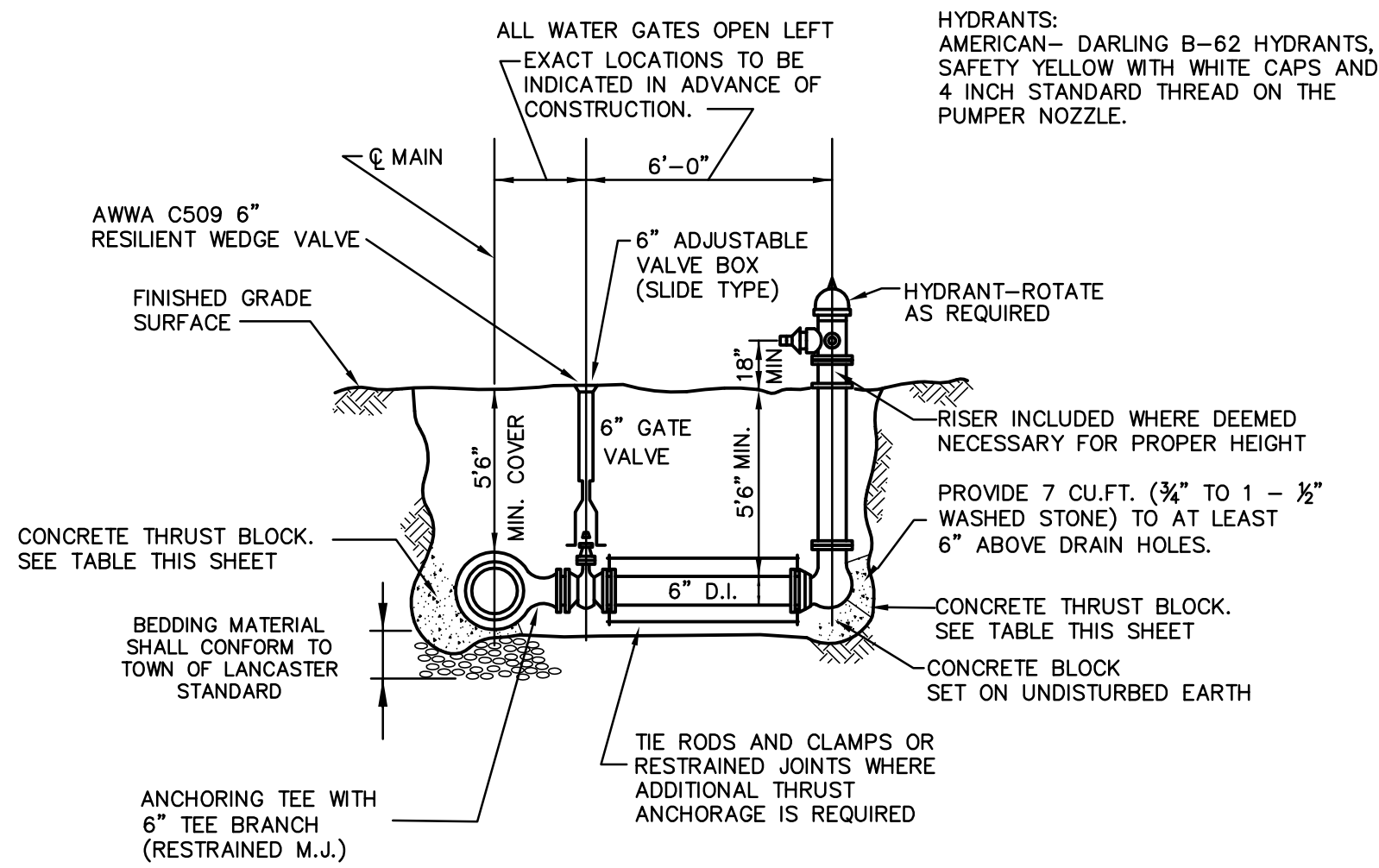


TYPICAL GATE VALVE
NOT TO SCALE

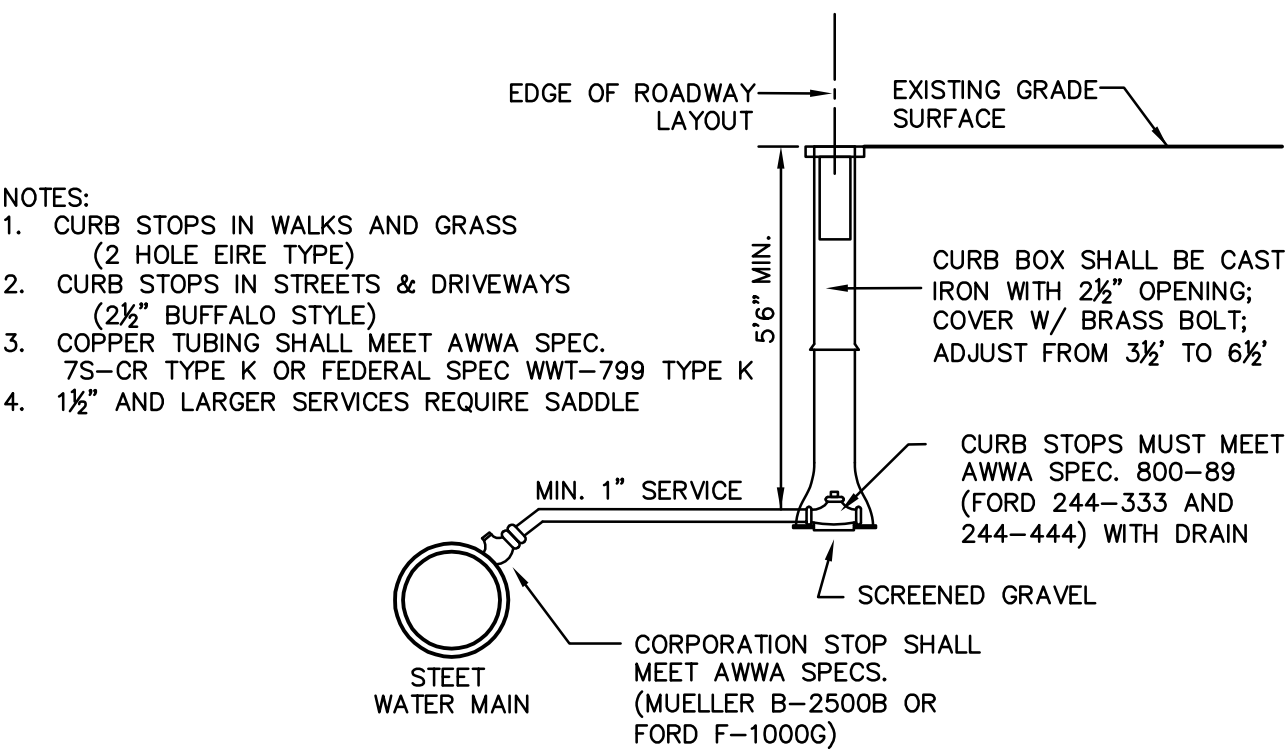
NOTE: CONCRETE FOR THRUST BLOCKS SHALL BE NO LONGER THAN THE RATIO OF 2 1/2 : 5 1/2 AND SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2000 PSI (SO THAT FLANGES AND BOLTS ARE ACCESSIBLE.)

BEARING AREAS OF THRUST BLOCKS (BEARING AREA IN SQUARE FT.)				
PIPE SIZE INCHES	1/4 BEND	1/8 BEND	1/16 BEND OR LESS	PLUG TEES
6 AND 8	8	8		8
10 AND 12	22	13	8	16

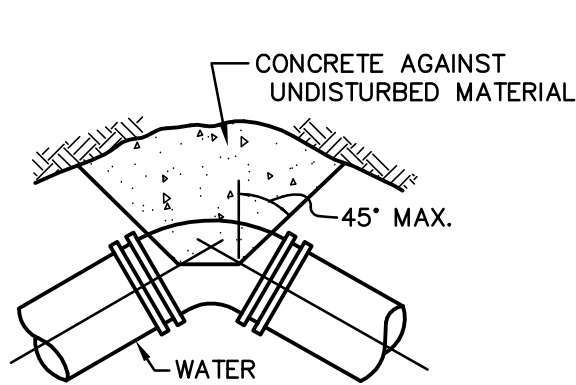
TYPICAL THRUST BLOCK DETAIL
NOT TO SCALE



