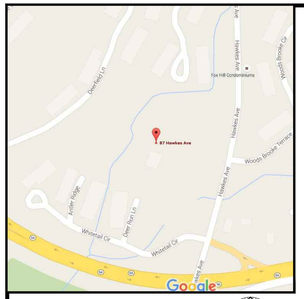
PARTH KNOLLS LLC.

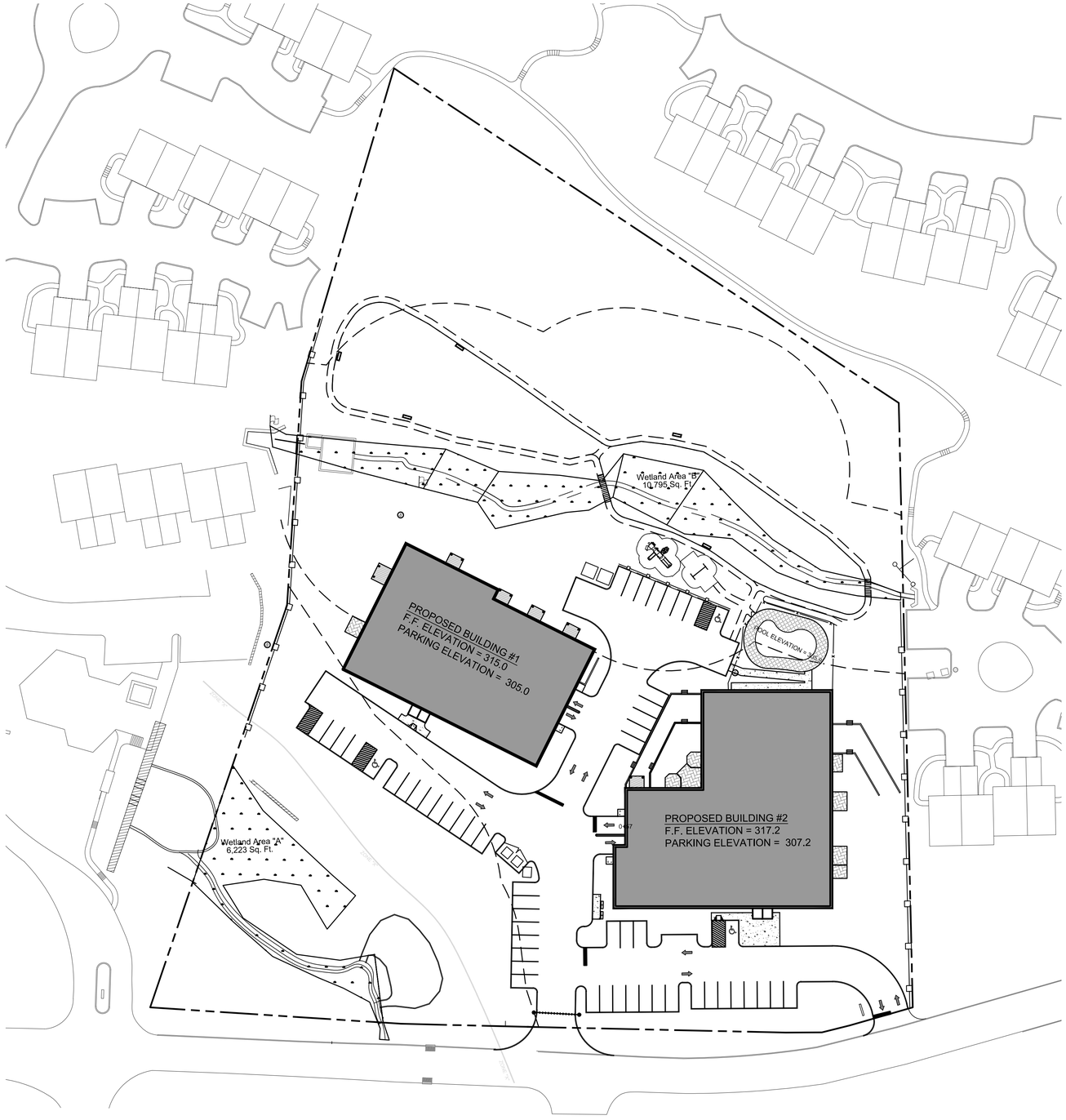


LOCATION MAP
NOT TO SCALE

SITE DATA:

CONTRACT VENDEE:	AUDUBON MANOR LLC.
DEVELOPER:	PARTH KNOLLS LLC. 500 EXECUTIVE BLVD. #203 OSSINING, NY, 10562
PROJECT LOCATION:	87 HAWKES AVE. OSSINING, NY, 10562
EXISTING TOWN ZONING:	MF-I, MULTIFAMILY-INN
PROPOSED USE:	MF-I, MULTIFAMILY-INN
TOWN TAX MAP DATA:	SECTION 80.20, BLOCK 1, LOT 15
SITE AREA :	5.53 ACRES (240,751 SF)
SEWAGE FACILITIES:	PUBLIC SEWERS
WATER FACILITIES:	PUBLIC WATER FACILITIES

DRAWING INDEX:



CONTRACT VENDEE:
AUDUBON MANOR, CO., LLC.
500 EXECUTIVE BLVD #203
OSSINING, NY 10562

CIVIL ENGINEER:
SITE DESIGN CONSULTANTS
251-F UNDERHILL AVENUE
YORKTOWN HEIGHTS, NY 10598
P: 914 962 4488
F: 914 962 7386
jriina@sitedesignconsultants.com

SURVEYOR:
LINK LAND SURVEYORS
21 CLARK PLACE, SUITE 1B
MAHOPAC, NY 10541
P: 845-628-5857
F: 845-621-0013
www.linklandsurveyors.com

ENVIRONMENTAL CONSULTANT:
TIM MILLER ASSOCIATES INC.
10 NORTH STREET
COLD SPRING, NY 10516
P: 845-265-4400

TRAFFIC CONSULTANT:
TIM MILLER ASSOCIATES INC.
10 NORTH STREET
COLD SPRING, NY 10516
P: 845-265-4400

ARCHITECT:
ARQ.HT, LLC.
100 EXECUTIVE BLVD #205
OSSINING, NY 10562
P: 914-944-3377

0 20 40 80
SCALE: 1"=40'-0"

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F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CADD\3D-15-18 BELDOTTI MANAGEMENT CORP\15-18 SITE PLAN 2-22-16.DWG

ZONING SCHEDULE:

ZONING DISTRICT:	MF-I, MULTI FAMILY RESIDENTIAL		
DIMENSIONAL REGULATIONS:	REQUIRED	PROVIDED	VARIANCE REQUIRED
MINIMUM SIZE OF LOT:			
MINIMUM LOT AREA:	40,000 SF.	240,751 SF.	NONE
MINIMUM LOT WIDTH:	150 FT.	522 FT.	NONE
MINIMUM LOT DEPTH:	150 FT.	414 FT.	NONE
MINIMUM YARD DIMENSIONS:			
PRINCIPAL BUILDING:			
FRONT YARD SETBACK:	50 FT.	82 FT.	NONE
REAR YARD SETBACK:	40 FT.	257 FT.	NONE
ONE SIDE YARD SETBACK:	50 FT.	50 FT.	NONE
COMBINED SIDE YARD SETBACK:	100 FT.	100 FT.	NONE
MAXIMUM % OF LOT TO BE OCCUPIED:			
LOT COVERAGE:	66% x 240,751 SF = 158,895 SF	71,456 SF	NONE
BUILDING COVERAGE:	20% x 240,751 SF = 48,151 SF	32,001 SF	NONE
MAXIMUM HEIGHT:			
PRINCIPAL BUILDING - FEET:	35 FEET	30 FEET	NONE
PRINCIPAL BUILDING - STORIES:	2 1/2	2 1/2	NONE

ZONING REGULATION NOTES:

1. AT LEAST 1/3 OF THE NET SITE AREA SHALL BE DEVOTED TO PERMANENT OPEN SPACE AND/OR FOR SITES SUITABLE FOR RECREATION AS REQUIRED BY NOTE 2. UNDEVELOPED PERMANENT OPEN SPACE SHALL BE PROVIDED AND GUARANTEED AT THE RATE OF 1,500 SQUARE FEET PER BEDROOM.
2. THERE SHALL BE PROVIDED ON THE SAME LOT A SUITABLY EQUIPPED AND LANDSCAPED CHILDREN'S PLAY AREA WITH A MINIMUM OF 400 SQUARE FEET FOR EACH DWELLING UNIT.
3. BUILDING COVERAGE SHALL BE NO MORE THAN 20% OF LOT AREA. 20% x 240,751 SF = 48,151 SF

PARKING SCHEDULE

PARKING REQUIRED: Two (2) spaces per dwelling unit pursuant to Zoning Section 200-29, Dwelling, Multifamily

Proposed Dwelling units. 53 apartments time (2) equals **106 spaces**

Indoor Parking	Breakdown	Total Parking
Building No. 1	Standard 25 Handicap 1 Total 26	26
Building No. 2	Standard 30 Handicap 1 Total 31	31
Outdoor Parking	**Breakdown**	
	Standard 48 Handicap 3 Total 51	51
Total Parking Provided		**108**
Bank Parking for future use, if required [spaces #59,60,61 & 62]	Standard	4
Total Potential Parking Available		**112**

Article VI.

Section 200.33 Affordable Housing {BMR}

Section 200.34 Required 10% of the number of Dwelling units

More than 5, but fewer than 10 acres 30%

Maximum permitted Density Bonus

Calculation Dwelling 41 Apartm 41

1/2 of the units received must be BMR

Density Bonus (x) 30%

Density Bonus Number of Dwelling units 12.3

Rounded Number of Dwelling units 12 12

Total number of units with density Bonus 53

1/2 of the Bonus Units received must be BMR 6

BMR units will be broken down as follows: 1 2 bedroom unit, 5 1 bedroom units

General Description of Project

Number of Multifamily Units

Type	Non-BMR	BMR Units	Total Units	Bedrooms	Unit Ratio
One (1) B/R	31	10	41	41	77%
Two (2) B/R	10	3	13	26	25%
Total Dwelling Units	41	12	53	66	100%

Section 200.29 9 40 40 75%

Parking & loading

2 for each dwelling unit plus 0.5 for each bedroom more than 2 bedrooms

	Regular Apts	BMR Apts	Total Parking
Dwelling Units	41	12	
Parking per Dwelling Unit	(x) 2	(x) 2	
Total Parking spaces required	82	24	106

Building Height Max

Stories 2 1/2

Feet 35'

Design Colonial

DISTANCE BETWEEN BLDGS. (#200-16C(1) (B))

BUILDING HEIGHT X 2 = 30 X2= 60" PROVIDED 60'

BULK REGULATIONS (#200-22)

THE TOTAL NUMBER OF APARTMENTS ALLOWED PER SECTION 200-22:

BULK REGULATIONS

1. REQUIRED SQ FT PER DWELLING UNIT. 4,000 SF PLUS 1,500 SQ FT PER BEDROOM.

ONE (1) BEDROOM APARTMENTS 5,500

TWO (2) BEDROOM APARTMENTS 7,000

CALCULATION:

ONE (1) BEDROOM APARTMENTS

5,500SF X 31 = 170,500 SF 31

TWO (2) BEDROOM APARTMENTS

7,000 SF X 10= 70,000 SF 10

TOTAL APARTMENTS 41

TOTAL SF AREA REQUIRED 240,000 SF

TOTAL PROVIDED-SITE SF AREA: 240,751 SF

Article VI. Affordable Housing

See Sheet T for Calculation of the BMR Units and Compliance with this Section

Section 200-33 Required below -market-rate-unit component

No fewer than 10% of the total number of Units Shall be BMR Units

Number of BMR Units Provided 6

Number of BMR Units Required 5.3

Section 200-34 Residential Density bonus; Multifamily

More than 5 acres, but fewer than 10 30% Bonus

Section 200-35

Sub-Section A The BMR units shall be no less than 80% of the size of said market rate units and shall be reasonably distributed. Further, the BMR units shall provide a mix of unit types in the same proportion

Number of BMR Units Provided 6

See Sheet "T" The Breakdown of the BMR Units are:

for calculation of One (1) Bedroom Units 3 Simplex & 2 Duplex Units 5

of Bonus Units Two (2) Bedroom Units 1 Simplex Unit 1

and break-down Total BMR Units See location in schedule below 6

Parth Knolls Apartment Tabulation

Building No.	Floor No	Apartment No.	Livable Sq Ft Area	One B/R Simplex	One B/R Duplex	Two B/R Simplex	BMR Unit	Simp 1 B/R	Dupl 1 B/R	Simp 2 B/R
One	1st fl.	101	1,013	1,013				1		
One	1st fl.	102	1,032	1,032				1		
One	1st fl.	103	1,095	1,095				1		
One	1st fl.	104	1,095	1,095				1		
One	1st fl.	105	1,099	1,099				1		
One	1st fl.	106	1,375			1,375				1
One	1st fl.	107	1,081	1,081				1		
One	1st fl.	108	1,007	1,007			BMR	1		
One	1st fl.	109	1,054	1,054				1		
One	1st fl.	110	1,218			1,218				1
								8		2
Two	1st fl.	111	1,263			1,263				1
Two	1st fl.	112	933	933				1		
Two	1st fl.	113	1,015	1,015				1		
Two	1st fl.	114	1,053			1,053	BMR			1
Two	1st fl.	115	1,459			1,459				1
Two	1st fl.	116	1,015	1,015				1		
Two	1st fl.	117	1,034	1,034				1		
Two	1st fl.	118	1,216			1,216				1
Two	1st fl.	119	1,200			1,200				1
Two	1st fl.	120	927	927				1		
Two	1st fl.	121	1,121	1,121				1		
Two	1st fl.	122	941	941				1		
Two	1st fl.	123	846	846			BMR	1		
								16	0	7
One	2nd fl	201	1,119		1,119				1	
One	2nd fl	202	1,119		1,119		BMR		1	
One	2nd fl	203	1,145			1,145				1
Page 1, Bal. forward page 2			28,475	16,308	2,238	9,929		16	2	8
Building No.	Floor No	Apartment No.	Livable Sq Ft Area	One B/R Simplex	One B/R Duplex	Two B/R Simplex	BMR Unit	Simp 1 B/R	Dupl 1 B/R	Simp 2 B/R
Balances forward from page 1			28,475	16,308	2,238	9,929		16	2	8
One	2nd fl	204	1,087	1,087				1		
One	2nd fl	205	1,276		1,276				1	
One	2nd fl	206	1,264		1,264				1	
One	2nd fl	207	1,087	1,087				1		
One	2nd fl	208	849	849			BMR	1		
One	2nd fl	209	1,109		1,109				1	
One	2nd fl	210	1,081	1,081				1		
One	2nd fl	211	1,109		1,109				1	
One	2nd fl	212	1,193	1,193				1		
One	2nd fl	213	1,043		1,043				1	
One	2nd fl	214	1,110	1,110				1		
								22	7	8
Two	2nd fl	215	1,264			1,264				1
Two	2nd fl	216	1,204		1,204				1	
Two	2nd fl	217	1,209		1,209		BMR		1	
Two	2nd fl	218	950	950				1		
Two	2nd fl	219	1,255			1,255				1
Two	2nd fl	220	1,038	1038				1		
Two	2nd fl	221	1,202		1,202				1	
Two	2nd fl	222	1,184		1,184				1	
Two	2nd fl	223	1,038	1,038				1		
Two	2nd fl	224	1,185		1,185				1	
Two	2nd fl	225	1,102			1,102				1
Two	2nd fl	226	1,375			1,375				1
Two	2nd fl	227	1,250		1,250				1	
Two	2nd fl	228	1,250	1250				1		
Two	2nd fl	229	1,196		1,196				1	
Two	2nd fl	230	1,138			1,138				1
Total Square Foot Areas			**59,523**	**26,991**	**16,469**	**16,063**		26	14	13
Break down of Apartment Type				**26 Apts**	**14 Apts**	**13 Apts**				
Average Sq ft size by Apartment Type				**1,038 sf**	**1,176 sf**	**1,236 sf**				
Section 200.35.A										
BMR Units must be no less than 80% of size of said market rate units				**830 sf**	**941 sf**	**989 sf**				
Section 200.35.B										
Minimum gross Floor Area				675 sf	675 sf	750 sf				
Section 200-22										
Minimum requirements. 700 sf per for 1 or more bedrooms				**700 sf**	**700 sf**	**700 sf**				

Provided BMR Units				**Break-down of BMR Units:**
Bldg. # 1	1st Fl	Apt No.108	1,007 sf	1 B/R Simplex
Bldg. # 1	2nd Fl.	Apt No.202	1,119 sf	1 B/R Duplex
Bldg. # 1	2nd Fl	Apt No. 208	849 sf	1 B/R Simplex
Bldg. # 2	1st Fl	Apt No.123	846 sf	1 B/R Simplex
Bldg. # 2	1st Fl	Apt No.114	1,053 sf	2 B/R Simplex
Bldg. # 2	2nd Fl.	Apt No. 227	1,209 sf	1 B/R Duplex

87.Parth Knolls BMR Units-Rev.1.2.29.16 Page 2

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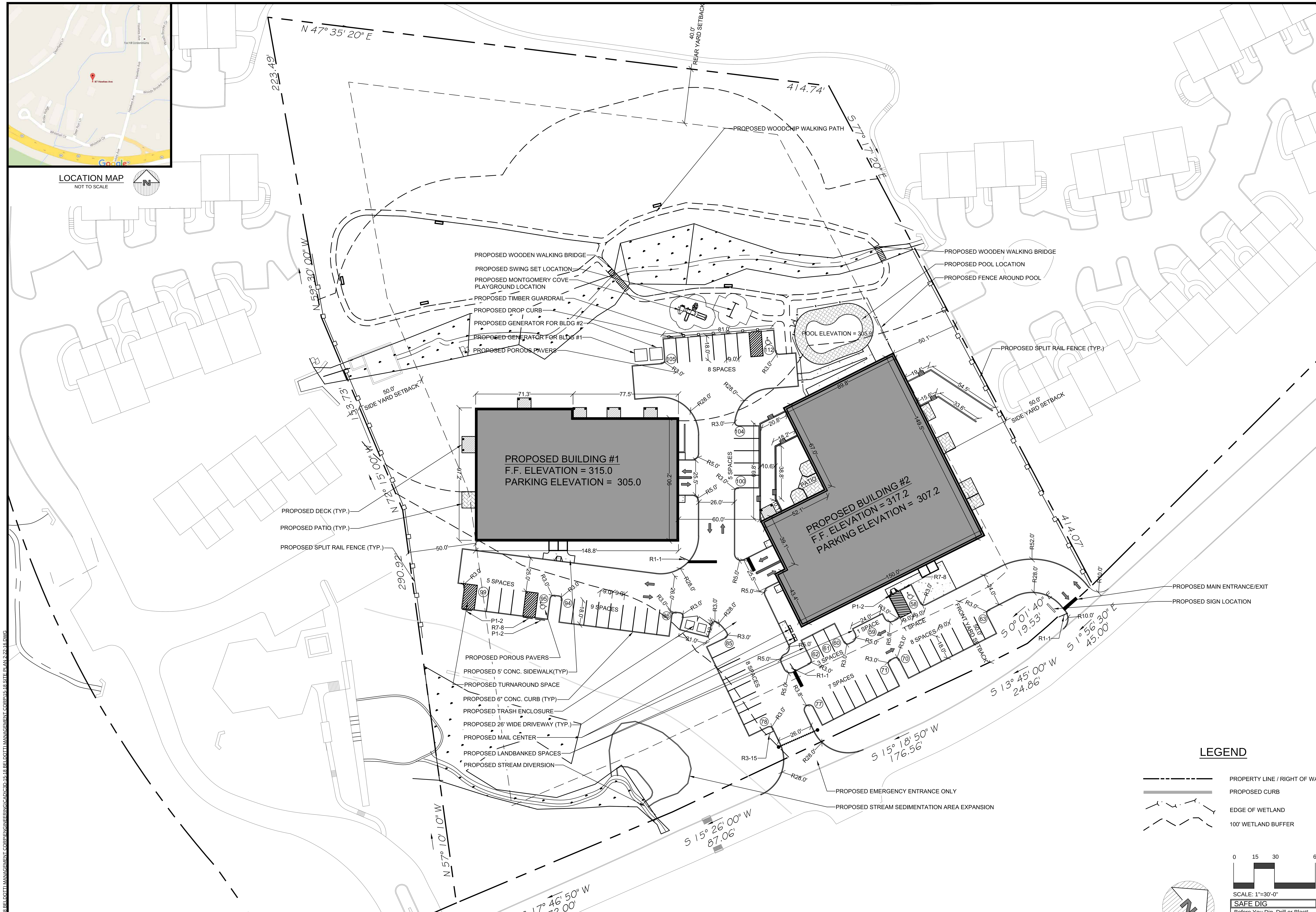
F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP15-18 SITE PLAN 2-22-16.DWG


LOCATION MAP
NOT TO SCALE
N 47° 35' 20" E
223.49'
40.0' REAR YARD SETBACK
414.74'
S 77° 17' 20" E
N 59° 30' 00" W
133.73'
N 72° 15' 00" W
290.92'
N 57° 10' 10" W
S 17° 46' 50" W
172.00'
S 15° 26' 00" W
87.06'
S 15° 18' 50" W
176.56'
S 13° 45' 00" W
24.86'
S 0° 01' 40" E
19.53'
S 1° 56' 30" E
45.00'
414.07'
50.0' SIDE YARD SETBACK
50.0' FRONT YARD SETBACK
PROPOSED WOODCHIP WALKING PATH
PROPOSED WOODEN WALKING BRIDGE
PROPOSED SWING SET LOCATION
PROPOSED MONTGOMERY COVE PLAYGROUND LOCATION
PROPOSED TIMBER GUARDRAIL
PROPOSED DROP CURB
PROPOSED GENERATOR FOR BLDG #2
PROPOSED GENERATOR FOR BLDG #1
PROPOSED POROUS PAVERS
PROPOSED POOL LOCATION
PROPOSED FENCE AROUND POOL
POOL ELEVATION = 305.5
PROPOSED SPLIT RAIL FENCE (TYP.)
PROPOSED BUILDING #1
F.F. ELEVATION = 315.0
PARKING ELEVATION = 305.0
PROPOSED BUILDING #2
F.F. ELEVATION = 317.2
PARKING ELEVATION = 307.2
PATIO
PROPOSED DECK (TYP.)
PROPOSED PATIO (TYP.)
PROPOSED SPLIT RAIL FENCE (TYP.)
8 SPACES
5 SPACES
9 SPACES
1 SPACE
3 SPACES
7 SPACES
PROPOSED POROUS PAVERS
PROPOSED 5' CONC. SIDEWALK(TYP)
PROPOSED TURNAROUND SPACE
PROPOSED 6" CONC. CURB (TYP)
PROPOSED TRASH ENCLOSURE
PROPOSED 26' WIDE DRIVEWAY (TYP.)
PROPOSED MAIL CENTER
PROPOSED LANDBANKED SPACES
PROPOSED STREAM DIVERSION
PROPOSED MAIN ENTRANCE/EXIT
PROPOSED SIGN LOCATION
PROPOSED EMERGENCY ENTRANCE ONLY
PROPOSED STREAM SEDIMENTATION AREA EXPANSION
LEGEND
PROPERTY LINE / RIGHT OF WAY
PROPOSED CURB
EDGE OF WETLAND
100' WETLAND BUFFER
0 15 30 60
SCALE: 1"=30'-0"
SAFE DIG
Before You Dig, Drill or Blast!
Call 811

NOTE:

1. *THIS IS NOT A SURVEY.* ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY JOSEPH R. LINK, DATED 03/07/15, LAST REVISED 06/08/15. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

PROJECT # 15-18

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www.sitedesignconsultants.com

Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	11/9/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: 1" = 30'

DRAWN BY: TK

DATE: 9/25/15

SITE PLAN

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining, Westchester County, NY

Sheet C-101

NOTE:

1. *THIS IS NOT A SURVEY.* ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY JOSEPH R. LINK, DATED 03/07/15, LAST REVISED 06/08/15. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

PROJECT # 15-18

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Revisions:

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1	11/9/15	Town Comments
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3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: 1" = 30'
DRAWN BY: TK
DATE: 9/25/15

EXISTING CONDITIONS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining — Westchester County, NY

Sheet C-102

PROPOSED BUILDING #1
F.F. ELEVATION = 315.0
PARKING ELEVATION = 305.0

PROPOSED BUILDING #2
F.F. ELEVATION = 317.2
PARKING ELEVATION = 307.2

POOL ELEVATION = 305.9

PHASE I

PHASE II

100' BUFFER AS PER OSSINING CODE #105-3(B)(1)

TREE #1650 BLEW DOWN DURING STORM ON 3/24/16

PROPOSED TREE TO BE PROTECTED (TYP)
PROPOSED EROSION BLANKET (TYP)
PROPOSED SILT FENCE (TYP)
PROPOSED INLET PROTECTION (TYP)
PROPOSED SOIL STOCKPILE (TYP)
PROPOSED CONSTRUCTION DUMPSTER LOCATION
PROPOSED TREE TO BE RMEOVED (TYP)
PRPOSED LIMIT OF DISTURBANCE (TYP)

PROPOSED CONSTRUCTION ENTRANCE (TYP)

LEGEND

- EXISTING GRADING
- EXISTING SPOT GRADE
- PROPOSED GRADING
- PROPERTY LINE / RIGHT OF WAY
- EDGE OF WETLAND
- 100' WETLAND BUFFER
- PROPOSED FIRE HYDRANT
- PROPOSED DRAINAGE LINE
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CRYSTAL STREAM STRUCTURE
- PROPOSED HEADWALL WITH RIP RAP
- PROPOSED SEWER SERVICE CONNECTION
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE CONNECTION
- PROPOSED SANITARY MANHOLE AND LINE
- PROPOSED BUILDING AND DRIVE
- PROPOSED SOIL STOCKPILES
- PROPOSED SILT FENCE
- PROPOSED CRUSHED STONE INLET PROTECTION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED LIMIT OF DISTURBANCE
- EXISTING TREE TO BE PROTECTED
- EXISTING TREE TO BE REMOVED

0 15 30 60

SCALE: 1"=30'-0"

NOTE:

1. *THIS IS NOT A SURVEY*. ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY JOSEPH R. LINK, DATED 03/07/15, LAST REVISED 06/08/15. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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PROJECT # 15-18

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	11/5/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: 1" = 30'

DRAWN BY: TK

DATE: 9/25/15

E&SC PLAN

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-103

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP15-18 SITE PLAN 2-22-16.DWG

STORMWATER RIMS & INV.

