SITE PLAN

HIGHLAND VILLAGE
278–300 WEST CENTRAL STREET

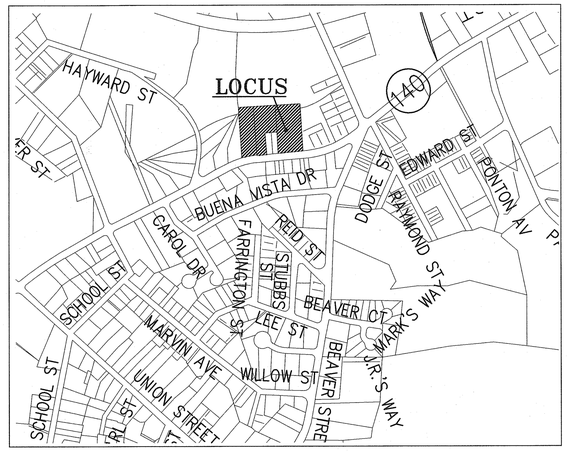
FRANKLIN, MASSACHUSETTS

INDEX

1. COVER SHEET
2. EXISTING CONDITIONS
3. PROPOSED LAYOUT
4. PROFILE
5. DEMOLITION & EROSION CONTROL PLAN
6. PROPOSED GRADING & DRAINAGE
7. PROPOSED UTILITIES
8. PROPOSED LANDSCAPING
9. PHOTOMETRIC PLAN
10. AUTOTURN FOR FIRE TRUCK

11–13 CONSTRUCTION DETAILS

ARCHITECTURAL PLANS



VICINITY MAP
1"=500'

LOCUS:

280 WEST CENTRAL STREET
JOEL D'ERRICO
A.M. 278 LOT 32
DEED BK 33822 PG 200

300 WEST CENTRAL STREET
JOEL D'ERRICO
A.M. 278 LOT 35
DEED BK 33822 PG 200

278 WEST CENTRAL STREET
DOUBLE J DEVELOPMENT LLC
A.M. 278 LOT 31
DEED BK. 29771 PG. 94

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

ARCHITECT
MICHAEL J. KONOSKY ASSOCIATES
842 UPPER UNION STREET
FRANKLIN, MA. 02038

UTILITIES ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EVIDENCE TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAY EXIST. CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG–SAFE[7233].

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS–OF–WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE:
BEING A MAJORITY

10/6/17
COMMONWEALTH OF MASSACHUSETTS
ROBERT E. CONSTANTINE, II
No. 49611
REGISTERED PROFESSIONAL LAND SURVEYOR
PROFESSIONAL LAND SURVEYOR

10/6/2017
COMMONWEALTH OF MASSACHUSETTS
DALE MACDONNCH
CIVIL
No. 34575
REGISTERED PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

REVISIONS

DATE	REVISED

Guerriere & Halnon, Inc.
Engineering & Land Surveying
Ph. (508) 528–3221
Fx. (508) 528–7921
55 WEST CENTRAL STREET
FRANKLIN, MA 02038
www.guerriereandhalnon.com

SITE PLAN

HIGHLAND VILLAGE
278–300 WEST CENTRAL STREET

FRANKLIN
MASSACHUSETTS

COVER

DATE	SCALE
SEPTEMBER 26, 2017	AS NOTED
SHEET 1 OF 13	JOB NO. F3988

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GENERAL RESIDENTIAL V

	REQUIRED
MIN. LOT AREA	10,000 SF
MIN. LOT FRONTAGE	100 FT
MIN. LOT DEPTH	100 FT
MIN. LOT WIDTH	90 DIA
MAX HEIGHT	40 FT
MAX. STORIES	3
IMPERV. COVERAGE	35%

MIN. YARD SETBACKS

FRONT	20 FT
SIDE	15 FT
REAR	20 FT

NOTES

1. THIS SITE IS NOT IN A FLOOD HAZARD ZONE.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES IN THE FIELD. ANY DISCREPANCY WITH THE PLANS SHOULD BE REPORTED TO THE DESIGN ENGINEER UPON DISCOVERY.
3. CONTRACTOR & ARCHITECT SHALL VERIFY SITE UTILITIES PRIOR TO DESIGN & CONSTRUCTION.
4. REFER TO FRANKLIN ASSESSORS MAP 278 LOTS 31,32 AND 35.
5. THERE ARE NO TREES DESIGNATED AS "PUBLIC SHADED TREES" ON THIS SITE TO BE REMOVED FOR THE SITE PLAN.
6. THIS SITE IS NOT IN A WATER RESOURCE DISTRICT.

TESTING INFORMATION

TESTING DATE: MARCH 8, 2017 SOIL EVALUATOR: BRUCE WILSON, JR.

TP 1

266.2		
	SANDY LOAM 10YR3/3	0"–18" A
264.7		
	SANDY LOAM 10YR5/6	18"–44" B
262.54		
	SAND 2% GRAVEL 10% COBBLES LG. STONES 2.5Y5/4	44"–132" C–1
255.2		
	LOAMY SAND NO GRAVEL	132"–180" C–2
251.2		

TP 2

278.9		
	SANDY LOAM 10YR3/3	0"–12" A
277.9		
	SANDY LOAM 10YR5/6	12"–18" Bw
277.4		
	SAND MED. TO COURSE 10% GRAVEL 2% COBBLES 2.5Y5/4	18"–216" C–1
260.9		
	LOAMY SAND 2% GRAVEL	216"–240" C–2
258.9	NO GW NO MOTTLES	

TP 3

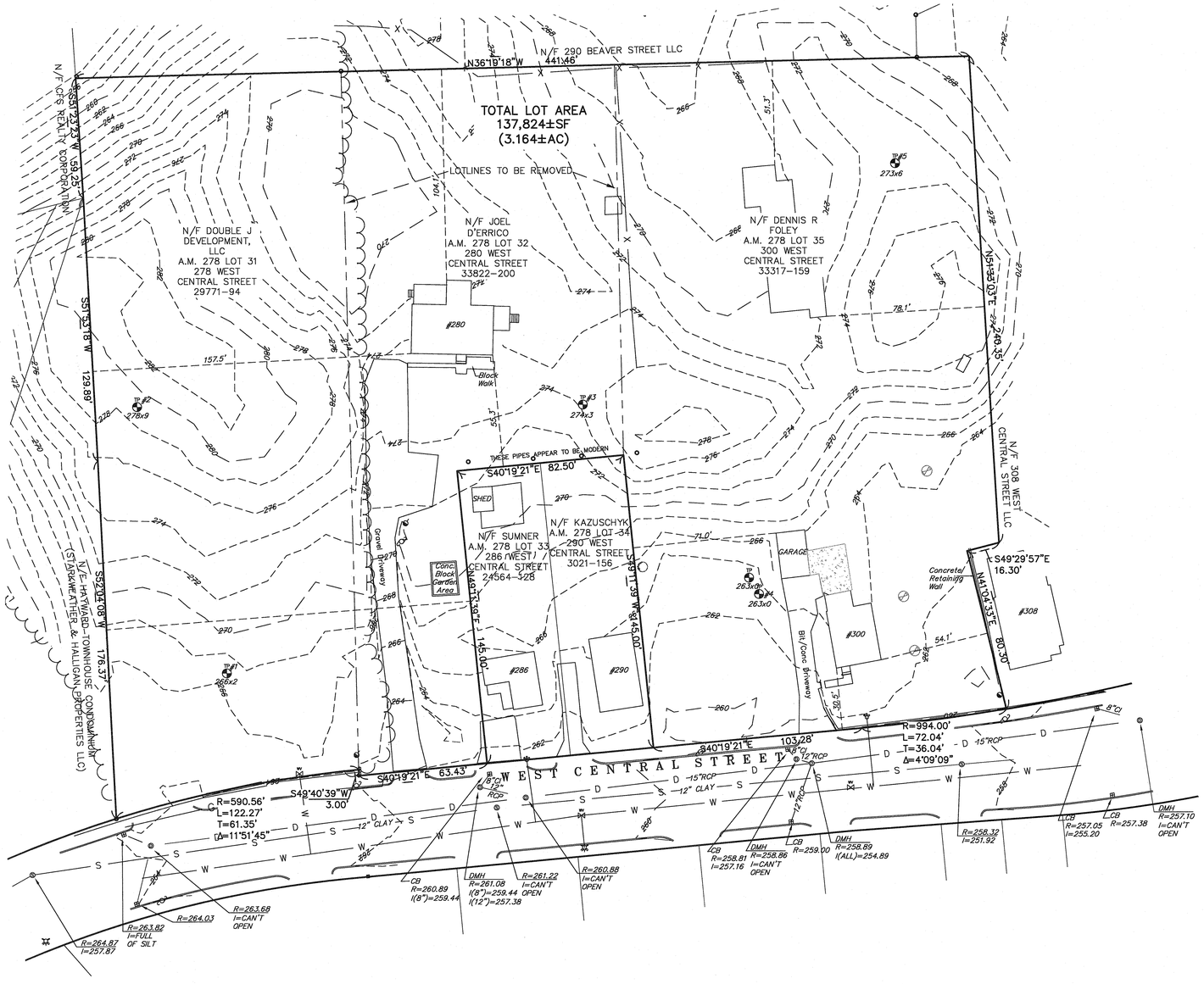
274.3		
	SANDY LOAM 10YR3/3	0"–8" A
273.64		
	SANDY LOAM	8"–24" B
272.3		
	SAND 10–15% GRAVEL 2% COBBLES	24"–192"
	MED. TO COARSE 2.5Y5/4	C–1
258.3	NO GW NO MOTTLES	

TP 4

263.0		
	SANDY LOAM 10YR3/3	0"–12" A
262.0		
	SANDY LOAM 10YR5/6	12"–44" B
259.67		
	SAND 10% GRAVEL 2% COBBLES 2.5Y5/4	44"–96" C–1
255.0		
	SAND FINE	96"–142" C–2
251.17		
	SAND–MED COARSE 2.5Y5/4	142"–192" C–3
247.0	NO GW NO MOTTLES	

TP 5

273.6		
	SANDY LOAM 10YR3/3	0"–16" A
272.27		
	SANDY LOAM 10YR5/6	16"–32" B
270.94		
	SAND MED. GRAIN 2.5Y5/4	32"–84" C
266.6		
	SAND 5–10% GRAVEL	84"–102" C–2
265.1		
	SAND 2% GRAVEL	102"–192"
257.6		



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JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE: _____
BEING A MAJORITY

COMMONWEALTH OF MASSACHUSETTS ROBERT E. CONSTANTINE, II No. 49611 REGISTERED PROFESSIONAL LAND SURVEYOR 10/6/17

PROFESSIONAL LAND SURVEYOR

PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

REVISIONS

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SITE PLAN

HIGHLAND VILLAGE
278–300 WEST CENTRAL STREET

FRANKLIN
MASSACHUSETTS

EXISTING CONDITIONS

DATE SEPTEMBER 26, 2017	SCALE 1"=30'
SHEET 2 OF 13	JOB NO. F3988

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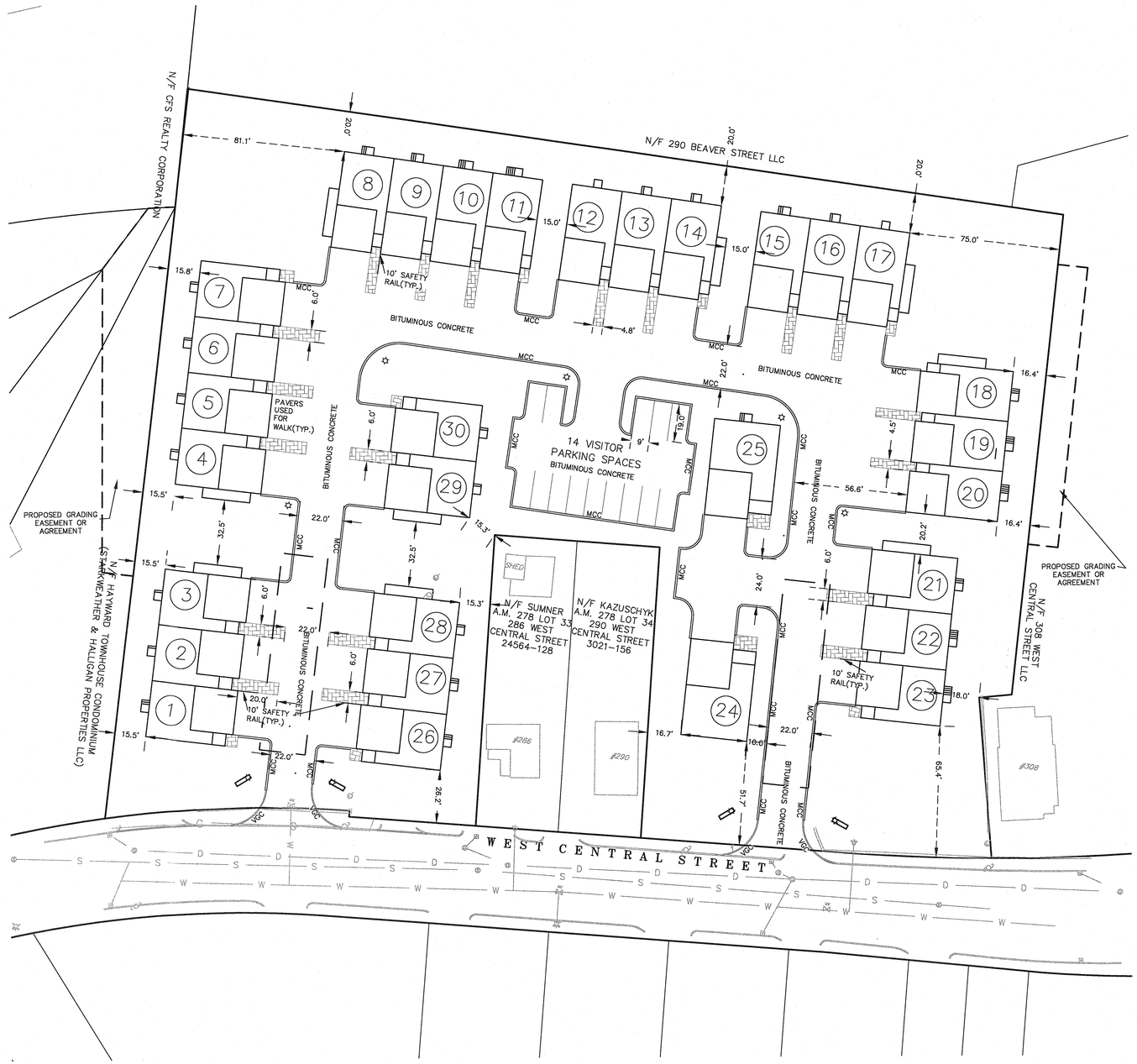
LEGEND

A.M.	ASSESSOR'S MAP
N/F	NOW OR FORMERLY
UP#	UTILITY POLE
Ⓢ	EXISTING SEWER MANHOLE
WV	EXISTING WATER VALVE
	PROP FIRE HYDRANT
	EXISTING UTILITY POLE
⊞	EXISTING CATCHBASIN
Ⓓ	PROPOSED DRAIN MANHOLE
	EXISTING TREELINE
000.0x	EXISTING SPOT ELEVATION
—000—	EXISTING CONTOUR
—S—	EXISTING SEWERLINE
—W—	EXISTING WATERLINE
—G—	EXISTING GASLINE
—OHW—	EXISTING OVERHEAD WIRE
	EXISTING CONCRETE
♿	HANDICAP SPACE
(##)	EXISTING NUMBER OF SPACES
EP	EDGE OF PAVEMENT
GC	GRANITE CURB
ER	EXISTING RAMP
P.R.	PROPOSED RAMP
◇D	PARKING RECOMMENDED BY DPW



