

LEXINGTON HERITAGE
PRELIMINARY ENGINEERING PLANS
OLD ARLINGTON HEIGHTS RD & COUNTRY LN
SECTION 8 TOWNSHIP 42 NORTH RANGE 11 EAST
ARLINGTON HEIGHTS, ILLINOIS
COOK COUNTY

DEVELOPER / SUBDIVIDER:

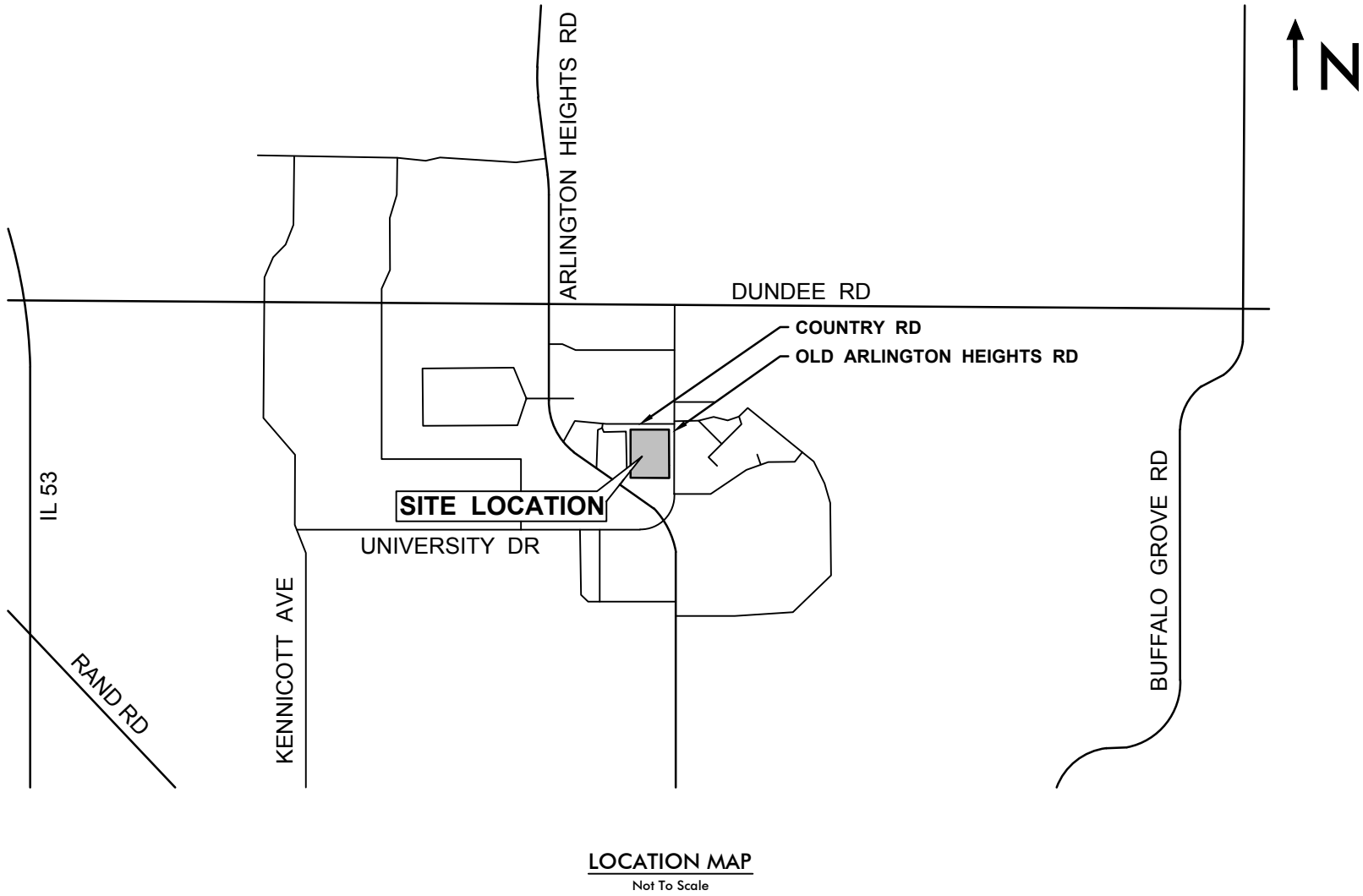
Lexington Homes
1731 Marcey Street, Suite 200
Chicago, IL
Tel: 847-875-8289
Fax: 773-60-0301