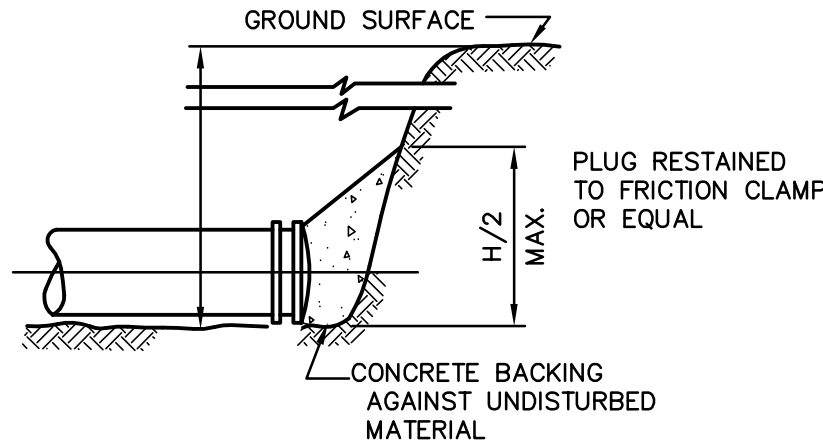
TYPICAL HYDRANT ASSEMBLY DETAIL
NOT TO SCALE



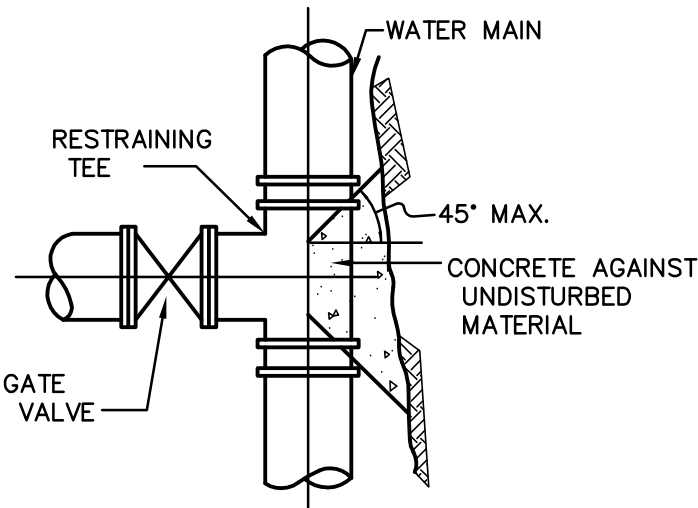
TYPICAL NEW WATER SERVICE CONNECTION DETAIL
NOT TO SCALE



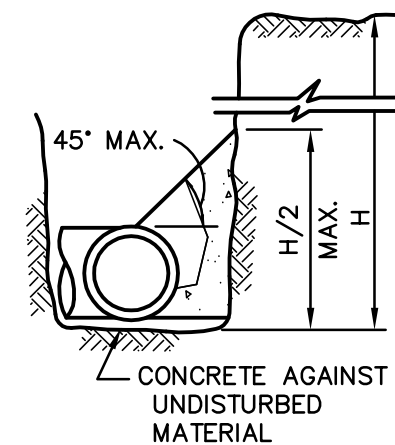
TYPICAL BEND



TYPICAL PLUG



TYPICAL TEE



TYPICAL SECTION

NOTES:
ALL WATER DETAILS MANUFACTURERS & CONSTRUCTION
STANDARDS SHALL CONFORM TO THE TOWN OF LANCASTER
STANDARDS.

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No.	DATE	
1	04/10/18	APARTMENTS 136 UNITS
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SITE DEVELOPMENT PLAN
"GOODRIDGE BROOK ESTATES"
Multi Unit & Single Family Subdivision Layout
LANCASTER, MASSACHUSETTS