GENERAL RESIDENTIAL V

	REQUIRED	PROPOSED
MIN. LOT AREA	10,000 SF	137,824 SF
MIN. LOT FRONTAGE	100 FT	361.02 FT
MIN. LOT DEPTH	100 FT	240 FT
MIN. LOT WIDTH	90 DIA	177 FT
MAX HEIGHT	40 FT	30 FT
MAX. STORIES	3	3
IMPERV. COVERAGE	35%	54.8% (75,498±SF)

MIN. YARD SETBACKS		
FRONT	20 FT	26.2 FT
SIDE	15 FT	15.3 FT
REAR	20 FT	20.0 FT

15 FT. MINIMUM DISTANCE BETWEEN BUILDINGS

UNIT DIMENSIONS

UNITS 1–7, 26–30, 21–23	28' X 43'
UNITS 8–17	25' X 48'
UNITS 18–20	25' X 46'
UNITS 24,25	33' X 48'

MASSACHUSETTS STATE PLANE
NAD83 NAVD88

DIG SAFE NOTE:
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0 15 30 60 FEET 120 180
0 2.5 5 10 25 METERS 50

JOB NO. F3988

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10/6/17
ROBERT E. CONSTANTINE, II No. 49611
COMMONWEALTH OF MASSACHUSETTS
PROFESSIONAL LAND SURVEYOR

10/6/2017
DALE MASCHINCHIN CIVIL No. 34576
COMMONWEALTH OF MASSACHUSETTS
PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

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SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

SITE LAYOUT

DATE SEPTEMBER 26, 2017	SCALE 1"=30'
SHEET 3 OF 13	JOB NO. F3988

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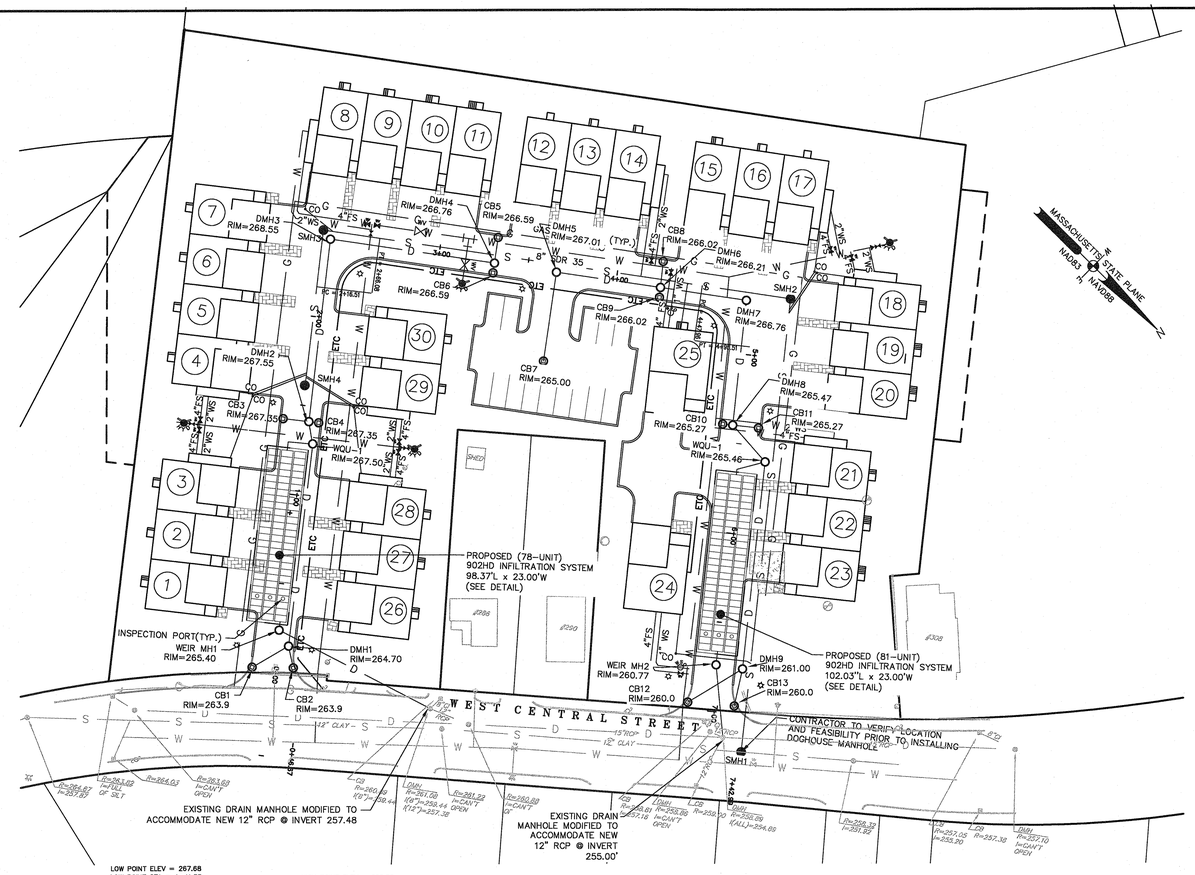
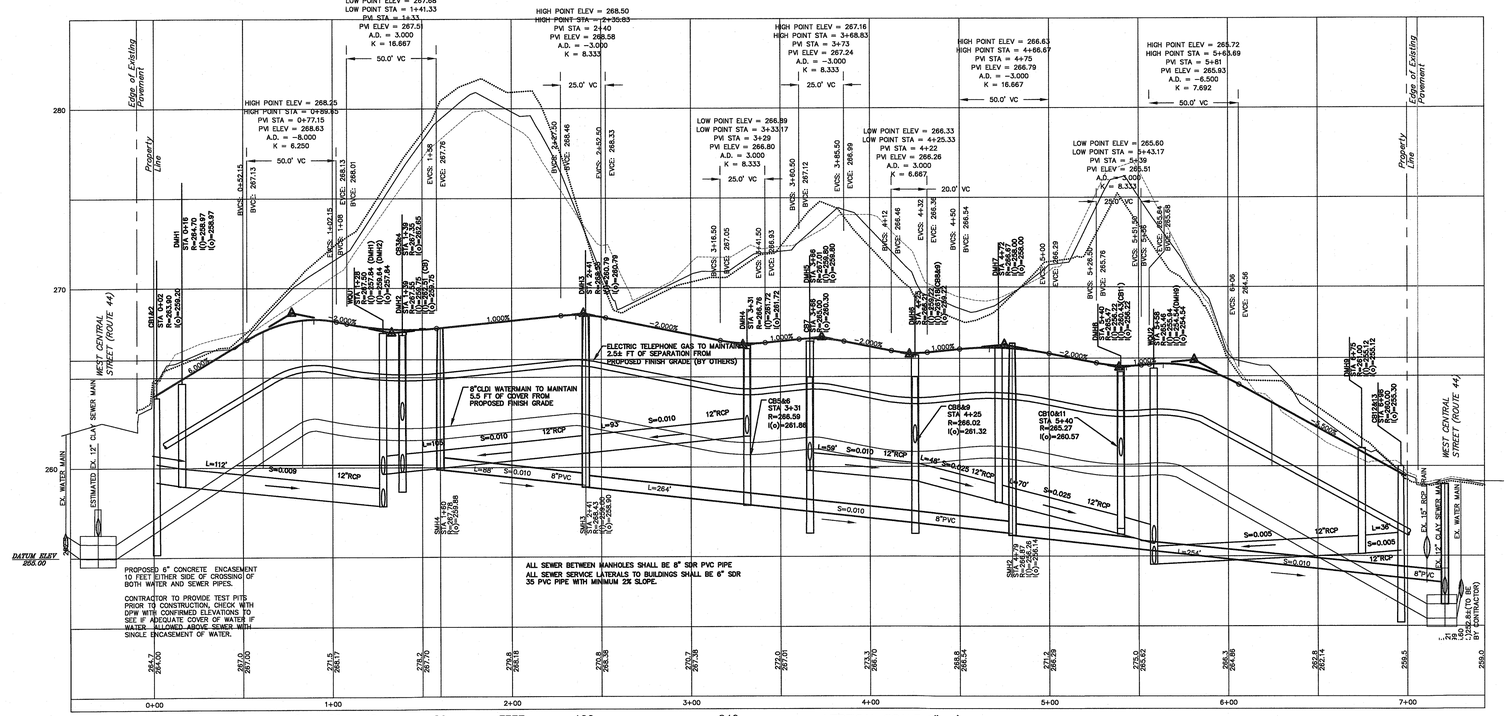
SCHEDULE OF SEWER SERVICES			
UNIT #	8" INV IN MAIN	LENGTH OF PIPE TYPICAL SERVICE SLOPE= 2% MIN.	HSE. INVERT
# 1	261.40	11.4'	261.50
# 2	261.27	11.4'	261.50
# 3	261.14	11.4'	261.50
# 4	259.12	32.7'	261.50
# 5	258.88	32.7'	259.75
# 6	259.64	32.7'	259.50
# 7	258.41	32.7'	259.25
# 8	258.17	45.6'	259.50
# 9	258.02	45.6'	259.25
# 10	257.76	45.6'	259.00
# 11	257.55	45.6'	258.75
# 12	257.13	45.6'	258.25
# 13	256.87	45.6'	258.00
# 14	256.61	45.6'	257.75
# 15	256.15	45.6'	257.50
# 16	255.88	45.6'	257.25
# 17	255.69	45.6'	257.00
# 18	255.44	26.8'	256.75
# 19	255.25	26.8'	256.50
# 20	255.02	26.8'	256.25
# 21	254.55	12.3'	255.25
# 22	254.21	12.3'	255.00
# 23	253.97	12.3'	254.75
# 24	260.35	53.5'	262.00
# 25	260.39	12.1'	261.00
# 26	260.91	21.5'	261.50
# 27	260.24	21.5'	261.50
# 28	259.97	21.5'	261.50
# 29	259.12	35.1'	259.50
# 30	258.88	32.7'	259.75

– ALL SEWER PIPES LESS THAN 5' COVER SHALL BE INSULATED





LEGEND

A.M.	ASSESSOR'S MAP
N/F	NOW OR FORMERLY
UP#	UTILITY POLE
Ⓢ	EXISTING SEWER MANHOLE
	EXISTING WATER VALVE
	PROP FIRE HYDRANT
	EXISTING UTILITY POLE
	EXISTING CATCHBASIN
Ⓓ	PROPOSED DRAIN MANHOLE
	EXISTING TREELINE
000.0x	EXISTING SPOT ELEVATION
—000—	EXISTING CONTOUR
—S—	EXISTING SEWERLINE
—W—	EXISTING WATERLINE
—G—	EXISTING GASLINE
— OHW —	EXISTING OVERHEAD WIRE
	EXISTING CONCRETE
♿	HANDICAP SPACE
(##)	EXISTING NUMBER OF SPACES
EP	EDGE OF PAVEMENT
GC	GRANITE CURB
ER	EXISTING RAMP
P.R.	PROPOSED RAMP
◇0	PARKING RECOMMENDED BY DPW

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JOB NO. F3988

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FRANKLIN PLANNING BOARD

DATE:

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10/6/17
ROBERT E. CONSTANTINEZ, II No. 49011 REGISTERED PROFESSIONAL LAND SURVEYOR
COMMONWEALTH OF MASSACHUSETTS
PROFESSIONAL LAND SURVEYOR

10/6/2017
DALE MACKINNON CIVIL No. 34575 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
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REVISIONS

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SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

PROFILE

DATE SEPTEMBER 26, 2017	SCALE 1"=40'
SHEET 4 OF 13	JOB NO. F3988

LEGEND

A.M.	ASSESSOR'S MAP
N/F	NOW OR FORMERLY
UP#	UTILITY POLE
Ⓢ	EXISTING SEWER MANHOLE
WV	EXISTING WATER VALVE
	PROP FIRE HYDRANT
	EXISTING UTILITY POLE
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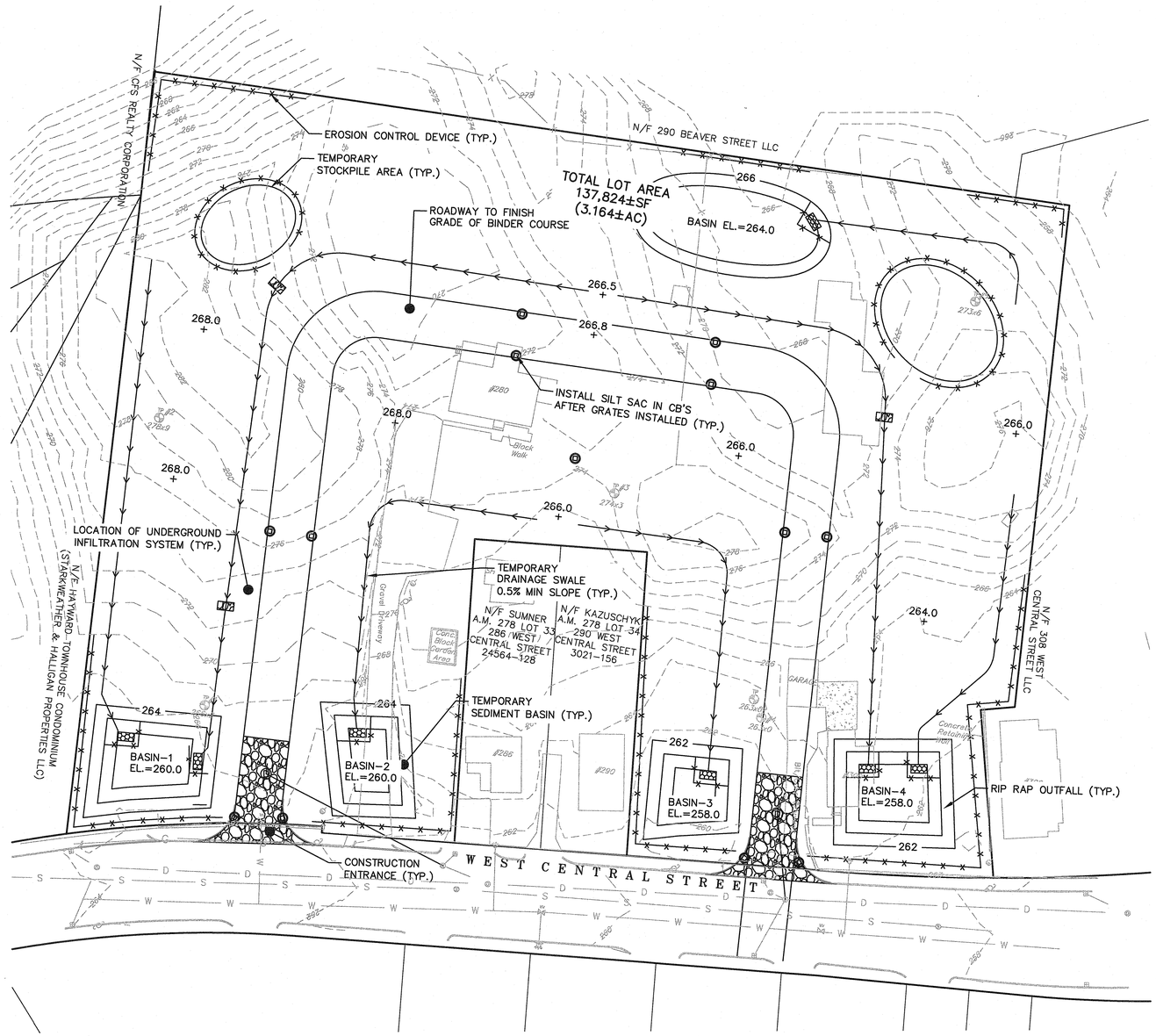
P.R.	PROPOSED RAMP
◇D	PARKING RECOMMENDED BY DPW

MASSACHUSETTS STATE PLANE
NAD83 NAVD88
N



GENERAL EROSION CONTROL AND DRAINAGE CONSTRUCTION PHASING

1. INSTALL EROSION CONTROL DEVICES ALONG PERIMETER OF SITE.
2. INSTALL CONSTRUCTION ENTRANCE.
3. SITE TO BE CLEARED AND GRUBBED.
4. INSTALL RETAINING WALLS.
5. INSTALLED SLOPE MATTING TO STABILIZE SLOPES (IF APPLICABLE)
6. INSTALL CONSTRUCTION ENTRANCE.
7. INSTALL TEMPORARY SEDIMENT BASIN.
8. INSTALL TEMPORARY DIVERSION SWALES AND DIRECT THEM TO THE SEDIMENT BASIN. INSTALL CHECK DAMS EVERY 100 FT.
9. INSTALL DRAINAGE MANHOLES AND CATCHBASINS AND ENSURE TEMPORARY COVER IS IN PLACE.
10. INSTALL SUBSURFACE INFILTRATION SYSTEMS AND WATER QUALITY UNIT.
11. INSTALL ALL DRAINAGE RISERS, GRATES AND COVERS
12. REMOVE CONSTRUCTION ENTRANCES.
13. INSTALL ROAD UP TO BINDER FINISH GRADE.
14. REMOVED TEMPORARY DIVERSION SWALES AND SEDIMENTATION BASINS AFTER SITE HAS BEEN STABILIZED AND PREPARED FROM BUILDING FOUNDATION INSTALLATION.
15. REMOVE PERIMETER EROSION CONTROL DEVICES ONCE SITE CONSTRUCTION IS COMPLETE.