PREPARED BY:

Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
1304 N. Plum Grove Road
Schaumburg, IL 60173
Tel: 847-394-6600
Fax: 847-394-6608
www.haegerengineering.com

VILLAGE OF ARLINGTON HEIGHTS

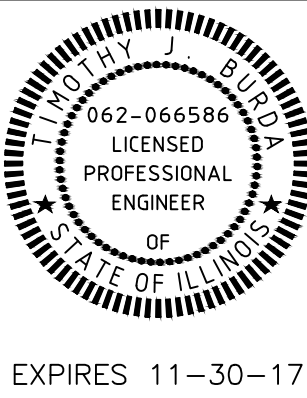
33 S Arlington Heights Rd
Arlington Heights, IL 60005
Tel: 847-368-5000



Benchmark
Site Benchmark
CP # 101 (See Survey)
Description: Cross Notch
Elevation: 697.55 NAVD 88 (Geoid 12A)

INDEX TO SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	EXISTING & DEMOLITION PLAN
3	GEOMETRY PLAN
4	GRADING PLAN
5	UTILITIES PLAN

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
	Clean Out	
	Storm Sewer Service	
	Sanitary Sewer Service	
	Water Main	
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
	B-Box	
	Well Head	
	Light Pole	
	Hand Hole	
	Fence	
	Sign	
	Gas Valve	
	Gas Line	
	Electric Line	
	Overhead Utility Line	
	Electrical Pedestal	
	Electric Manhole	
	Guy Wire	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
	Telephone Line	
	Cable TV Pedestal	
	Mailbox	
	Number of Parking Stalls	
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
	Curb Elevation and Gutter/Pavement Elevation	
	Pavement Elevation	
	Sidewalk Elevation	
	Ground Elevation	
	Top of Wall Elevation	
	Bottom of Wall Elevation	
	Open Lid Frame & Grate	
	Closed Lid Frame & Lid	
	Swale	
	Hardscape Flow	
	Softscape Flow	
	Contour Line	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
	Soil Boring	
	Over Land Flow Route	



Revision	Date	No.
Per Village of Palatine Comments	10/27/2016	2
Per Village of Palatine Comments	10/5/2016	1

HAEGER ENGINEERING
consulting engineers • land surveyors
1304 N. Plum Grove Road, Schaumburg, IL 60173 • Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003152
www.haegerengineering.com

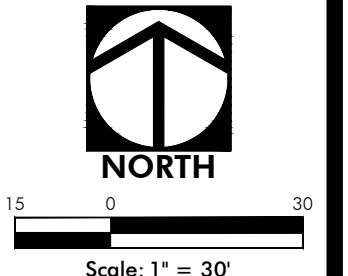
TITLE SHEET
PRELIMINARY ENGINEERING PLAN
LEXINGTON HERITAGE
ARLINGTON HEIGHTS, ILLINOIS

Project Manager:	T J B
Engineer:	D J V
Date:	07/15/2016
Project No.	16-003
Sheet	1 / 5



Know what's below.
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.



DEMOLITION LEGEND	
	BUILDING REMOVAL
	PAVEMENT REMOVAL
	GRAVEL REMOVAL
	CONCRETE REMOVAL
	UTILITY REMOVAL
	CURB REMOVAL
	FENCE REMOVAL
	MISCELLANEOUS REMOVAL
	SAW CUT
	TREE REMOVAL
	TREE PROTECTION

NOTE:
1) Contractor to remove all trees and brush.
2) 3 min. patches required for all curb and gutter replacement.