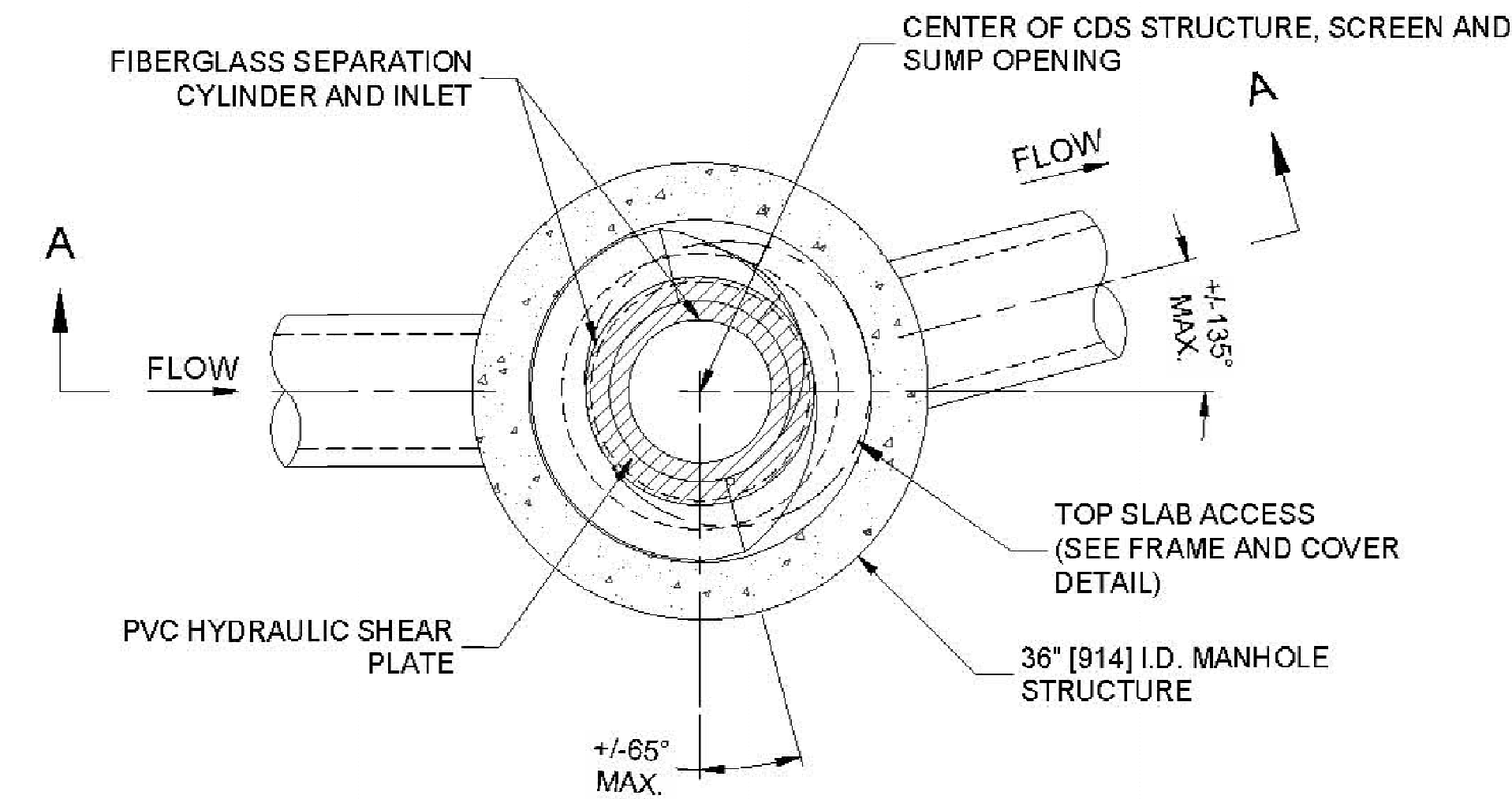
PREPARED FOR:
CRESCENT BUILDERS, INC.
94 NORTH MAIN STREET
BOYLSTON MA 01863

GLM Engineering Consultants, Inc.
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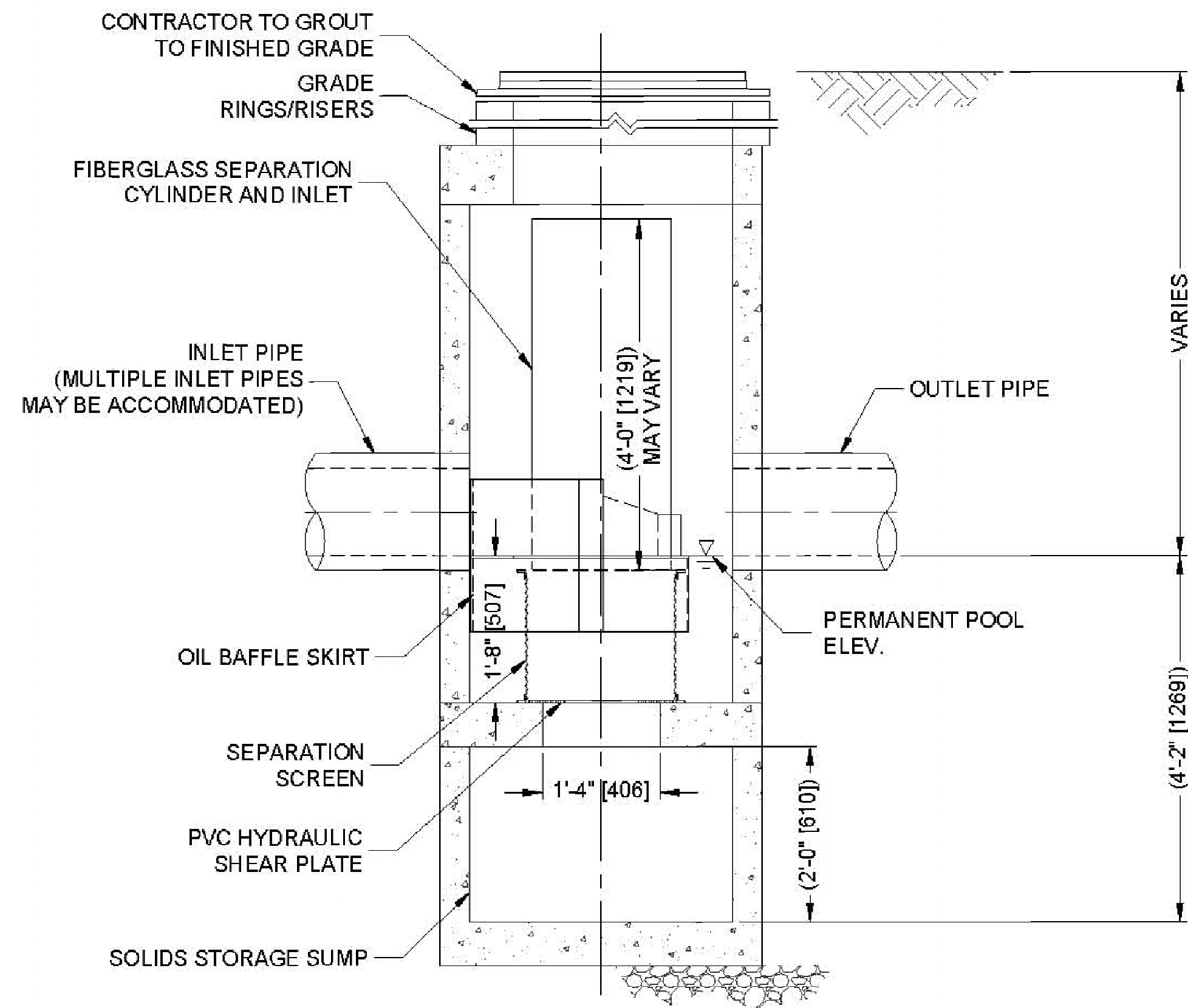
DRW.: RST
JOB No. 12,274
DATE: FEBRUARY 8, 2018
SCALE: nts
SHEET: 25 of 27
PLAN #: 27,147

CDS1515-3-C DESIGN NOTES

CDS1515-3-C RATED TREATMENT CAPACITY IS 1.0 CFS, OR PER LOCAL REGULATIONS.
THE STANDARD CDS1515-3-C CONFIGURATION IS SHOWN.