Pipe	Upstream Structure	Rim	Downstream Structure	Rim	Length (ft)	Section Size (in)	Upstream Inv. Elev. (ft)	Downstream Inv. Elev. (ft)	Slope (%)
CB-1 TO CB-2	CB-1	317.33	CB-2	314.95	49.12	12	314.28	311.79	5.07
CB-2 TO CB-3	CB-2	314.95	CB-3	314.01	43.06	12	311.54	311.01	1.23
CB-3 TO CB-4	CB-3	314.01	CB-4	311.14	71.09	12	310.76	308.14	3.69
CB-4 TO CB-5	CB-4	311.14	CB-5	311.40	23.81	12	307.90	307.78	0.50
CB-5 TO CB-6	CB-5	311.40	CB-6	311.88	69.32	18	307.53	307.18	0.50
CB-6 TO CB-9	CB-6	310.22	CB-9	313.49	60.30	18	306.93	306.63	0.50
CB-7 TO CB-8	CB-7	313.49	CB-8	313.50	20.45	12	310.49	310.39	0.50
CB-8 TO CB-9	CB-8	313.50	CB-9	311.88	137.44	12	310.14	306.70	2.50
CB-9 TO CST #1	CB-9	311.88	CST #1	311.73	20.24	18	306.38	306.28	0.50
CST #1 TO BYPASS 1	CST #1	311.73	BYPASS 1	311.66	17.24	15	306.18	306.09	0.52
BYPASS 1 TO SC-310 CHAMBERS	BYPASS 1	311.66	SC-310 CHAMBERS	306.94	9.56	12	305.05	305.00	0.50
BYPASS 1 TO Outlet 1	BYPASS 1	311.66	Outlet 1	---	50.23	15	305.84	305.59	0.50
CB-10 TO CB-11	CB-10	306.22	CB-11	306.22	23.03	12	303.22	303.1	0.50
CB-11 TO BYPASS 2	CB-11	306.22	BYPASS 2	306.92	18.99	12	302.85	302.76	0.47
BYPASS 2 TO CISTERN	BYPASS 2	306.92	CISTERN	303.14	9.58	12	301.25	301.2	0.50
BYPASS 2 TO DMH-1	BYPASS 2	306.92	DMH-1	304.57	70.89	12	302.45	301.57	1.24
DMH-1 TO Outlet 2	DMH-1	304.57	Outlet 2	---	84.74	12	301.22	300.8	0.50

SANITARY SEWER RIMS & INV.

Pipe	Upstream Structure	Rim	Downstream Structure	Rim	Length (ft)	Section Size (in)	Upstream Inv. Elev. (ft)	Downstream Inv. Elev. (ft)	Slope (%)
SMH-1 TO SMH-2	SMH-1	307.90	SMH-2	307.00	83.37	6	305.40	304.50	1.08
SMH-2 TO SMH-3	SMH-2	307.00	SMH-3	310.00	157.44	6	304.50	302.75	1.11
SMH-3 TO PUMPSTATION	SMH-3	310.00	PUMPSTATION	309.20	5.50	6	302.75	302.50	4.55

PROPOSED BUILDING #1
F.F. ELEVATION = 315.0
PARKING ELEVATION = 305.0

PROPOSED BUILDING #2
F.F. ELEVATION = 317.2
PARKING ELEVATION = 307.2

100' BUFFER AS PER OSSINING CODE #105-3(B)(1)

PROPOSED POROUS PAVERS
PROPOSED FOOTING DRAIN
PROPOSED RAINWATER HARVESTING CHAMBERS
PROPOSED FIRE HYDRANT
PROPOSED WATERMAIN TO BE ENCASED IN CONCRETE WHERE SEPARATION CANNOT BE MET
10.0' MIN. SEPARATION
PROPOSED STANDPIPE FOR SEWER
CST UNIT
BYPASS
PROPOSED HDPE END SECTION (TYP)
PROPOSED SUBSURFACE SC-310 INFILTRATION CHAMBERS INV. = 304.5
PROPOSED 6" DEEP SWALE
PROPOSED RAIN GARDEN
PROPOSED FOOTING DRAIN
PROPOSED 6" SEWER SERVICE CONNECTION
POOL ELEVATION = 305.0
PROPOSED ROOF DRAIN
PROPOSED WATERMAIN
PROPOSED WATER SERVICE CONNECTION
PROPOSED WATER MAIN
PROPOSED FIRE HYDRANT

DMH-1 DMH-2 SMH-1 SMH-2 SMH-3 CB-1 CB-2 CB-3 CB-4 CB-5 CB-6 CB-7 CB-8 CB-9 CB-10 CB-11

TP #6 TP #7 TP #8

LEGEND

- EXISTING GRADING (222)
- EXISTING SPOT GRADE (×222.8)
- PROPOSED GRADING (200)
- PROPERTY LINE / RIGHT OF WAY
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER
- PROPOSED FIRE HYDRANT
- PROPOSED DRAINAGE LINE
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CRYSTAL STREAM STRUCTURE
- PROPOSED HEADWALL WITH RIP RAP
- PROPOSED SEWER SERVICE CONNECTION (SS)
- PROPOSED WATER MAIN (W)
- PROPOSED WATER SERVICE CONNECTION (WS)
- PROPOSED UTILITY CROSSING
- PROPOSED SANITARY MANHOLE AND LINE
- PROPOSED HOUSE AND DRIVE

0 15 30 60
SCALE: 1"=30'-0"

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PROJECT # 15-18

Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	11/9/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

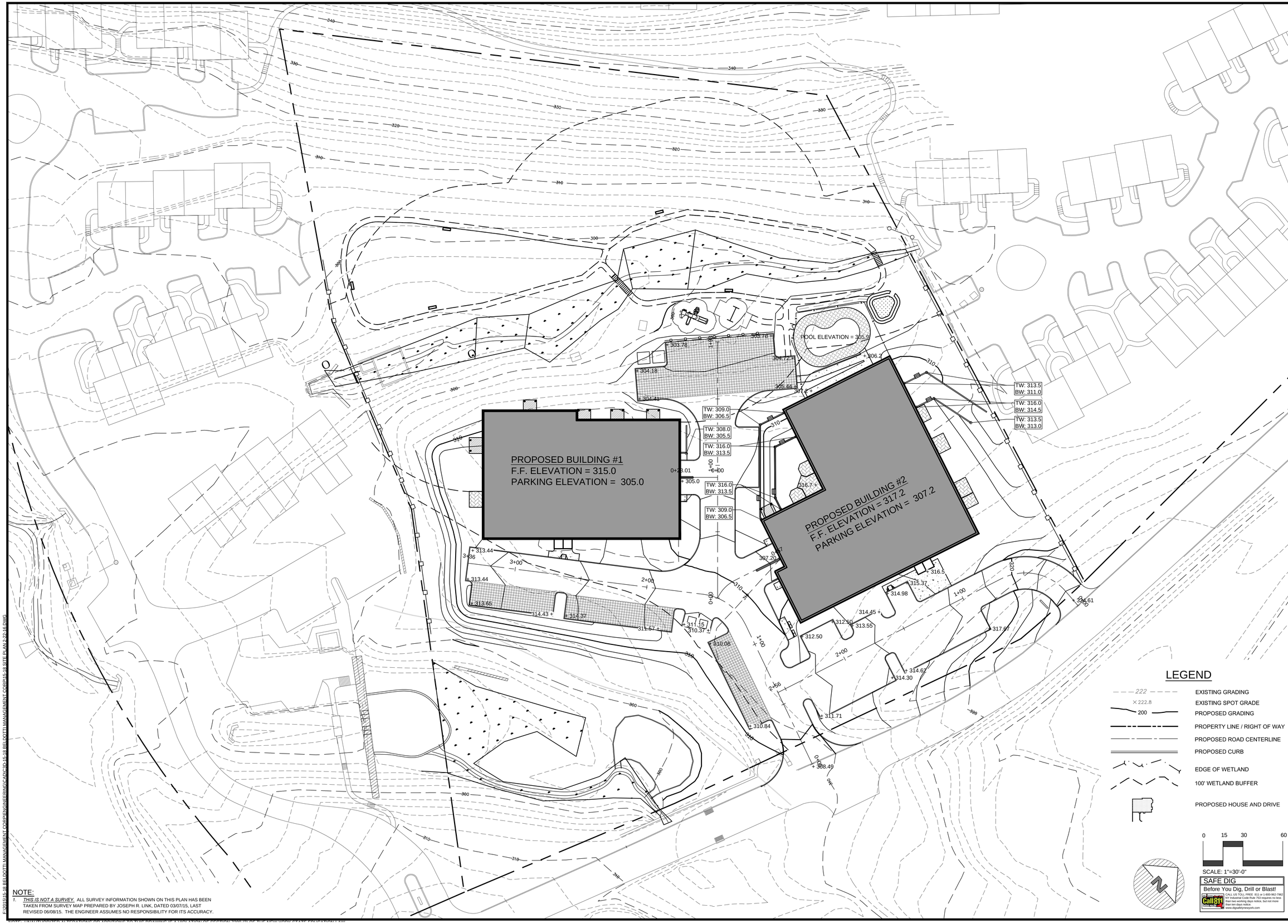
SCALE: 1" = 30'
DRAWN BY: TK
DATE: 9/25/15

UTILITY PLAN

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-104

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CADD\3D-15-18 BELDOTTI MANAGEMENT CORP15-18 SITE PLAN 2-22-16.DWG



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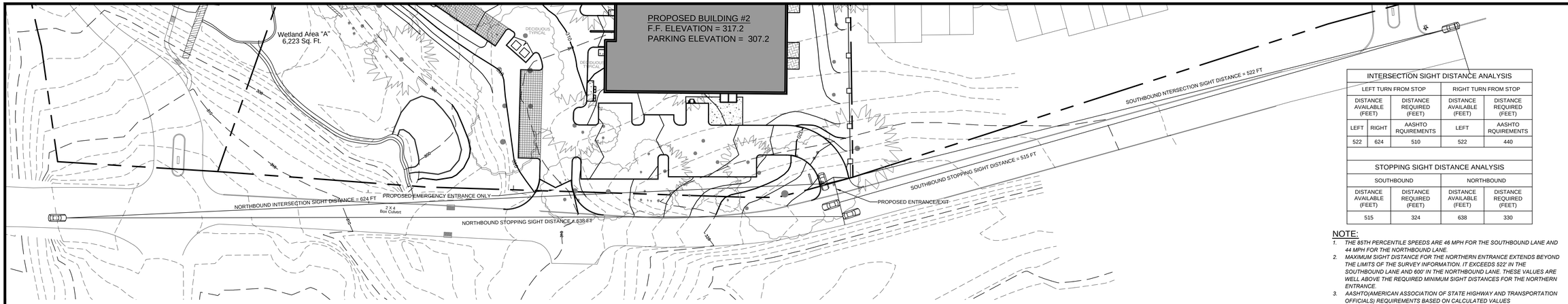
GRADING PLAN

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-105

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP\15-18 SITE PLAN 2-22-16.DWG

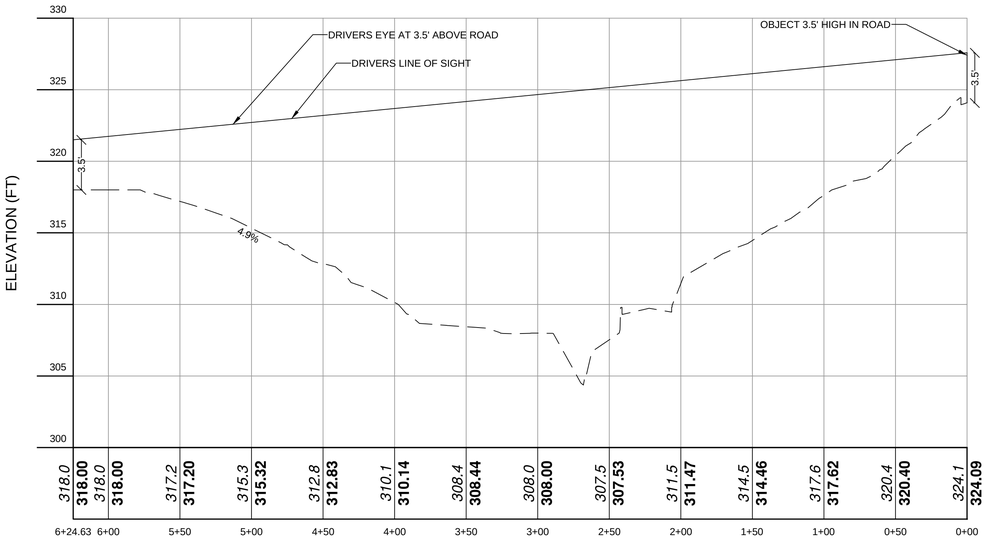


INTERSECTION SIGHT DISTANCE ANALYSIS				
LEFT TURN FROM STOP			RIGHT TURN FROM STOP	
DISTANCE AVAILABLE (FEET)		DISTANCE REQUIRED (FEET)	DISTANCE AVAILABLE (FEET)	DISTANCE REQUIRED (FEET)
LEFT	RIGHT	AASHTO RQUIREMENTS	LEFT	AASHTO RQUIREMENTS
522	624	510	522	440

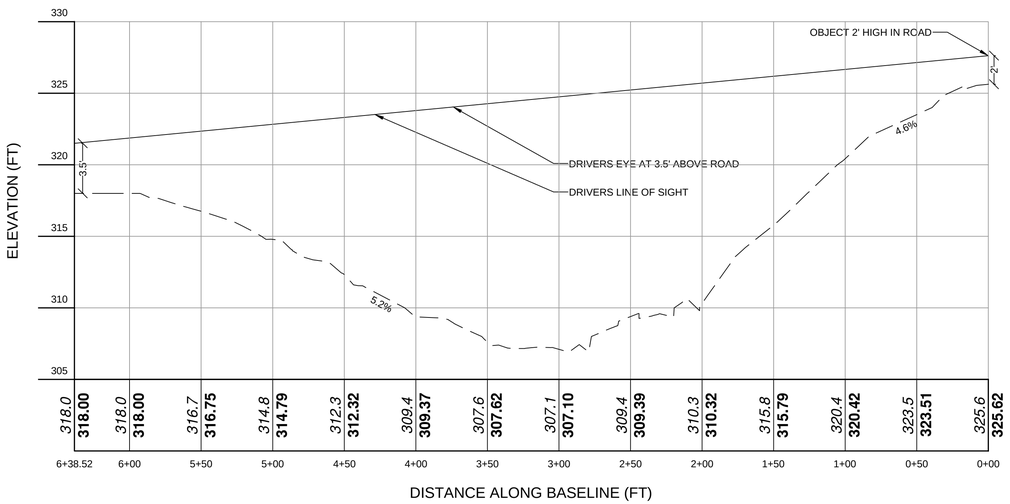
STOPPING SIGHT DISTANCE ANALYSIS			
SOUTHBOUND		NORTHBOUND	
DISTANCE AVAILABLE (FEET)	DISTANCE REQUIRED (FEET)	DISTANCE AVAILABLE (FEET)	DISTANCE REQUIRED (FEET)
515	324	638	330

NOTE:

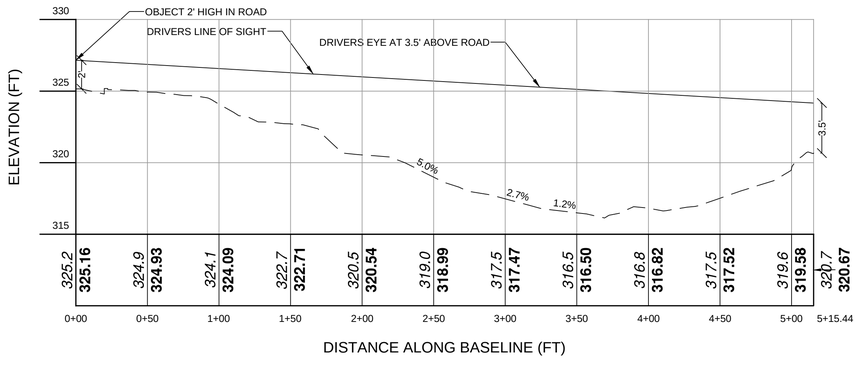
1. *THE 85TH PERCENTILE SPEEDS ARE 46 MPH FOR THE SOUTHBOUND LANE AND 44 MPH FOR THE NORTHBOUND LANE.*
2. *MAXIMUM SIGHT DISTANCE FOR THE NORTHERN ENTRANCE EXTENDS BEYOND THE LIMITS OF THE SURVEY INFORMATION. IT EXCEEDS 522' IN THE SOUTHBOUND LANE AND 600' IN THE NORTHBOUND LANE. THESE VALUES ARE WELL ABOVE THE REQUIRED MINIMUM SIGHT DISTANCES FOR THE NORTHERN ENTRANCE.*
3. *AASHTO(AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS) REQUIREMENTS BASED ON CALCULATED VALUES*



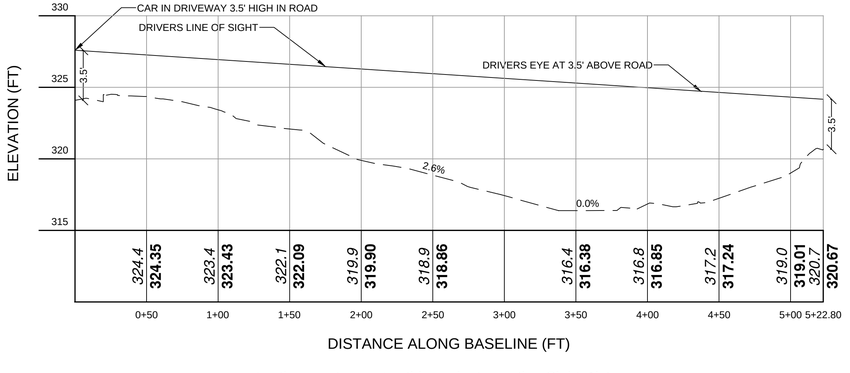
North Entrance Northbound Intersection Sight Distance
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'



North Entrance Northbound Stopping Sight Distance
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'



North Entrance Southbound Stopping Sight Distance
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'



Northern Entrance Northbound Intersection Sight Distance
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'

LEGEND

- 222 — EXISTING GRADING
- ×222.8 — EXISTING SPOT GRADE
- 200 — PROPOSED GRADING
- PROPERTY LINE / RIGHT OF WAY
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER
- PROPOSED HOUSE AND DRIVE

0 15 30 60
SCALE: 1"=30'-0"

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

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SCALE: 1" = 40'
DRAWN BY: TK
DATE: 9/25/15

SIGHT DISTANCE PLAN

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-106

E:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP15-18 SITE PLAN 2-22-16.DWG

TREES EAST OF STREAM

Tag #	Species	DBH	Condition
1700	Norway Maple	15	Fair,One sided leaning over road
1699	Sugar Maple	32	Good healthy crown
1698	Norway Maple	9	One sided leaning
1697	Norway Maple	31	Good
1696	Norway Maple	10	Fair, One sided leaning
1695	Norway Maple	9	Fair, One sided leaning
1694	Norway Maple	9	Fair, One sided
1693	Black Cherry	13	Good, Tall spindly no lower branching
1692	Norway Maple	11	Fair, Curved leaning
1691	Twin Norway Maple	10 + 14	Good, Full Crown
1690	Red Maple	26	Poor, Rotting trunk, Dead leader
1689	Red Maple	42	Good, Three large leaders
1688	Red Maple	32	Fair, Some rotting scars. Sparse canopy
1687	Tulip Poplar	13	Fair, Straight 20' then leans
1686	Norway Maple	12	Fair, One sided
1685	Norway Spruce	33	Good, Lower branches all dead
1684	Black Birch	15	Healthy but bad leaning
1683	Black Birch	13	Healthy but bad leaning
1682	Red Oak	11	Good
1681	Norway Spruce	23	Good, Lower branches all dead
1680	Norway Spruce	26	Good, Lower branches all dead
1679	Eastern White Pine	35	Good
1678	Eastern White Pine	29	Good
1677	Sassafras Twin	14 + 12	Good
1676	Norway Spruce	24	Fair, One sided bleeding
1675	Black Cherry	10	Poor, Broken branches in crown
1674	Black Cherry	9	Poor, Alive but uprooted
1673	Gray Birch	12	Good, but leaning
1672	Gray Birch Twin	9 + 11	Good, but leaning
1671	Norway Spruce	25	Poor, dying
1670	Norway Spruce	23	Dead mostly
1669	Norway Spruce	25	Good, Covered in Poison Ivy
1668	Norway Spruce	19	Fair, One sided covered in Poison Ivy
1667	Norway Spruce	39	Good
1666	Norway Spruce	25	Good
1665	Norway Maple	11	Good
1664	Norway Maple	27	Fair, Trunk rot, weakened crown
1663	Norway Maple	24	Good
1662	Norway Maple	31	Fair, Weakened crown
1661	Norway Maple	26	Fair. Fire/Lightning damage, weak crown
1660	Norway Maple	32	Good, But large dead leader should be pruned
1659	Red Maple	25	Poor, Trunk damage, weak crown
1658	London Plane Tree	33	Fair, Poor crown growth
1657	Basswood	29	Good
1656	Norway Maple	37	Good
1655	Magnolia (Triple)	10 + 9+ 11	Good, but overshadowed by 1654
1654	Norway Spruce	35	Good
1653	Norway Spruce	25	Good, no lower branches
1652	Norway Spruce	30	Fair
1651	Norway Maple	18	Good
1650	Red Maple	13	Good
1649	Norway Maple	12	Poor, Dead leader, weak crown
1648	Norway Maple	17	Good but bad leaner
1647	Norway Maple	16	Good but bad leaner
1646	Magnolia (Quad)	10, 4, 4, 3	Good
1645	Norway Spruce	35	Poor, Choked by Poison Ivy
Untagged	Norway Spruce	~30"	Fair, Poison Ivy, tree near parking area
1644	Norway Spruce	~28	Fair
1643	Norway Spruce	~22	Fair
1642	Multi Trunk Taxa		Good
1641	Norway Spruce	30	Good
1640	Norway Spruce	32	Good
1639	Norway Spruce	33	Good
1638	Blue Spruce	19	Fair, One sided, Poison Ivy
1637	Norway Spruce	28	Good
1636	Eastern White Pine	40	Good
1635	Eastern White Pine	28	Fair, One sided
1634	Cedar (check SPP.)	25	Good
1633	Apple	13	Gnarly Old Apple Tree
1632	Triple Magnolia	9 + 11 + 13	Good
1631	Twin Pear	12 + 12	Good, Needs Pruning
1630	Eastern White Pine	15	Good, but viny
1629	Twin Pignut Hickory	23 + 17	Good, but slight southern lean
1628	Red Oak	11	Good
1627	Norway Spruce	26	Good
1626	Norway Spruce	22	Good
1625	Norway Spruce	28	Good, but viny
1624	Norway Spruce	22	Good
1623	Norway Spruce	25	Good
1622	Norway Spruce	24	Good
1621	Ailanthus	16	Good but a garbage tree
1620	Norway Spruce	24	Good, but viny
1619	Norway Spruce	30	Good, but viny
1618	Tulip Poplar	21	Good