Per Village of Palatine Comments
Per Village of Palatine Comments

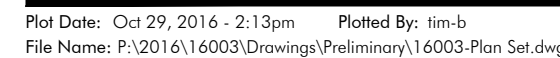
Date
10/27/2016

No.
2

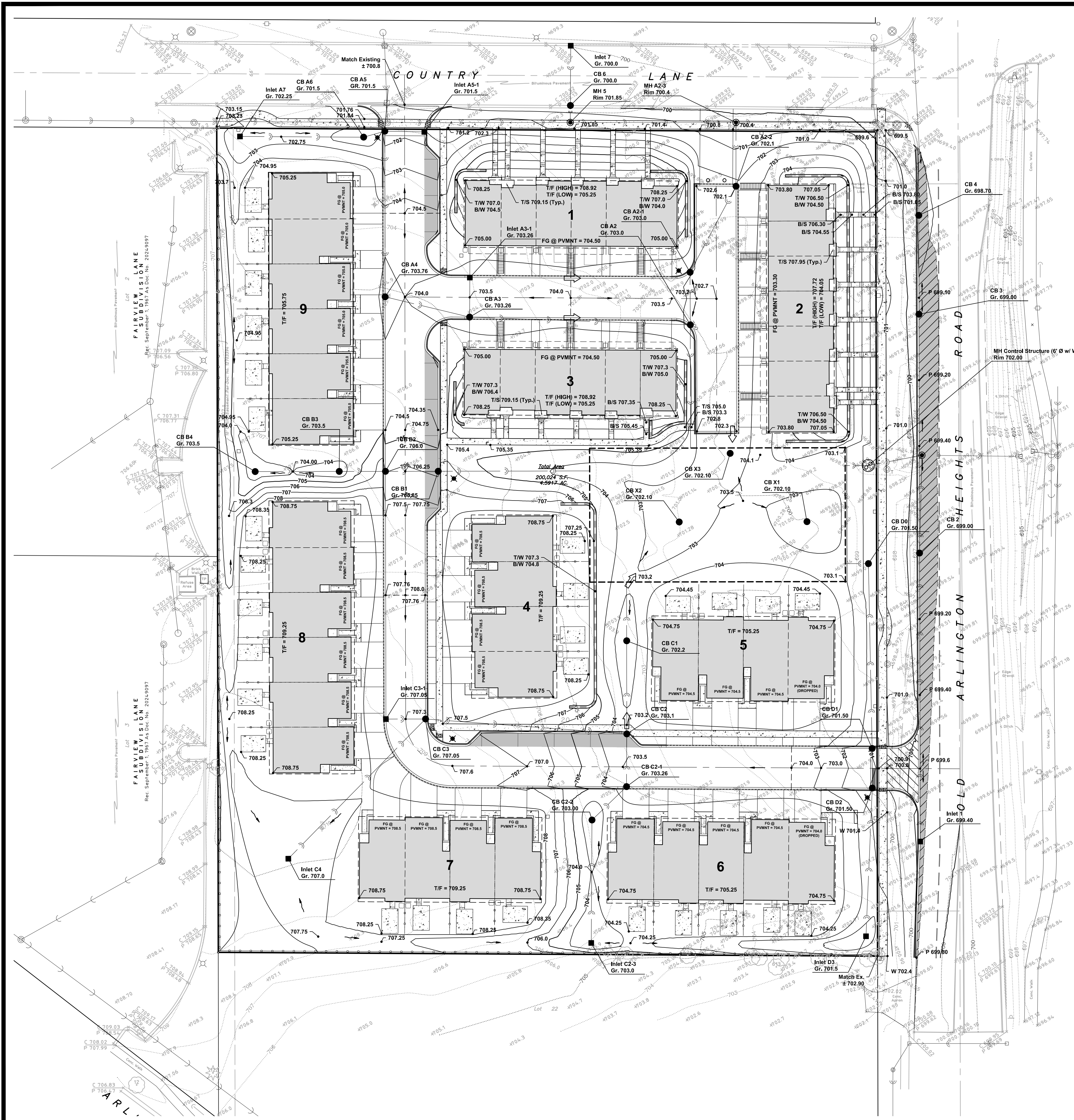
HAEGER ENGINEERING
consulting engineers • land surveyors
1304 N. Plum Grove Road, Schaumburg, IL 60173 • Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003120
www.haegerengineering.com

EXISTING & DEMOLITION PLAN
PRELIMINARY ENGINEERING PLAN
LEXINGTON HERITAGE
ARLINGTON HEIGHTS, ILLINOIS

Project Manager: TJB
Engineer: DJV
Date: 07/15/2016
Project No. 16-003
Sheet 2



3



A. Definitions and Constraints:

Site Area	4.59 Ac
Drainage Tributary Area	4.59 Ac
Release Rate	0.18 CFS/Ac
Allowable Release Rate	0.83 CFS
Site HWL (High Water Level)	700.00
Detention Vault Area	12,589 SF
Detention Vault Height	5.00 Ft
Restrictor Elevation	694.25
Restrictor Size	3.630 Inches
Restrictor Type	Orifice w/ Hood