NOTES:

1. SPECIAL CONSIDERATION FOR INLET CONTROLS FOR EROSION COLLECTION BEFORE ENTERING DRAINAGE SYSTEM.
2. INSTALL SILT SACKS.
3. BARRIER AROUND CATCH BASIN, MULCH SOCK OR EQUAL.
4. INSTALL FILTER FABRIC ON ALL DRAIN MANHOLE OUTLETS DISCHARGING TO INFILTRATION SYSTEM.
5. INSPECTIONS BEFORE AND AFTER STORM EVENTS ARE REQUIRED TO INSURE ADEQUACY OF EROSION CONTROL MEASURES.
6. ALL EXISTING STRUCTURES TO BE RAZED.
7. STOCK PILE AREA TO BE CONTAINED USING EROSION CONTROL DEVICES
8. DIRT BAG SHALL BE USED TO PERIODICALLY CLEAN THE TEMPORARY SEDIMENTATION BASINS DURING CONSTRUCTION.

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	TRIBUTARY AREA (AC.)	REQUIRED VOLUME (CF)	PROVIDED VOLUME (CF)	WATER LEVEL 10-YR. STORM (EL)
SEDIMENT TRAP-1	0.77	1,386	4,206	263.46
SEDIMENT TRAP-2	0.60	1,072	4,448	222.45
SEDIMENT TRAP-3	0.48	860	4,237	223.12
SEDIMENT TRAP-4	0.80	1,448	4,237	223.12
SEDIMENT TRAP-5	0.41	738.5	3,690	265.72

NOTE: CALCULATIONS FOR MINIMUM SEDIMENT BASIN/TRAP VOLUME BASED ON MASSACHUSETTS EROSION CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS REPRINTED MAY 2003

0 15 30 60 FEET 120 180
0 2.5 5 10 25 METERS 50

JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE:

BEING A MAJORITY

COMMONWEALTH OF MASSACHUSETTS ROBERT E. CONSTANTINE, II No. 49611 REGISTERED PROFESSIONAL LAND SURVEYOR — 10/6/17
PROFESSIONAL LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS DALE MACCONNON CIVIL No. 34575 REGISTERED PROFESSIONAL ENGINEER — 10/6/2017
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SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

EROSION & DEMOLITION PLAN

DATE SEPTEMBER 26, 2017
SCALE 1"=30'
SHEET 5 OF 13
JOB NO. F3988

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LEGEND

A.M.	ASSESSOR'S MAP
N/F	NOW OR FORMERLY
UP#	UTILITY POLE
Ⓢ	EXISTING SEWER MANHOLE
W	EXISTING WATER VALVE
	PROP FIRE HYDRANT
	EXISTING UTILITY POLE
⊞	EXISTING CATCHBASIN
Ⓓ	PROPOSED DRAIN MANHOLE
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000.0x	EXISTING SPOT ELEVATION
—000—	EXISTING CONTOUR
—S—	EXISTING SEWERLINE
—W—	EXISTING WATERLINE
—G—	EXISTING GASLINE
—OHW—	EXISTING OVERHEAD WIRE
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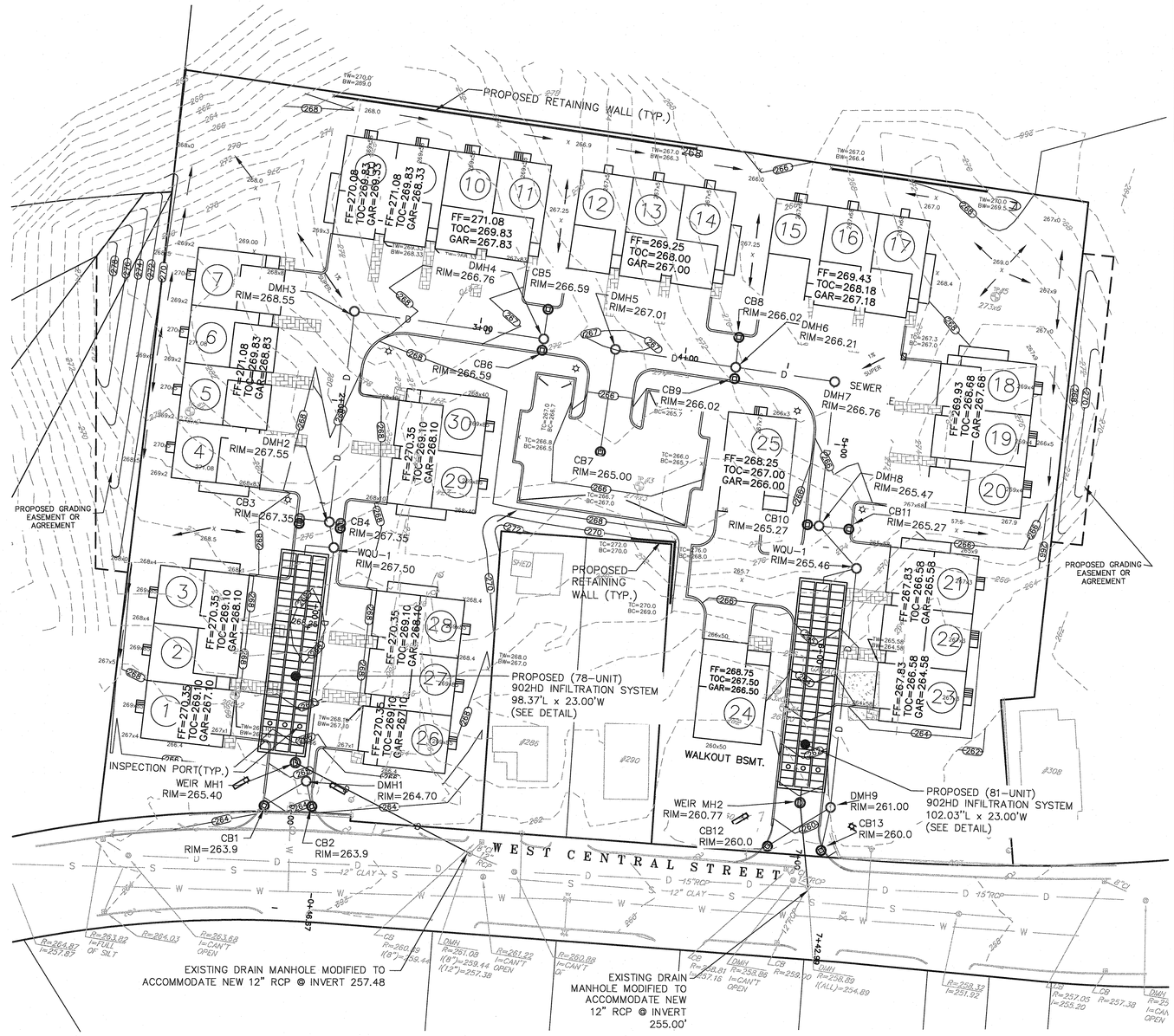
♿	HANDICAP SPACE
(##)	EXISTING NUMBER OF SPACES
EP	EDGE OF PAVEMENT
GC	GRANITE CURB
ER	EXISTING RAMP
P.R.	PROPOSED RAMP
◇0	PARKING RECOMMENDED BY DPW



Drainage Area	Upper Structure	Lower Structure	Sum of CA's (af)	Time of Concentration (TC) (min)	Rainfall Intensity (I) (in/hr)	Actual Peak Flow Rate (Q) (cfs)	Pipe Diameter (in)	Slope (ft/ft)	Roughness Coefficient (n)	Design Flow Full (Qf) (cfs)	Velocity Flow Full (Vf) (fps)	Actual Velocity (V) (fps)	Length of Pipe (L) (ft)	Time in pipe (min)	Total Fall (ft)	Invert Elevation Upper End	Invert Elevation Lower End	Rim Elev Upper End	Rim Elev Lower End	Desinnation
PR-1A-CB-1	CB-1	DMH-1	0.05	6.00	5.80	0.29	12	0.010	0.013	3.56	4.54	0.37	23.5	0.09	0.24	259.20	258.97	263.90	264.70	
PR-1A-CB-2	CB-2	DMH-1	0.04	6.00	5.80	0.25	12	0.018	0.013	4.83	6.15	0.32	12.5	0.03	0.23	259.20	258.97	263.90	264.70	
		DMH-1	WQU-1	0.09	6.09	5.80	0.54	12	0.010	0.013	3.56	4.54	0.69	112.5	0.41	1.13	258.97	257.84	264.70	267.50
PR-1A-CB-3	CB-3	DMH-2	0.10	6.00	5.80	0.57	12	0.010	0.013	3.56	4.54	0.73	14.5	0.05	0.14	262.65	262.51	267.35	267.55	
PR-1A-CB-4	CB-4	DMH-2	0.09	6.00	5.80	0.52	12	0.025	0.013	5.68	7.23	0.67	5.5	0.01	0.14	262.65	262.51	267.35	267.55	
PR-1A-CB-5	CB-5	DMH-4	0.09	6.00	5.80	0.51	12	0.012	0.013	3.90	4.97	0.64	14.5	0.05	0.17	261.89	261.72	266.59	266.76	
PR-1A-CB-6	CB-6	DMH-4	0.02	6.00	5.80	0.14	12	0.031	0.013	6.27	7.99	0.17	5.5	0.01	0.17	261.89	261.72	266.59	266.76	AREA-1 920HD RECHARGER INFILTRATION SYSTEM
		DMH-4	DMH-3	0.11	6.05	5.80	0.64	12	0.010	0.013	3.56	4.54	0.82	92.5	0.34	0.93	261.72	260.79	266.76	268.55
		DMH-3	DMH-2	0.11	6.39	5.80	0.64	12	0.010	0.013	3.56	4.54	0.82	104.5	0.38	1.05	260.79	259.75	268.55	267.55
		DMH-2	WQU-1	0.30	6.77	5.69	1.70	12	0.010	0.013	3.56	4.54	2.17	11.0	0.04	0.11	259.75	259.64	267.55	267.50
		WQU-1	CHAMBER-1	0.39	7.19	5.59	2.19	12	0.010	0.010	4.63	5.90	2.79	16.5	0.05	0.17	257.84	257.68	267.50	
		** WEIR-MH1	EX-DMH1				0.10	12	0.005	0.013	2.52	3.21	0.13	17.5	0.09	0.09	258.00	257.91	265.40	261.08
PR-1B-CB-7	CB-7	DMH-5	0.13	6.00	5.80	0.73	12	0.010	0.013	3.56	4.54	0.93	50.0	0.18	0.50	260.30	259.80	265.00	267.01	
PR-1B-CB-8	CB-8	DMH-6	0.08	6.00	5.80	0.49	12	0.010	0.013	3.56	4.54	0.62	14.5	0.05	0.14	261.32	261.18	266.02	266.21	
PR-1B-CB-9	CB-9	DMH-6	0.02	6.00	5.80	0.11	12	0.025	0.013	5.63	7.17	0.13	5.5	0.01	0.14	261.32	261.18	266.02	266.21	
		DMH-5	DMH-6	0.13	6.00	5.80	0.73	12	0.010	0.013	3.56	4.54	0.93	58.5	0.21	0.58	259.80	259.22	267.01	266.21
		DMH-6	DMH-7	0.23	6.21	5.80	1.33	12	0.025	0.013	5.68	7.23	1.69	48.0	0.11	1.22	259.22	258.00	266.21	266.76
		DMH-7	DMH-8	0.23	6.21	5.80	1.33	12	0.025	0.013	5.68	7.23	1.69	70.0	0.16	1.78	258.00	256.22	266.76	265.47
PR-1B-CB-10	CB-10	DMH-8	0.06	6.00	5.80	0.32	12	0.025	0.013	5.63	7.17	0.41	5.5	0.01	0.14	260.57	260.43	265.27	265.47	
PR-1B-CB-11	CB-11	DMH-8	0.09	6.00	5.80	0.53	12	0.010	0.013	3.56	4.54	0.67	14.5	0.05	0.14	260.57	260.43	265.27	265.47	AREA-2 920HD RECHARGER INFILTRATION SYSTEM
PR-1B-CB-12	CB-12	DMH-9	0.07	6.00	5.80	0.42	12	0.005	0.013	2.52	3.21	0.54	35.5	0.18	0.18	255.30	255.12	260.00	261.00	
PR-1B-CB-13	CB-13	DMH-9	0.07	6.00	5.80	0.40	12	0.009	0.013	3.28	4.18	0.51	21.0	0.08	0.18	255.30	255.12	260.00	261.00	
		DMH-8	WQU-2	0.38	6.38	5.80	2.18	12	0.005	0.013	2.52	3.21	2.77	104.5	0.54	0.52	256.22	255.70	265.47	265.46
		DMH-9	WQU-2	0.14	6.18	5.80	0.82	12	0.005	0.013	2.52	3.21	1.05	116.0	0.60	0.58	255.12	254.54	261.00	265.46
		WQU-2	CHAMBER-2	0.52	6.98	5.69	2.94	12	0.005	0.010	3.28	4.17	3.75	16.5	0.07	0.08	254.54	254.46	265.46	
		** WEIR-MH2	EX-DMH2				0.10	12	0.010	0.013	3.56	4.54	0.13	17.5	0.06	0.18	254.46	254.28	266.46	

Pipe lengths were taken from center of structures

** 100 yr discharge flow rate from HydroCAD

DESIGN COMPUTATIONS FOR STORM DRAINS

DIG SAFE NOTE:

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STORM DRAINAGE NOTES

1. INSTALL CONNECTIONS TO CATCH BASINS, TSS REMOVAL UNIT AND DRAIN MANHOLES.
2. CONTRACTOR & ARCHITECT ARE TO VERIFY SITE UTILITIES PRIOR TO DESIGN & CONSTRUCTION.
3.
4. ALL DRAIN PIPES ARE 12" RCP CLIII UNLESS OTHERWSE NOTED

SITE DRAINAGE INSTALLATIONS NOTES

1. EACH SUBSURFACE CHAMBER WILL BE INSTALLED SEPARATELY TO DESIGN ELEVATION.
2. INSTALL CONNECTIONS TO CATCH BASINS, TSS REMOVAL UNIT AND DRAIN MANHOLES.
3. EXCAVATE AND INSTALL SUBSURFACE UNIT, BACKFILL W/ STONE MAINTAINING 18"-24" COVER AND AS-BUILT EACH SECTION.