TREES WEST OF STREAM

Tag #	Species	DBH	Condition
1600	Tulip poplar	32	Good
1599	Red maple	19	Good
1598	Red maple	224	Good
1597	Red maple	36	Poor
1596	Red maple	13	Good
1595	Red maple	22	Poor
1594	Tulip poplar	11	Fair
1593	Red maple	21	Good
1592	Red maple	18	Good
1591	Pin Oak	30	Good but leaning
1590	Pin Oak	24	Good but leaning
1589	Beech	16	Good
1588	Red maple	42	Good/Fair Craggy
1587	Black birch	11	Fair
1586	Triple Beech	21/15/9	Good
1585	Red Oak	20	Good
1584	Pignut hickory	24	Good
1583	Beech	11	Good
1582	Sugar maple	12	Good
1581	Black birch	17	Good
1580	Red Oak	23	Fair but leaning
1579	Red Oak	11	Fair but tangled with adjacent tree
1578	Norway maple	12	Good
1577	Tulip poplar	26	Good but leaning
1576	Beech	12	Good
1575	Birch	20	Fair
1574	Norway maple	10	Good

LEGEND

- 222 — EXISTING GRADING
- ×222.8 — EXISTING SPOT GRADE
- 200 — PROPOSED GRADING
- PROPERTY LINE / RIGHT OF WAY
- EDGE OF WETLAND
- 100' WETLAND BUFFER
- PROPOSED BUILDING AND DRIVE
- EXISTING TREE TO BE PROTECTED
- EXISTING TREE TO BE REMOVED

TREE #1659 BLEW DOWN DURING STORM ON 2/24/16

100' BUFFER AS PER OSSINING CODE #105-38(B)(1)

50' BUFFER AS PER OSSINING CODE #105-38(B)(2)

0 15 30 60

SCALE: 1"=30'-0"

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PROJECT # 15-18

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DRAWN BY: TK
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TREE PLAN

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-107

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CADC\3D-15-18 BELDOTTI MANAGEMENT CORP15-18 SITE PLAN 2-22-16.DWG

PROPOSED FIRE HYDRANT (TYP)

PROPOSED BUILDING #1
F.F. ELEVATION = 315.0
PARKING ELEVATION = 305.0

PROPOSED BUILDING #2
F.F. ELEVATION = 317.2
PARKING ELEVATION = 307.2

PROPOSED EMERGENCYH ENTRANCE ONLY
TO BE SECURED WITH CHAIN TO PREVENT
TRAFFIC FROM USING IT AS AN ENTRANCE

PROPOSED EMERGENCYH ENTRANCE ONLY

60.0'
R28.0'
26.0'
50.0'
17.9'
15.0'

LEGEND

- PROPERTY LINE / RIGHT OF WAY
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER

0 15 30 60

SCALE: 1"=30'-0"

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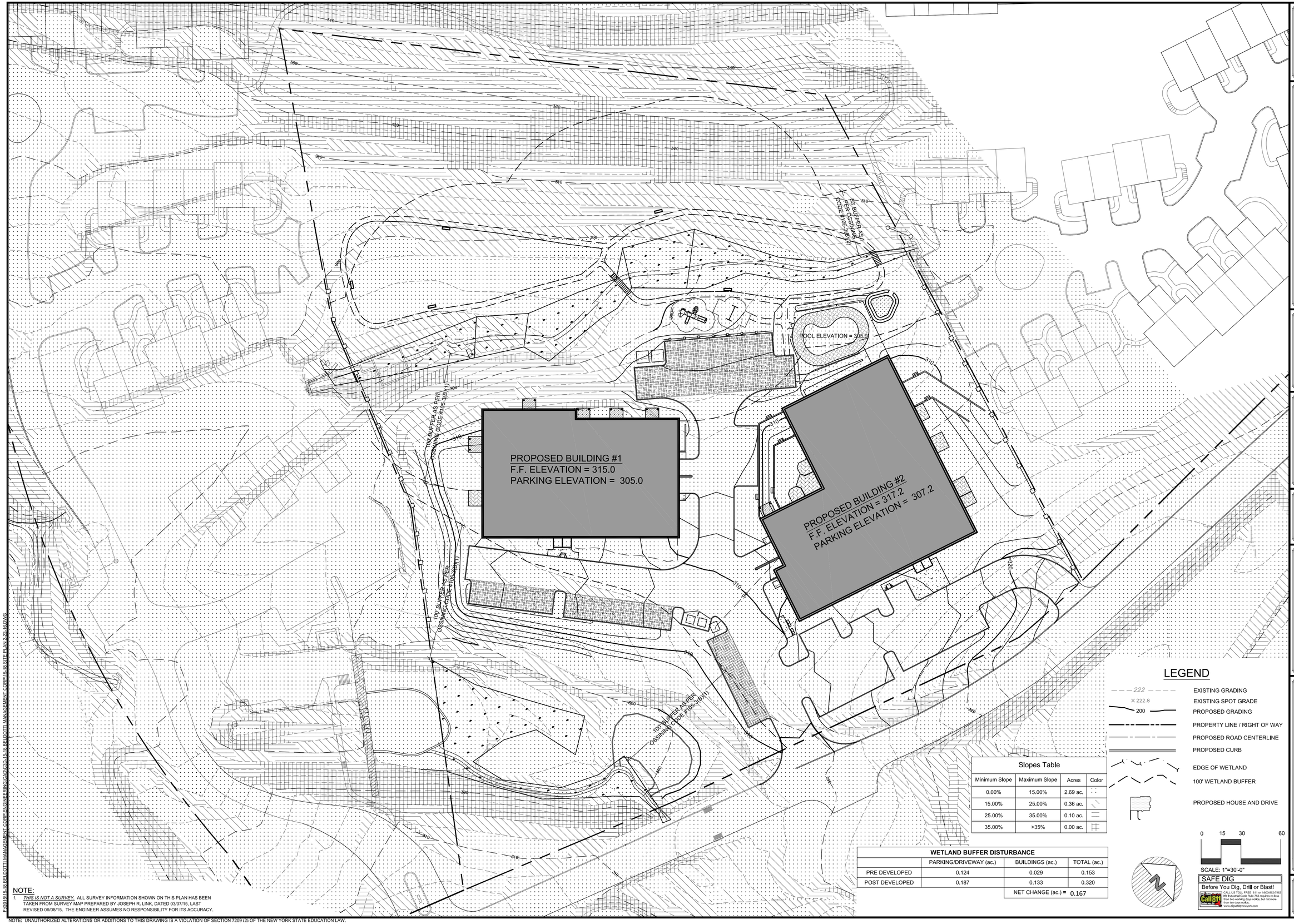
Fire Access Plan

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-108

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CADC\3D-15-18 BELDOTTI MANAGEMENT CORP15-18 SITE PLAN 2-22-16.DWG



LEGEND

- EXISTING GRADING
- EXISTING SPOT GRADE
- PROPOSED GRADING
- PROPERTY LINE / RIGHT OF WAY
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER
- PROPOSED HOUSE AND DRIVE

Slopes Table			
Minimum Slope	Maximum Slope	Acres	Color
0.00%	15.00%	2.69 ac.	
15.00%	25.00%	0.36 ac.	
25.00%	35.00%	0.10 ac.	
35.00%	>35%	0.00 ac.	

WETLAND BUFFER DISTURBANCE			
	PARKING/DRIVEWAY (ac.)	BUILDINGS (ac.)	TOTAL (ac.)
PRE DEVELOPED	0.124	0.029	0.153
POST DEVELOPED	0.187	0.133	0.320
		NET CHANGE (ac.) =	0.167

0 15 30 60

SCALE: 1"=30'-0"

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ENVIRONMENTAL CONTRAINTS MAP

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-109

PER SECTION 200-16C(3)(a)
99,985 SF OF OPEN SPACE

PER SECTION 200-16C(1)(d)
RECREATION AREA
21,200 SF. REQUIRED
23,045 SF PROVIDED

50' BUFFER AS PER OSSINING CODE #105-3(B)(1)

PROPOSED WOODEN PEDESTRIAN BRIDGE
PROPOSED WOOD CHIP WALKING PATH
PROPOSED SWINGSET PLAY AREA
PROPOSED POOL

PROPOSED BENCHES

PROPOSED WOODEN PEDESTRIAN BRIDGE

100' BUFFER AS PER OSSINING CODE #105-3(B)(1)

PROPOSED BUILDING #1
F.F. ELEVATION = 315.0
PARKING ELEVATION = 305.0

PROPOSED BUILDING #2
F.F. ELEVATION = 317.2
PARKING ELEVATION = 307.2

100' BUFFER AS PER OSSINING CODE #105-3(B)(1)

PER SECTION 200-16C(3)(a)
32,311 SF OF OPEN SPACE

100' BUFFER AS PER OSSINING CODE #105-3(B)(1)

ZONING REGULATION NOTES:

1. AT LEAST 1/3 OF THE NET SITE AREA SHALL BE DEVOTED TO PERMANENT OPEN SPACE AND/OR FOR SITES SUITABLE FOR RECREATION AS REQUIRED BY NOTE 2. UNDEVELOPED PERMANENT OPEN SPACE SHALL BE PROVIDED AND GUARANTEED AT THE RATE OF 1,500 SQUARE FEET PER BEDROOM.
2. THERE SHALL BE PROVIDED ON THE SAME LOT A SUITABLY EQUIPPED AND LANDSCAPED CHILDREN'S PLAY AREA WITH A MINIMUM OF 400 SQUARE FEET FOR EACH DWELLING UNIT.

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RECREATION AREA REQUIREMENTS

NUMBER OF UNITS	REQUIRED SF PER UNIT	AREA REQUIRED	AREA PROVIDED
53	400 SF	21,200 SF	23,045 SF

OPEN SPACE REQUIREMENTS

APARTMENTS & TYPE	BEDROOMS	OPEN SPACE REQUIRED	OPEN SPACE PROVIDED
ONE BEDROOM - 40	40 x 1,500 SF	60,000 SF	
TWO BEDROOM - 13	26 X 1,500 SF	39,000 SF	
TOTALS - 53	66 BEDROOMS	99,000 SF	
REAR OF PROPERTY			99,985 SF
FRONT OF PROPERTY			32,311 SF
TOTAL PROVIDED			132,296 SF

LEGEND

- PROPERTY LINE / RIGHT OF WAY
- PROPOSED ROAD CENTERLINE
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER
- PROPOSED RECREATION AREA
- PERMANENT OPEN SPACE
- PROPOSED HOUSE AND DRIVE

0 15 30 60
SCALE: 1"=30'-0"

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F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP\15-18 SITE PLAN 2-22-16.DWG

Site Design Consultants
Civil Engineers • Land Planners
251-F Underhill Avenue, Yorktown Heights, NY 10598
(914) 962-4488 - Fax: (914) 962-7386
www.sitedesignconsultants.com

PROJECT # 15-18

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	11/9/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments

SCALE: 1" = 30'
DRAWN BY: TK
DATE: 9/25/15

OPEN SPACE AND RECREATION PLAN

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-110

Schedule

Symbol	Label	Manufacturer	Catalog Number	Description	Number Lamps	Filename	Light Loss Factor	Lumens Per Lamp	Lamp	Wattage
	S-1	Lithonia Lighting	DSX0 LED 20C 700 40K T4M MVOLT SPA PIR1FC3V DDBXD/SSS 12 4C DM19AS DDB	DSX0 LED WITH (1) 20 LED LIGHT ENGINES, TYPE T4M OPTIC, 4000K, @ 700mA	1	DSX0_LED_20C_700_40K_T4M_MVOLT.ies	0.9	4967.066	LED	45.07
	S-2	Lithonia Lighting	DSX0 LED 20C 700 40K T4M MVOLT SPA PIR1FC3V DDBXD/SSS 12 4C DM19AS DDB	DSX0 LED WITH (1) 20 LED LIGHT ENGINES, TYPE T4M OPTIC, 4000K, @ 700mA	1	DSX0_LED_20C_700_40K_T4M_MVOLT.ies	0.9	4967.066	LED	90.14
	S-3	Lithonia Lighting	DSXB LED 16C 530 40K SYM	D-SERIES BOLLARD WITH 16 4000K LEDS OPERATED AT 530mA AND SYMMETRIC DISTRIBUTION	1	DSXB_LED_16C_530_40K_SYM.ies	0.9	1602.745	LED	28
	SC	American Electric Lighting	247CL 10LEDE10 MVOLT 4K R3 HSS/ RSS 10 4C	American Revolution Deluxe LED Full cutoff with 10LED, 4K with R3 distribution driven at 1050mA and House Side Shield.	1	247CL_10LEDE10_XXXX_4K_R3_HSS.ies	0.9	2202.522	LED	39
	SF	Hydrel	4640 18LED WHT41K HSP	6.25"DIA. X 9.25"H. LED LUMINAIRE CLEAR LENS	1	4640_18LED_WHT41K_HSP.ies	0.9	1409		19.62
	SE	Lithonia Lighting	VGR1C 50LED 3500K (CEILING MOUNT)	GATEWAY DEEP CAST ROUND LED FIXTURE WITH POLYCARBONATE LENS	1	VGR1C_50LED_3500K_(CEILING_MOUNT).ies	0.9	1605.856	(3) 3500K LED BOARDS	52

Notes:

1. These calculations are based on the listed fixtures only. Substitution of these fixtures will void all calculations.
2. Acuity Brands Lighting reserves the right to withdraw these copyrighted plans from the public record if substitutions occur.
3. ALL SUBSTITUTIONS REQUIRE NEW CALCULATIONS BASED ON THE FIXTURES SUPPLIED.
4. Luminaire near Pool area for security lighting only. Illumination will not meet NYS Sanitary Code for night swimming.

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Drive Lanes and Parking	+	1.9 fc	9.0 fc	0.1 fc	90.0:1	19.0:1
Pool Security Lighting	+	0.7 fc	4.6 fc	0.1 fc	46.0:1	7.0:1
Site Trespass	+	0.0 fc	0.5 fc	0.0 fc	N/A	N/A

LEGEND

PROPERTY LINE / RIGHT OF WAY

PROPOSED CURB

EDGE OF WETLAND

100' WETLAND BUFFER

0 15 30 60

SCALE: 1"=30'-0"

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NOTE:

1. *THIS IS NOT A SURVEY*. ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY JOSEPH R. LINK, DATED 03/07/15, LAST REVISED 06/08/15. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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PROJECT # 15-18

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Engineer:
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NYS Lic. No. 64431

Revisions:

No:	Date	Comments:
1	10/9/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments

SCALE: 1" = 30'

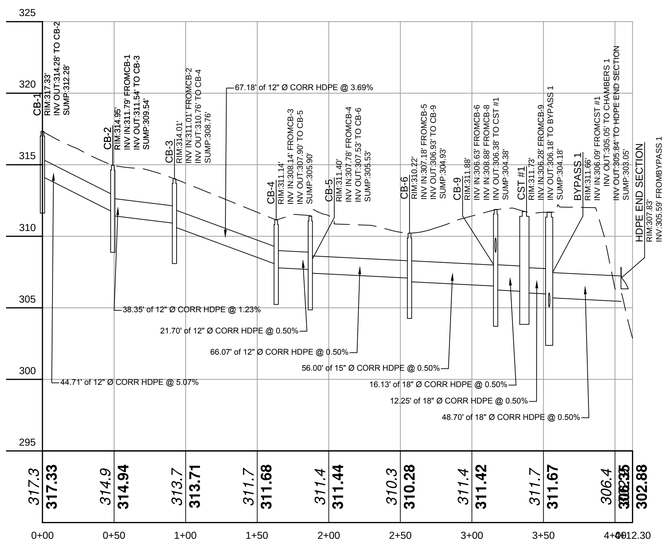
DRAWN BY: TK

DATE: 9/25/15

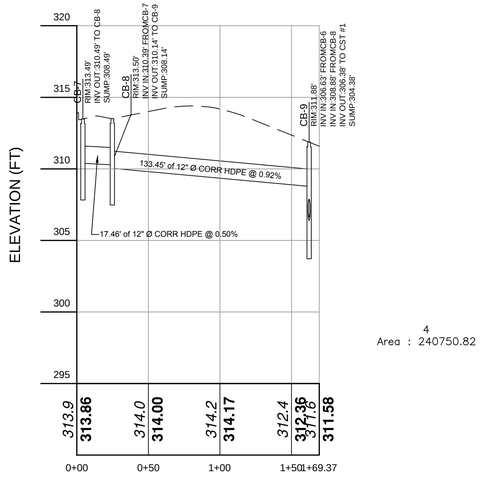
LIGHTING PLAN

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-111

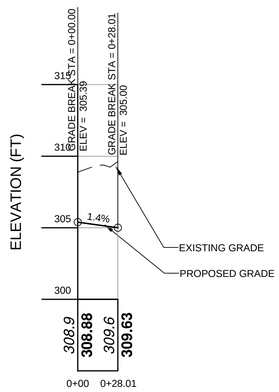


CB-1 TO OUTLET
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'

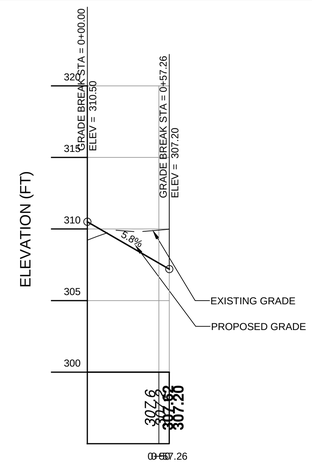


CB-6 TO CST
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'

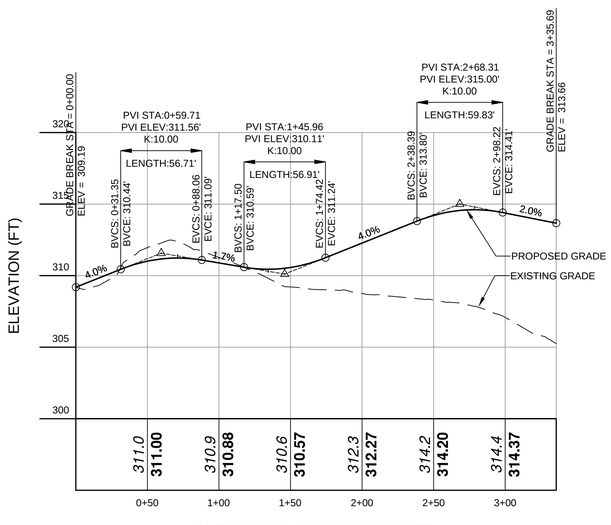
4
Area : 240750.82



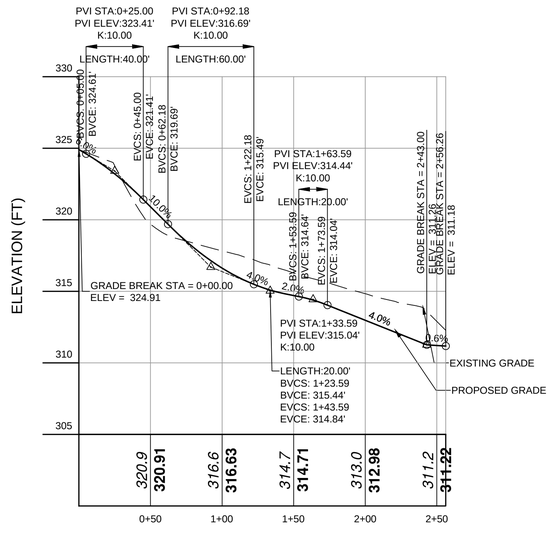
Building 1 Garage
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'



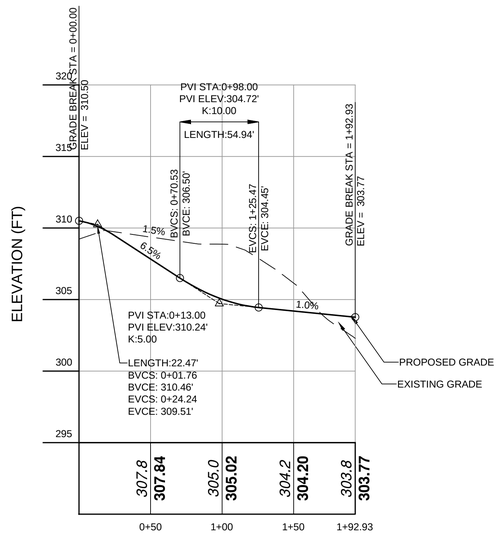
BUILDING 2 GARAGE
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'



BUILDING 1 DRIVEWAY
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'



BUILDING 2 DRIVEWAY
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'



DRIVEWAY TO LOWER PARKING
PROFILE SCALE:
HORIZ: 1"=50'
VERT: 1"=5'

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Revisions:

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SCALE: NTS
DRAWN BY: TK
DATE: 9/25/15

PROFILES

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-301

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP15-18 SITE PLAN 2-22-16.DWG

GENERAL NOTES:

1. THE ENGINEER WHOSE SEAL APPEARS HEREON HAS NOT BEEN RETAINED FOR SUPERVISION OF CONSTRUCTION, SUBSEQUENTLY,HE IS NOT RESPONSIBLE FOR CONSTRUCTION AND THEREFORE ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION PRACTICES, PROCEDURES, AND RESULTS THEREFROM.
2. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE OR HELD ACCOUNTABLE FOR THE INTEGRITY OF ANY STRUCTURES CONSTRUCTED OR UNDER CONSTRUCTION PRIOR TO THE APPROVAL OF THE PLANS.
3. THE TOWN ENGINEER'S OFFICE AND WATER DISTRICT OFFICE IS TO BE NOTIFIED 24 HOURS BEFORE COMMENCING SITE CONSTRUCTION OR WATER MAIN CONNECTION.
4. ALL WORK IS TO BE IN ACCORDANCE WITH THE TOWN CODE OF PRACTICE AND SPECIFICATIONS.
5. ALL CONDITIONS, LOCATIONS, AND DIMENSIONS SHALL BE FIELD VERIFIED AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY DISCREPANCIES.
6. ALL CHANGES MADE TO THE PLANS SHALL BE APPROVED BY THE ENGINEER WHOSE SEALAPPEARS ON THESE DRAWINGS. ANY SUCH CHANGES SHALL BE FILED AS AMENDMENTS TO THE ORIGINAL BUILDING PERMIT.
7. ALL WRITTEN DIMENSIONS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER ANY SCALED DIMENSIONS.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL IN A "CODE 53" PRIOR TO CONSTRUCTION FOR UNDERGROUND UTILITY LOCATIONS. 9. SUBSTRUCTURES AND THEIR ENCROACHMENTS BELOW GRADE, IF ANY, ARE NOT SHOWN.
9. ANY PROPOSED ELECTRIC AND/OR TELEPHONE SERVICE LINES ARE TO BE PLACED UNDERGROUND.
10. THE DESIGN ENGINEER DISCLAIMS ANY LIABILITY FOR DAMAGE OR LOSS INCURRED DURING OR AFTER CONSTRUCTION.
11. ALL CONDITIONS, LOCATIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND THE OWNER/ENGINEER NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO THE START OF WORK. THE OWNER/ENGINEER WILL EVALUATE THE SITUATION AND MODIFY THE PLAN AS NECESSARY.