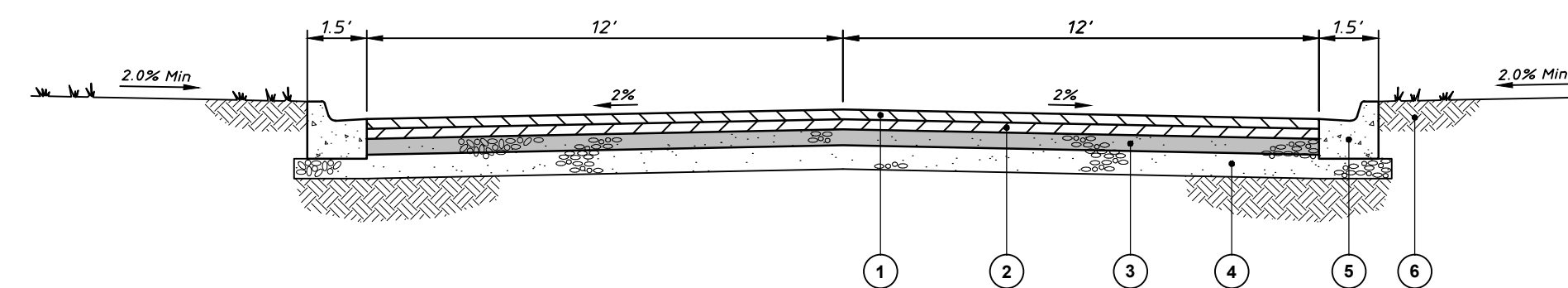
B. Coverage Summary:

	Sq. Ft	Acre	%	C - Factor
EXISTING Impervious Area=	40,513	0.93	20%	0.95
EXISTING Pervious Area=	159,511	3.66	80%	0.50
EXISTING Total =	200,024	4.59		0.59

	Sq. Ft	Acre	%	C - Factor
PROPOSED Impervious Area=	105,805	2.43	53%	0.95
PROPOSED Pervious Area=	94,219	2.16	47%	0.50
PROPOSED Total =	200,024	4.59		0.74

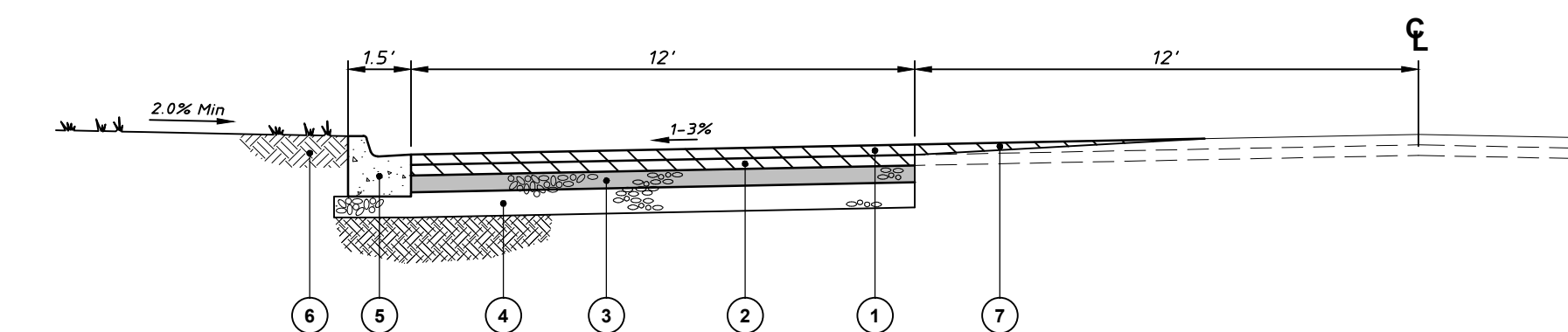
D. Storage:

Required	Storage (Ac-Ft)
Using Bulletin 70 Rainfall Table	1.196
Proposed	Storage (Ac-Ft)
Detention Provided	1.301



- 1 Bituminous Concrete Surface Course - Mix D, N50 - 2"
- 2 Bituminous Concrete Binder Course - N50 - 2.25"
- 3 Bituminous Concrete Binder Course - N30 - 5"
- 4 Aggregate Base Course, Type B, Crushed Limestone CA-6 - 4"
- 5 Combination Concrete Curb and Gutter, Type B-6.12
- 6 6" Topsoil and Sod