0 15 30 60 FEET 120 180

0 2.5 5 10 25 METERS 50

JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE:

BEING A MAJORITY

ROBERT E. CONSTANTINE, II No. 49611 REGISTERED PROFESSIONAL LAND SURVEYOR — 10/6/17

PROFESSIONAL LAND SURVEYOR

DALE MACKINNON CIVIL No. 34576 REGISTERED PROFESSIONAL ENGINEER — 10/6/2017

PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

REVISIONS

DATE	REVISED

Guerriere & Halnon, Inc.
Engineering & Land Surveying
Ph. (508) 528-3221 55 WEST CENTRAL STREET
Fx. (508) 528-7921 FRANKLIN, MA 02038
www.guerriereandhalnon.com

SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

GRADING & DRAINAGE

DATE SEPTEMBER 26, 2017	SCALE 1"=30'
SHEET 6 OF 13	JOB NO. F3988

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LEGEND

A.M.	ASSESSOR'S MAP
N/F	NOW OR FORMERLY
UP#	UTILITY POLE
	EXISTING SEWER MANHOLE
	EXISTING WATER VALVE
	PROP FIRE HYDRANT
	EXISTING UTILITY POLE
	EXISTING CATCHBASIN
	PROPOSED DRAIN MANHOLE
	EXISTING TREELINE
000.0x	EXISTING SPOT ELEVATION
000	EXISTING CONTOUR
S	EXISTING SEWERLINE
W	EXISTING WATERLINE
G	EXISTING GASLINE
OHW	EXISTING OVERHEAD WIRE
	EXISTING CONCRETE
	HANDICAP SPACE
##	EXISTING NUMBER OF SPACES
EP	EDGE OF PAVEMENT
GC	GRANITE CURB
ER	EXISTING RAMP
P.R.	PROPOSED RAMP
	PARKING RECOMMENDED BY DPW

WATER NOTES

1. ALL PROPOSED WATER LINES TO MAINTAIN A 10' HORIZONTAL SEPARATION FROM SANITARY SEWER LINES OR MAINTAIN A 18" VERTICAL SEPARATION FROM SANITARY SEWER LINES.
2. IN CASES WHERE VERTICAL AND HORIZONTAL SEPARATIONS ARE NOT MEET, THE WATER LINE MUST BE ENCASED WITH A DUCTILE IRON SLEEVE OR ENCASED IN CONCRETE.
3. ALL WATER TO BE ABOVE SEWER LINE UNLESS OTHER WISE NOTED. IN THE CASE WHERE THE WATER MAIN LINE IS TO BE INSTALLED BELOW A SANITARY LINE, BOTH UTILITY LINES MUST BE ENCASED.
4. ANY WATER LINE THAT IS LESS THAN 5 FT OF COVER FROM FINISH GRADE SHALL BE INSULATED.
5. PROPOSED WATER MAIN TO HAVE BETWEEN A 5'-7' COVER TO FINISH GRADE.
6. THE WATER MAIN AND SERVICES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE FRANKLIN WATER DEPARTMENT REGULATIONS.
7. ALL WATER MAIN PIPE TO BE CLASS 52, CEMENT LINED, DUCTILE IRON (C.L.D.I.) SIZED AS NOTED. ALL FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT.
8. VALVES, HYDRANTS AND SERVICES SHALL COMPLY WITH THE FRANKLIN WATER DEPARTMENT STANDARDS.
9. THE WATER MAIN LINE IS TO BE PRESSURE TESTED AND DISINFECTED PER AWWA AND THE WATER DEPARTMENT STANDARDS.
10. CONTRACTOR TO PERFORM EXPERIMENTAL EXCAVATIONS PRIOR TO ANY WATER MAIN WORK TO DETERMINE THE EXACT SIZE, LOCATION, ELEVATION AND MATERIAL OF CONSTRUCTION OF THE EXISTING UTILITY.

DIG SAFE NOTE:

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0 15 30 60 FEET 120 180
0 2.5 5 10 25 METERS 50

JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE: _____

BEING A MAJORITY

10/6/17
ROBERT E. CONSTANTINE, II No. 46611 COMMONWEALTH OF MASSACHUSETTS REGISTERED PROFESSIONAL LAND SURVEYOR
PROFESSIONAL LAND SURVEYOR

10/6/2017
DALE MACKERNON CIVIL No. 34676 COMMONWEALTH OF MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

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SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

PROPOSED UTILITIES

DATE SEPTEMBER 26, 2017	SCALE 1"=30'
SHEET 7 OF 13	JOB NO. F3988

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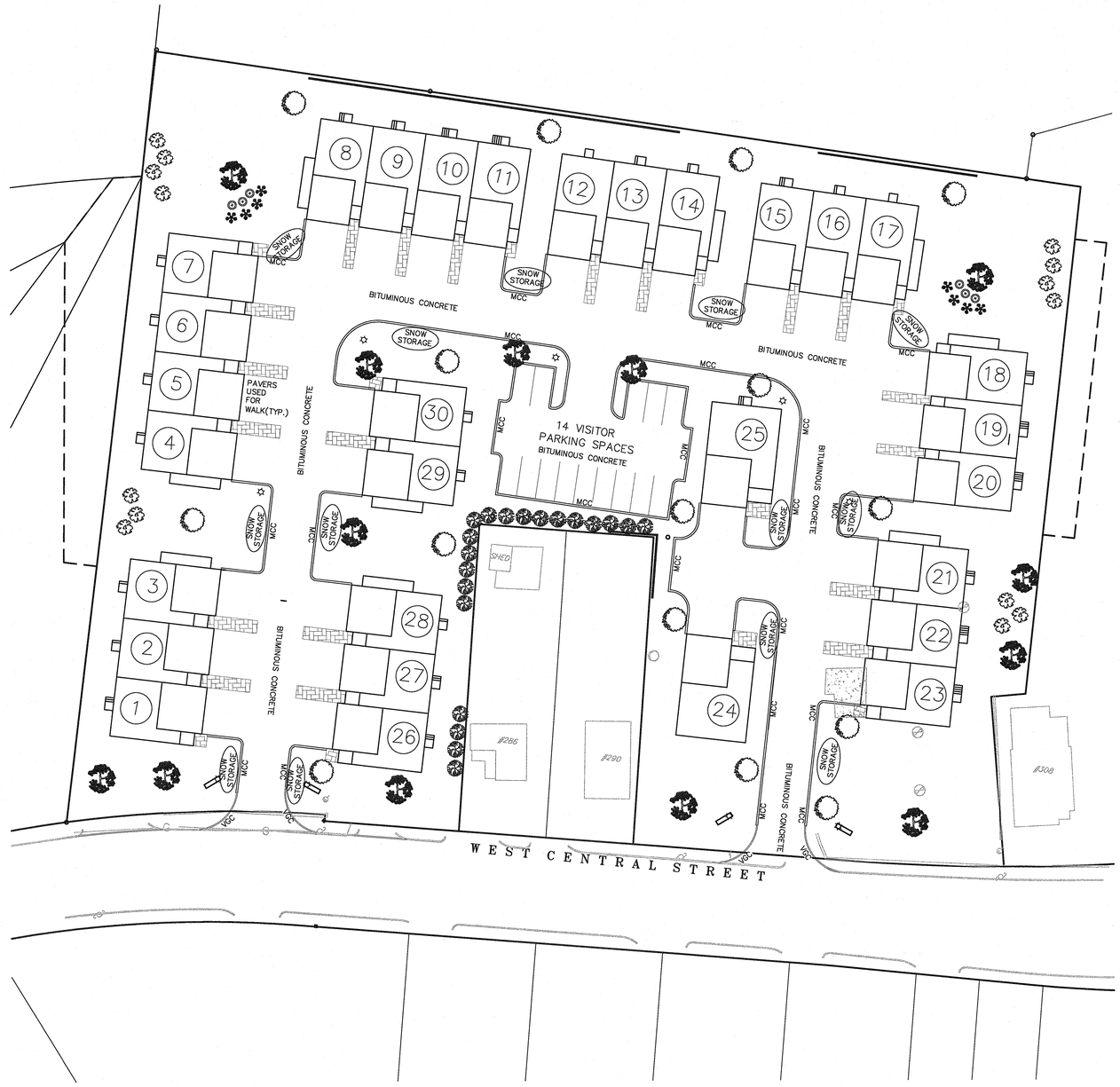
LEGEND

A.M.	ASSESSOR'S MAP
N/F	NOW OR FORMERLY
UP#	UTILITY POLE
(S)	EXISTING SEWER MANHOLE
WV	EXISTING WATER VALVE
	PROP FIRE HYDRANT
	EXISTING UTILITY POLE
	EXISTING CATCHBASIN
	PROPOSED DRAIN MANHOLE
	EXISTING TREELINE
000.0x	EXISTING SPOT ELEVATION
—000—	EXISTING CONTOUR
—S—	EXISTING SEWERLINE
—W—	EXISTING WATERLINE
—G—	EXISTING GASLINE
— OHW —	EXISTING OVERHEAD WIRE
	EXISTING CONCRETE
	HANDICAP SPACE
(##)	EXISTING NUMBER OF SPACES
EP	EDGE OF PAVEMENT
GC	GRANITE CURB
ER	EXISTING RAMP
P.R.	PROPOSED RAMP
	PARKING RECOMMENDED BY DPW



PLANTING LEGEND

SYMBOL	NAME	SIZE	QUANTITY
	LITTLE LEAF LINDEN TILIA CORDATA	4' MIN: 2.5" CAL.	15
	SUPERIOR HYBRID POPLAR POPULUS DELTOIDS X POPULUS NIGRA	4' MIN. 2.5" CAL.	13
	ROSE OF SHARON HIBISCUS SYIACUS	5 GAL.	14
	RHODODENDRON HENRY'S RED (DARK RED)	2' MIN.	6
	HERMOCADIS DAYLILIES	2 GAL.	8
	PYRAMIDLIS ARBORVITAE THUJA ACCIDENTALIS	5' MIN.	20

PLANTINGS TAKEN FROM THE TOWN OF FRANKLIN BEST PRACTICE GUIDE

SHADE TREES TO BE TO BE PLACED AT AN AVERAGE SPACING OF 50 FEET AND OF A HARDWOOD SPECIES APPROVED BY THE PLANNING BOARD, 2 1/2" IN DIAMETER, CALIPER 1' ABOVE GRADE. TREES SHALL BE VARIED AMONG THE FOLLOWING SPECIES:

- SUGAR MAPLE (ACER SACCHARUM)
- PIN OAK (QUERCUS PALUSTRIS)
- RED MAPLE (ACER RUBRUM)

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0 15 30 60 FEET 120 180
0 2.5 5 10 25 METERS 50

JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE:

BEING A MAJORITY

10/6/17
ROBERT E. CONSTANTINE, II
No. 49611
COMMONWEALTH OF MASSACHUSETTS
REGISTERED PROFESSIONAL LAND SURVEYOR
PROFESSIONAL LAND SURVEYOR

10/6/2017
DALE MACKINNON
CIVIL
No. 34675
COMMONWEALTH OF MASSACHUSETTS
REGISTERED PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

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SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

LANDSCAPING

DATE SEPTEMBER 26, 2017	SCALE 1"=30'
SHEET 8 OF 13	JOB NO. F3988

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LEGEND

A.M.	ASSESSOR'S MAP
N/F	NOW OR FORMERLY
UP#	UTILITY POLE
	EXISTING SEWER MANHOLE
	EXISTING WATER VALVE
	PROP FIRE HYDRANT
	EXISTING UTILITY POLE
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	PROPOSED DRAIN MANHOLE
	EXISTING TREELINE
000.0x	EXISTING SPOT ELEVATION
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	HANDICAP SPACE
##	EXISTING NUMBER OF SPACES
EP	EDGE OF PAVEMENT
GC	GRANITE CURB
ER	EXISTING RAMP
P.R.	PROPOSED RAMP
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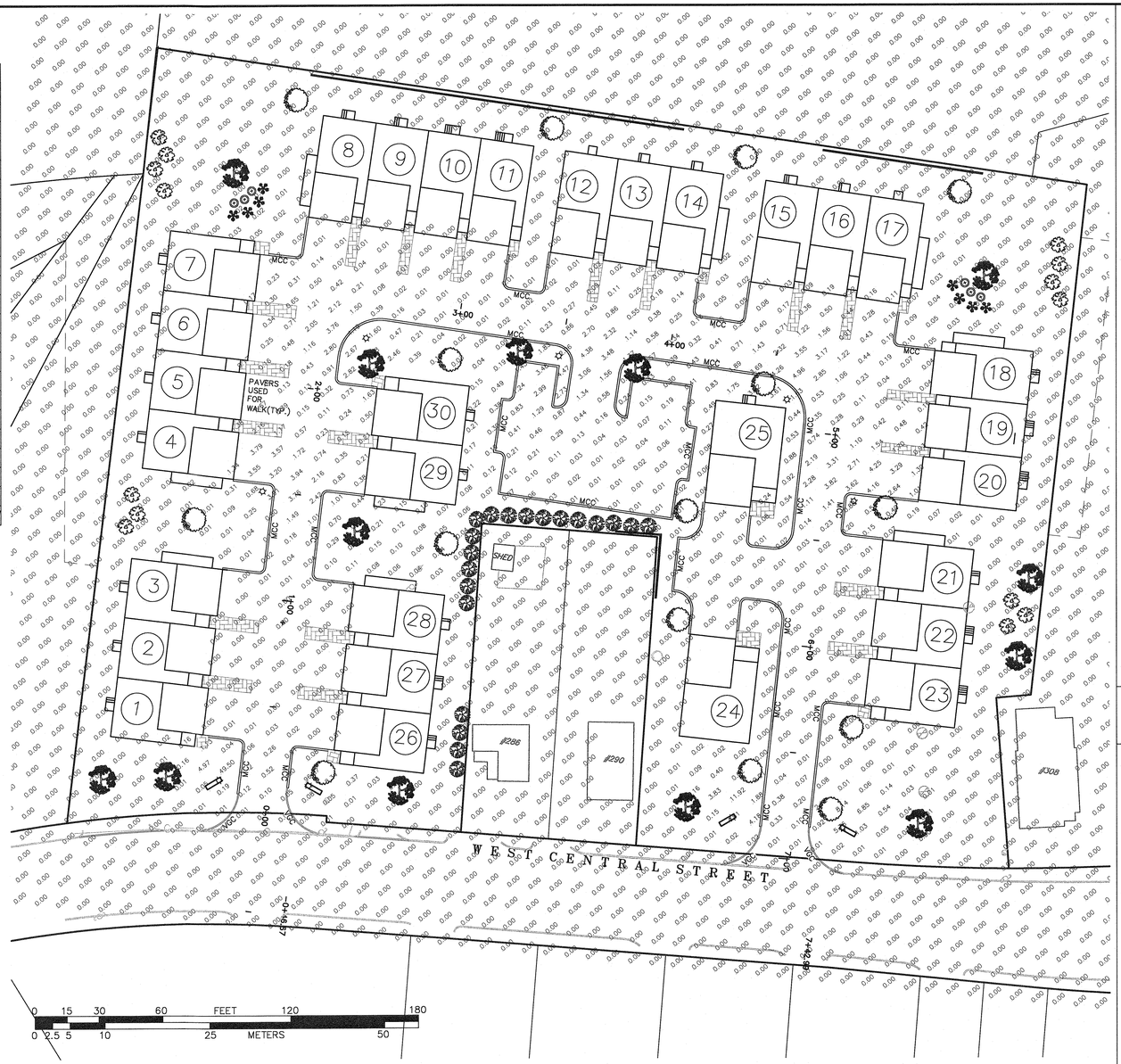
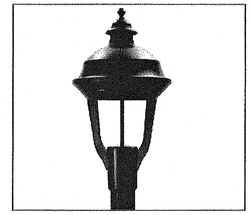


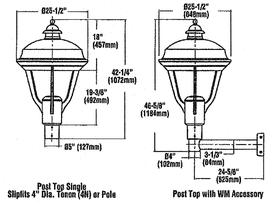
LED LEXINGTON DECORATIVE AREA LIGHTS

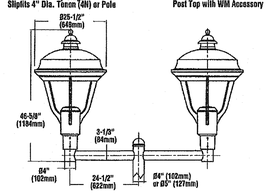


LIGHT OUTPUT - XLXM3					
POST TOP MOUNT			Lumens (Nominal)		Watts (Nominal)
	# of LEDS	Type 3	Type FT	Type 5	
Cool White	SS 64	6180	5570	5240	70
	HO 64	8670	8270	7510	108
Neutral White	SS 64	5930	5350	5150	70
	HO 64	8250	7590	6890	108

LED Chips are frequently updated therefore values may increase.