CONTRACTOR RESPONSIBILITIES:

1. ALL WORK ON THE PROJECT SHALL BE PERFORMED IN A WORKMAN LIKE MANNER AND SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE INDUSTRY. THE OWNER WILL BE THE SOLE JUDGE OF THE ACCEPTABILITY OF THE WORK. MATERIALS AND WORK DEEMED UNACCEPTABLE WILL BE REMOVED AND REDONE AT THE SOLE COST AND RESPONSIBILITY OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT HIS WORK AND WILL BE HELD RESPONSIBLE FOR CONSEQUENTIAL DAMAGES DUE TO HIS ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR THE ACTS AND OMISSIONS OF HIS EMPLOYEE, AND THEIR AGENTS AND EMPLOYEES, AND ANY OTHER PERSONS PERFORMING ANY THE WORK UNDER A SEPARATE CONTRACT WITH THE CONTRACTOR.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY SHORE EXISTING UTILITIES IF REQUIRED BY CONSTRUCTION.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE THE BUILDING INSPECTOR IN ADVANCE OF HIS WORK OR AS THE INSPECTOR DEEMS APPROPRIATE.
5. ALL CONDITIONS, LOCATIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND THE OWNER/ENGINEER NOTIFIED IN WRITING OF ANY DISCREPANCIES PRIOR TO THE START OF WORK. THE OWNER/ENGINEER WILL EVALUATE THE SITUATION AND MODIFY THE PLAN AS NECESSARY.
6. ALL CHANGES MADE TO THIS PLAN SHALL BE APPROVED BY THE ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS. ANY UNAUTHORIZED ALTERATION OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.
7. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING HIS BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THIS CONTRACT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR THE ACTS AND OMISSIONS OF HIS EMPLOYEES, SUBCONTRACTORS, AND THEIR AGENTS AND EMPLOYEES, AND ANY OTHER PERSONS PERFORMING ANY OF THE WORK UNDER A CONTRACT WITH THE CONTRACTOR.
9. THE CONTRACTOR SHALL VERIFY ALL SUBSTRUCTURES ENCOUNTERED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SECURE & PAY FOR A BUILDERS RISK POLICY TO COVER THE PERIOD OF CONSTRUCTION. THE ENGINEER & OWNER SHALL BE NAMED AS ADDITIONAL INSURED. ALL CONTRACTORS EMPLOYED AT THE SITE SHALL BE COVERED BY WORKMAN'S COMPENSATION.

GENERAL CONSTRUCTION NOTES:

1. BENCH MARKS USING U.S.G.S. DATUM SHALL BE OF SUCH ELEVATION THAT THE GROUND WILL SLOPE AWAY FROM IT IN ALL DIRECTIONS.
2. CONSTRUCTION ACTIVITY SHALL BE LIMITED FROM 8:00 A.M. TO 6 P.M., AND NO CONSTRUCTION ACTIVITY SHALL OCCUR ON SUNDAYS OR LEGAL NEW YORK STATE HOLIDAYS. WHERE BLASTING IS NECESSARY, IT SHALL OCCUR FROM MONDAY THROUGH FRIDAY BETWEEN THE HOURS OF 8:00 A.M. AND 6:00 P.M. NO BLASTING SHALL OCCUR ON HOLIDAYS, SATURDAY OR SUNDAY. ALL BLASTING SHALL ALSO BE COMPLETED IN ACCORDANCE WITH THE TOWN OF OSSINING AND NEW YORK STATE BLASTING ORDINANCES.
3. ANY SOIL THAT IS UNSUITABLE FOR DEVELOPMENT OF BUILDINGS OR ROADWAYS SHALL BE REMOVED FROM AREAS TO BE DEVELOPED AND SHALL BE DISPOSED OF WITHIN THE SITE IN NEW EMBANKMENTS WHERE STRUCTURAL LOADING, I.E. A BUILDING OR ROADWAY, WILL NOT TAKE PLACE. WHEN CONSTRUCTION IS PROPOSED TO OCCUR IN SPECIFIC AREAS WHERE SOILS ARE OF QUESTIONABLE SUITABILITY, THE APPLICANT SHALL PROVIDE SOILS ENGINEERING REPORTS AS REQUIRED BY THE PLANNING BOARD ENGINEER, PRIOR TO THE CONSTRUCTION OF ROADWAYS AND, AS REQUIRED BY THE BUILDING INSPECTOR, PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
4. NO TOPSOIL SHALL BE REMOVED FROM THE SITE.
5. ROCK CUT STABILITY IS TO BE FIELD VERIFIED BY GEOTECHNICAL ENGINEER AND SHALL BE MODIFIED IF REQUIRED.
6. NO CRUSHING/PROCESSING IS PERMITTED ON THE SITE WITHOUT PRIOR APPROVAL BY THE TOWN OF OSSINING PLANNING BOARD.

GENERAL STORM DRAINAGE & UTILITY NOTES

1. ALL UTILITIES, INCLUDING ELECTRIC LINES, TELEPHONE, WATER, SANITARY SEWER LINES, AND STORM SEWER LINES SHALL BE LOCATED UNDERGROUND AND SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF OSSINING AND THE UTILITY COMPANIES HAVING JURISDICTION.
2. LOCATION OF GAS AND WATER VALVES, ELECTRIC AND TELEPHONE POLES ARE TO BE DETERMINED BY PROPER AUTHORITIES AND APPROVED, AS TO LOCATION, BY THE TOWN ENGINEER.
3. EACH BUILDING CONSTRUCTED HEREON SHALL BE OF SUCH AN ELEVATION THAT THE GROUND WILL SLOPE AWAY FROM IT IN ALL DIRECTIONS. IN THE EVENT THAT THIS IS NOT FEASIBLE, THE CONTRACTOR SHALL INSTALL TYPICAL YARD DRAINS AS REQUIRED AND CONNECT THEM TO THE STORM DRAINAGE SYSTEM OR AS DIRECTED BY THE PROJECT ENGINEER.
4. ROOF LEADERS AND FOOTING DRAINS SHALL EMPTY INTO THE STORM DRAINAGE SYSTEM OR DISCHARGE DIRECTLY TO STORMWATER MANAGEMENT SYSTEMS IF GRADES PERMIT, AND CONNECTION TO THE STORM SYSTEM IS NOT FEASIBLE, FOOTING DRAINS ONLY MAY DISCHARGE TO DAYLIGHT AT THE REAR OF BUILDINGS. FOOTING DRAINS SHALL EXTEND A MINIMUM OF 30 FT. FROM THE REAR FACE OF THE BUILDING WHEN POSSIBLE. UNDER NO CIRCUMSTANCES SHALL THE DISCHARGE OF GROUND WATER OR STORM WATER, EITHER BY GRAVITY OR BY PUMPING, BE DISCHARGED TO ANY SANITARY SEWER SYSTEM.
5. ANY REVISIONS AND/OR ADDITIONS TO THE ROAD STORM DRAINAGE SYSTEMS CURRENTLY SHOWN ON THE PLANS WHICH ARE DEEMED NECESSARY DURING CONSTRUCTION MUST BE MADE BY THE CONTRACTOR AS REQUIRED BY THE TOWN AND SHALL BE SHOWN ON THE AS-BUILT DRAWINGS.
6. STORM DRAIN PIPING TO BE HIGH DENSITY POLYETHYLENE AS SHOWN ON THE CONSTRUCTION DRAWINGS. MINIMUM COVER TO BE 2' UNLESS OTHERWISE NOTED.
7. INTERCEPTOR DRAINS ARE TO BE INSTALLED WHERE REQUIRED BY THE TOWN OR PROJECT ENGINEER DURING ROAD CONSTRUCTION.
8. ALL EXISTING UNDERGROUND DRAINS ENCOUNTERED DURING CONSTRUCTION OF PROPOSED ROADS ARE TO BE CONNECTED TO PROPOSED DRAINAGE IMPROVEMENTS. CONNECTIONS TO BE APPROVED BY THE TOWN ENGINEER.
9. PRIOR TO FINAL APPROVAL AND OPERATION OF DRAINAGE SYSTEM, CONTRACTOR SHALL CLEAR ALL ACCUMULATED SEDIMENT AND/OR DEBRIS FROM DRAINAGE STRUCTURES, MANHOLES, CULVERTS, OUTLETS AND DRAIN INLETS. ENGINEER SHALL BE NOTIFIED FOR FINAL INSPECTION.
10. ALL STRUCTURES SHALL BE SET ONE INCH BELOW PAVEMENT.
11. STREET OPENING PERMIT FROM THE TOWN OF OSSINING D.P.W. MAY BE REQUIRED FOR INSTALLATIONS IN PUBLIC ROADS.

WALL NOTES:

1. EXCAVATION IN GENERAL SHALL CONFORM TO THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS.
2. THE ENGINEER SHALL BE NOTIFIED OF UNSUITABLE SUB-GRADE SOILS PRIOR TO PLACEMENT OF WALL.
3. WALLS TO BE CONSTRUCTED ON VIRGIN IN-SITU SOIL SHALL HAVE A MINIMUM ALLOWABLE BEARING CAPACITY OF 2 TSF. ALL OTHER CONDITIONS SHALL BE APPROVED BY THE GEOTECHINICAL ENGINEER.
4. TO INSURE A PROPER BEARING SURFACE, THE WALL SHALL BE CONSTRUCTED ON NATURAL IN-SITU SOIL, THE CONTRACTOR SHALL STRIP ALL TOP SOIL. THE AREA SHALL THEN BE COMPACTED USING SUITABLE COMPACTION EQUIPMENT. A MINIMUM OF 3 PASSES SHALL BE MADE.
5. WALLS SHALL NOT BE CONSTRUCTED ON WET OR FROZEN GROUND.
6. SOILS USED AS BACKFILL SHALL CONSIST OF CLEAN DRY SOIL. THE MATERIAL SHALL BE GRANULAR AND FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL. IN GENERAL THE SOIL SHALL BE NON-PLASTIC WITH A PLASTICITY INDEX LESS THAN 5 AND SHALL CONFORM TO THE AASHTO SOIL CLASSIFICATION SYSTEM FOR AN "A-1-A" SOIL . HOWEVER THE MAXIMUM SIZE SHALL BE 6". IN GENERAL ALL FILL SHALL BE APPROVED BY THE ENGINEER PRIOR TO IT'S USE. WET MATERIAL OR UNSUITABLE MATERIAL SHOULD NOT BE USED.
7. BACKFILL SHALL BE PLACED AND COMPACTED IN A MAXIMUM 12" LIFTS.
8. ALL BOULDER RETAINING WALLS SHALL HAVE A GEOTEXTILE FABRIC BACKING FOR THE FULL HIEGHT OF THE WALL AS MANUFACTURED BY MIRAFI OR APPROVED EQUAL.
9. IF GROUNDWATER IS ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO DETERMINE IF THE ADDITION OF AN UNDERDRAIN MAY BE REQUIRED.
10. THE CONTRACTOR SHALL NOT USE LARGE OR HEAVY CONSTRUCTION EQUIPMENT WITHIN 5' OF THE RETAINING WALLS OR NEW FOUNDATION WALLS. HAND OPERATED COMPACTING EQUIPMENT SHALL BE USED WITHIN 5' OF THE WALL FACE.
11. ALTERNATE WALL DESIGNS MUST BE SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER THE MINIMUM FACTORS OF SAFETY FOR SLIDING AND OVERTURNING SHALL BE 2.0.
12. ALTERNATE WALL DESIGNS MUST BE SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER THE MINIMUM FACTORS OF SAFETY FOR SLIDING AND OVERTURNING SHALL BE 2.0.

WATERMAIN NOTES

I. DISTRIBUTION SYSTEM - WATERMAIN

A. GENERAL

THE CONTRACTOR SHALL PERFORM THE NECESSARY EXCAVATION, BACKFILLING, CLEARING, GRUBBING, SHEETING, SHORING, DO ALL SHAPING OF TRENCHES, PUMPING AND BAILING, LAYING AND JOINING OF ALL PIPES, PROTECT AND SUPPORT EXISTING STRUCTURES AND REPAIR THEM, IF DAMAGED, AND ALL ELSE NECESSARY TO COMPLETE THE WORK.

THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, LABOR, AND TOOLS NECESSARY TO COMPLETE THE WORK IN A SAFE, NEAT, AND WORKMANLIKE MANNER.

B. SITE AND ACCESS CLEARING (WITHIN EASEMENTS)

THE CONTRACTOR SHALL CONFINE ALL CLEARING OPERATIONS TO WITHIN THE IMMEDIATE AREAS THAT ARE ESSENTIAL FOR CONSTRUCTION OF THE WORK.

C. STOCKPILING OF SUITABLE BACKFILL MATERIAL

THE CONTRACTOR SHALL BE PREPARED WHEN EXCAVATING THE TRENCH TO SEPARATE SUITABLE BACKFILL MATERIAL FROM UNSUITABLE MATERIAL FOR USE AS BACKFILL ADJACENT TO THE PIPE.

D. PROTECTION OF EXISTING STRUCTURES AND UTILITIES

SPECIAL PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT OVERHEAD POWER LINES, WATERMAINS, GAS MAINS, ELECTRIC AND TELEPHONE CONDUITS, STORM AND SANITARY SEWERS, CULVERTS, BUILDINGS AND OTHER EXISTING STRUCTURES IN AND NEAR THE EXCAVATION. IN ALL CASES, WHETHER UNDERGROUND STRUCTURES HAVE OR HAVE NOT BEEN DELINEATED, THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE ACCEPTS NO RESPONSIBILITY FOR THEIR LOCATION. 'UNDERGROUND UTILITIES" LOCATES EXISTING UNDERGROUND UTILITIES FREE OF CHARGE. THE PHONE NUMBER IS 1-800-245-2828.

GUTTERS, SEWERS, DRAINS AND DITCHES SHALL BE KEPT OPEN AT ALL TIMES FOR SURFACE DRAINAGE. NO DAMMING OR PONDING OF WATER IN GUTTERS OR OTHER WATERWAYS WILL BE PERMITTED EXCEPT WHERE STREAM CROSSINGS ARE NECESSARY AND THEN ONLY TO AN EXTENT WHICH THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE SHALL CONSIDER NECESSARY. THE CONTRACTOR SHALL NOT DIRECT ANY FLOW OF WATER ACROSS OR OVER PAVEMENTS EXCEPT THROUGH APPROVED PIPES OR PROPERLY CONSTRUCTED TROUGHS OF SUCH SIZES AND LENGTHS AS MAY BE REQUIRED, AND PLACE THE SAME AS DIRECTED. THE GRADING IN THE VICINITY OF TRENCHES SHALL BE CONTROLLED SO THAT THE GROUND SURFACE IS PROPERLY PITCHED TO PREVENT WATER RUNNING IN THE TRENCHING. THE CONTRACTOR SHALL NOT COMMENCE OPERATIONS INVOLVING ANY PUBLIC UTILITY BEFORE HAVING GIVEN WRITTEN NOTICE TO THE COMPANY OR OWNER, OR ITS AGENTS, AND SHALL COOPERATE WITH THE COMPANY'S OR OWNER'S FORCES IN PROTECTING AND PREVENTING DAMAGE TO THE PROPERTY.

THE CONTRACTOR WILL, AT HIS OWN EXPENSE, BE RESPONSIBLE FOR DIRECT OR INDIRECT DAMAGE THAT MAY BE DONE TO ANY UTILITY OR STRUCTURE IN THE PROSECUTION OF HIS WORK. THE LIABILITY OF THE CONTRACTOR IS ABSOLUTE AND IS NOT DEPENDENT UPON ANY QUESTIONS OF NEGLIGENCE ON HIS PART OR ON THE PART OF HIS AGENT, OR EMPLOYEES, AND THE NEGLECT OF THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE TO DIRECT THE CONTRACTOR TO TAKE ANY PARTICULAR PRECAUTION OR TO REFRAIN FROM DOING SUCH DAMAGE.

SHOULD THE POSITION OF ANY PIPE, CONDUIT, POLE OR OTHER STRUCTURES, ABOVE OR BELOW THE GROUND, BE SUCH AS TO REQUIRE ITS REMOVAL, REALIGNMENT, OR CHANGE DUE TO WORK TO BE DONE, REALIGNMENT OR CHANGE WILL BE DONE BY OR UNDER SUPERVISION OF THE OWNER OF THE OBSTRUCTIONS. THE CONTRACTOR SHALL UNCOVER AND SUSTAIN THE STRUCTURES, AFTER SUCH REALIGNMENT OR CHANGE.

THE CONTACTOR SHALL NOT INTERFERE WITH ANY PERSONS, OR WITH THE OWNER IN PROTECTING, REMOVING, CHANGING OR REPLACING THEIR PIPES, CONDUITS, POLES OR OTHER STRUCTURES; BUT HE SHALL SUFFER SAID PERSONS OR THE OWNER TO TAKE ALL SUCH MEASURES AS THEY MAY DEEM NECESSARY OR ADVISABLE FOR THE PURPOSE AFORESAID, AND THE CONTRACTOR SHALL THEREBY BE IN NO WAY RELIEVED OF ANY OF HIS RESPONSIBILITIES.

THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE OWNER OF THE RESPECTIVE UTILITY PRIOR TO RELOCATION OR INTERRUPTION OF SERVICE. ALL WORK NECESSARY FOR THE RELOCATION SHALL BE PERFORMED BY THE CONTRACTOR, OR BY THE OWNER AT THE OWNER'S OPTION, AND TO THE SATISFACTION OF THE OWNER. WHERE SERVICE IS INTERRUPTED, THE CONTRACTOR SHALL COOPERATE IN RESTORING SERVICE PROMPTLY. ALL CHARGES FOR DAMAGES DONE TO UTILITIES SHALL BE PAID BY THE CONTRACTOR.

E. CONSTRUCTION OF ROAD RIGHT-OF-WAY

CONSTRUCTION IN THE ROAD RIGHT-OF-WAY SHALL AT ALL TIMES BE PERFORMED WITH MINIMUM DISTURBANCE TO TRAFFIC WITH SUFFICIENT BARRICADES AND DIRECTION. DETOURS CAN BE INSTITUTED WITH APPROVAL OF THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE, OR STATE, COUNTY, OR LOCAL AUTHORITIES. PAVEMENT SHALL BE CUT PRIOR TO REMOVAL. HOLES AND SETTLEMENTS IN THE TRENCHES SHALL BE IMMEDIATELY FILLED TO THE ORIGINAL GRADE ELEVATION WITH THE SPECIFIED MATERIALS.

F. EXCAVATION AND PREPARATION OF TRENCH

THE CONTRACTOR SHALL PROCEED WITH CAUTION IN THE EXCAVATION AND PREPARATION OF THE TRENCH SO THAT THE EXACT LOCATION OF UNDERGROUND STRUCTURES, BOTH KNOWN AND UNKNOWN, MAY BE DETERMINED. THE TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND DEPTH REQUIRED. MINIMUM DEPTH OF COVER FROM SURFACE OF GROUND TO TOP OF PIPE BARREL SHALL BE FOUR FEET (4'). NO TRENCH SHALL BE EXCAVATED MORE THAN FIVE HUNDRED LINEAL FEET (500 LF) IN ADVANCE OF PIPE LAYING UNLESS AUTHORIZED BY THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE. THE TRENCH SHALL BE SO BRACED AND DRAINED THAT THE WORKMEN MAY WORK THEREIN SAFELY AND EFFICIENTLY. IT IS ESSENTIAL THAT THE DISCHARGE OF THE TRENCH DEWATERING PUMPS BE CONDUCTED TO NATURAL DRAINAGE CHANNELS OR DRAINS, AS IN ACCORDANCE WITH OSHA REQUIREMENTS.

THE WIDTH OF THE TRENCH SHALL BE OF ADEQUATE SIZE TO PERMIT THE PIPE TO BE LAID AND JOINTED PROPERLY, BUT SHALL NOT EXCEED THE SUM OF TWENTY-FOUR INCHES(24") PLUS THE PIPE OUTSIDE DIAMETER, AND THE BACKFILL TO BE PLACED AND COMPACTED AS SPECIFIED.

LEDGE ROCK, BOULDERS AND LARGE STONES SHALL BE REMOVED TO PROVIDE A CLEARANCE OF AT LEAST SIX INCHES (6") BELOW AND ON EACH SIDE OF ALL PIPES AND FITTINGS.

THE TRENCH SHALL BE EXCAVATED TO THE DEPTH REQUIRED SO AS TO PROVIDE A UNIFORM AND CONTINUOUS BEARING AND SUPPORT FOR THE PIPE ON SOLID AND UNDISTURBED GROUND AT EVERY POINT. WHERE THE BOTTOM OF THE TRENCH AT A SUBGRADE IS FOUND TO BE UNSTABLE, OR TO INCLUDE ASHES, CINDERS, ALL TYPES OF REFUSE, VEGETABLE OR OTHER ORGANIC MATERIAL OR LARGE PICES OF FRAGMENTS OR INORGANIC MATERIAL WHICH IN THE JUDGEMENT OF THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE SHOULD BE REMOVED, THE CONTRACTOR SHALL EXCAVATE AND REMOVE SUCH UNSUITABLE MATERIAL TO THE WIDTH AND DEPTH ORDERED BY THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE.

ANY PART OF THE BOTTOM OF THE TRENCH EXCAVATED BELOW THE SPECIFIED GRADE SHALL BE CORRECTED WITH APPROVED BEDDING MATERIAL, SUCH AS THOROUGHLY COMPACTED CRUSHED STONE, GRAVEL, OR CONCRETE AS DIRECTED BY THE TOWN ENGINEER, WATER SUPERINTENDENT, OR AUTHORIZED REPRESENTATIVE. THE FINISHED SUBGRADE SHALL BE PREPARED ACCURATELY BY MEANS OF HAND TOOLS.