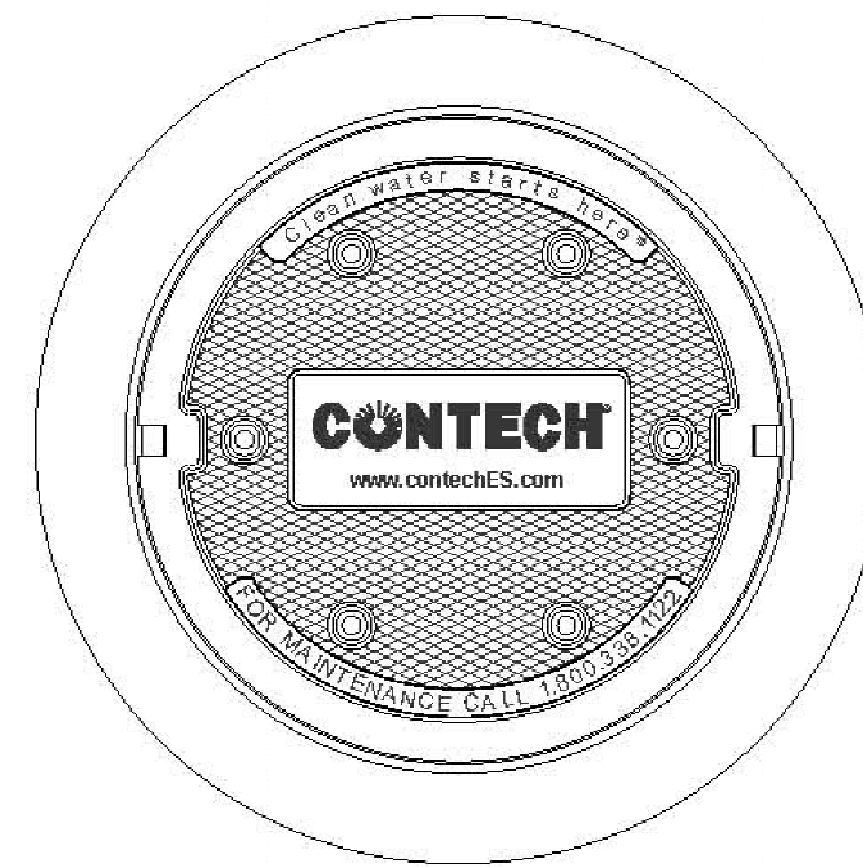


PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

CDS UNITS TO BE INSTALLED AT:
DRAIN MH#57
DRAIN MH#66
DRAIN MH#77



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

- GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
 3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
 4. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2'. AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
 5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
 6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

- INSTALLATION NOTES
- A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
 - C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
 - D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
 - E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH
ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS1515-3-C
ONLINE CDS
STANDARD DETAIL

REVISIONS		DESCRIPTION
No.	DATE	
1	04/10/18	APARTMENTS 136 UNITS
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DRW.: RST	
JOB No.	12,274
DATE:	FEBRUARY 8, 2018
SCALE:	nts
SHEET:	26 of 27
PLAN #:	27,147

DEEP HOLE -- #08-1		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	404.0
6"		403.5
16"	B -- SILT LOAM	402.2
	C -- FINE SILT LOAM, 5 % GRAVEL	
84"		397.0
28"	GROUNDWATER OBSERVED (STANDING / WEEPING)	401.7
24"	SOIL MOTTUNG -- FAINT	402.0
	ESTIMATED SEASONAL HIGH GROUNDWATER	402.0

DEEP HOLE -- #08-2		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	406.0
4"		405.7
12"	B -- SANDY LOAM	405.0
	C -- SILT LOAM	
80"		399.3
38"	GROUNDWATER OBSERVED (STANDING / WEEPING)	402.8
30"	SOIL MOTTUNG -- FAINT	403.5
	ESTIMATED SEASONAL HIGH GROUNDWATER	403.5

DEEP HOLE -- #08-3		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	402.0
2"		401.8
10"	B -- SILT LOAM	401.2
	C -- SILT LOAM	
115"		392.4
NA	GROUNDWATER OBSERVED (STANDING / WEEPING)	
86"	SOIL MOTTUNG -- FAINT	394.8
	ESTIMATED SEASONAL HIGH GROUNDWATER	394.8

DEEP HOLE -- #08-4		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	402.2
4"		401.9
14"	B -- SILT LOAM	401.0
	C -- SILT LOAM	
76"		395.9
NA	GROUNDWATER OBSERVED (STANDING / WEEPING)	
NA	SOIL MOTTUNG -- FAINT	
	ESTIMATED SEASONAL HIGH GROUNDWATER	