DIMENSIONS





Post Top with BK MPT BO (x2)
Mounts to 4" or 5" Dia. D180 Bolt-on Pole
(select 3" reduced drilling pattern)

BUG LISTING

XLXM3 PT - TYPE 3

Drive Current	Color Temp.*	Lumens	Watts	LER	BUG Rating
HO	CW	8669	108	80	B1-U2-G2
	NW	8251	108	76	B1-U2-G1
SS	CW	6184	70	88	B1-U1-G1
	NW	5930	70	85	B1-U1-G1

XLXM3 PT - TYPE 5

Drive Current	Color Temp.*	Lumens	Watts	LER	BUG Rating
HO	CW	7510	108	70	B3-U1-G1
	NW	6894	108	64	B3-U1-G1
SS	CW	5243	70	75	B2-U1-G1
	NW	5146	70	74	B2-U1-G1

XLXM3 PT - TYPE FT

Drive Current	Color Temp.*	Lumens	Watts	LER	BUG Rating
HO	CW	8271	107	77	B1-U2-G2
	NW	7580	108	70	B1-U2-G2
SS	CW	5572	70	80	B1-U2-G2
	NW	5354	70	76	B1-U2-G2

* Color Temperature: NW-4000K, CW-5000K

LUMINAIRE EPA CHART - Lexington		
	MOUNTING STYLE	
PT Single	PT	1.4
PT D180* with BK MPT BO (2)	PT	2.7

SHIPPING WEIGHTS - Lexington	
Catalog Number	Est. Weight (kg/lbs.)
XLXM3 (PT)	29/64

STREET LIGHTING

NOT TO SCALE

CCI 19 in. Pewter Motion Activated Outdoor Beveled Glass Coach Lantern

Product Overview

The L2553PW 19 in. Motion Activated Beveled Glass Coach Lantern features switchable dual functions that include motion activated or dusk to dawn mode. Choose the function that suits your project. The high quality 19 in. motion activated lantern comes in a pewter finish and includes adjustable time and sensitivity settings which allow you to customize the unit for your unique specifications. Motion activated lantern operates up to a 100-Watt bulb (not included); Unit may be used with or without the tail (included). Unit is weather resistant and combines functionality with structure and style. UL and CUL Listed - industry standards for safety and longevity. The Designers Edge is an international manufacturer and marketer of work lights, motion activated lighting, floodlighting, security lighting products, and landscape lighting products. Since 1987, we have built our reputation as an innovator of high quality, uniquely designed products. We have been recognized as a leader in our industry by receiving many patents and awards for our product designs and packaging.

- 150 degree motion activated coverage
- 30 ft. detection range
- Adjustable time and sensitivity settings
- Comes with a 1 year warranty

Specifications

Dimensions

Product Depth (in.)	7
Product Height (in.)	19
Product Length (in.)	7
Product Width (in.)	5.8
Number of Bulbs Required	1
Outdoor Lighting Features	Motion Sensing,Weather Resistant
Power Type	Low voltage

UNIT LIGHTING ON MOTION SENSORS

NOT TO SCALE

THIS PHOTOMETRIC PLAN IS BASED SOLELY UPON PROPRIETARY INFORMATION SUPPLIED BY THE LUMINAIRE MANUFACTURER AND CLIENT RECOMMENDATION.

LUMINAIRE LOCATIONS, LIGHTING PATTERNS, AND ILLUMINATION LEVELS WERE PREPARED UTILIZING INFORMATION SUPPLIED BY THE LUMINAIRE MANUFACTURER AND THE SOFTWARE PACKAGE SIMPLY OUTDOOR. IT'S VALUES SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND SHALL BE VERIFIED BY THE LUMIN MANUFACTURER PRIOR TO INSTALLATION.

ACTUAL PERFORMANCE OF LIGHTING PATTERNS AND/OR ILLUMINANCE VALUES MAY VARY DUE TO VARIATIONS IN LIGHT HEIGHT, ELECTRICAL VOLTAGE, LAMP WATTAGE, AND OTHER VARIABLE FIELD CONDITIONS, OR USING A LUMINAIRE OTHER THAN SPECIFICALLY NOTED HEREON.

GUERRIERE & HALNON, INC ASSUMES NO RESPONSIBILITY FOR ANY SAFETY AND/OR SECURITY RISKS DUE TO INADEQUATE LIGHT LEVELS WHICH MAY OCCUR AFTER INSTALLATION.

DIG SAFE NOTE:

UTILITIES ARE PLOTTED FROM FIELD LOCATION AND ANY RECORD INFORMATION AVAILABLE, AND SHOULD BE CONSIDERED APPROXIMATE. OTHER UTILITIES MAY EXIST WHICH ARE NOT EVIDENT OR FOR WHICH RECORD INFORMATION WAS NOT AVAILABLE. CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING. ALSO, CALL 1(888)DIG-SAFE "DIG-SAFE" AT 1(888)344-7233

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE:

BEING A MAJORITY

10/6/17
ROBERT E. CONSTANTINE, II
No. 49611
COMMONWEALTH OF MASSACHUSETTS
PROFESSIONAL LAND SURVEYOR

PROFESSIONAL LAND SURVEYOR

10/6/2017
DALE MACKINNON
CIVIL
No. 34575
COMMONWEALTH OF MASSACHUSETTS
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

REVISIONS

DATE	REVISED

Guerriere & Halnon, Inc.
Engineering & Land Surveying
55 WEST CENTRAL STREET
FRANKLIN, MA 02038
Ph. (508) 528-3221
Fx. (508) 528-7921
www.guerriereandhalnon.com

SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

PHOTOMETRICS

DATE	SCALE
SEPTEMBER 26, 2017	1"=30'
SHEET 9 OF 13	JOB NO. F3988

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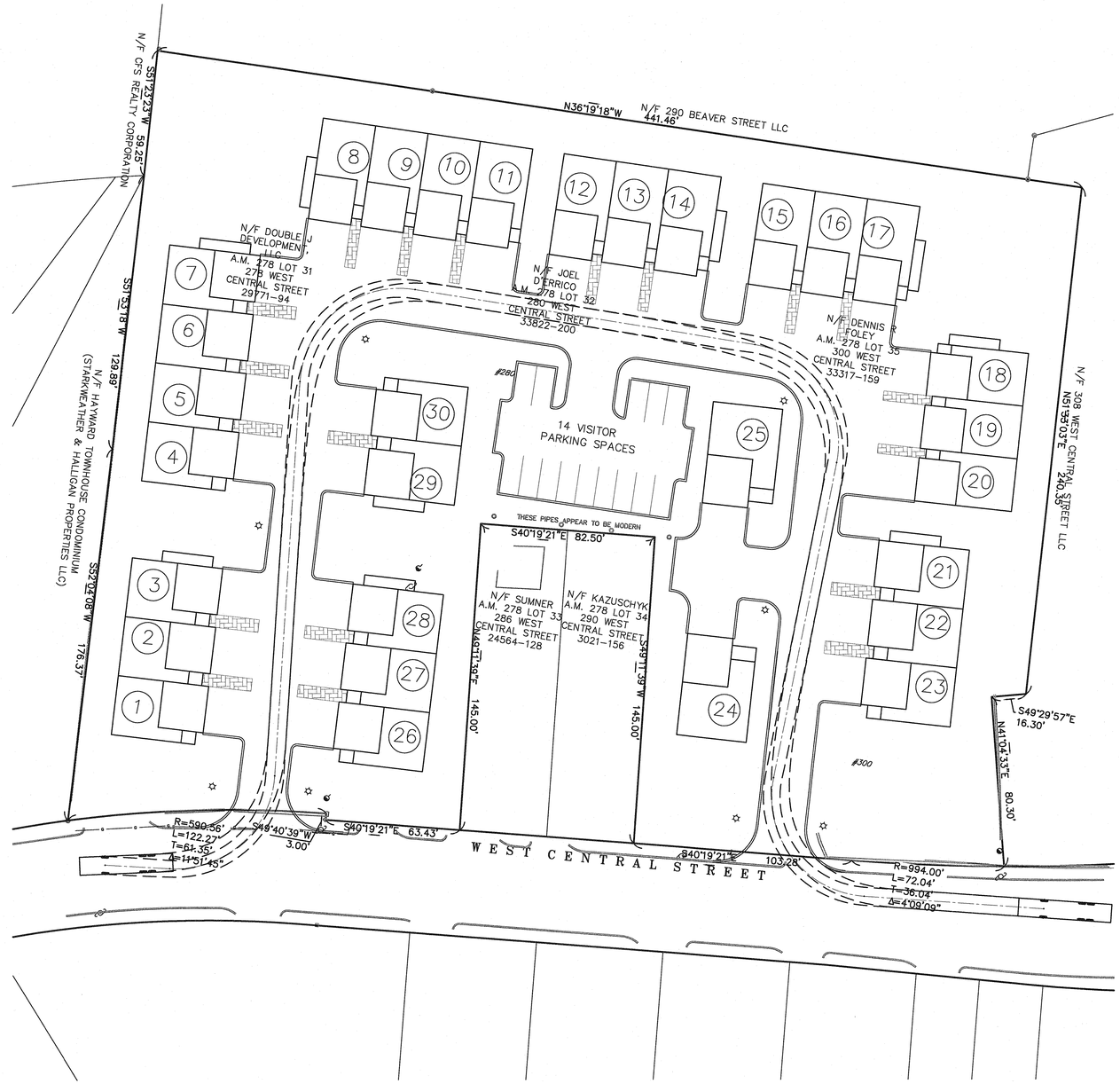
LEGEND

A.M.	ASSESSOR'S MAP
N/F	NOW OR FORMERLY
UP#	UTILITY POLE
Ⓢ	EXISTING SEWER MANHOLE
WV	EXISTING WATER VALVE
	PROP FIRE HYDRANT
	EXISTING UTILITY POLE
⊞	EXISTING CATCHBASIN
Ⓓ	PROPOSED DRAIN MANHOLE
	EXISTING TREELINE
000.0x	EXISTING SPOT ELEVATION
000	EXISTING CONTOUR
S	EXISTING SEWERLINE
W	EXISTING WATERLINE
G	EXISTING GASLINE
OHW	EXISTING OVERHEAD WIRE
	EXISTING CONCRETE
♿	HANDICAP SPACE
##	EXISTING NUMBER OF SPACES
EP	EDGE OF PAVEMENT
GC	GRANITE CURB
ER	EXISTING RAMP
P.R.	PROPOSED RAMP
◇0	PARKING RECOMMENDED BY DPW



SHADE TREES TO BE TO BE PLACED AT AN AVERAGE SPACING OF 50 FEET AND OF A HARDWOOD SPECIES APPROVED BY THE PLANNING BOARD, 2 1/2" IN DIAMETER, CALIPER 1' ABOVE GRADE. TREES SHALL BE VARIED AMONG THE FOLLOWING SPECIES:

- SUGAR MAPLE (ACER SACCHARUM)
- PIN OAK (QUERCUS PALUSTRIS)
- RED MAPLE (ACER RUBRUM)

DIG SAFE NOTE:

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0 15 30 60 FEET 120 180
0 2.5 5 10 25 METERS 50

JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE:
BEING A MAJORITY

10/6/17
COMMONWEALTH OF MASSACHUSETTS ROBERT E. CONSTANTINE, II No. 49611 REGISTERED PROFESSIONAL LAND SURVEYOR
PROFESSIONAL LAND SURVEYOR

10/6/2017
COMMONWEALTH OF MASSACHUSETTS DALE MACKINNON CIVIL No. 34575 REGISTERED PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

REVISIONS

DATE	REVISED

Guerriere & Halnon, Inc.
Engineering & Land Surveying
Ph. (508) 528-3221 55 WEST CENTRAL STREET
Fx. (508) 528-7921 FRANKLIN, MA 02038
www.guerriereandhalnon.com

SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

AUTO-TURN FIRE TRUCK

DATE SEPTEMBER 26, 2017	SCALE 1"=30'
SHEET 10 OF 13	JOB NO. F3988

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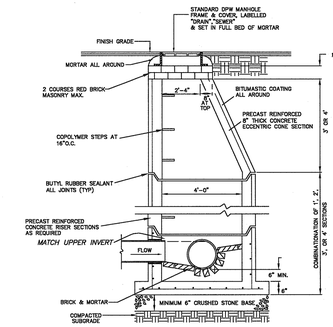
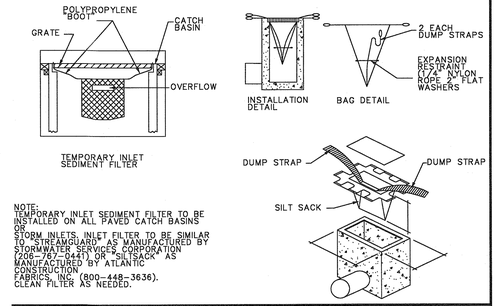


NOTE:
1. ALL STRUCTURES SHALL MEET THE REQUIREMENTS OF THE TOWN OF FRANKLIN DEPARTMENT OF PUBLIC WORKS.
2. PIPE OPENINGS TO BE PRECAST IN MANHOLE SECTIONS.
3. MANHOLE DESIGN SPECIFICATIONS SHALL CONFORM TO PRECAST REINFORCED CONCRETE MANHOLE SECTIONS A.S.T.M. DESIGNATION C 478, LATEST REVISION.
3. ALL PIPE GASKETS SHALL BE PRE-MOLDED NEOPRENE O-RING TYPE.