GENERAL WATER MAIN NOTES:

1. ALL PROPOSED WATERMAIN MATERIALS, CONSTRUCTION AND INSTALLATION SHALL CONFORM TO ALL APPLICABLE RULES AND REGULATIONS OF THE TOWN OF OSSINING WATER DEPARTMENT AND THE WESTCHESTER COUNTY HEALTH DEPARTMENT STANDARDS AND SPECIFICATIONS.
2. THE RECORDS OF THE TOWN OF OSSINING INDICATE THAT THERE IS ADEQUATE WATER PRESSURE AND CAPACITY AS REQURIED TO SERVE THIS PROJECT.
3. ALL BACKFLOW PREVENTION DEVICES ASSOCIATED WITH THE FIRE AND DOMESTIC SERVICES FOR EACH OF THE PROPOSED OFFICE SPACES IN THE TYPE "B" UNITS SHALL BE LOCATED INTERNAL TO THE BUILDING AND SHALL REQUIRE SEPARATE APPROVAL BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH.
4. ALL FIRE AND DOMESTIC SERVICE CONNECTIONS FROM THE PROPOSED WATER MAIN SHALL BE INSTALLED WITH WET TAPS AFTER THE CONTRACTOR HAS INSTALLED THE MAIN AND IT HAS BEEN APPROVED BY THE TOWN OF OSSINING WATER DEPARTMENT AND THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH.
5. THE CONTRACTOR IS ADVISED THAT BEFORE HE CONNECTS TO THE EXISTING WATER SYSTEM, HE MUST ADVISE AND COORDINATE HIS OPERATIONS WITH THE TOWN OF OSSINING WATER DEPARTMENT'S SUPERINTENDENT. MEANS AND METHODS USED TO CONNECT TO THE EXISTING SERVICE SHALL BE APPROVED BY THE TOWN AND SHALL INCLUDE BUT NOT BE LIMITED TO WET TAPS OR OTHERWISE.
6. THE CONTRACTOR IS TO MAINTAIN CONSTANT FLOW AND PRESSURE IN ALL WATER MAINS AT ALL TIMES. IF THE NEED SHOULD ARISE THAT WATER SERVICE IS TO BE INTERRUPTED FOR A SHORT PERIOD, IT MUST BE COORDINATED WITH AND APPROVED BY THE ENGINEER AND THE TOWN OF OSSINING SUPERINTENDENT OF WATER.
7. WATER MAINS CROSSING HOUSE SEWERS, STORM SEWERS OR SANITARY SEWERS SHALL BE LAID TO PROVIDE A VERTICAL SEPARATION OF A MINIMUM OF 18" BETWEEN THE BOTTOM OF WATER MAIN AND TOP OF SEWER.
8. WATER MAINS PASSING UNDER HOUSE SEWERS, IN ADDITION, SHALL BE PROTECTED BY PROVIDING A VERTICAL SEPARATION OF 18" MINIMUM FROM THE BOTTOM OF THE SEWER TO THE TOP OF THE WATER MAIN AND ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF THE JOINTS AND THE SEWER SETTLING AND BREAKING THE WATER MAIN. IN ADDITION THE LENGTH OF WATER PIPE IS TO BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER. NO WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER OR SEWER MANHOLE.
9. THE COVER OVER THE TOP OF THE WATER MAIN SHALL BE A MINIMUM OF 4 FEET TO A MAXIMUM OF 5.5 FT.
10. WATER MAINS SHALL BE CLASS 54 DUCTILE IRON PIPES (DIP) TYTON JOINT TYPE AND FITTINGS SHALL BE FACTORY CEMENT LINED CLASS 54. ALL FITTINGS SHALL HAVE MECHANICAL JOINTS AND SHALL BE PRESSURE RATED AT 250 PSI. ALL NECESSARY JOINT MATERIALS SHALL BE FURNISHED. WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH AWWA STANDARDS, LATEST REVISION.
11. ALL GATE VALVES SHALL BE MUELLER RESILIENT WEDGE (TURN LEFT OPEN) TYPE AND SHALL MEET AWWA STANDARDS, LATEST REVISION.
12. ALL SERVICE CONNECTIONS AND SMALL DIAMETER EXTENSIONS SHALL CONFORM TO AWWA C-151.
13. RETAINER GLANDS AND CONCRETE THRUST BLOCKS OR RODS SHALL BE USED AT ALL LOCATIONS WHERE RESTRAINTS EXIST.
14. INSTALLATION AND TESTING OF THE WATER MAIN SHALL BE INSPECTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH. THE CONTRACTOR SHALL PROVIDE THE HEALTH DEPARTMENT A MINIMUM 48 HOURS NOTICE PRIOR TO ANY PRESSURE/LEAKAGE TESTS AND/OR DISINFECTION AND BACTERIOLOGICAL TESTS PERFORMED ON THE PROPOSED WATER MAIN. THE RESULTS OF THE ABOVE TESTS MUST BE ACCEPTED BY THE WCHD PRIOR TO USE OF THE MAIN.
15. ASBUILT DRAWINGS SHALL SHOW DIMENSIONS BETWEEN ALL VALVE TURNING NUTS AND FINISH GRADE.
16. INSTALLATION, DISINFECTION AND TESTING TO BE WITNESSED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER OR TOWN OF OSSINING ENGINEER.
17. ALL HYDRANTS AND VALVES SHALL BE AS MANUFACTURED BY THE MUELLER COMPANY.
18. THE FINAL LOCATIONS OF FIRE HYDRANTS AND SIAMESE CONNECTIONS SHALL BE DETERMINED BY AND COORDINATED WITH THE TOWN OF OSSINING FIRE DEPARTMENT.
19. IF, DURING CONSTRUCTION, IT IS FOUND THAT THE REQUIRED SEPARATION OF WATER MAINS, SANITARY SEWERS, STORM SEWERS, AND BUILDING SEWERS CANNOT BE MET, THE DEVELOPER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONTACT THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH. APPROVAL BY THE WCHD IS REQUIRED PRIOR TO ANY FIELD CHANGES THAT WILL AFFECT MINIMUM WATER/SEWER SEPARATION DISTANCES.
20. ALL TYPES OF INSTALLED PIPE SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C-600.
21. ALL NEW, CLEANED OR REPAIRED WATER MAINS SHALL BE DISINFECTED AND BACTERIOLOGICAL TESTING PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C-651-05 (EXCEPT FOR SECTION 4.4.2 WHICH IS NOT APPROVABLE). THE SPECIFICATIONS INCLUDE DETAILED PROCEDURES FOR THE ADEQUATE FLUSHING, DISINFECTION, AND MICRO- BIOLOGICAL TESTING OF ALL WATER MAINS.
22. ROAD OPENINGS SHALL BE DONE IN ACCORDANCE WITH CONDITIONS OF PERMIT, AND COORDINATED WITH THE TOWN OF OSSINING.

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PROJECT # 15-18

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Revisions:

No.	Date	Comments:
1	11/5/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: NTS
DRAWN BY: TK
DATE: 9/25/15

NOTES

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet G-1

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NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.

Construction Sequence

Recommended Sequence of Construction

Use of erosion and sediment control structures and practices are important for maintaining site stability under runoff and during daily construction activities. The Construction Sequence should be staged with erosion and sediment controls, as follows, with all controls in place and implemented prior to respective infrastructure construction. As construction proceeds, the controls should be monitored, maintained and replaced as needed. Additional controls may be required as needed to address unforeseen situations.

Refer to The Construction Drawings for all plans and details which relate to the Construction Sequence. This Sequence should be followed in conjunction with all Plans, Notes, and the Stormwater Pollution Prevention Plan. Prior to the commencement of work, the Owner and General Contractor shall read and understand the Sequence for Construction. The Sequence shall be discussed at the time of the Pre-construction Meeting.

During construction of the project, the Contractor is responsible to coordinate all required inspections with various agencies and the Project Engineer.

Construction Sequence

General Sequence: The general sequence applies to the start of all Phases of the project. The requirements in such shall be applied as appropriate in that phase and shall be assumed in place prior to the start of the work outlined in the sequence for each Phase.

1. Prior to the beginning of any site work the major features of the construction must be field staked by a licensed surveyor. These include the building, limits of disturbance, utility lines, and Stormwater practices.
2. Prior to the start of the project, an on-site pre-construction meeting will be held. This will be attended by the Project Owner, the Operator responsible for complying with the approved construction drawings including the Erosion and Sediment Control (E&SC) Plan and Details, the Design Engineer, the Engineer responsible for E&SC monitoring during construction, Town representatives from the Engineering Department and Code Enforcement.
3. Cut and clear trees within the phase limits as necessary for the areas to be disturbed. Install tree protective measure at marked locations on E&SC Plan.
4. Install all temporary erosion control measures as shown on the Erosion and Sediment Control Plan for the project's immediate disturbance areas. This shall include, but not limited to silt fence, stabilized construction entrances, diversion swales, sediment traps, construction fence, etc. This sequence must be followed to insure proper implementation of the Erosion and Sediment Control Plan (E&SC) and Stormwater Pollution Prevention Plan (SWPPP).
5. Timbered trees and woodchips shall be temporarily stored in the stockpile and/or staging area if necessary before being removed off-site. Woodchips may be used for mulch to stabilize disturbed areas. Woodchip mulch shall be applied at a minimum rate of 500 lbs. per 1000 SF (2" thick minimum).
6. Remove existing vegetative cover, cut and clear trees, grub, remove stumps and other surface features in the limit of construction only. Any disturbance that results from tree clearing and grubbing shall be immediately stabilized with woodchips mulch, hydro-mulch, or straw and seed. Timbered trees, wood chips, and stumps shall be removed off-site unless otherwise directed. As stated woodchips may be stockpiled for use as stabilizing ground cover. Demolish and/or remove existing features, i.e.: fence, concrete slab, asphalt etc., and dispose of or stockpile as required by the Owner. All construction debris shall be properly disposed of in accordance with all Federal, State, and Local requirements.

Standard Sequence Notes for Phases I & II

7. Begin rough grading the building pads for the Buildings. Begin moving the fill towards the location designated for each phase. Cut and fill of a certain phase shall meet the next phase boundary at a maximum slope of 2V:1H. For previous phases where grading is complete match to finish grade elevations. All compaction requirements shall be met within the fill sections. (This work shall include the commencement of the retaining walls around the proposed building construction.) Upon completion of the grading, temporary seed or hydro-mulch the embankment and install erosion control blankets as shown on the Plans along the northern perimeter of the fill section. During building and site construction, maintain and re-establish as required, erosion control and stabilization measures as required by the Site Plan and Details. Areas which are to remain undisturbed for more than seven (7) days shall be stabilized with temporary seeding or mulch.
8. A licensed surveyor must define the building locations.
9. Install or check condition of all temporary Erosion Control Measures as shown on the Erosion and Sediment Control Plan.
10. Begin preparation of the building site and excavation of the building foundation as well as construction of all retaining walls. Areas in which final grade is achieved shall be immediately stabilized with permanent vegetative cover. Permanent slopes of 3:1 or greater shall receive erosion blankets.
11. Begin construction of the foundation. Upon completion and after proper curing time is achieved, backfill the foundation and bring site to rough grade. Areas which are to remain undisturbed for more than seven (7) days shall be stabilized with temporary seeding or mulch.

The following phases are the general order for construction of the project and may be modified after approved by the supervising Engineer. The phasing is meant to minimize the amount of open disturbance. Under no circumstances shall multiple phases amounting to five (5) acres or greater be disturbed during the same period of time. In the event greater disturbance is necessary outside of the Phase lines shown on the Erosion and Sediment Control Plan, the Contractor shall coordinate with the Engineer of Record, and Municipality for an on-site meeting to discuss the alternative approach to the construction.

Phase I: Construction of Building 1 - The intent of this Phase is to complete the construction of Building 1, the driveways for the parking area in front of the building, the parking garage, the parking area in the rear of the building, and the landscape and hardscape included in the Phase limits shown on the Erosion and Sediment Control Plan. Additionally, any proposed drainage measures shown within the phase limits shall be put in place, but not connected until the final stabilization of Phase 2.

1. The Surveyor shall stake-out the proposed driveway centerlines, limits of cut and fill and the location of the temporary sediment traps.
2. Implement the General Sequence Notes 1 through 6 where applicable prior to continuing this Phase.
3. Once the tree removal operation is complete strip the topsoil within the Phase I boundary and place excavated topsoil within the identified stockpile locations. Any soils so deemed by the Design or Monitoring Engineer shall be stockpiled for future use as landscaped area topsoil. Contractor shall take every precaution feasible to reduce the amount of disturbed/exposed soils during construction.
4. Construct and install temporary sediment traps along the proposed access drive and rear parking area. Install the temporary filtered outlet pipe. Any disturbed area that will not be further disturbed within seven (7) days shall be immediately stabilized with woodchips, hydro-mulch, or straw and seed.
5. Prior to starting the work install all erosion and sediment controls including the installation of the stabilized construction entrance and sediment trap.
6. Begin the removal of the existing driveway. Material shall be properly disposed of.
7. Begin rough grading of driveways within phase limits and adjacent areas. Slops in excess of 3H:1V shall not be left exposed and must be stabilized.
8. Begin excavation of the building foundation for the Building and adjacent areas.

Refer to Notes 7 through 12 under the General Sequence.

9. Cut material shall first be moved to the fill locations required to complete the access drive and staging area and bring the area up to final grades. Excess material to be used toward infilling in Phase II shall be stockpiled. Blasted rock that is not suitable to remain on site shall be hauled away and properly disposed of. An area has been provided for the stockpiling of removed soil and rock which is to be removed from the site as well as a cueing area for trucks awaiting loading.
10. Proceed with the construction of Building 1. This includes the building structure itself, retaining walls, and rough grades. At any point during this begin installation of the utilities including the water and sewer connections, drainage and power utilities.
11. Stake-out the location of utilities and utility structures within this Phase. Temporarily relocate the staging area at the western end of the site. Begin installation of subsurface infiltration and detention chambers within Phase I limits.
12. When the subsurface units are installed, the upstream drainage structure shall be blocked so as to not allow sediment laden water from reaching the subsurface chambers.
13. Backfill as installation is complete and stabilize the area. If trenches are to be left open, place excavated material on the up-slope sides of the trench and protect and stabilize if it is to remain open for an extended period of seven (7) days or more.
14. Upon completion of the subsurface chambers, begin installation of proposed bypass and outlet structures. Install storm sewer piping, catch basins and manholes, working downstream to upstream. During the installation of catch basins, install inlet protection and water bar as per E&SC Plan to assure that sediment laden water will not enter the storm system. Once the final grade above the system is achieved, put into place the final topsoil cover, seed mix, and erosion control blanket, or hydro-mulch. Refer to the Landscape Plan for the seed mix requirements.
15. Once the infiltrator system has been installed, grade and install the base course for the driveways and parking areas. Re-establish the staging area for the construction site trailer and parking.

Note: No stormwater is permitted to enter the infiltration system from the upstream conveyance system and shall be blocked until the completion and stabilization of all Phases tributary to the basin. An area shall be considered to have achieved final stabilization when it has a minimum uniform 80% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.

16. Complete construction of the building and remaining retaining walls within Phase limits.
17. Stake out and install curbing as per Plan. Once curbing is completed around catch basins, re-install inlet protection within catch basins. As curbing is complete, backfill with topsoil. Areas that are filled with topsoil are to be raked, seeded, and hay mulched.
18. Upon completion of the majority of the infrastructure in that phase, install pavement binder course to the thickness and elevation as per the Construction Plans.
19. As each Phase is at the completion stage install final asphalt surface.
20. Install hardscape such as patios, walks steps etc., and final vegetation including sod and landscaping. Refer to Landscape Plans for location and identification of ground cover and plantings. Clear site of debris and all unwanted materials. Disposal shall be in accordance with all Federal, State, and Local requirements.
21. During the Final Phase of building construction, finish grade, topsoil, rake, and seed all areas as required. Where required or recommended, hydro-mulch or install erosion control blankets.
22. Upon completion of this Phase, the Contractor shall be required to stabilize disturbed soils in the event the disturbed area will remain not worked for greater than seven (7) days, at the direction of the Engineer of Record or permitting entity Inspector, and when significant precipitation is in the immediate forecast. All disturbed areas shall be temporarily stabilized with hydro-mulch or where appropriate woodchips. It is recommended that any grading that is at the finish stage will receive no further disturbance and that permanent stabilization such as topsoil, seed, mulching or blankets as per the Plan be installed. **The next Phase cannot commence until these steps have been completed.**

Phase II: Construction of Building 2 - The intent of this Phase is to complete the construction of Building 2, the main access driveway and parking for the building, the pool and recreation area located behind the building and the landscape and hardscape included in the Phase limits shown on the Erosion and Sediment Control Plan. Additionally, the any proposed drainage measures shown within the phase limits shall be put in place, but not connected until the final stabilization of Phase II.

1. The Surveyor shall stake-out the proposed building, drive and parking access, pool and recreation area, limits of cut and fill, and the location of the temporary sediment traps.
2. Strip topsoil within the Phase II boundary and place excavated topsoil within the identified stockpile locations. Any soils so deemed by the Design or Monitoring Engineer shall be stockpiled for future use as landscaped area topsoil. Contractor shall take every precaution feasible to reduce the amount of disturbed/exposed soils during construction.
3. Begin excavation for the building foundation for the building and adjacent areas. **Refer to Notes 7 through 12 under the General Sequence.**
4. Begin rough grading main access driveway and parking area for building 2. Connections to building 1 driveway shall be made at subgrade elevations.
5. Cut material shall first be moved to the fill locations required to complete and bring the areas up to final grades. Excess material to be removed from the site.
6. Stake-out the location of utilities and utility structures within this Phase. Install storm sewer piping, catch basins and manholes, working downstream to upstream. During the installation of catch basins, install inlet protection and water bar as per E&SC Plan to assure that sediment-laden water will not enter the storm system. Make connections to other phase utilities as necessary.
7. Complete construction of the building and remaining retaining walls within Phase limits. Utilities must be installed and completed before the construction of the retaining walls.
8. Stake out and install curbing as per Plan. Once curbing is completed around catch basins, re-install inlet protection within catch basins. As curbing is complete, backfill with topsoil. Areas that are filled with topsoil are to be raked, seeded, and hay mulched.
9. Upon completion of the majority of the infrastructure in that phase, install pavement binder course to the thickness and elevation as per the Construction Plans.
10. As the Phase is at the completion stage install final asphalt surface.
11. Install hardscape such as patios, walks steps etc., and final vegetation including sod and landscaping. Refer to Landscape Plans for location and identification of ground cover and plantings. Clear site of debris and all unwanted materials. Disposal shall be in accordance with all Federal, State, and Local requirements.
12. During the Final Phase of building construction, once final grade is achieved, place final topsoil cover, begin placement of seed mix and erosion control blanket, or hydro-mulch. Refer to the Landscape Plan for the seed mix requirements.

Final Site Stabilization and Completion of New Construction:

13. Upon completion of all Phases, the site shall be inspected by the Supervising Engineer and Town Inspector to determine completion of all work and permanent stabilization of the site.
14. Any areas deemed incomplete or not properly stabilized shall be done so to the satisfaction to the Supervising Engineer and Town Inspector.
15. Once the site is deemed adequately stable the temporary erosion and sediment control measures can be removed including the sediment traps. The area where the sediment trap was located shall be filled, top soiled, seeded and mulched in accordance with the specifications within this plan. At that time if deemed appropriate drainage structures upstream from the subsurface stormwater management systems shall be cleaned of sediment and debris. They can then be unblocked to allow for flow of collected surface runoff.

Contact information during and after construction:

Anthony Beldotti
APB. Management
500 Executive Blvd. #203
Ossining, NY 10562
914-762-7898

GENERAL EROSION CONTROL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED. ROAD SURFACE FLOWS FROM THE SITE SHOULD BE DISSIPATED WITH TRACKING PAD OR APPROPRIATE MEASURES DURING ADJACENT ROAD SHOULDER REGRADING. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL DEVICES THROUGHOUT THE COURSE OF CONSTRUCTION.
2. CATCH BASIN INLET PROTECTION MUST BE INSTALLED AND OPERATING AT ALL TIMES UNTIL TRIBUTARY AREAS HAVE BEEN STABILIZED. WHEN POSSIBLE FLOWS SHOULD BE STABILIZED BEFORE REACHING INLET PROTECTION STRUCTURE. TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED ON A REGULAR BASIS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
4. THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURING STANDARDS SHALL BE AS SPECIFIED IN THESE PLANS, AS ORDERED BY THE ENGINEER, AND IN ACCORDANCE WITH THE LATEST EDITION OF THE "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL" (NYSSESC).
5. ALL TOPSOIL SHALL BE PLACED IN A STABILIZED STOCKPILE FOR REUSE ON THE SITE. ALL STOCKPILE MATERIAL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE TEMPORARILY SEEDED AND MULCHED WITHIN 7 DAYS. REFER TO SOIL STOCKPILE DETAILS.
6. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 7 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL IMMEDIATELY RECEIVE TEMPORARY SEEDING. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL NOT BE LIMED AND FERTILIZED PRIOR TO TEMPORARY SEEDING.
7. ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.
8. THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.
9. SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
10. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT EDITION OF NYSSESC.
11. ALL REGRADED AREAS MUST BE STABILIZED APPROPRIATELY PRIOR TO ANY ROCK BLASTING, CUTTING, AND/OR FILLING OF SOILS. SPECIAL CARE SHOULD BE TAKEN DURING CONSTRUCTION TO INSURE STABILITY DURING MAINTENANCE AND INTEGRITY OF CONTROL STRUCTURES.
12. ANY SLOPES GRADED AT 3:1 OR GREATER SHALL BE STABILIZED WITH EROSION BLANKETS TO BE STAKED INTO PLACE IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS. EROSION BLANKETS MAY ALSO BE REQUIRED AT THE DISCRETION OF TOWN OFFICIALS OR PROJECT ENGINEER. WHEN STABILIZED BLANKET IS UTILIZED FOR CHANNEL STABILIZATION, PLACE ALL OF THE VOLUME OF SEED MIX PRIOR TO LAYING NET, OR AS RECOMMENDED BY THE MANUFACTURER.
13. TO PREVENT HEAVY CONSTRUCTION EQUIPMENT AND TRUCKS FROM TRACKING SOIL OFF-SITE, CONSTRUCT A PERVIOUS CRUSHED STONE PAD. LOCATE AND CONSTRUCT PADS AS DETAILED IN THESE PLANS.
14. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST BY SPRINKLING EXPOSED SOIL AREAS PERIODICALLY WITH WATER AS REQUIRED. CONTRACTOR TO SUPPLY ALL EQUIPMENT AND WATER.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION INSPECTIONS AS PER NYSDEC GP-0-15-002 AND TOWN OF OSSINING CODE.

MAINTENANCE OF TEMPORARY EROSION AND SEDIMENT CONTROL STRUCTURES:

N.Y.S.D.E.C. GP-0-15-002 EXPOSURE RESTRICTIONS - STATES THAT ANY EXPOSED EARTHWORK SHALL BE STABILIZED IN ACCORDANCE WITH THE GUIDELINES OF THIS PLAN.

1. TREES AND VEGETATION SHALL BE PROTECTED AT ALL TIMES AS SHOWN ON THE DETAIL DRAWING AND AS DIRECTED BY THE ENGINEER.
2. CARE SHOULD BE TAKEN SO AS NOT TO CHANNEL CONCENTRATED RUNOFF THROUGH THE AREAS OF CONSTRUCTION ACTIVITY ON THE SITE.
3. FILL AND SITE DISTURBANCES SHOULD NOT BE CREATED WHICH CAUSES WATER TO POND OFF SITE OR ON ADJACENT PROPERTIES.
4. RUNOFF FROM LAND DISTURBANCES SHALL NOT BE DISCHARGED OR HAVE THE POTENTIAL TO DISCHARGE OFF SITE WITHOUT FIRST BEING INTERCEPTED BY A CONTROL STRUCTURE, SUCH AS A SEDIMENT TRAP OR SILT FENCE. SEDIMENT SHALL BE REMOVED BEFORE EXCEEDING 50% OF THE RETENTION STRUCTURE'S CAPACITY.
5. FOR FINISHED GRADING, ADEQUATE GRADE SHALL BE PROVIDED SO THAT WATER WILL NOT POND ON LAWNS FOR MORE THAN 24 HOURS AFTER RAINFALL, EXCEPT IN SWALE FLOW AREAS WHICH MAY DRAIN FOR AS LONG AS 48 HOURS AFTER RAINFALL.
6. ALL SWALES AND OTHER AREAS OF CONCENTRATED FLOW SHALL BE PROPERLY STABILIZED WITH TEMPORARY CONTROL MEASURES TO PREVENT EROSION AND SEDIMENT TRAVEL. SURFACE FLOWS OVER CUT AND FILL AREAS SHALL BE STABILIZED AT ALL TIMES.
7. ALL SITES SHALL BE STABILIZED WITH EROSION CONTROL MATERIALS WITHIN 7 DAYS OF FINAL GRADING.
8. TEMPORARY SEDIMENT TRAPPING DEVICES SHALL BE REMOVED FROM THE SITE WITHIN 30 DAYS OF FINAL STABILIZATION.

MAINTENANCE SCHEDULE:

	DAILY	WEEKLY	MONTHLY	AFTER RAINFALL	NECESSARY TO MAINTAIN FUNCTION	AFTER APPROVAL OF INSPECTOR
SILT FENCE	– – –	– – – –	INSP.	INSP.	CLEAN/ REPLACE	REMOVE
WHEEL CLEANER	CLEAN	– – – –	– – – –	– – – –	REPLACE	REMOVE
INLET PROTECTION	– – –	INSP.	INSP.	CLEAN	REPLACE	REMOVE

MAINTENANCE OF PERMANENT CONTROL STRUCTURES DURING CONSTRUCTION:

The stormwater management system and outlet structure shall be inspected on a regular basis and after every rainfall event. Sediment build up shall be removed from the inlet protection regularly to insure detention capacity and proper drainage. Outlet structure shall be free of obstructions. All piping and drain inlets shall be free of obstruction. Any sediment build up shall be removed.

MAINTENANCE OF CONTROLS AFTER CONSTRUCTION:

Controls (including respective outlet structures) should be inspected periodically for the first few months after construction and on an annual basis thereafter. They should also be inspected after major storm events.

DEBRIS AND LITTER REMOVAL:

Twice a year, inspect outlet structure and drain inlets for accumulated debris. Also, remove any accumulations during each mowing operation.

STRUCTURAL REPAIR/REPLACEMENT:

Outlet structure must be inspected twice a year for evidence of structural damage and repaired immediately.

EROSION CONTROL:

Unstable areas tributary to the basin shall immediately be stabilized with vegetation or other appropriate erosion control measures.

SEDIMENT REMOVAL:

Sediment should be removed after it has reached a maximum depth of five inches above the stormwater management system floor.