DEEP HOLE -- #08-5		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	404.5
8"		403.8
26"	B -- SILT LOAM	402.3
	C -- SILT LOAM	
108"		395.5
48"	GROUNDWATER OBSERVED (STANDING / WEEPING)	400.5
34"	SOIL MOTTUNG -- FAINT	401.7
	ESTIMATED SEASONAL HIGH GROUNDWATER	401.7

DEEP HOLE -- #08-6		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	406.3
3"		406.0
26"	B -- SILT LOAM	404.1
	C -- SILT LOAM	
72"		400.3
48"	GROUNDWATER OBSERVED (STANDING / WEEPING)	402.3
38"	SOIL MOTTUNG -- FAINT	403.1
	ESTIMATED SEASONAL HIGH GROUNDWATER	403.1

DEEP HOLE -- #08-7		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	401.2
2"		401.0
10"	B -- SANDY LOAM	400.4
	C -- SANDY LOAM	
92"		393.5
NA	GROUNDWATER OBSERVED (STANDING / WEEPING)	
NA	SOIL MOTTUNG -- FAINT	
	ESTIMATED SEASONAL HIGH GROUNDWATER	

DEEP HOLE -- #08-8		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	394.0
2"		393.8
20"	B -- SILT LOAM	392.3
48"	C1-- COURSE SAND	390.0
	C1-- FINE SAND	
108"		385.0
52"	GROUNDWATER OBSERVED (STANDING / WEEPING)	389.7
42"	SOIL MOTTUNG -- FAINT	390.5
	ESTIMATED SEASONAL HIGH GROUNDWATER	390.5

DEEP HOLE -- #08-9		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	398.5
3"		398.3
10"	B -- SANDY LOAM	397.7
	C -- SANDY LOAM	
102"		390.0
80"	GROUNDWATER OBSERVED (STANDING / WEEPING)	391.8
74"	SOIL MOTTUNG -- FAINT	392.3
	ESTIMATED SEASONAL HIGH GROUNDWATER	392.3

DEEP HOLE -- #08-10		
HORIZ DEPTH	DATE: 01/28/08 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	398.0
3"		397.8
8"	B -- SANDY LOAM	397.3
48"	C1 -- SANDY LOAM	394.0
	C2 -- SILTY LOAM	
76"		391.7
	C3 -- SILTY LOAM WITH SHALE	
108"		389.0
88"	GROUNDWATER OBSERVED (STANDING / WEEPING)	390.7
78"	SOIL MOTTUNG -- FAINT	391.5
	ESTIMATED SEASONAL HIGH GROUNDWATER	391.5

DEEP HOLE -- #1		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	401.8
4"		401.5
19"	B--FINE SANDY LOAM	401.6
	C -- FINE SILT LOAM, 20% GRAVEL	
108"		392.8
48"	GROUNDWATER OBSERVED (STANDING / WEEPING)	397.8
24"	SOIL MOTTUNG -- FAINT	399.8
	ESTIMATED SEASONAL HIGH GROUNDWATER	399.8

DEEP HOLE -- #2		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	404.3
8"		403.6
18"	B--FINE SANDY LOAM	402.8
	C -- SILT LOAM	
108"		395.3
18"	GROUNDWATER OBSERVED (STANDING / WEEPING)	402.8
18"	SOIL MOTTUNG -- FAINT	402.8
	ESTIMATED SEASONAL HIGH GROUNDWATER	402.8

DEEP HOLE -- #3		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	398.6
8"		397.9
12"	B--FINE SANDY LOAM	397.6
	C -- SILT LOAM	
108"		389.6
72"	GROUNDWATER OBSERVED (STANDING / WEEPING)	392.6
NA	SOIL MOTTUNG -- FAINT	
	ESTIMATED SEASONAL HIGH GROUNDWATER	392.6

DEEP HOLE -- #4		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	402.2
6"		401.7
19"	B--FINE SANDY LOAM	400.6
	C -- SILT LOAM	
120"		392.2
92"	GROUNDWATER OBSERVED (STANDING / WEEPING)	394.5
NA	SOIL MOTTUNG -- FAINT	
	ESTIMATED SEASONAL HIGH GROUNDWATER	394.5

DEEP HOLE -- #5		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	406.6
6"		406.1
18"	B -- SANDY LOAM	405.1
37"	C1 -- SANDY LOAM	403.5
	C2 -- SILT LOAM	
113"		397.2
28"	GROUNDWATER OBSERVED (STANDING / WEEPING)	404.3
28"	SOIL MOTTUNG -- FAINT	404.3
	ESTIMATED SEASONAL HIGH GROUNDWATER	404.3