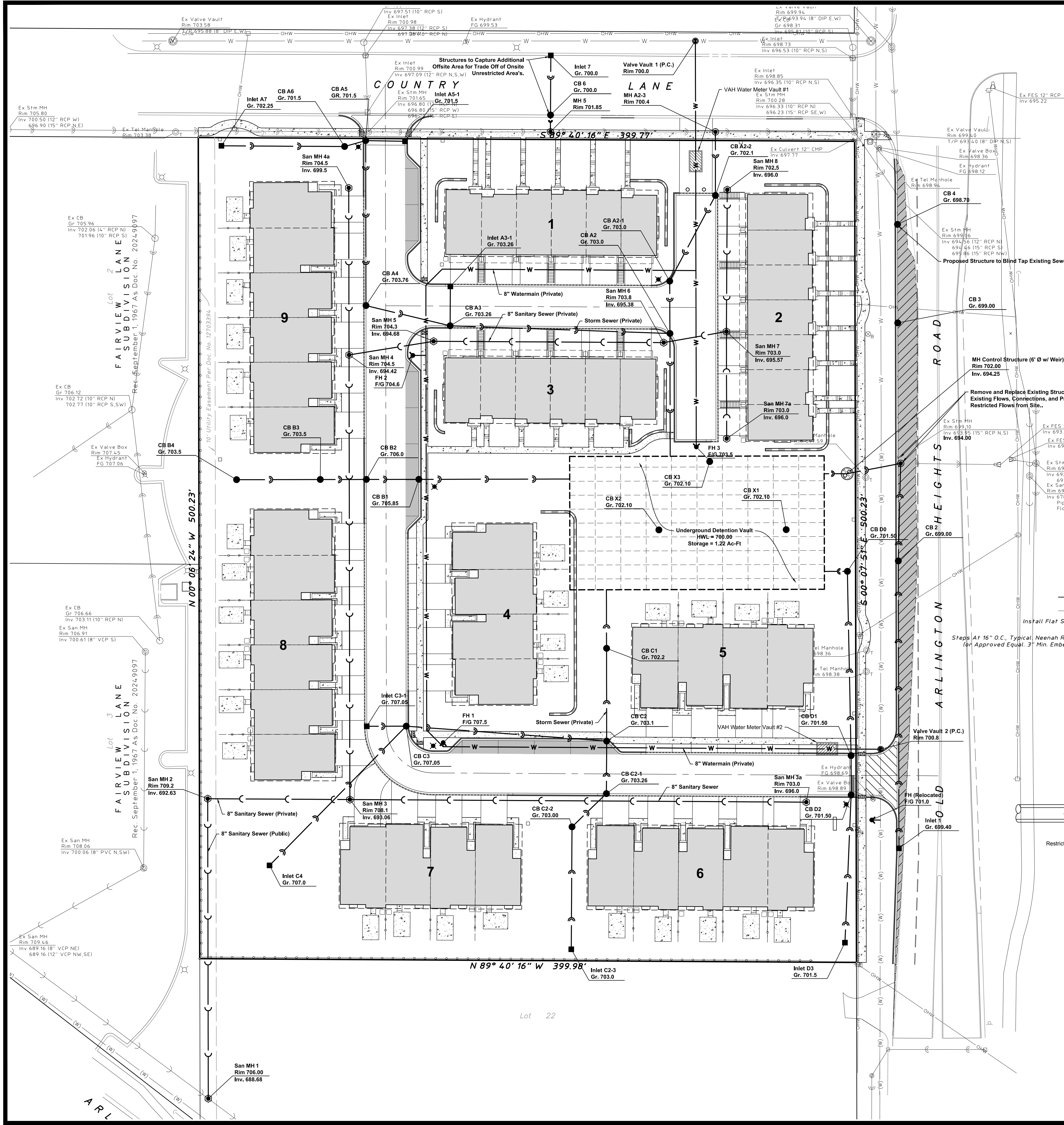
ONSITE PRIVATE ROAD
CROSS SECTION - B6.12



- 1 Bituminous Concrete Surface Course - Mix D, N50 - 2"
- 2 Bituminous Concrete Binder Course - N50 - 2.25"
- 3 Bituminous Concrete Binder Course - N30 - 5"
- 4 Aggregate Base Course, Type B, Crushed Limestone CA-6 - 4"
- 5 Combination Concrete Curb and Gutter, Type B-6.12
- 6 6" Topsoil and Sod
- 7 Butt Joint