TOPSOIL:

Existing topsoil will be removed and stored in piles sufficiently as to avoid mixing with other excavation. Stockpiles shall be surrounded by erosion control as outlined on these plans. The furnishing of new topsoil shall be of a better or equal to the following criteria (SS713.01 NYSDOT):

1. The pH of the material shall be 5.5 to 7.6.
2. The organic content shall not be less than 2% or more than 70%.
3. Gradation:

SIEVE SIZE	% PASSING BY WGT.
2 INCH	100
1 INCH	85 TO 100
1/4 INCH	65 TO 100
NO. 200 MESH	20 TO 80

PERMANENT VEGETATIVE COVER:

1. Site preparation:
   - 1.1. Install erosion control measures.
   - 1.2. Scarify compacted soil areas.
   - 1.3. Lime as required to ph 6.5.
   - 1.4. Fertilize with 10-6-4 4 lbs/1,000 S.F.
   - 1.5. Incorporate amendments into soil with disc harrow.
2. Seed mixtures for use on swales and cut and fill areas.

MIXTURE		LBS./ACRE
ALT. A	KENTUCKY BLUE GRASS	20
	CREEPING RED FESCUE	28
	RYE GRASS OR REDTOP	5
ALT. B	CREEPING RED FESCUE	20
	REDTOP	2
	TALL FESCUE/SMOOTH BLOOMGRASS	20

3. SEEDING
   - 3.1. Prepare seed bed by raking to remove stones, twigs, roots and other foreign material.
   - 3.2. Apply soil amendments and integrate into soil.
   - 3.3. Apply seed uniformly by cyclone seeder culti-packer or hydro-seeder at rate indicated.
   - 3.4. Stabilize seeded areas in drainage swales.
   - 3.5. Irrigate to fully saturate soil layer, but not to dislodge planting soil.
   - 3.6. Seed between April 1st and May 15th or August 15th and October 15th.
   - 3.7. Seeding may occur May 15th and August 15th if adequate irrigation is provided.

TEMPORARY VEGETATIVE COVER:

SITE PREPARATION:

1. Install erosion control measures.
2. Scarify areas of compacted soil.
3. Fertilize with 10-10-10 at 400/acre.
4. Lime as required to ph 6.5.

SEED SPECIES:

MIXTURE	LBS./ACRE
Rapidly germinating annual ryegrass (or approved equal)	20
Perennial ryegrass	20
Cereal oats	36

SEEDING:
Same as permanent vegetative cover

OWNER / OPERATOR CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Further, I hereby certify that the SWPPP meets all Federal, State, and local erosion and sediment control requirements. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law."

Name (please print): _____

Title: _____

Date: _____

Address: _____

Phone: _____

E-mail: _____

Signature: _____

CONTRACTOR CERTIFICATION STATEMENT

Certification Statement - All contractors and subcontractors as identified in a SWPPP, by the Owner or Operator, in accordance with Part III.A.5 of the SPDES General Permit for Stormwater Runoff from Construction Activity, GP-0-15-002, dated January 12, 2015, Page 10 of 40, shall sign a copy of the following Certification Statement before undertaking any construction activity at the Site identified in the SWPPP:

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the Qualified Inspector during a site inspection. I also understand that the Owner or Operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") General Permit for Stormwater Discharge from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

Individual Contractor: _____

Name and Title (please print): _____

Signature of Contractor: _____

Company / Contracting Firm: _____

Name of Company: _____

Address of Company: _____

Telephone Number / Cell Number: _____

Site Information: _____

Address of Site: _____

_____

Today's Date: _____

Site Design Consultants
Civil Engineers • Land Planners
251-F Underhill Avenue, Yorktown Heights, NY 10598
(914) 962-4488 - Fax: (914) 962-7386
www.sitedesignconsultants.com

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	12/1/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

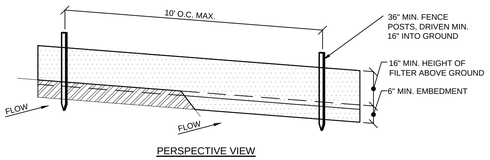
SCALE: N.T.S
DRAWN BY: TK
DATE: 9/25/15

E&SC NOTES

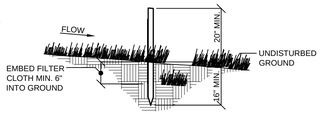
SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town Of Ossining Westchester County, NY

Sheet G-2

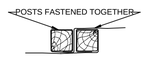
NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.



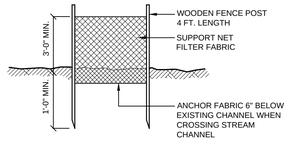
PERSPECTIVE VIEW



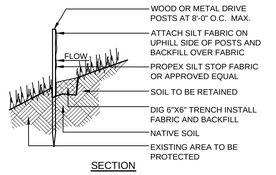
SECTION



PLAN VIEW: JOINING SECTIONS



ELEVATION

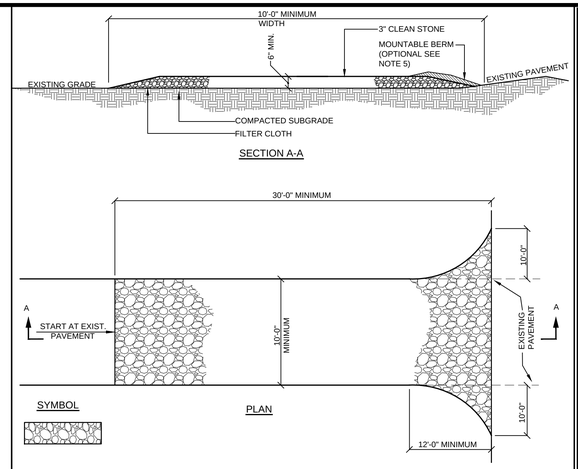


SECTION

NOTES:
1. Filter cloth to be fastened securely to post: steel either t or u type or 2" hardwood posts at top and mid section.
2. When two sections of filter cloth adjoin each other they shall be overlapped by 6 inches and folded. Filter cloth shall be mirafi 100x, stabilinka t140n or approved equal
3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.
4. Excavate 4 inch trench along the lower perimeter of the site.
5. Unroll a section at a time and position the post against the back (downstream) wall of the trench (net side away from direction of flow).
6. Drive the post into the ground until the netting is approximately 2 inches from the trench bottom.
7. Lay the toe-in flap of fabric onto the undisturbed bottom of the trench, backfill the trench and tamp the soil. Steeper slopes require an intercept trench.
8. Join sections as shown above.

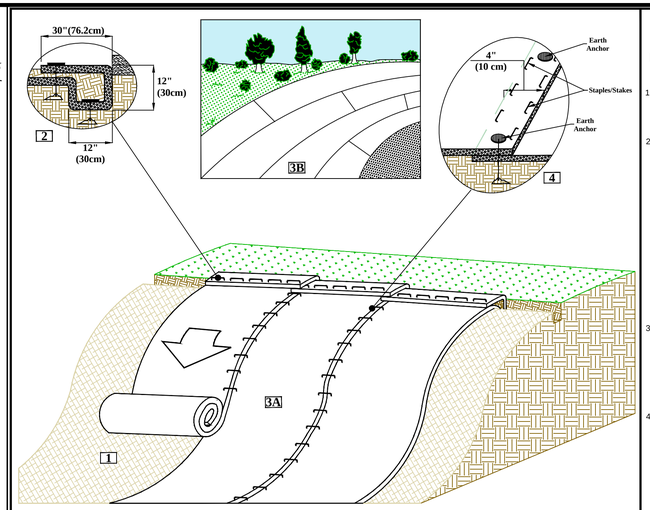
SYMBOL

E-1 SILT FENCE DETAIL
NOT TO SCALE



INSTALLATION NOTES:
1. Stone size - use 3" min. Stone, or reclaimed or recycled concrete equivalent.
2. Length - as required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply.
3. Thickness - not less than six (6) inches.
4. Width - 10 foot minimum, but not less than the full width at points where ingress or egress occur. 24 ft if single entrance to site.
5. Surface water - all surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
6. Maintenance - the entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right of way this may require periodic top dressing with additional stone as conditions demand and repair and/or cleanouts of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right of way must be removed immediately.
7. Washing - wheels shall be cleaned to remove sediment prior to entrance onto public right of way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
8. Periodic inspection and needed maintenance shall be provided after each rain

E-2 STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



Drawing Not To Scale

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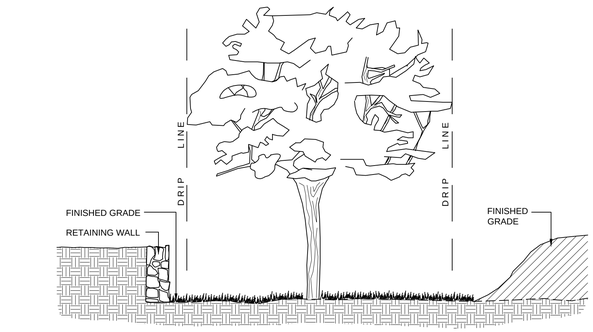
Drawn on: 01-28-13

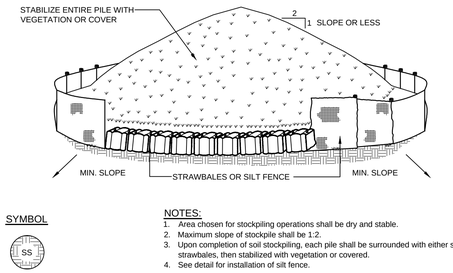
SLOPE INSTALLATION EARTH ANCHOR (EA) DETAIL

1. Prepare soil before installing high-performance turf reinforcement mats (HP-TRMs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the HP-TRMs in a 12" (30 cm) deep x 12" (30cm) wide trench with approximately 30" (76.2 cm) of HP-TRMs extended beyond the up-slope portion of the trench. Anchor the HP-TRMs with an alternating row of staples and anchors approximately 30" (76.2 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Fold remaining 30" (76.2 cm) portion of HP-TRMs back over compacted soil. Secure HP-TRMs over compacted soil with an alternating row of staples/anchors spaced approximately 18" (45 cm) apart across the width of the HP-TRMs.
3. Roll the HP-TRMs (A) down or (B) horizontally across the slope. HP-TRMs will unroll with appropriate side against the soil surface. All HP-TRMs must be securely fastened to soil surface by placing staples/anchors in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel HP-TRMs must be stapled between earth anchors with approximately 4" (10 cm) overlap depending on the HP-TRM type. For curved sections, adjust the overlap edges of parallel HP-TRMs accordingly with a minimum of 4" (10 cm) overlap to accommodate transitional segments.

*NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the HP-TRMs.



E-10 TREE PROTECTION PLAN FOR GRADE CHANGE DETAIL
NOT TO SCALE



SYMBOL

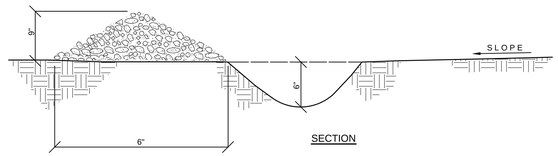
NOTES:
1. Area chosen for stockpiling operations shall be dry and stable.
2. Maximum slope of stockpile shall be 1:2.
3. Upon completion of soil stockpiling, each pile shall be surrounded with either silt fencing or strawbales, then stabilized with vegetation or covered.
4. See detail for installation of silt fence.

E-5 SOIL STOCKPILE DETAIL
NOT TO SCALE

E-3 INLET PROTECTION DETAIL
NOT TO SCALE

NOTES:
1. Contractor shall use the tree trunk armor detail for isolated trees that require protection.
2. As an alternate, the contractor may protect trees in the vicinity of regular heavy traffic / construction areas or clusters of trees to be protected as per the construction fence detail.

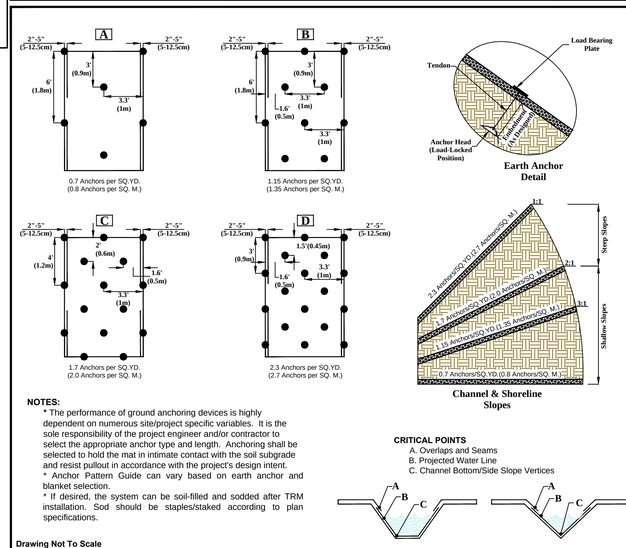
E-4 TREE TRUNK ARMOR / TREE PROTECTION DETAIL
NOT TO SCALE



INSTALLATION NOTES:
1. Install the water bar as soon as the right of way is cleared and graded.
2. Disk or strip the sod from the base for the constructed ridge before placing fill.
3. Track the ridge to compact it to the design cross section.
4. The outlet shall be located on an undisturbed area. Field spacing will be adjusted to use the most stable outlet areas. Outlet protection will be provided when natural areas are not adequate.
5. Vehicle crossing shall be stabilized with gravel. Exposed areas shall be immediately seeded and mulched.
6. Periodically inspect water bars for erosion damage and sediment. Check outlet areas and make repairs as needed to restore operation.

SYMBOL
W B

E-6 WATER BAR DETAIL
NOT TO SCALE



NOTES:
* The performance of ground anchoring devices is highly dependent on numerous site/project specific variables. It is the sole responsibility of the project engineer and/or contractor to select the appropriate anchor type and length. Anchoring shall be selected to hold the mat in intimate contact with the soil subgrade and resist pullout in accordance with the project's design intent.
* Anchor Pattern Guide can vary based on earth anchor and blanket selection.
* If desired, the system can be soil-filled and sodded after TRM installation. Sod should be staples/staked according to plan specifications.

CRITICAL POINTS
A. Overlaps and Seams
B. Projected Water Line
C. Channel Bottom/Side Slope Vertices

Drawing Not To Scale

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Disclaimer:
The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

Drawn on: 01-28-13

SLOPE INSTALLATION EARTH ANCHOR (EA) DETAIL

1. Prepare soil before installing high-performance turf reinforcement mats (HP-TRMs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the HP-TRMs in a 6" (15 cm) deep x 6" (15cm) wide trench with approximately 12" (30 cm) of HP-TRMs extended beyond the up-slope portion of the trench. Anchor the HP-TRMs with a row of staples and anchors approximately 12" (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to compacted soil and fold remaining 12" (30 cm) portion of HP-TRMs back over seed and compacted soil. Secure HP-TRMs over compacted soil with a row of staples/stakes spaced approximately 12" (30 cm) apart across the width of the HP-TRMs.
3. Roll the HP-TRMs (A) down or (B) horizontally across the slope. HP-TRMs will unroll with appropriate side against the soil surface. All HP-TRMs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel HP-TRMs must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the HP-TRM type.
5. Consecutive HP-TRMs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire HP-TRM width.

*NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the HP-TRMs.

Site Design Consultants
Civil Engineers • Land Planners
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www.sitedesignconsultants.com

PROJECT # 15-18

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	11/19/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: NTS
DRAWN BY: TK
DATE: 9/25/15

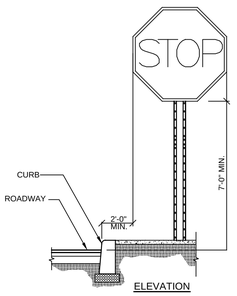
E&SC DETAILS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

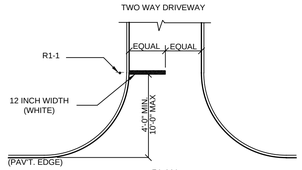
Sheet C-501

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP\15-18_DETAILS 3-1-16.DWG

NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.



ELEVATION



PLAN

SYMBOL	DESCRIPTION
GR. MT. OH MT. BR MT. B/B	GROUND MOUNTED OVERHEAD MOUNTED BRIDGE MOUNTED BACK TO BACK
┼ OR ᵽ	APPROXIMATE LOCATION OF SIGN

TYPICAL INSTALLATION GUIDELINES

SIGN	M.U.T.C.D. NUMBER	SIZE OF SIGN	TYPE OF MOUNT
STOP	R1-1	18" X 18"	GR. MT.
RESERVED PARKING	R7-8	12" X 18"	GR. MT.
ONE WAY	R3-12 (L) R3-13 (R)	12" X 18"	GR. MT.

SIGN	M.U.T.C.D. NUMBER	SIZE OF SIGN	TYPE OF MOUNT
NO PARKING ANY TIME	P1-2 (SEE NOTE 4)	12" X 18"	GR. MT.
DO NOT ENTER	R3-15	24" X 24"	GR. MT.

GENERAL NOTES:

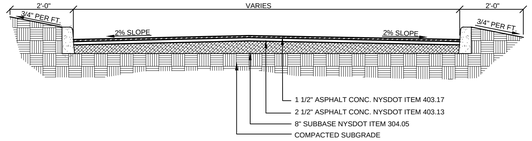
1. All signage shall be in accordance with the latest edition of the national MUTCD and the N.Y.S Supplement (MUTCD), September 2007, including the following:
   A. Letter size and series
   B. Legend and background color
   C. Reflectivity
   D. Size of sign
2. The type of characters as specified in the standard specifications shall be as follows:

MUTCD CODE LETTER	TYPE OF CHARACTER
G.I.	TYPE IV
R.P.W.M.	TYPE IV OR V.

3. Sign locations as shown on plans are approximate. The Contractor shall relocate existing signs and install new signs in accordance with the MUTCD, latest edition. The Contractor shall contact the Town Engineer to discuss/resolve problem areas.
4. Except where otherwise specified, parking signs shall be placed facing approaching traffic at an angle of between 30 and 45 degrees with the line of traffic flow. Parking signs shall be placed at each end of a regulation (single-headed arrows) and, within the regulation (double-headed arrows), at intervals not to exceed 200 ft
5. Where new signs are installed the Contractor shall affix a label to the back of the sign panel. This label will show the date of installation and identification numbers.
6. Placement of W3-17 sign is prescribed in the General Municipal Law.

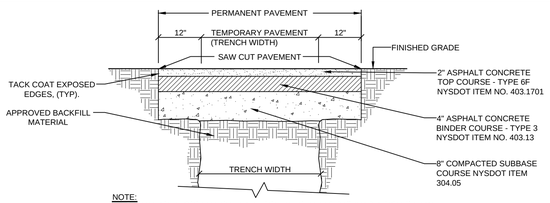
R-1 TRAFFIC SIGN DETAIL

NOT TO SCALE



R-2 TYPICAL DRIVEWAY AND PARKING LOT SECTION

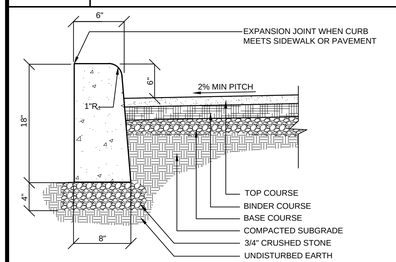
NOT TO SCALE



NOTE:
1. Pavement layer thickness shown are minimum values and shall match existing if greater.

R-3 ROADWAY PAVEMENT REPLACEMENT DETAIL

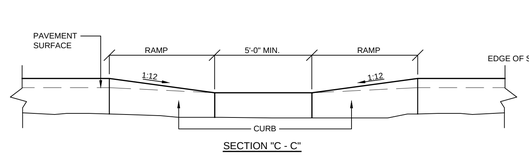
NOT TO SCALE



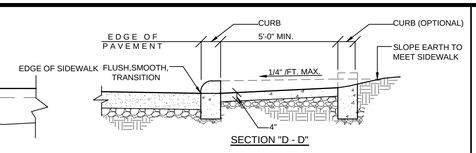
NOTE:
1. Provide 1/2" expansion joint in concrete curb every ten feet.
2. Construct curb with class A concrete (3000 psi).
3. For use within the site.

R-4 CONCRETE CURB DETAIL

NOT TO SCALE



SECTION "C - C"



SECTION "D - D"

NOTES:

GENERAL:
1. Sidewalk curb ramp type and location are as shown on the plans or as directed.
2. All sidewalk curb ramp types may be used as straight or curved curb sections.
3. Sidewalk curb ramp types may be different at each location within an intersection.

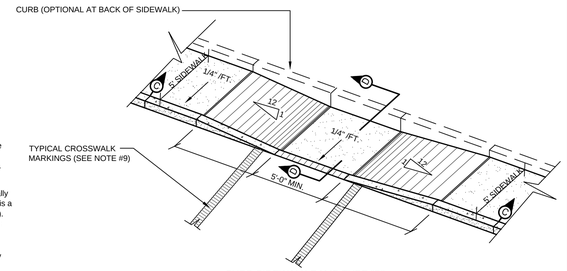
SIDEWALK CURB RAMP CRITERIA:
4. The maximum slope of a sidewalk curb ramp shall be 1:12.
5. The maximum width of a sidewalk curb ramp shall be five feet. Exclusive of flared sides.
6. All sidewalk curb ramps shall have flush, smooth transitions to the adjacent street or highway surface.

SURFACE FINISH:
7. The surface of all sidewalk curb ramps shall be stable, firm, and slip resistant (E.G. A coarse broom finish perpendicular to the ramp slope is acceptable on cement concrete curb ramps.)
8. All proposed sidewalk curb ramps shall have a detectable warning surface installed from the back of the curb for a distance of 2 feet in the direction of travel on the ramp and extending the full width of the ramp, excluding the ramp sides or flares. The detectable warning surface shall comply with the requirements of section 4.29.2 of the Americans with Disabilities Act accessibility guidelines (ADAAG).

SIDEWALK CURB RAMP PLACEMENT:
9. At a corner, where the curb radius is 25-feet or less, a single ramp (either type a or b) located diagonally can often serve crosswalks in two directions. However, a single ramp shall only be used where there is a minimum clear space of 48" falling entirely within the projection of the intersection curbs (see figure 1). Where the radius exceeds 25' or the minimum 48" clear space is not achievable, then separate ramps should be provided for each crosswalk.

PAVEMENT MARKINGS AT CROSSWALKS:
10. Sidewalk curb ramps at marked crossings shall be wholly contained within the markings excluding any flared sides.
11. At a corner where a single ramp (either type a or b; located diagonally serves two crosswalks, this shall be a 48" minimum clear space at the ramp bottom wholly contained within the intersection crosswalk markings.
12. Where stop lines are necessary, they shall be located in advance of sidewalk curb ramps.

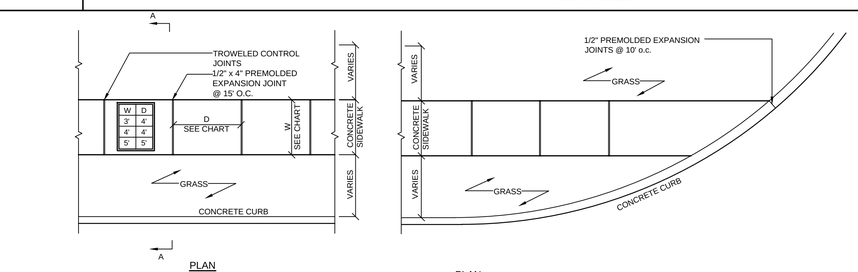
UTILITIES - DRAINAGE INLETS OR GRATES:
13. Where feasible, provide for drainage inlets or grates immediately upstream from the curb ramps. Reticuline or rectangular drainage grates are to be used in the area of curb ramps.
14. Do not place signal poles, sign posts, utility poles, fire hydrants, etc., within the ramp or side flare areas.