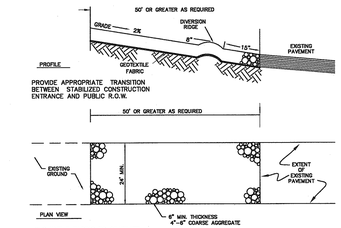
PRECAST CONCRETE DRAIN/SEWER MANHOLE
NOT TO SCALE



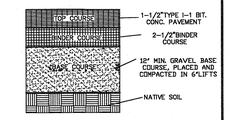
NOTE:
TEMPORARY INLET SEDIMENT FILTER TO BE INSTALLED ON ALL PAVED CATCH BASINS OR
STORM INLETS. INLET FILTER TO BE SIMILAR TO "STREAMGUARD" AS MANUFACTURED BY STORMWATER SERVICES CORPORATION (206-767-9441) OR "SILTSACK" AS MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS, INC. (800-448-3636). CLEAN FILTER AS NEEDED.

SILT SACK DETAIL
NO SCALE

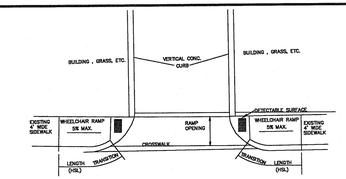
D-SESC- silt sack



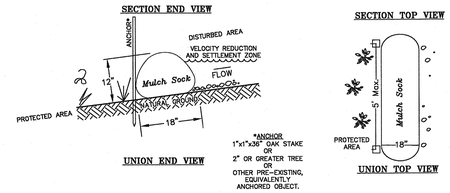
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



TYPICAL PAVEMENT SECTION
NOT TO SCALE



MASS HIGHWAY DRAWING NO 107.6.0 WHEELCHAIR RAMP FOR RIGHT OF WAY AREAS
NOT TO SCALE

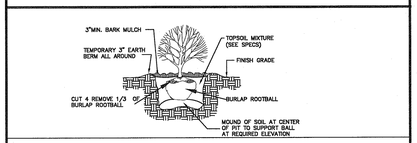


*ANCHOR
1"x1"x36" OAK STAKE OR
2" OR GREATER TREE SA
OTHER PRE-EXISTING, EQUIVALENTLY ANCHORED OBJECT.

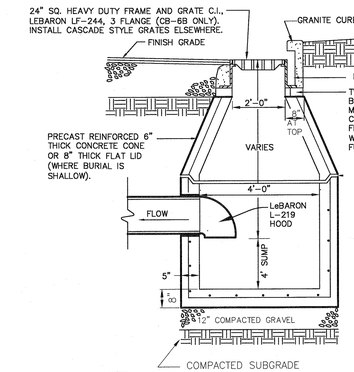
1. WHERE SECTION ENDS MEET, THERE SHALL BE AN OVERLAP OF 6" OR GREATER. BOTH SIDES SHALL BE ANCHORED (OAK STAKES, TREES, ETC.) TO STABILIZE THE UNION.
2. NO ADDITIONAL ANCHORS ARE REQUIRED ON SLOPES LESS THAT 2:1.
3. ADDITIONAL ANCHORS ARE REQUIRED AT 5' INTERVALS (MAX.) ON THE DOWNSLOPE OR PROTECTED SIDE ON SLOPES GREATER THAN 2:1 TO PREVENT MOVEMENT.

Mulch Sock **COMPONENTS:**
- OUTSIDE CASING: 100% organic hessian.
- FILLER INGREDIENT:
  A blend of coarse and fine compost and shredded wood.
- Particle sizes: 100% passing a 3" screen; 90-100% passing a 1" screen; 70-100% passing a 0.75" screen; 30-75% passing a 0.25" screen.
  Weight: Approx. 850 lbs./cu.yd.
  (Ave. 30 lbs./l.f.)

EROSION CONTROL BARRIER
NOT TO SCALE



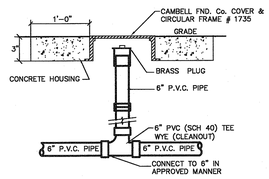
SHRUB DETAIL
NOT TO SCALE



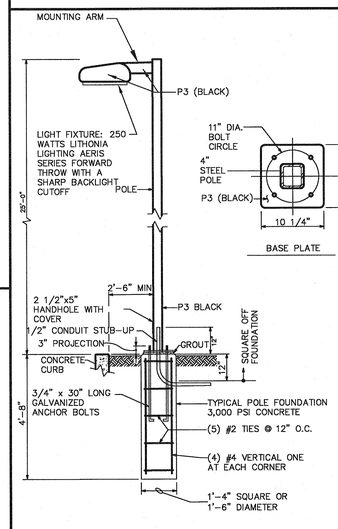
NOTE:
ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.

ALL PIPE GASKETS SHALL BE PRE-MOLDED NEOPRENE O-RING TYPE.

TYP. PRECAST CONCRETE CATCH BASIN DETAIL
NOT TO SCALE

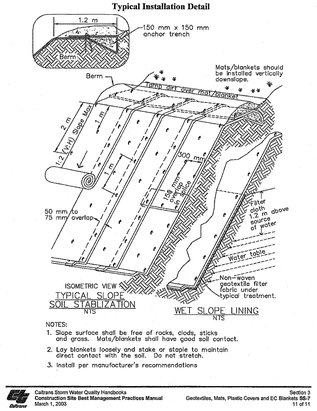


SEWER CLEANOUT DETAIL
NOT TO SCALE



TYPICAL YARD LIGHT DETAIL
NOT TO SCALE

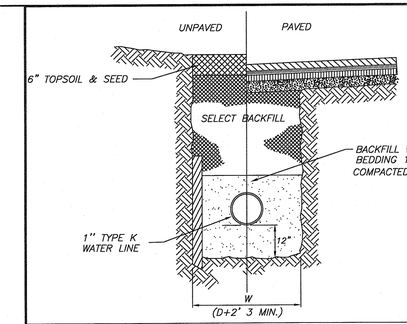
Geotextiles, Mats, Plastic Covers and Erosion Control Blankets
SS-7



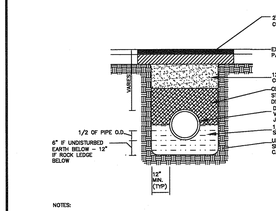
NOTES:
1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations

Caltrans Storm Water Quality Handbooks
Construction Site Best Management Practices Manual
March 1, 2003
Section 3
Geotextiles, Mats, Plastic Covers and EC Blankets SS-7
11 of 11

EROSION CONTROL BLANKET
NOT TO SCALE

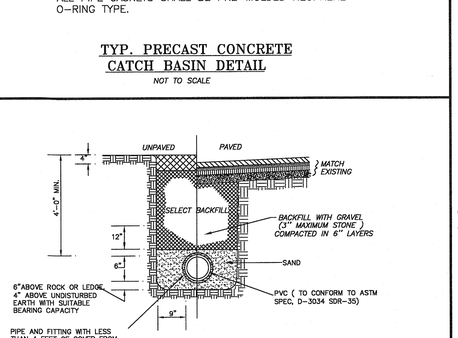


1" TYPE K WATERLINE TRENCH DETAIL
N.T.S.



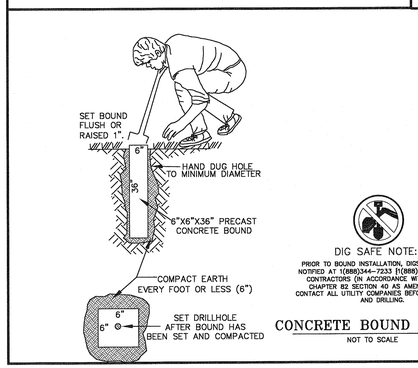
NOTES:
1.AT TIME OF CONSTRUCTION, THE TRENCH IS TO BE BACKFILLED, THEN TOPPED WITH A 12" THICK LAYER OF COMPACTED GRAVEL AND A 2" THICK TEMPORARY LAYER OF HOT TOP PATCH.
2. AFTER THE TRENCH HAS SETTLED THE ORIGINAL PAVEMENT IS TO BE SAW CUT ALONG THE TRENCH. PAVEMENT & TEMPORARY HOT TOP PATCH TO BE REMOVED, ADDITIONAL COMPACTED GRAVEL TO BE PLACED AS NEEDED, AND BITUMINOUS CONCRETE TO BE PLACED TO THE THICKNESS OF THE ORIGINAL PAVEMENT OR TO THE MINIMUM THICKNESS AS SPECIFIED ABOVE, WHICHEVER IS GREATER.

TYPICAL TRENCH SECTION FOR REINFORCED CONCRETE PIPE
NOT TO SCALE



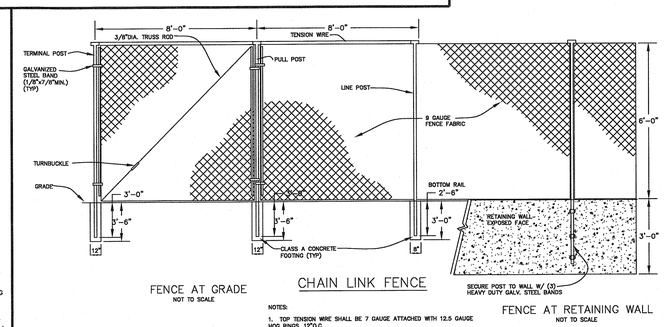
PIPE AND FITTING WITH LESS THAN 4 FEET OF COVER FROM FINISH/EXISTING GRADE MUST BE INSULATED WITH POLYURTHANE INSULATION AND PROTECTED WITH AN OUTER JACKET 18-GAUGE, ALUMINUM 5052 MARINE GRADE SPIR-1-OK JACKET (OR APPROVED EQUAL).

SEWER P.V.C. TRENCH SECTION
NOT TO SCALE



DIG SAFE NOTE:
PRIOR TO BOUND INSTALLATION, DIGSAFE MUST BE NOTIFIED AT 1(888)344-7233 [1(888)DIG-SAFE] AND CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING.

CONCRETE BOUND DETAIL
NOT TO SCALE

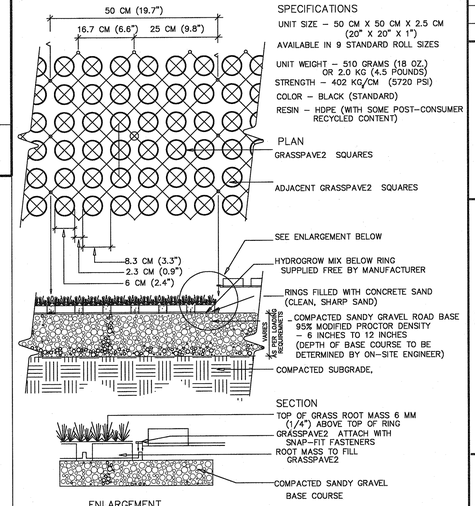


FENCE AT GRADE
NOT TO SCALE

CHAIN LINK FENCE

NOTES:
1. TOP TENSION WIRE SHALL BE 7 GAUGE ATTACHED WITH 12.5 GAUGE HOG RINGS, 12"O.C.
2. LINE POSTS AND TIES SHALL BE SPACED AT 24"MAX.
3. FENCE FABRIC TO BE LOCATED ON OUTSIDE OF FENCE POSTS.
4. BOTTOM OF FENCE FABRIC TO BE SECURED TO RETAINING WALL.

FENCE AT RETAINING WALL
NOT TO SCALE



NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER.

TYPICAL GRASSPAVER DETAIL
NOT TO SCALE

JOB NO. F3988

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PROFESSIONAL ENGINEER

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72 DEERVIEW WAY
FRANKLIN, MA 02038

REVISIONS	
DATE	REVISED

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www.guerriereandhalnon.com

SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

CONSTRUCTION DETAILS

DATE	SCALE
SEPT. 26, 2017	AS NOTED
SHEET 11 OF 13	JOB NO. F3988

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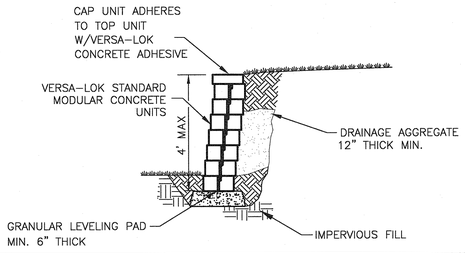
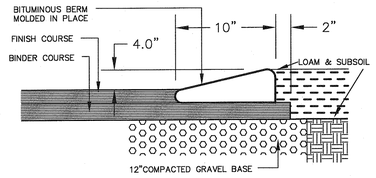


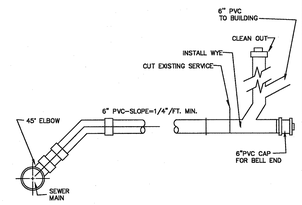
TYPICAL SECTION VERSA-LOK RETAINING WALL (OR APPROVED EQUAL)

NOT TO SCALE



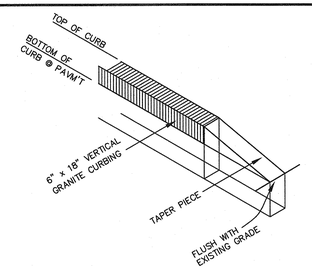
MODIFIED BITUMINOUS CAPE COD BERM DETAIL

NOT TO SCALE



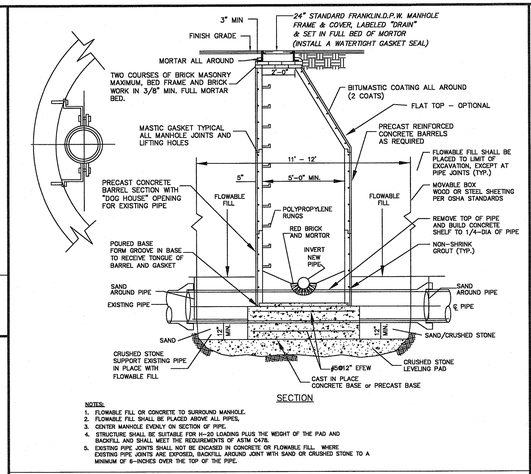
TYPICAL PVC SEWER SERVICE CONNCETION

NOT TO SCALE



VERTICAL GRANITE CURB TAPER DETAIL

NOT TO SCALE



NOTES:
1. FLOWABLE FILL OR CONCRETE TO SURROUND MANHOLE.
2. FLOWABLE FILL SHALL BE PLACED ABOVE ALL PIPES.
3. CENTER MANHOLE EVENLY ON SECTION OF PIPE.
4. STRUCTURE SHALL BE SUITABLE FOR H-20 LOADING PLUS THE WEIGHT OF THE PAD AND BACKFILL AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
5. EXISTING PIPE JOINTS SHALL NOT BE ENCASED IN CONCRETE OR FLOWABLE FILL. WHERE EXISTING PIPE JOINTS ARE EXPOSED, BACKFILL AROUND JOINT WITH SAND OR CRUSHED STONE TO A MINIMUM OF 6-INCHES OVER THE TOP OF THE PIPE.