OLD ARLINGTON HEIGHTS RD
CROSS SECTION - B6.12





Detention Storage Calculations (Bulletin 70)

Project: Lexington Heritage
Location: Arlington Heights, IL
Project #: 16003

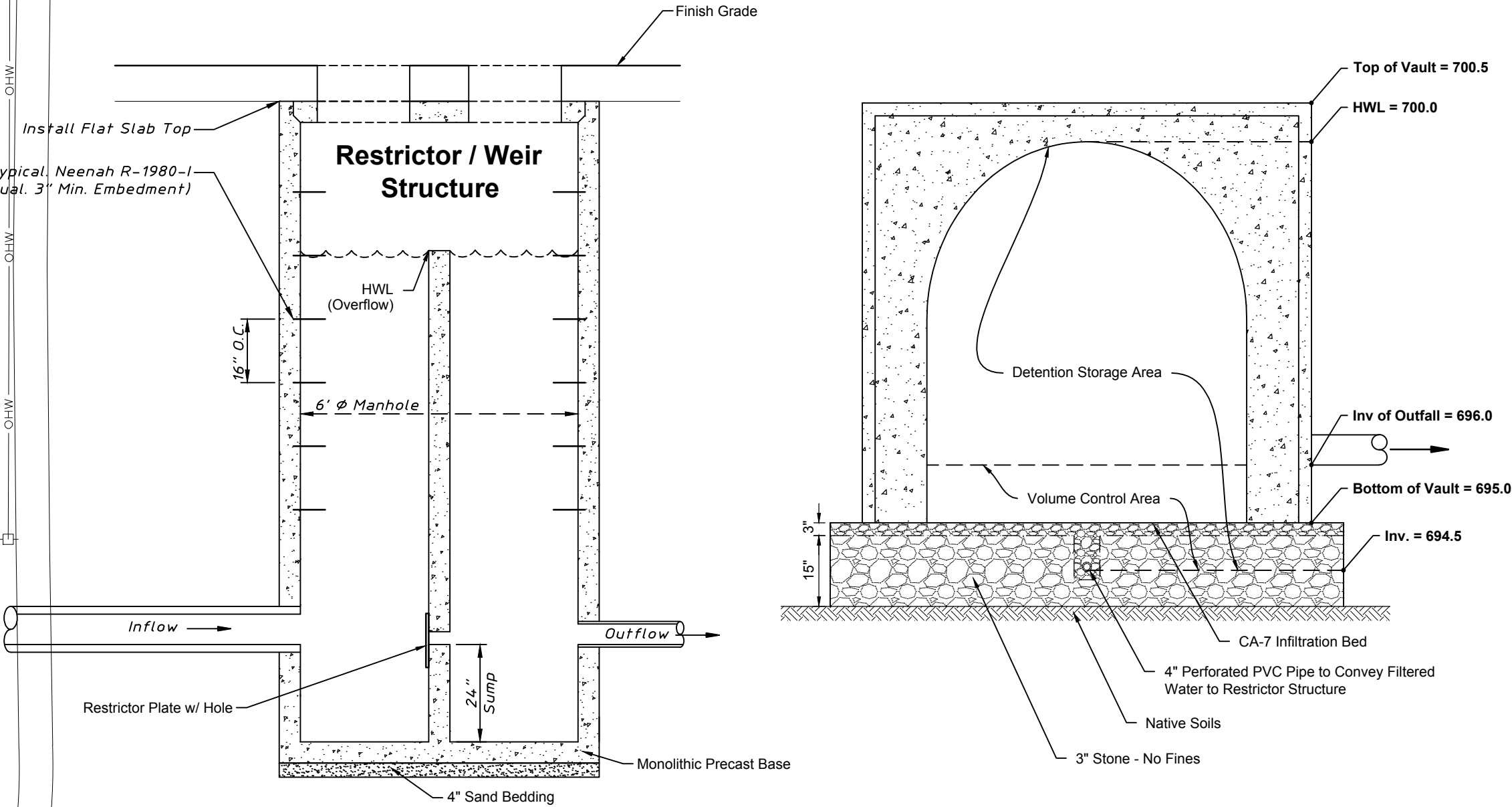
Prepared: TJB
Reviewed: LAK
Date: 8/21/2015