DEEP HOLE -- #6		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	407.5
6"		407.0
20"	B -- SANDY LOAM	405.8
36"	C1 -- SANDY LOAM	404.5
	C2 -- SILT LOAM	
113"		398.1
51"	GROUNDWATER OBSERVED (STANDING / WEEPING)	403.3
24"	SOIL MOTTUNG	405.5
	ESTIMATED SEASONAL HIGH GROUNDWATER	405.5

DEEP HOLE -- #7		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	403.0
8"		402.3
28"	B -- SILT LOAM	400.7
38"	C1 -- SANDY LOAM	399.8
	C2 -- SILT LOAM	
108"		394.0
36"	GROUNDWATER OBSERVED (STANDING / WEEPING)	400.0
NA	SOIL MOTTUNG	
	ESTIMATED SEASONAL HIGH GROUNDWATER	400.0

DEEP HOLE -- #8		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	407.0
6"		406.5
16"	B -- SILT LOAM	405.2
	C -- SILT LOAM	
108"		397.5
48"	GROUNDWATER OBSERVED (STANDING / WEEPING)	403.0
NA	SOIL MOTTUNG	
	ESTIMATED SEASONAL HIGH GROUNDWATER	403.0

DEEP HOLE -- #9		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	418.1
8"		417.4
28"	B -- SILT LOAM	415.8
40"	C1 -- SANDY LOAM	414.8
	C2 -- SILT LOAM	
108"		409.1
44"	GROUNDWATER OBSERVED (STANDING / WEEPING)	414.4
NA	SOIL MOTTUNG	
	ESTIMATED SEASONAL HIGH GROUNDWATER	414.4

DEEP HOLE -- #10		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	410.1
8"		409.4
18"	B--FINE SANDY LOAM	408.6
28"	C1 -- SANDY LOAM	407.8
	C2 -- SILT LOAM	
108"		401.1
60"	GROUNDWATER OBSERVED (STANDING / WEEPING)	405.1
NA	SOIL MOTTUNG	
	ESTIMATED SEASONAL HIGH GROUNDWATER	405.1

DEEP HOLE -- #18-1 (Basin 5)		
HORIZ DEPTH	DATE: 8/14/18 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	394.0
4"		393.7
26"	B -- SILT LOAM	391.8
	C1 -- LOAMY SAND	
132"		383.0
120"	GROUNDWATER OBSERVED (STANDING / WEEPING)	384.0
NA	SOIL MOTTUNG	
	ESTIMATED SEASONAL HIGH GROUNDWATER	

DEEP HOLE -- #18-2 (Basin 4)		
HORIZ DEPTH	DATE: 8/14/18 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	400.0
4"		399.7
30"	B -- SILT LOAM	397.5
	C -- LOAMY SAND	
84"		393.0
74"	GROUNDWATER OBSERVED (STANDING / WEEPING)	393.8
30"	SOIL MOTTUNG	397.5
	ESTIMATED SEASONAL HIGH GROUNDWATER	397.5

DEEP HOLE -- #18-3 (Basin 2)		
HORIZ DEPTH	DATE: 03/28/06 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	398.0
4"		397.7
32"	B -- SILT LOAM	395.3
62"	C1 -- LOAMY SAND	392.8
	GROUNDWATER OBSERVED (STANDING / WEEPING)	
32"	SOIL MOTTUNG	395.3
32"	ESTIMATED SEASONAL HIGH GROUNDWATER	395.3

DEEP HOLE -- #18-4 (Basin 6)		
HORIZ DEPTH	DATE: 8/15/18 SOIL DESCRIPTION	ELEV.
0"	A -- TOPSOIL	396.0
6"		395.5
24"	B--FINE SANDY LOAM	394.0
	C1 -- SAND	
92"		388.3
	C2 -- LOAMY SAND	
108"		387.0
None	GROUNDWATER OBSERVED (STANDING / WEEPING)	
90"	SOIL MOTTUNG	388.5
90"	ESTIMATED SEASONAL HIGH GROUNDWATER	388.5

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SHEET: 27 of 27
PLAN #: 27,147