PROPOSED DOG HOUSE MANHOLE EXISTING PIPE DETAIL

NOT TO SCALE

JOB NO. F3988

APPROVED DATE:
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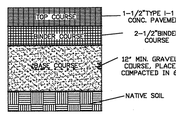
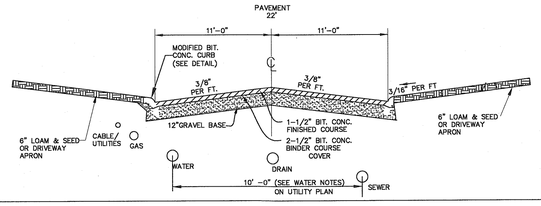


TYPICAL PAVEMENT SECTION

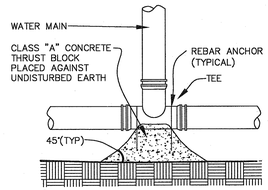
NOT TO SCALE



TYPICAL DRIVEWAY CROSS SECTION

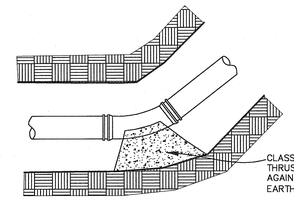
NOT TO SCALE

NOTE:
1. TEMPORARY BERM SHALL BE PLACED ALONG THE ENTIRE EDGE OF ROADWAY WITH THE BINDER COURSE AND SHALL REMAIN IN PLACE UNTIL FINISH COURSE IS PLACED.



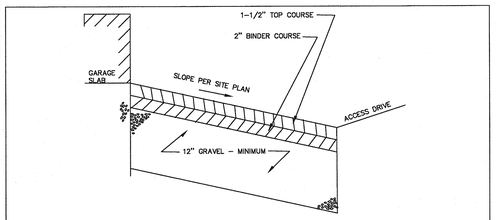
TYPICAL WATER MAIN TEE

NOT TO SCALE



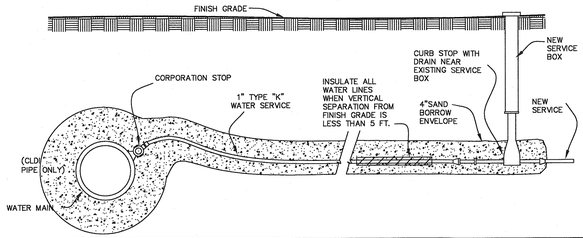
TYPICAL WATER MAIN HORIZONTAL BEND

NOT TO SCALE



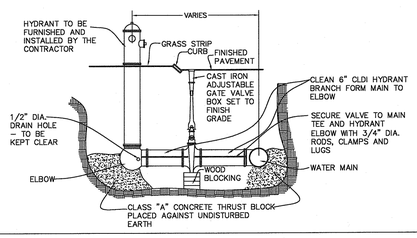
SITE DRIVEWAY APRON DETAIL

N.T.S.



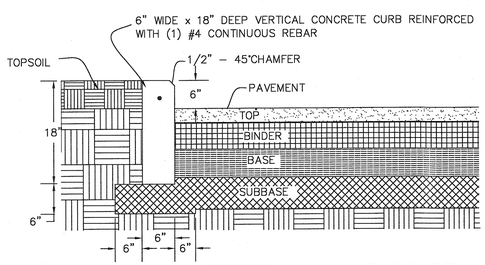
HOUSE SERVICE CONNECTION

NOT TO SCALE



TYPICAL HYDRANT

NOT TO SCALE



VERTICAL CONCRETE CURB AT GRADE

NOT TO SCALE

Silt Control System

DIRTBAG®

PUMPED-SILT CONTROL SYSTEM
Use DIRTBAG® anywhere an accumulated body of dirty water must be pumped.

Protect the environment effectively and economically! Collect sand, silt and fines. Avoid silting streams, surrounding property and storm sewers. As more and more emphasis is put on saving our wetlands, regulations are becoming more stringent regarding the pumping of dirty water from holes around construction sites.
Removes silt, fines and sand from water
Reduces velocity of discharge
Meets state and corps specifications
Degradable bag
DOT approved
Handles up to 1500 gpm

DIRTBAG SPECIFICATIONS
1.0 **Description**

1.1 This work shall consist of furnishing, placing and removing the **DIRTBAG** pumped sediment control device as directed by the design engineer or as shown on the contract drawings. The **DIRTBAG** pumped-silt control system is marketed by:

NES PUMPING SYSTEMS
2200 Canton Road
Marietta, GA 30066
Phone: (800) 888-0308
Fax: (770) 426-9418

2.0 **Materials**

2.1 **DIRTBAG**

2.1.1 The **DIRTBAG** shall be non-woven bag which is sewn with double needle machine using high strength thread.

2.1.2 Seams - All structural seams will be sewn with high strength, double stitched "J" type. Seam strength test will have the following minimum average roll values:

1.0

DIRTBAG STYLE	TEST METHOD	TEST RESULT
DIRTBAG 53	ASTM D-4884	60 lb. / in.
DIRTBAG 55	ASTM D-4884	100 lb. / in.

2.1.3 The **DIRTBAG** will have an opening large enough to accommodate a six (6) inch discharge hose with attached strap to tie off the hose to prevent the pumped water from escaping from the **DIRTBAG** without being filtered.

2.1.4 The geotextile fabric shall be non-woven fabric with the following properties:

DIRTBAG 53 Non-woven

PROPERTY	TEST METHOD	TEST RESULT
Weight	ASTM D-3776	8 oz. / yd.
Grab Tensile	ASTM D-4632	200 lb.
Puncture	ASTM D-4833	130 lb.
Flow Rate	ASTM D-4491	80 gal / min / ft²
Permitivity	ASTM D-4991	1.4 sec (-1)
UV Resistance	ASTM D-4355	70%
AOS % Retained	ASTM D-4751	100

DIRTBAG 55

PROPERTY	TEST METHOD	TEST RESULT
Weight	ASTM D-3776	10 oz. / yd.
Grab Tensile	ASTM D-4632	270 lb.
Puncture	ASTM D-4833	150 lb.
Flow Rate	ASTM D-4491	70 gal / min / ft²
Permitivity	ASTM D-4991	1.3 sec (-1)
UV Resistance	ASTM D-4355	70%
AOS % Retained	ASTM D-4751	100

*All properties are minimum average roll value except the weight of the fabric which is given for information only.

3.0 **Construction Sequence**

3.1 **General**

3.1.1 Install the **DIRTBAG** on a slope. It should be placed so the incoming water flows into the bag and will flow through the **DIRTBAG** and then flow off the site without creating more erosion. The neck of the **DIRTBAG** should be tied off tightly, to stop the water from flowing out of the **DIRTBAG**, without going through the walls of the bag. To increase the surface area being used, **DIRTBAG** may be placed on a gravel bed to allow water to flow in all directions.

3.1.2 The **DIRTBAG** is considered full and should be disposed when it is impractical for the bag to filter the sediment out a a reasonable flow rate and should be replaced with a new **DIRTBAG**.

3.1.3 Disposal may be accomplished as directed by the design engineer. If the site allows, the **DIRTBAG** may be buried on the site and seeded, visible fabric removed and seeded or removed from site to a proper disposal area.

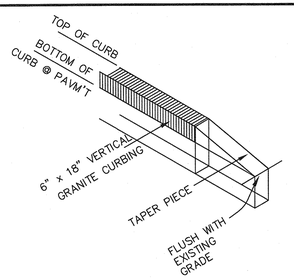
Toll Free: (800) 888-0308

NES Pumping Systems
2200 Canton Road
Marietta, Georgia 30066

E-mail: rentsales@pumprental.com
Atlanta: 770.428.2723
Houston: 877.858.5244
Boston: 508.620.2702
Nashville: 615.867.4677
Birmingham: 205.608.1723
Savannah: 912.964.2723
Fax: 770.426.9418

DIRT BAG

NOT TO SCALE



VERTICAL GRANITE CURB TAPER DETAIL

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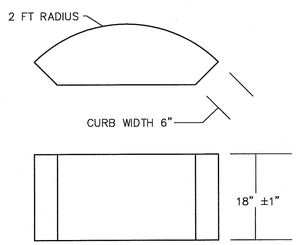

GRANITE CURB DRIVEWAY CORNER

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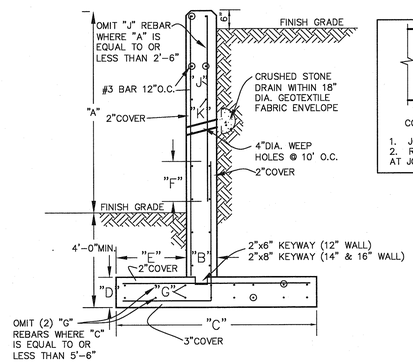

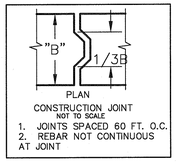

CONCRETE RETAINING WALL DETAIL

N.T.S.

NOTES:
1. CONCRETE TO BE CLASS A - 3000P.S.I., AIR ENTRAINED.
2. REINFORCEMENT BARS TO BE A.S.T.M. A615, GRADE 60.
3. SOIL BEARING CAPACITY TO BE 2000P.S.F. MIN.
4. 12" COMPACTED GRANULAR BASE BELOW FOOTING.

WALL DIMENSIONS SCHEDULE						REINFORCEMENT BAR SCHEDULE															
A*	B	C	D	E	F	G**			H			I			J			K			
						QUANTITY TOTAL (TOP, BOTTOM)	GA	LENG.	SPAC.	GA	LENG.	SPAC.	GA	LENGTH TOTAL (HORIZ.xVERT)	SPAC.	GA	LENG.	QUAN.	SPAC.	GA	LENG.
2'-6"MAX.	1'-0"	5'-0"	1'-0"	1'-3"	–	6 (4T., 2B.)	#5	CONT.	12"O.C.	#5	4'-8"	12"O.C.	#5	8'-6" (1'11"Hx6'7"V)	–	–	–	6	12"O.C.	#5	CONT.
5'-6"MAX.	1'-0"	5'-6"	1'-2"	1'-3"	27"	6 (4T., 2B.)	#5	CONT.	9"O.C.	#5	5'-2"	9"O.C.	#5	8'-1" (1'11"Hx6'2"V)	18"O.C.	#5	5'-10"	6	16"O.C.	#5	CONT.
9'-0"MAX.	1'-2"	7'-9"	1'-4"	1'-6"	32"	10 (7T., 3B.)	#5	CONT.	6"O.C.	#6	7'-5"	6"O.C.	#6	10'-2" (2'4"Hx7'10"V)	12"O.C.	#6	8'-2"	9	16"O.C.	#6	CONT.
12'-6"MAX.	1'-4"	10'-0"	1'-6"	2'-6"	38"	10 (7T., 3B.)	#5	CONT.	6"O.C.	#7	9'-6"	6"O.C.	#7	12'-0" (3'6"Hx7'6"V)	12"O.C.	#7	11'-6"	13	14"O.C.	#6	CONT.

**SPACING OF "G" REBARS VARIES - SEE SECTION.
*FACE OF WALL TO BE BATTERED 1" OVER ENTIRE HEIGHT WHERE "A" IS GREATER THAN 5'-6" AND LESS THAN OR EQUAL TO 9'-0".
*FACE OF WALL TO BE BATTERED 2" OVER ENTIRE HEIGHT WHERE "A" IS GREATER THAN 9'-0".
CONT. = CONTINUOUS GA = GUAGE HORIZ.= HORIZONTAL LENG. = LENGTH MAX. = MAXIMUM O.C. = ON CENTER QUAN. = QUANTITY SPAC. = SPACING VERT. = VERTICAL

10/6/17
COMMONWEALTH OF MASSACHUSETTS
ROBERT E. CONSTANTINE, II
No. 49301
REGISTERED PROFESSIONAL LAND SURVEYOR
PROFESSIONAL LAND SURVEYOR

10/6/2017
COMMONWEALTH OF MASSACHUSETTS
DALE MACKINNON
CIVIL
No. 34575
REGISTERED PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

REVISIONS

DATE	REVISED

Guerriere & Halnon, Inc.
Engineering & Land Surveying
Ph. (508) 528-3221 55 WEST CENTRAL STREET
Fx. (508) 528-7921 FRANKLIN, MA 02038
www.guerriereandhalnon.com

SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

CONSTRUCTION DETAILS

DATE	SCALE
SEPT. 26, 2017	AS NOTED
SHEET 12 OF 13	JOB NO. F3988

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CULTEC RECHARGER® 902HD PRODUCT SPECIFICATIONS

GENERAL
CULTEC RECHARGER® 902HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS
1. THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS."
3. THE CHAMBER SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.
4. THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
5. THE CHAMBER SHALL BE ARCHED IN SHAPE.
6. THE CHAMBER SHALL BE OPEN-BOTTOMED.
7. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
8. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® 902HD SHALL BE 48 INCHES (1219 mm) TALL, 78 INCHES (1981 mm) WIDE AND 4.10 FEET (1.25 mm) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER® 902HD SHALL BE 3.67 FEET (1.12 m).
9. MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER® 902HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCHES (600 mm).
10. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 11.5 INCHES (292 mm).
11. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
12. THE NOMINAL STORAGE VOLUME OF THE RECHARGER® 902HD CHAMBER SHALL BE 17.66 FT3 / FT (1.641 m3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER® 902HD SHALL BE 64.75 FT3 / UNIT (1.834 m3 / UNIT) - WITHOUT STONE.
13. THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913 FT3 / FT (0.085 m3 / m) - WITHOUT STONE.
14. THE RECHARGER® 902HD CHAMBER SHALL HAVE TWENTY-FOUR DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.
15. THE RECHARGER® 902HD CHAMBER SHALL HAVE 7 CORRUGATIONS.
16. THE CHAMBER SHALL HAVE A RAISED INTEGRAL CAP AT THE TOP OF THE ARCH NEAR THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT.
17. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
18. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
19. MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 8.3 FEET (2.53 m).

END CAP PARAMETERS
1. THE CULTEC RECHARGER® 902HD END CAP (REFERRED TO AS 'END CAP') SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE END CAP SHALL BE TWIN-SHEET THERMOFORMED OF BLACK VIRGIN HIGH MOLECULAR WEIGHT POLYETHYLENE.
3. THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
4. THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 48.5 INCHES (1231 mm) TALL, 78 INCHES (1982 mm) WIDE AND 9.7 INCHES (246 mm) LONG. WHEN JOINED WITH A RECHARGER 902HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 6.2 INCHES (157 mm).
5. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCHES (600 mm).
6. THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL
CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 902HD STORMWATER CHAMBERS.

FEED CONNECTOR PARAMETERS
1. THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF BLACK HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE).
3. THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.
4. THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED.
5. THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
7. THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.
8. THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-25 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

CULTEC NO. 66™ WOVEN GEOTEXTILE

GENERAL
CULTEC NO. 66™ WOVEN GEOTEXTILE IS UTILIZED AS AN UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE.

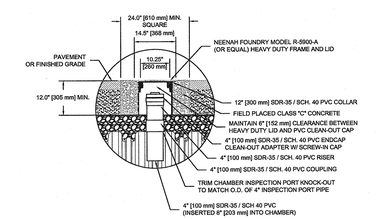
GEOTEXTILE PARAMETERS
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 315 LBS (1.40KN) PER ASTM D4632 TESTING METHOD.
4. THE GEOTEXTILE SHALL HAVE A TENSILE ELONGATION RESISTANCE OF 15% PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE A MULLEN BURST RESISTANCE OF 600PSI (4138 KPA) PER ASTM D3786 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A TEAR RESISTANCE OF 115 LBS (0.51 KN) PER ASTM D4533 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A PUNCTURE RESISTANCE OF 150 LBS (0.66 KN) PER ASTM D4833 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 900 LBS (4.00 KN) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 70% @ 500 HRS. PER ASTM D4355 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.05 SEC-1 PER ASTM D4491 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 4 GPM/FT2 (160 LPM/M2) PER ASTM D4491 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A PERCENT OPEN AREA OF <1% PER CW-02215 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER ASTM D4751 TESTING METHOD.
14. THE GEOTEXTILE SHALL CONSIST OF A 100% HIGH-TENACITY, SILT-FILM POLYPROPYLENE YARNS.