Area Requiring Detention = 4.59 acres
100-year, 24-hour Rainfall Depth = 7.58 inches
Release Rate = 0.83 cfs
Runoff Coefficient = 0.74

Detention Storage Calculations for 100-Year Storm

Runoff Coeff. c	Storm Duration t (hours)	Rainfall Intensity i(100) (in/hr)	Drainage Area A (acres)	Inflow Rate Q(i)=ci(100)A (cfs.)	Release Rate Q(o) (cfs.)	Storage Rate Q(i)-Q(o) (cfs.)	Storage Required Q(i)-Q(o)*t /12 (acre-ft.)
0.74	0.17	9.55	4.59	32.36	0.83	31.54	0.447
0.74	0.33	7.33	4.59	24.84	0.83	24.01	0.660
0.74	0.50	5.61	4.59	19.01	0.83	18.19	0.758
0.74	0.67	4.93	4.59	16.71	0.83	15.88	0.887
0.74	0.83	4.24	4.59	14.37	0.83	13.54	0.937
0.74	1.00	3.56	4.59	12.06	0.83	11.24	0.937
0.74	1.50	2.68	4.59	9.08	0.83	8.26	1.032
0.74	2.00	2.24	4.59	7.59	0.83	6.76	1.127
0.74	3.00	1.62	4.59	5.49	0.83	4.66	1.166
0.74	4.00	1.28	4.59	4.34	0.83	3.51	1.170
0.74	5.00	1.08	4.59	3.66	0.83	2.83	1.181
0.74	6.00	0.95	4.59	3.22	0.83	2.39	1.196
0.74	7.00	0.83	4.59	2.81	0.83	1.99	1.159
0.74	8.00	0.75	4.59	2.54	0.83	1.72	1.143
0.74	9.00	0.68	4.59	2.30	0.83	1.48	1.108
0.74	10.00	0.63	4.59	2.14	0.83	1.31	1.090
0.74	11.00	0.59	4.59	2.00	0.83	1.17	1.075
0.74	12.00	0.55	4.59	1.86	0.83	1.04	1.037
0.74	13.00	0.51	4.59	1.73	0.83	0.90	0.977
0.74	14.00	0.48	4.59	1.63	0.83	0.80	0.934
0.74	15.00	0.45	4.59	1.53	0.83	0.70	0.873
0.74	16.00	0.43	4.59	1.46	0.83	0.63	0.841
0.74	17.00	0.41	4.59	1.39	0.83	0.56	0.797
0.74	18.00	0.39	4.59	1.32	0.83	0.50	0.743
0.74	19.00	0.37	4.59	1.25	0.83	0.43	0.677
0.74	20.00	0.36	4.59	1.22	0.83	0.39	0.656
0.74	21.00	0.35	4.59	1.19	0.83	0.36	0.629
0.74	22.00	0.34	4.59	1.15	0.83	0.33	0.597
0.74	23.00	0.33	4.59	1.12	0.83	0.29	0.559
0.74	24.00	0.32	4.59	1.08	0.83	0.26	0.516

STORAGE REQUIRED PER BULLETIN 70 = 1.196 Ac-ft.
STORAGE REQUIRED PER BULLETIN 70 = 52,119 Cubic Feet



RESTRICTOR STRUCTURE DETAIL N.T.S. UNDERGROUND DETENTION VAULT (INDIVIDUAL UNIT)

UTILITY SUMMARY TABLE

Sanitary Sewer	Length (Ft)
8" PVC	1,302
Storm Sewer	Length (Ft)
12" RCP	1,621
15" RCP	307
18" RCP	109
Watermain	Length (Ft)
8" DIP	983

HAEGER ENGINEERING
consulting engineers • land surveyors
1304 N. Plum Grove Road, Schaumburg, IL 60173 • Tel. 847.394.6600 Fax. 847.394.6608
Illinois Professional Design Firm License No. 184-003120
www.haegerengineering.com

UTILITIES
PLAN
PRELIMINARY ENGINEERING PLAN
LEXINGTON HERITAGE
ARLINGTON HEIGHTS, ILLINOIS

Project Manager: TJB
Engineer: DJV
Date: 07/15/2016
Project No. 16-003
Sheet 5

10/27/2016
10/5/2016
Per Village of Palatine Comments
Per Village of Palatine Comments
Revision
Date
No.