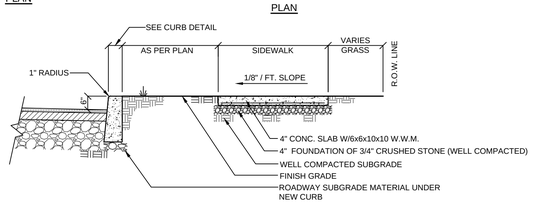
CURB SIDEWALK RAMP TYPE "B"

R-5 SIDEWALK CURB-RAMP DETAIL

NOT TO SCALE



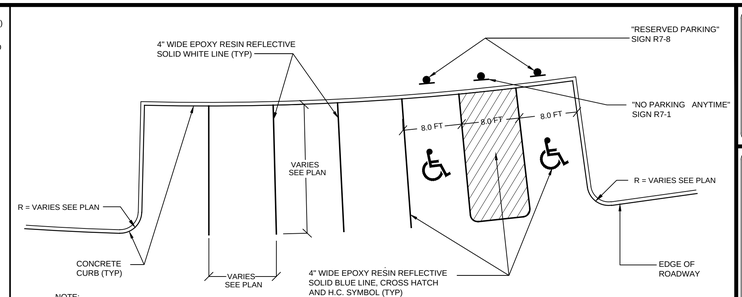
PLAN



SECTION A-A

R-6 CONCRETE SIDEWALK DETAIL

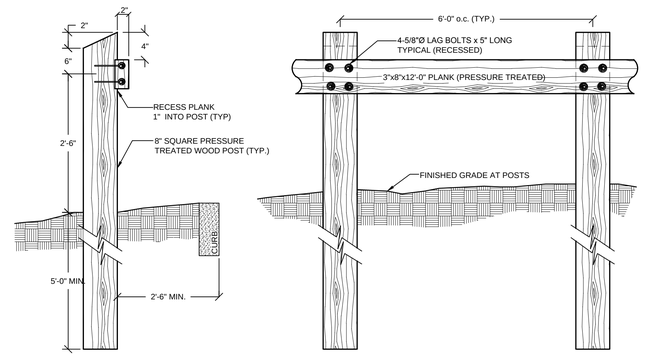
NOT TO SCALE



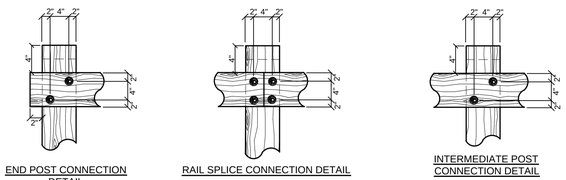
NOTE:
1. Handicap parking spaces shall be located as shown on plan.

R-7 TYPICAL PARKING STALL LAYOUT

NOT TO SCALE

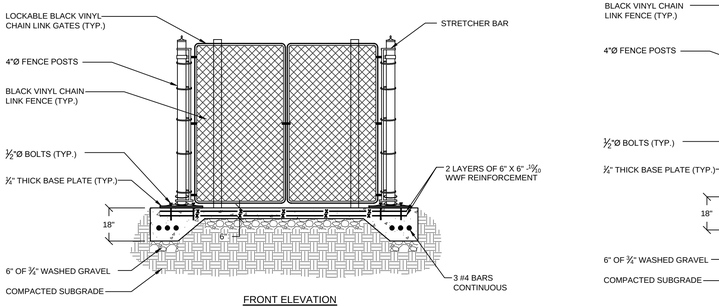


SECTION ELEVATION

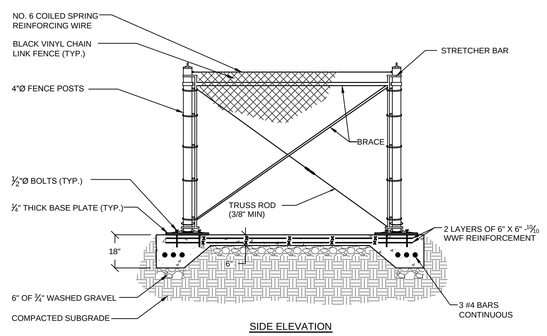


R-8 TIMBER GUARDRAIL DETAIL

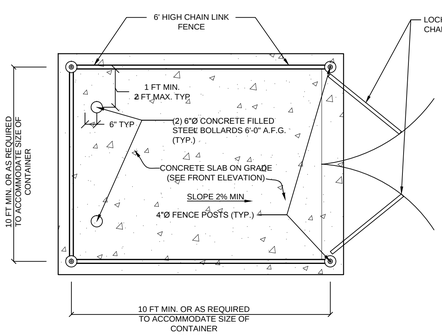
NOT TO SCALE



FRONT ELEVATION



SIDE ELEVATION



PLAN

S-1 TRASH ENCLOSURE DETAIL

NOT TO SCALE

NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

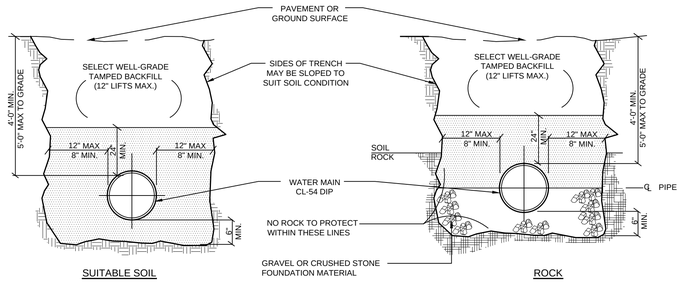
No.	Date	Comments:
1	11/9/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: N.T.S
DRAWN BY: TK
DATE: 9/25/15

DETAILS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-502

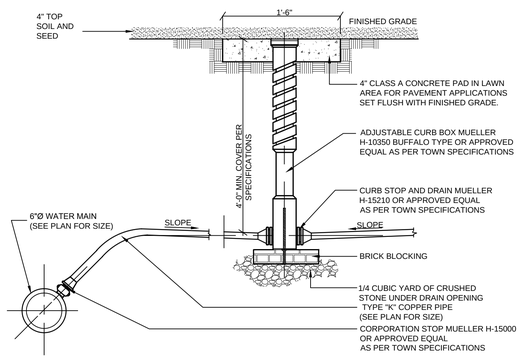


NOTES:

1. In materials to be considered as unsuitable (i.e. Muck) material is to be replaced 24" below the pipe invert and replaced with item no. 4 bedding.
2. A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a depth of at least six inches below the bottom of the pipe.
3. See Pavement Replacement Detail for backfill specifications in local and main TOWN roads.

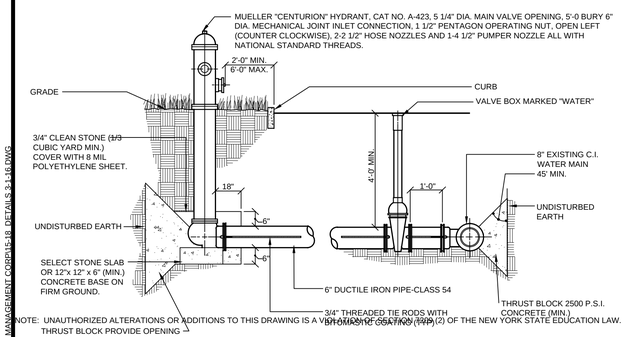
W-1 WATER MAIN BEDDING DETAIL

NOT TO SCALE



W-2 WATER SERVICE CONNECTION DETAIL

NOT TO SCALE



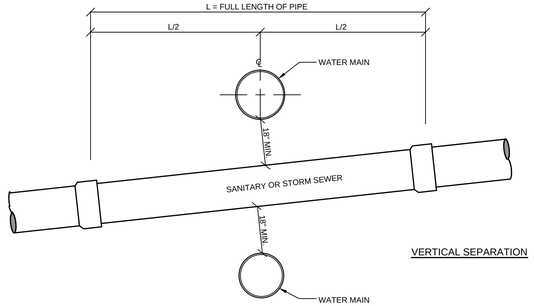
NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.

NOTES:

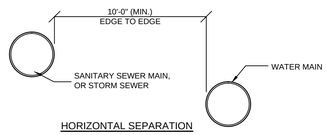
1. Retainer glands, concrete thrust blocks and tie rods shall be used at all locations where restraints are required.
2. If groundwater is encountered within 7 feet of grade, hydrant drain holes shall be plugged. When the drains are plugged the barrels must be pumped dry after use during freezing weather. Where hydrant drains are not plugged, a gravel pocket or dry well shall be provided unless the natural soils will provide adequate drainage. Hydrant drains shall not be connected to or located within 10 feet of sanitary sewers or storm drains.
3. If hydrant is within 10 feet of sewers, hydrant drain holes shall be plugged.
4. Hydrant shall be painted with two coats of Electro- Farrothane, plastic finish, No. 44 red paint.
5. All gate valves shall be Mueller AWWA standard.

W-3 FIRE HYDRANT DETAIL

NOT TO SCALE



VERTICAL SEPARATION



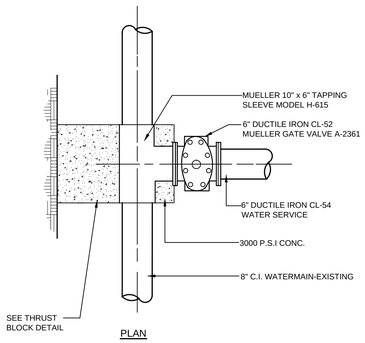
HORIZONTAL SEPARATION

NOTES:

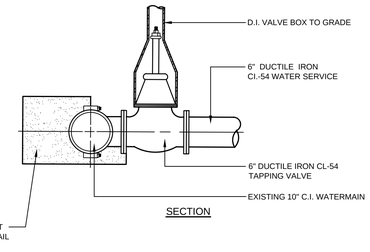
1. Any deviation from the required minimum separations shall be subject to a review and approval by the Westchester County Department of Health prior to construction
2. HORIZONTAL SEPARATION NOTES:
   A Water mains shall be laid at least ten (10) feet horizontally, as measured from edge to edge, from any existing or proposed sewer or drain lines. Should local conditions prevent a lateral separation of ten feet, a water main may be laid closer than ten feet to a sewer if (1) it is laid in a separate trench, or if (2) it is laid in the same trench with the water main located at one side on a bench of undisturbed earth and if in either case the elevation of the crown of the sewer or drain is at least 18 inches below the bottom of the water main
   B When it is impossible to obtain proper horizontal separation, as stipulated above, the sewer or drain shall be constructed of materials and with joints equivalent to the standards for the water main and shall be pressure tested to assure water tightness prior to backfilling.
3. VERTICAL SEPARATION NOTES:
   A Normal conditions: whenever a water main must cross over or under a sewer or drain, the pipes shall be laid to provide a vertical separation between them of at least 18 inches, as measured from the bottom of the higher pipe to the crown of the lower pipe.
   B Unusual conditions: when conditions prevent a vertical separation of 18 inches, the sewer shall be constructed of materials and with joints equivalent to the water main standards and shall be pressure tested to assure water tightness prior to backfilling.
   C Water main crossing over sewers:
   i. Vertical separation of 18 inches must be provided;
   ii. Adequate structural support must be provided for the sewer to prevent excessive deflection of joints and settling;
   iii. Full length of water pipe must be centered at the point of crossing, no joints will be permitted at the point of crossing;.

W-4 SEPARATION OF WATER MAINS, SANITARY SEWERS OR STORM SEWERS

NOT TO SCALE



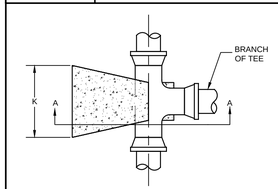
PLAN



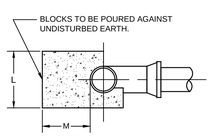
SECTION

W-5 TAPPING SLEEVE AND GATE VALVE CONNECTION DETAIL

NOT TO SCALE



PLAN



SECTION A-A

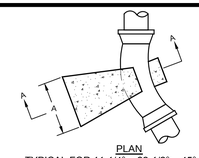
BRANCH SIZE IN.	BLOCK DIMENSIONS			CONCRETE VOLUME FT.³
	K IN.	L IN.	M IN.	
6	18	16	12	2.4
8	30	18	12	4.0
10	42	20	12	6.3
12	50	24	16	11.3
16	60	36	24	30.0

NOTES:

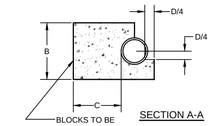
1. Min. 2,500 psi concrete to be used.
2. Block dimensions are minimum and are based upon soil bearing pressure of 2,000 psf and water pressure of 150 psi. Where soil bearing is less or water pressure is greater, a special design will be required.
3. All bolts shall be covered with burlap before pouring concrete.

W-6 THRUST BLOCKING FOR TEES

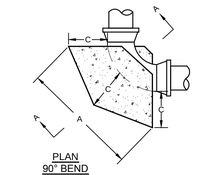
NOT TO SCALE



PLAN
TYPICAL FOR 11-1/4°; - 22-1/2°; - 45° BENDS



SECTION A-A



PLAN
90° BEND

PIPE DIAM. IN.	BEND	BLOCK DIMENSIONS A IN.	B IN.	C IN.	CONCRETE VOLUME FT.³
16	90	80	32	32	39.5
	45	48	28	30	19.7
	22.5	30	22	26	10.0
	11.25	20	18	12	3.8
12	90	56	26	20	15.0
	45	38	22	10	7.7
	22.5	20	20	12	3.6
	11.25	18	18	12	3.0
10	90	48	22	16	8.9
	45	28	20	12	4.0
	22.5	18	18	12	2.7
	11.25	16	16	12	2.2
8	90	34	20	12	4.4
	45	20	18	12	2.5
	22.5	14	14	12	1.6
	11.25				(3)
6	90	24	16	12	2.5
	45	14	14	12	1.5
	22.5	12	12	12	1.2
	11.25				(3)

NOTES:

1. Min. 2,500 psi concrete to be used.
2. Block dimensions are minimum and are based upon soil bearing pressure of 2,000 psf and water pressure of 150 psi. Where soil bearing is less or water pressure is greater, a special design will be required.
3. All bolts shall be covered with burlap before pouring concrete.
4. Bend to be set against disturbed earth, backfill to be firmly tamped, or block to be furnished as directed by the engineer.

W-7 THRUST BLOCKING FOR HORIZONTAL BENDS

NOT TO SCALE

Site Design Consultants
Civil Engineers • Land Planners
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PROJECT # 15-18

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	11/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

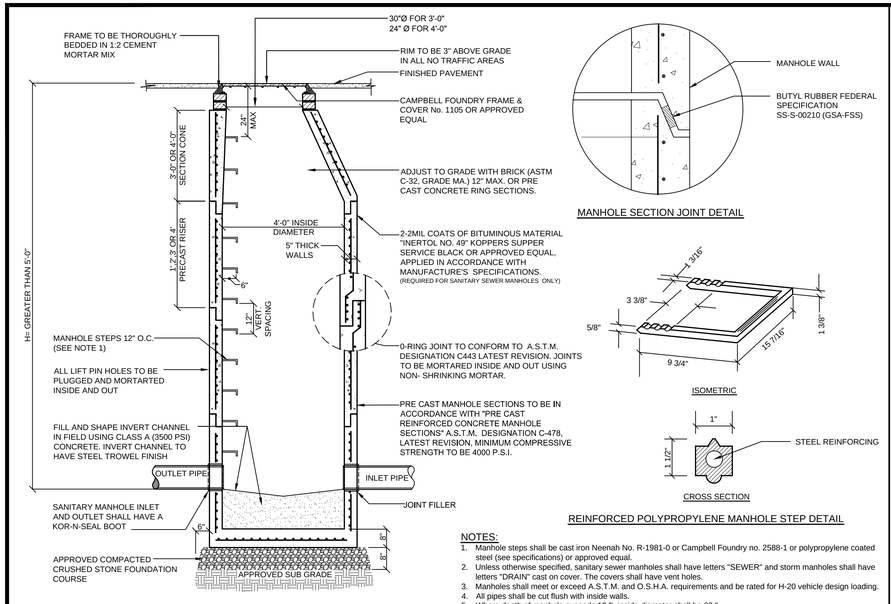
SCALE: NTS
DRAWN BY: TK
DATE: 9/25/15

WATER MAIN DETAILS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-503

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP\15-18_DETAILS 3-1-16.DWG



MANHOLE SECTION JOINT DETAIL

ISOMETRIC

CROSS SECTION

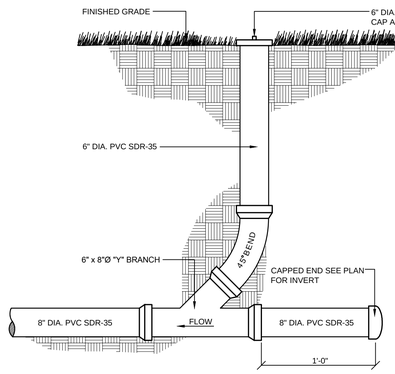
REINFORCED POLYPROPYLENE MANHOLE STEP DETAIL

NOTES:
1. Manhole steps shall be cast iron Neenah No. R-1981-0 or Campbell Foundry no. 2588-1 or polypropylene coated steel (see specifications) or approved equal.
2. Unless otherwise specified, sanitary sewer manholes shall have letters "SEWER" and storm manholes shall have letters "DRAIN" cast on cover. The covers shall have vent holes.
3. Manholes shall meet or exceed A.S.T.M. and O.S.H.A. requirements and be rated for H-20 vehicle design loading.
4. All pipes shall be cut flush with inside walls.
5. Where depth of manhole exceeds 10 ft, inside diameter shall be 60 ".

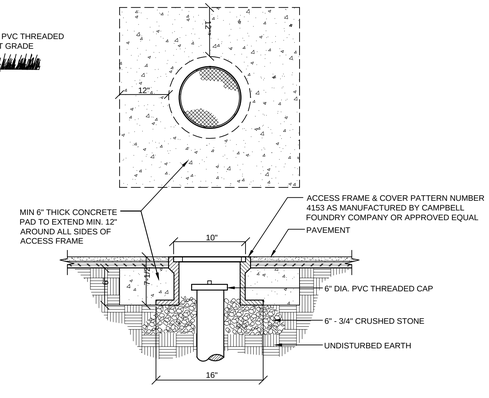
S-1

PRECAST CONCRETE SEWER MANHOLE DETAIL

NOT TO SCALE



SEWER CLEANOUT DETAIL AT GRADE



ACCESS FRAME & COVER DETAIL FOR CLEANOUT UNDER PAVEMENT

NOTES:
1. Clean-outs shall be spaced at minimum 50 ft intervals and/or at all changes in vertical and horizontal alignment.
2. All fittings to be white H.D. As manufactured by GPK Products Inc. or approved equal.

S-2

GRAVITY SEWER LATERAL CLEAN-OUT DETAIL

NOT TO SCALE

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PROJECT # 15-18

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4	3/7/16	Town Comments

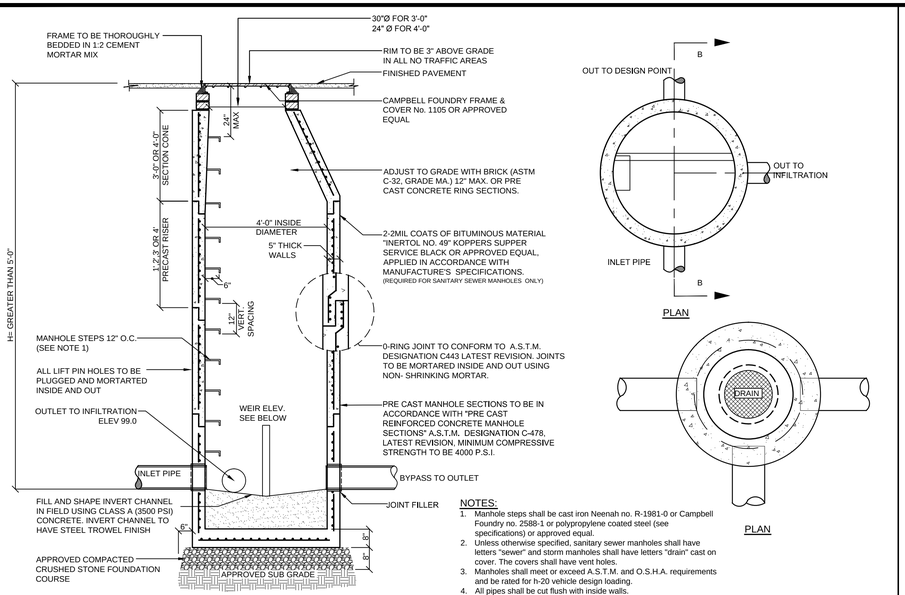
SCALE: NTS
DRAWN BY: TK
DATE: 9/25/15

SANITARY SEWER DETAILS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-504

E:\2015\15-18 BELLODITI MANAGEMENT CORP\ENGINEERING\CAD\CSD-15-18 BELLODITTI MANAGEMENT CORP\15-18_DETAILS 3-1-16.DWG

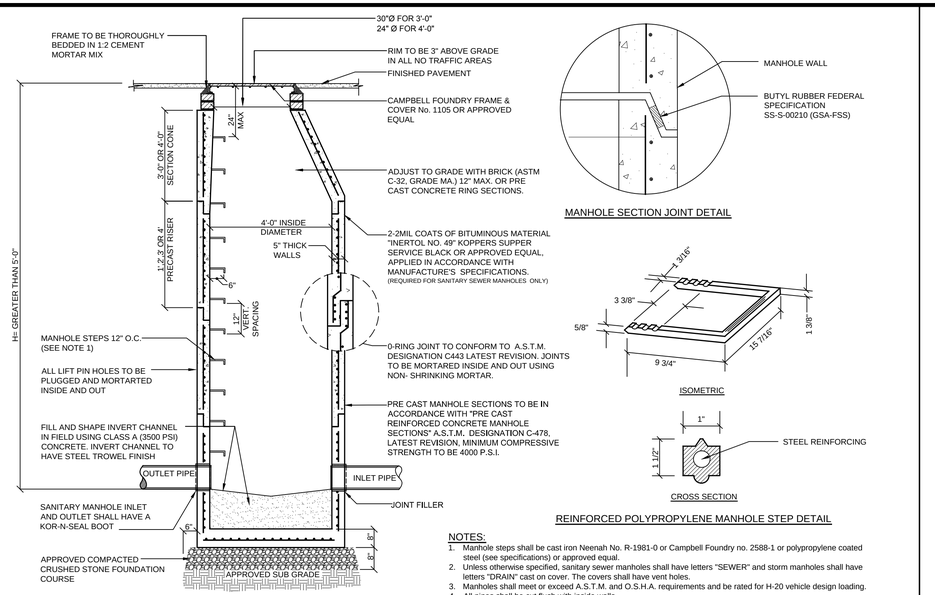


STRUCTURE	WEIR ELEV.
BYPASS 1	142.05
BYPASS 2	144.20

NOTES:
1. Manhole steps shall be cast iron Neenah no. R-1981-0 or Campbell Foundry no. 2588-1 or polypropylene coated steel (see specifications) or approved equal.
2. Unless otherwise specified, sanitary sewer manholes shall have letters "sewer" and storm manholes shall have letters "drain" cast on cover. The covers shall have vent holes.
3. Manholes shall meet or exceed A.S.T.M. and O.S.H.A. requirements and be rated for h-20 vehicle design loading.
4. All pipes shall be cut flush with inside walls.
5. Where depth of manhole exceeds 10 ft, inside diameter shall be 60 ".

D-1 STORM BYPASS STRUCTURE DETAIL

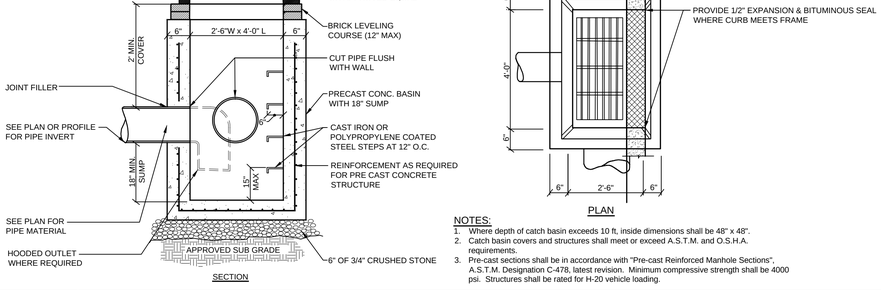
NOT TO SCALE



NOTES:
1. Manhole steps shall be cast iron Neenah No. R-1981-0 or Campbell Foundry no. 2588-1 or polypropylene coated steel (see specifications) or approved equal.
2. Unless otherwise specified, sanitary sewer manholes shall have letters "SEWER" and storm manholes shall have letters "DRAIN" cast on cover. The covers shall have vent holes.
3. Manholes shall meet or exceed A.S.T.M. and O.S.H.A. requirements and be rated for H-20 vehicle design loading.
4. All pipes shall be cut flush with inside walls.
5. Where depth of manhole exceeds 10 ft, inside diameter shall be 60 ".