GENERAL EROSION CONTROL AND CONSTRUCTION NOTES

1. THE LIMITS OF ALL CLEARING, GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE THE LIMITS OF DISTURBANCE SHALL REMAIN TOTALLY UNDISTURBED.
2. INSPECT ALL SEDIMENT AND EROSION CONTROL MEASURES AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS AFTER EVERY RAINFALL EVENT.
3. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES OR REPLACE AS REQUIRED TO ASSURE PROPER FUNCTION.
4. CONTRACTOR SHALL IMMEDIATELY REPAIR ANY AND ALL EROSION AND SEDIMENT CONTROLS FOUND TO BE FAULTY.
5. ANY AND ALL DEBRIS AND LITTER WHICH ACCUMULATES IN THE BASINS SHALL BE REMOVED WEEKLY.
6. THE CONTRACTOR SHALL IMPLEMENT ALL REASONABLE EROSION AND SEDIMENT CONTROLS PRIOR TO THE ACTUAL COMMENCEMENT OF CONSTRUCTION ACTIVITIES INCLUDING THE CLEARING AND/OR GRUBBING OF ANY PORTION OF THE PROPERTY. THESE MEASURES SHALL BE MAINTAINED IN EFFECT THROUGHOUT THE ENTIRE CONSTRUCTION PHASE, OR UNTIL THE SITE HAS BECOME STABILIZED WITH AN ADEQUATE VEGETATIVE COVER.
7. SEDIMENT BUILD UP BEHIND FILTERMITT SHALL BE MONITORED AND BE REMOVED WHENEVER IT HAS ACCUMULATED TO FOUR INCHES IN DEPTH.
8. CATCH BASINS SHALL BE PROTECTED WITH SILT FILTERS (SILT SACKS). INSPECT SEDIMENT FILTERS AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS AFTER RAINFALL THAT PRODUCES RUNOFF.
9. CLEAN OR REPLACE FILTERS WITHIN 24 HOURS OF INSPECTION WHEN SEDIMENT REACHES ONE HALF OF THE FILTER SACK DEPTH. CATCH BASINS SHALL BE PROTECTED BY SEDIMENT FILTERS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED. SUMPS SHALL BE CLEANED WHENEVER SEDIMENT HAS ACCUMULATED TO A DEPTH OF 24 INCHES AND IMMEDIATELY FOLLOWING INSTALLATION OF PERMANENT PAVEMENT.
10. THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE STOCKPILE OF EROSION CONTROL MATERIALS ON-SITE AT ALL TIMES FOR EMERGENCY OR ROUTINE REPLACEMENT AND SHALL INCLUDE MATERIALS TO REPAIR OR REPLACE SILT FENCE, MULCH SOCK, STONE FILTER DIKES OR ANY OTHER DEVICES PLANNED FOR USE DURING CONSTRUCTION.
11. THE CONTRACTOR IS TO INSPECT ALL CONTROLS NO LESS THAN WEEKLY, AND IN ANTICIPATION OF RAINFALL EVENTS EXPECTED TO EXCEED 1/2 INCH IN DEPTH. ALL DEFICIENCIES NOTED DURING SAID INSPECTION SHALL BE REPAIRED IMMEDIATELY AND IN NO CASE SHALL A DEFICIENCY BE ALLOWED TO GO UNCORRECTED DURING A RAINFALL EVENT. THE EROSION CONTROL DEVICES SHALL BE MAINTAINED, REINFORCED, OR REPLACED IF NECESSARY. ALL ACCUMULATED SEDIMENTS AND OTHER MATERIALS COLLECTED
12. BY THE SEDIMENTATION CONTROL SYSTEMS SHALL BE REMOVED AS NECESSARY TO INSURE PROPER FUNCTION OF SYSTEMS AND DISPOSED OF IN A MANNER THAT IS CONSISTENT WITH THE INTENT OF THIS PLAN, IN AN UPLAND AREA.
13. TEMPORARY EARTH OR STONE DIKES, DRAINAGE SWALES AND/OR TEMPORARY SLOPE DRAINS SHALL BE INSTALLED WHERE OFF-SITE OR ON-SITE RUNOFF IS SUFFICIENT ENOUGH SUCH THAT IT WILL BE NECESSARY TO DIVERT THE FLOW AROUND THE SITE OR PREVENT EROSION WITHIN THE LIMITS OF WORK.
14. STORM DRAIN INLET PROTECTION SHALL BE USED FOR ALL EXISTING AND PROPOSED CATCH BASINS IN THE PROJECT AREA. PRIOR TO COMPLETION OF THE PROJECT, ALL CATCH BASINS WITHIN THE PROJECT AREA SHALL BE CLEANED.
15. ALL DISTURBED EARTH SLOPES AREA TO BE STABILIZED WITH PERMANENT VEGETATIVE COVER, TO BE ESTABLISHED AS SOON AS POSSIBLE. DISTURBED AREAS THAT ARE NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL RECEIVE A PERMANENT OR TEMPORARY VEGETATIVE COVER AS SOON AS FINAL CONTOURS ARE ESTABLISHED. TEMPORARY VEGETATIVE COVER IS TO BE ESTABLISHED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES WILL NOT REQUIRE ADDITIONAL DISTURBANCE FOR PERIOD OF 30 DAYS OR MORE. IF THE SEASON PREVENTS THE ESTABLISHMENT OF VEGETATIVE COVER, DISTURBED AREAS SHALL BE MULCHED AND THEN SEEDED AS SOON AS WEATHER CONDITIONS ALLOW.
16. THERE SHALL BE NO DIRECT DISCHARGE OF DEWATERING OPERATIONS INTO ANY DRAINAGE SYSTEM UNLESS THIS DISCHARGE IS CLEAN AND FREE OF SETTLEABLE SOLIDS. ANY DEWATERING DISCHARGE CONTAINING SETTLEABLE SOLIDS (SEDIMENTS) SHALL BE PASSED THROUGH A SEDIMENTATION CONTROL DEVICE(FILTER BAG) TO REMOVE THESE SOLIDS. THE CONTRACTOR IS TO MAINTAIN SAID SEDIMENT CONTROL DEVICE THROUGHOUT THE ENTIRE DEWATERING OPERATION AND REPAIR DEFICIENCIES IMMEDIATELY.
17. SOIL STOCKPILE AREAS FOR CONSTRUCTION MATERIALS SHALL BE LOCATED OUTSIDE WETLAND AREAS AND ASSOCIATED BUFFERS.
18. ALL PLANTINGS SHALL BE ACCOMPLISHED BY THE CONTRACTOR AS EARLY AS THE POSSIBLE UPON COMPLETION OF GRADING AND CONSTRUCTION.
19. ALL PLANTINGS SHALL BE WATERED AND MAINTAINED BY THE CONTRACTOR TO ENSURE SURVIVAL.
20. EROSION CONTROL SHALL REMAIN IN PLACE UNTIL THE CERTIFICATE OF COMPLETION IS ISSUED

INTERIM EROSION CONTROL AND CONSTRUCTION SEQUENCE

1. INSTALL EROSION CONTROL BARRIERS AND HAVE ENGINEER INSPECT AND PREPARE LETTER.
2. RAZE THE EXISTING BUILDINGS, PAVEMENT, WALKWAYS, ETC
3. CLEAR SITE OF ALL TREES DESIGNATED TO BE REMOVED. CONSTRUCT A TEMPORARY BASIN TO COLLECT RUNOFF DURING CONSTRUCTION.
4. STOCKPILE LOAM, OR REMOVE LOAM.
5. INSTALL PIPES FOR DRAINAGE SYSTEMS. INSTALL DISCHARGE POINT ON EACH SYSTEM.
6. BRING SITE TO SUB-GRADE.
7. ALL SLOPES ALONG THE PROPERTY LINES SHALL BE MULCHED TEMPORARILY, IF DISTURBED.
8. TEMPORARY STONE (3/4" – 1 ½") SHALL BE PLACED AT THE PROJECT ENTRANCE WHEN ACCESSING EXISTING PAVEMENT. SWEEPING IS REQUIRED IF FINES ARE OBSERVED IN THE PARKING LOT OR PUBLIC WAYS.
9. ALL DISTURBED AREAS NOT TREATED WITH PERMANENT LOAM AND SEED SHALL BE COVERED WITH MULCH, OR OTHER EROSION CONTROL DEVISE.
10. ALL CONSTRUCTION GRADES IN THE INTERIM SHALL BE SLOPED TO FLOW INTO THE TEMPORARY BASIN, WHERE POSSIBLE.
11. THE SITE MITIGATION OF EROSION IN THOSE AREAS TO BE LANDSCAPED OR MULCHED SHALL BE TO INSTALL AS SOON AS POSSIBLE.
12. CLEAN ALL SEDIMENT OUT OF TEMPORARY BASIN AND INSTALL CLEAN FILL PER PLAN SPECIFICATIONS PRIOR TO FINAL GRADING AND SURFACE STABILIZATION.
13. THE SUBSURFACE DRAINAGE SYSTEM SHALL BE INSTALLED PRIOR TO PAVEMENT INSTALLATION PROPER FILTERFABRIC SHALL BE PLACED AT INLETS TO KEEP THE STORM DRAINAGE CLEAN OF DEBRIS.
14. ONCE THE CURB IS INSTALLED, THE PERMANENT MULCH AND LANDSCAPING SHALL BE INSTALLED.
15. SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL THE SITE IS STABILIZED.
16. CLEAN ALL ON SITE CATCH BASINS, MANHOLES, PIPING, TEMPORARY BASIN, AND INFILTRATION CHAMBERS. INSTALL SILT BAGS AT EACH CATCH BASIN.
17. KEEP SITE SWEPT AND MAINTAINED PER STORMWATER MANAGEMENT PLAN.



INSPECTION PORT
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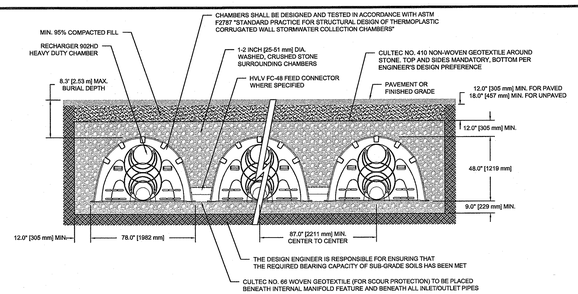

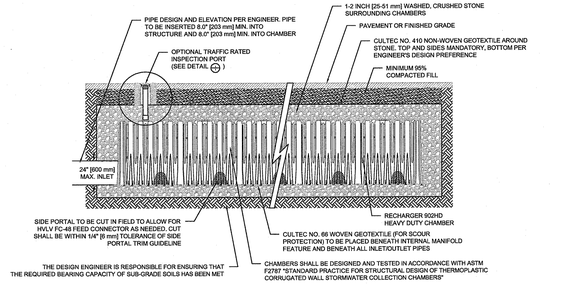

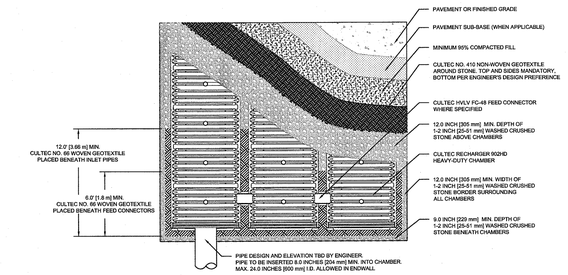

920HD XLHD RECHARGER INFILTRATION CHAMBERS
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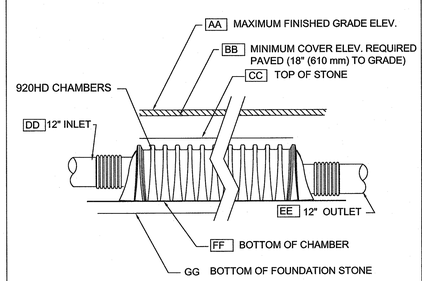
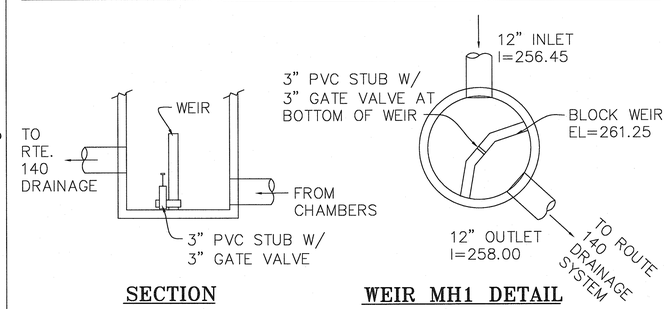


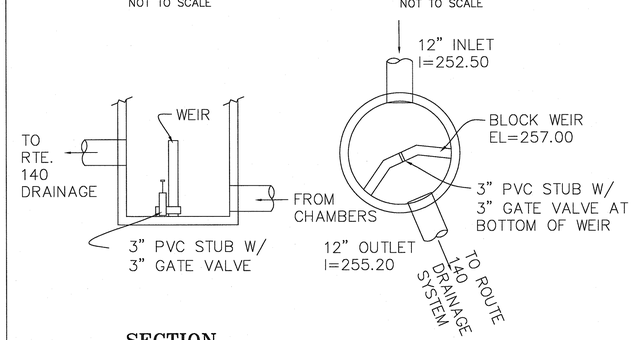
		RECH-1	RECH-2
AA	MAXIMUM FINISHED GRADE ELEV.	268.21	265.70
BB	MINIMUM COVER ELEV.	265.60	261.13
CC	TOP OF STONE	261.45	257.50
DD	12" INLET	257.68	254.46
EE	12" OUTLET	256.45	252.50
FF	BOTTOM OF CHAMBER	256.45	252.50
GG	BOTTOM OF FOUNDATION STONE	255.70	251.75

ELEVATIONS



SECTION
NOT TO SCALE

WEIR MH1 DETAIL
NOT TO SCALE



SECTION
NOT TO SCALE

WEIR MH2 DETAIL
NOT TO SCALE

JOB NO. F3988

APPROVED DATE:
FRANKLIN PLANNING BOARD

DATE:

BEING A MAJORITY

COMMONWEALTH OF MASSACHUSETTS ROGERT E CONSTANTINE, II No. 42611 REGISTERED PROFESSIONAL LAND SURVEYOR 10/6/17
PROFESSIONAL LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS DALE MACKINNON CIVIL No. 34576 REGISTERED PROFESSIONAL ENGINEER 10/6/2017
PROFESSIONAL ENGINEER

APPLICANT
JOEL D'ERRICO
72 DEERVIEW WAY
FRANKLIN, MA 02038

REVISIONS

DATE	REVISED

Guerriere & Halnon, Inc.
Engineering & Land Surveying
55 WEST CENTRAL STREET
FRANKLIN, MA 02038
Ph. (508) 528-3221
Fx. (508) 528-7921
www.guerriereandhalnon.com

SITE PLAN FOR HIGHLAND VILLAGE 278-300 WEST CENTRAL STREET IN FRANKLIN MASSACHUSETTS

CONSTRUCTION DETAILS

DATE SEPT. 26, 2017	SCALE AS NOTED
SHEET 13 OF 13	JOB NO. F3988

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