D-2 PRECAST CONCRETE STORM DRAIN MANHOLE DETAIL

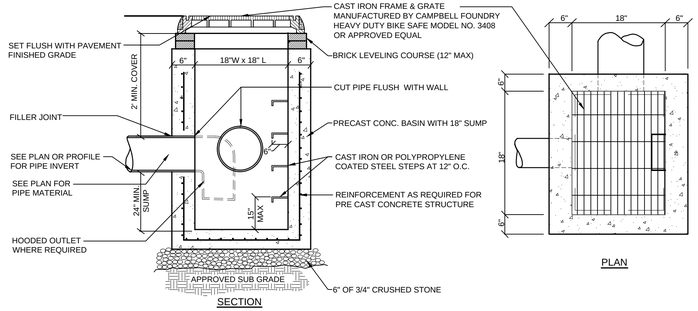
NOT TO SCALE



NOTES:
1. Where depth of catch basin exceeds 10 ft, inside dimensions shall be 48" x 48".
2. Catch basin covers and structures shall meet or exceed A.S.T.M. and O.S.H.A. requirements.
3. Pre-cast sections shall be in accordance with "Pre-cast Reinforced Manhole Sections", A.S.T.M. Designation C-478, latest revision. Minimum compressive strength shall be 4000 psi. Structures shall be rated for H-20 vehicle loading.

D-3 TYPICAL CATCH BASIN DETAIL

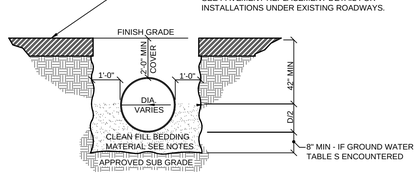
NOT TO SCALE



NOTES:
1. Where depth of catch basin exceeds 10 ft, inside dimensions shall be 48" x 48".
2. Top of basin shall be built with precast concrete structural slab designed for H-20 loading.

D-4 PRECAST CATCH BASIN - DRAIN INLET DETAIL

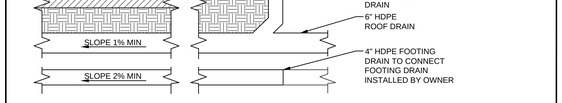
NOT TO SCALE



NOTES:
1. Pipe shall be laid and connected in the bedding which shall consist of:
   A. Compacted existing subsoil when laid above ground water or;
   B. 3/4" crushed stone when laid below ground water.
2. If subsoil is determined to be unsuitable by the Engineer, all unsuitable material shall be removed for at least 2'-6" below the pipe invert or twice the pipe diameter, whichever is greater, and replaced with compacted bedding material.

D-5 STORM PIPE BEDDING DETAIL

NOT TO SCALE



D-6 ROOF & FOOTING DRAIN CONNECTION DETAIL

NOT TO SCALE

Site Design Consultants
Civil Engineers • Land Planners
251-F Underhill Avenue, Yorktown Heights, NY 10598
(914) 962-4488 - Fax: (914) 962-7386
www.sitedesignconsultants.com

PROJECT # 15-18

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	11/5/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: NTS
DRAWN BY: TK
DATE: 9/25/15

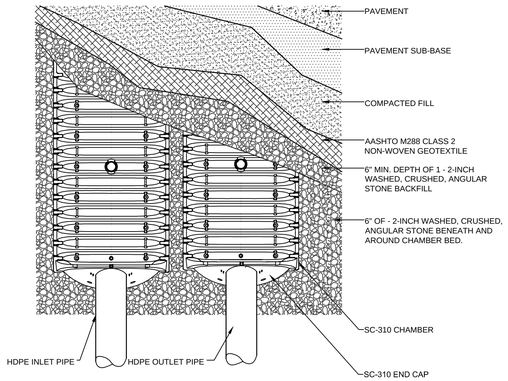
DRAINAGE DETAILS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-505

F:\2015\15-18.BELOOTTI MANAGEMENT.CORP\ENGINEERING\CADD\C3D\15-18 BELOOTTI MANAGEMENT CORP\15-18_DETAILS_3-1-16.DWG

NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.



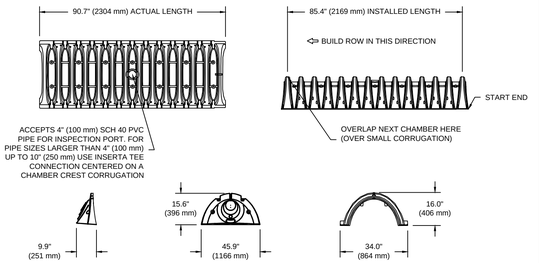
NOTES:

1. All design specifications for Stormtech SC-310 chambers shall be in accordance with the Stormtech design manual.
2. The installation of Stormtech SC-310 chambers shall be in accordance with the latest Stormtech installation instructions.
3. The contractor is advised to review and understand the installation instructions prior to beginning system installation. Call 1-888-892-2694 or visit www.stormtech.com to receive a copy of the latest Stormtech installation instructions.
4. Chambers shall meet the design requirements and load factors specified in Section 12.12 of the latest edition of the AASHTO LRFD bridge design specifications

SWM-1 | STORMTECH SC-310 CHAMBER SYSTEM PLAN VIEW DETAIL | NOT TO SCALE

SC-310 TECHNICAL SPECIFICATION

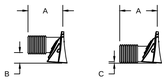
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	31.0 CUBIC FEET	(0.88 m³)
WEIGHT	35.0 lbs.	(16.8 kg)

*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS



STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	---
SC310EPE06B / SC310EPE06BPC			---	0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.9" (302 mm)	3.5" (89 mm)	---
SC310EPE08B / SC310EPE08BPC			---	0.6" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	---
SC310EPE10B / SC310EPE10BPC			---	0.7" (18 mm)
SC310EPE12B	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)

ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC310EPE12B THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

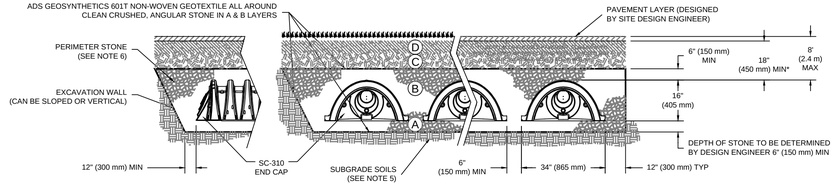
NOTE: ALL DIMENSIONS ARE NOMINAL

SWM-2 | STORMTECH SC-310 CHAMBER DETAIL | NOT TO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[4] A-1, A-2-4, A-3 OR AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2 3]

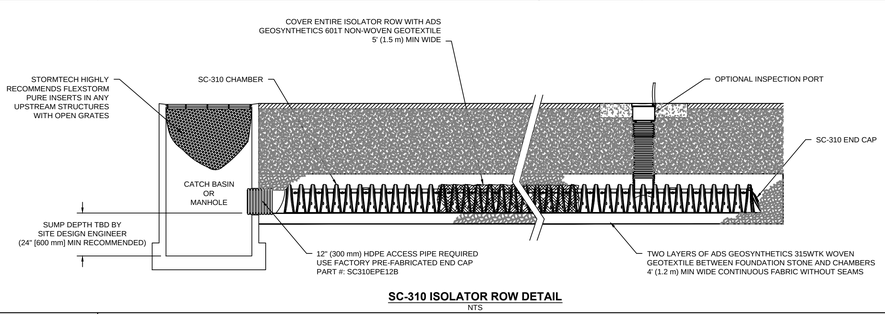
PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

1. SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
7. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

SWM-3 | STORMTECH SC-310 CROSS SECTION DETAIL | NOT TO SCALE



SC-310 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

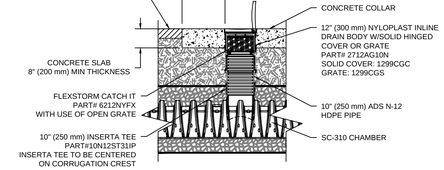
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

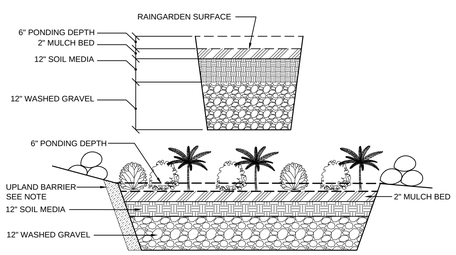
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SWM-4 | STORMTECH SC-310 CHAMBER DETENTION ISOLATOR ROW DETAIL | NOT TO SCALE



SC-310 INSPECTION PORT DETAIL
NTS

SWM-5 | STORMTECH FLUSING/INSPECTION PORT DETAIL | NOT TO SCALE



SOIL MEDIA SPECIFICATIONS:
COMPOSITION - 50% SAND, 20-30% TOPSOIL W/ LESS THAN 5% CLAYS, 20-30% LEAF COMPOST
POROSITY - 0.20

DRAINAGE LAYER SPECIFICATIONS:
POROSITY - 0.40

PLANT SPECIFICATIONS:

Suggested Shrubs List	Suggested Herbaceous Plant List
WITCH HAZEL(Hamemelis virginiana)	CINNAMON FERN (Osmunda cinnamomea)
WINTERBERRY(Ilex verticillata)	CUTLEAF CONEFLOWER (Rudbeckia laciniata)
ARROWWOOD (Viburnum dentatum)	WOOLGRASS (Scirpus cyperinus)
BROOK-SIDE ALDER (Alnus serrulata)	NEW ENGLAND ASTER (Aster novea-angliae)
RED-OISER DOGWOOD (Cornus stolonifera)	FOX SEDGE (Carex culpinoidea)
SWEET PEPPERBUSH (Clethra alnifolia)	SPOTTED JOE-PYE WEED (Eupatorium maculatum)
	SWITCH GRASS (Panicum virgatum)
	GREAT BLUE LOBELIA (Lobelia siphatica)
	WILD BERGAMOT (Monarda fisulosa)
	RED MILKWEED (Asclepias incarnata)

SW-6 | RAIN GARDEN DETAIL | NOT TO SCALE

Site Design Consultants
Civil Engineers • Land Planners
251-F Underhill Avenue, Yorktown Heights, NY 10598
(914) 962-4488 - Fax: (914) 962-7386
www.sitedesignconsultants.com

PROJECT # 15-18

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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
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4	3/7/16	Town Comments

SCALE: NTS
DRAWN BY: TK
DATE: 9/25/15

STORMWATER MANAGMENT DETAILS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-506

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP\15-18_DETAILS_3-1-16.DWG

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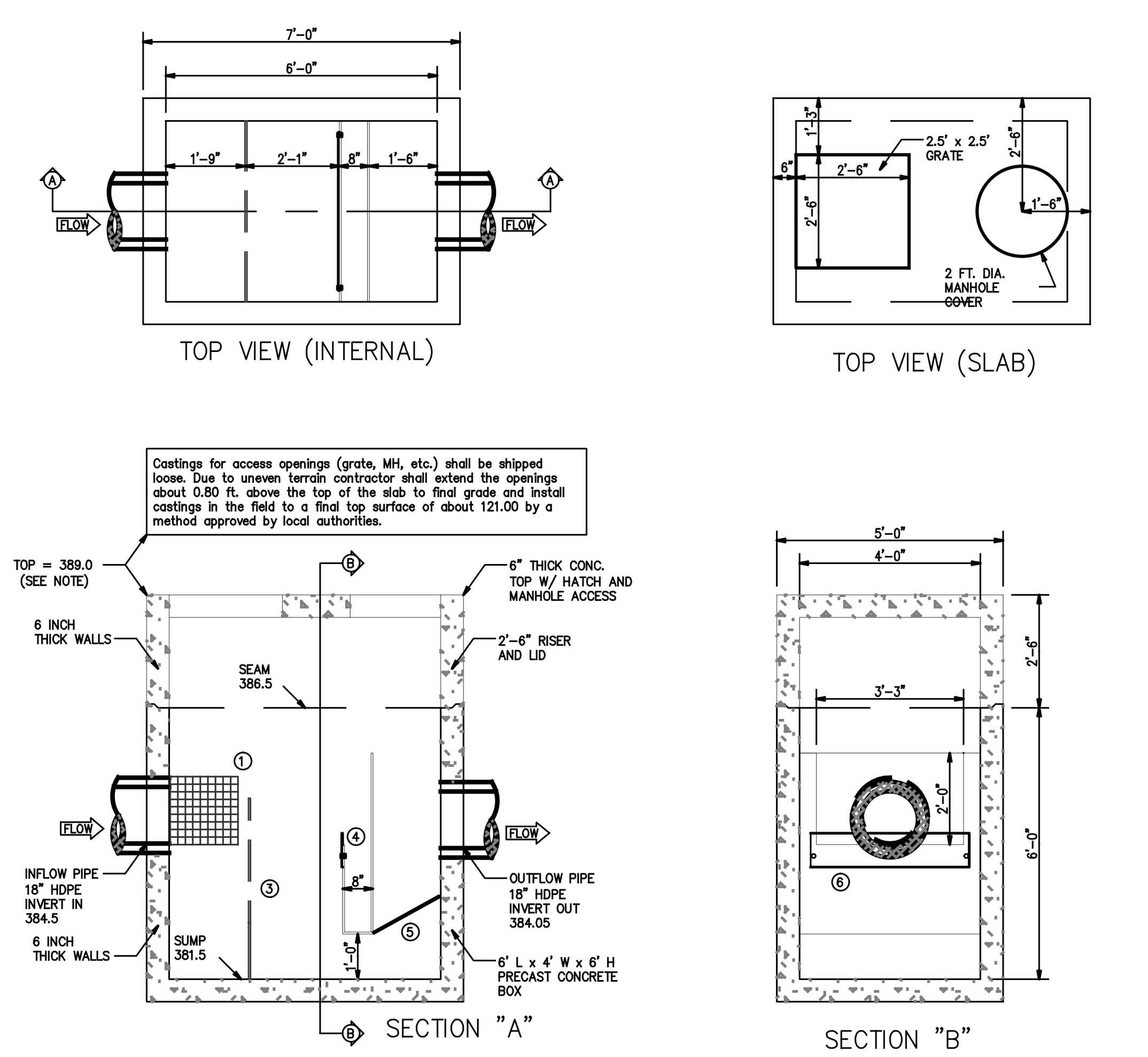
Manufactured by: Practical Best Management – 1-800-748-6945 www.crystalstream.com

1. ALL PIPES SHALL BE CONSTRUCTED TO BE FLUSH WITH THE INSIDE WALLS.
2. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL PIPES AND STRUCTURES BETWEEN AND AROUND THE WATER QUALITY VAULTS.
3. ALL VAULT LIFTING CONNECTIONS SHALL BE LOCATED ON THE OUTSIDE OF THE VAULT WALLS.
4. CONCRETE VAULT PRE-CASTER IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE CONCRETE VAULTS. WALL AND SLAB THICKNESSES SHALL BE ALTERED ACCORDINGLY.



LEGEND

① EXPANDED ALUMINUM BASKET W/ 1/4" MESH LINING, 1'-6" H x 1'-6" L x 4'-0" W, Upfit 3'-0" FROM SUMP
③ 2ND INTERNAL BAFFLE W/ 1" HOLES DRILLED AT 1 1/4" O.C., 4'-0" H.
④ SPILL PROTECTION RESERVOIR 4'-0" H. WITH A 2'-0" FRONT CUT.
⑤ 3/4"COCONUT FIBER FILTER IN ALUMINUM FRAME 1'-8" LONG.
⑥ 1/4"ALUMINUM PLATE, 9" H., 3'-6" WIDE.

CRYSTALSTREAM "CRYSTALCLEAN" WATER QUALITY VAULT MODEL "646 "

JURISDICTION: Ossining, NY

Protected by U.S. Patent No's: 6,797,161; 6,936,163; 6,939,461; 6,951,607; 6,994,783; 7,011,743, 7,037,436

CrystalStream Technologies

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SPECIFICATIONS

1. TOTAL FLOW CAPACITY SHALL BE 6 CFS.
2. WATER QUALITY FLOW OF 0.96 CFS MUST BE TREATED WITH A HYDRAULIC LOADING RATE OF 19 GPM/SF OR LESS.
3. SPILL PROTECTION CAPACITY SHALL BE 434 GALLONS BEFORE OVERFLOW.
4. ANY CHANGES OR SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER AND THE REVIEWING AUTHORITY.

JOB NAME:
Parth Knolls LLC – SC-310
Pretreatment
Device No.: CST-I1P
NY0-001-010515

DESIGN FIRM: Site Design Consultants

3.1 INSPECTION OVERVIEW

THE UNIT IS DESIGNED AND SPECIFIED IN MOST APPLICATIONS TO COMPLY WITH THE NON-POINT SOURCE MANDATES OF THE CLEAN WATER ACT AND THE NPDES REGULATIONS. THESE REGULATIONS STATE THAT ANY BMP (BEST MANAGEMENT PRACTICE) NEEDS TO BE INSPECTED EVERY 90 DAYS AND CLEANED AND MAINTAINED AS NEEDED. MANY LOCAL REGULATIONS HAVE SIMILAR REQUIREMENTS AND ALL FEDERAL, STATE AND LOCAL REQUIREMENTS MUST BE MET. CRYSTALSTREAM TECHNOLOGIES RECOMMENDS VISUAL INSPECTION ON A 30-DAY CYCLE AS WELL AS SEDIMENT DEPTH INSPECTION, DURING THE CONSTRUCTION PHASE. THE UNIT INSPECTION IS DONE TO DETERMINE THE OPERATIONAL STATUS OF THE UNIT AND DETERMINE IF A CLEANING CYCLE IS NECESSARY AS WELL AS TO MEET ANY JURISDICTIONAL ORDINANCE REQUIREMENTS. ALL INSPECTIONS MUST BE DOCUMENTED (APPENDIX 2). WHEN CONSTRUCTION HAS BEEN COMPLETED AND THE SITE HAS STABILIZED, THE CST UNIT SHOULD BE INSPECTED EVERY 90 DAYS FOR THE FIRST YEAR AND CLEANED WHEN SEDIMENT REACHES THE MAXIMUM STORAGE CAPACITY.

3.2 INSPECTION PROCEDURES

AS PER THE FOLLOWING:

3.2.1 THE UNIT SHOULD BE VISUALLY INSPECTED FROM THE SURFACE TO DETERMINE THE INTEGRITY OF ACCESS POINTS. LOOK FOR BROKEN HINGES OR BROKEN OR MISSING HANDLES. A QUALIFIED WELDER SHOULD REPAIR ANY BROKEN HINGES IMMEDIATELY. INSPECT BOLTS ON LID ANGLE IRON AND LOOK FOR LOOSE RED HEADS ON ANGLE IRON. REPLACE RED HEADS AS NEEDED. RE-PAINT THE LID, WITH A RUST RESISTANT PAINT AS NECESSARY.
3.2.2 THE ACCESS SHOULD BE OPENED AND SECURED PROPERLY.
3.2.3 A VISUAL INSPECTION SHOULD BE MADE OF THE TRASH BASKET AT THE FRONT OF THE UNIT TO DETERMINE CAPACITY AND TYPE OF MATERIAL TRAPPED.
3.2.4 A VISUAL INSPECTION SHOULD BE MADE OF THE WATER SURFACE IN THE FRONT OF THE UNIT TO DETERMINE OIL SHEEN OR BLANKET.
3.2.5 A VISUAL INSPECTION SHOULD BE MADE OF THE OIL AND HYDROCARBON RESERVOIR TO DETERMINE AMOUNT OF OIL/WATER TRAPPED AND THE HISTORICAL HIGH-WATER LEVEL IN THE UNIT.
3.2.6 A VISUAL INSPECTION OF THE WATER SURFACE IN THE REAR OF THE UNIT SHOULD BE MADE AND ANY POLLUTANTS NOTED.
3.2.7 INSPECT THE ALUMINUM MESH IN THE TRASH BASKET. REPLACE AS NEEDED.
3.2.8 INSPECT THE BASKET FRAME FOR CRACKS OR DAMAGE. REPAIR AS NEEDED.
A VISUAL INSPECTION SHOULD BE MADE OF THE PIPE CONNECTIONS TO THE UNIT AND ANY MATERIAL DECAY OR IMPROPER INSTALLATION NOTED. PIPES SHOULD BE CUT FLUSH WITH THE INTERIOR WALL OF THE UNIT AND PROPERLY MUDDED IN. IF UPON INSPECTION IT IS NOTED THAT THE PIPES ARE NOT CUT FLUSH, OR ARE NOT MUDDED IN, CONTACT THE CONTRACTOR AND REQUIRE THAT HE CORRECT THIS IMMEDIATELY.
3.2.9 INSPECT BAFFLES TO ENSURE THAT THEY ARE PROPERLY SEATED INTO THE BRACKETS. ALSO NOTE IF THERE IS ANY DAMAGE TO BAFFLES (BOWING). RESEAT BAFFLES IF NECESSARY.
3.2.10 INSPECT OIL RESERVOIR FOR CRACKS OR DAMAGE. CHECK THE WELDS AROUND THE OIL RESERVOIR FOR WEAR OR DAMAGE AND NOTE ANY REPAIR WORK NECESSARY. A QUALIFIED WELDER MUST PERFORM ALL REPAIR WORK TO THE WELDS ON THE OIL RESERVOIR DURING THE ROUTINE CLEANING.
3.2.11 INSPECT THE RISER FOR CRACKS IN THE CONCRETE WALLS. REPAIR AS REQUIRED DURING THE ROUTINE CLEANING.
3.2.12 A SILT GAUGE SHOULD BE USED TO DETERMINE SEDIMENT DEPTH AS SHOWN IN APPENDIX 1. CHECK THE SILT/SEDIMENT LEVEL BEHIND THE TRASH BASKET AND IN FRONT OF THE OIL RESERVOIR
3.2.13 THE ACCESS FOR CLEANING SHOULD BE EVALUATED AND DOCUMENTED. THE TRUCK CLEANING THESE UNITS REQUIRES A STABLE ROADWAY CAPABLE OF WITHSTANDING 15,000 POUNDS.
3.2.14 ANY CHANGES IN THE AREA TRIBUTARY THAT ARE EVIDENT SHOULD BE NOTED.
3.2.15 REPLACE THE ACCESS POINT COVERS CAREFULLY.
3.2.16 NOTE THE CONDITION OF THE AREA SURROUNDING THE UNIT ON THE INSPECTION REPORT. (EXAMPLE: GRASS, DIRT, ROCKS, SINK HOLES) REPORT ANY HAZARDOUS CONDITIONS TO THE APPROPRIATE SUPERVISOR.
3.2.17 AN INSPECTION REPORT SHOULD BE COMPLETED, WITH A COPY STAYING ON SITE AND A COPY BEING SENT TO THE LOCAL JURISDICTION.

THE INSPECTION PROCEDURES FOR THE TRAFFIC UNITS ARE SIMILAR TO THOSE FOR THE NON- TRAFFIC UNITS WITH THE EXCEPTION OF THE SEDIMENT DEPTH EVALUATIONS AS SHOWN IN APPENDIX 1 AND AN INSPECTION OF THE GRATE AND FRAME AND RING AND COVER. ALSO PROPER PRECAUTIONS SHOULD BE TAKEN IN TRAFFIC SITUATIONS AS SPECIFIED IN THE SAFETY SECTION OF THIS MANUAL.

NOTE: WHEN THERE HAS BEEN AN OBVIOUS GASOLINE SPILL OR OTHER FLAMMABLE/HAZARDOUS MATERIAL IN THE UNIT, IMMEDIATE NOTIFICATION SHOULD BE GIVEN TO THE OWNER AND JURISDICTIONAL AUTHORITIES. THIS MANUAL IS FOR ROUTINE CLEANING OF STORM WATER DEBRIS AND ANY UNUSUAL OCCURRENCES SHOULD BE LEFT TO PROPERLY TRAINED AND EQUIPPED INDIVIDUALS.

4.1 CLEANING OVERVIEW

THE CLEANING OF THE UNIT IS THE ESSENTIAL ELEMENT TO THE OPERATIONAL SUCCESS OF THE CRYSTALSTREAM DEVICE. THE POLLUTANT REMOVAL CAPACITY OF THE DEVICE WILL EVENTUALLY CAUSE THE EQUIPMENT TO FAIL WITHOUT PROPER MAINTENANCE AND ADDITIONALLY NOT ACHIEVE THE GOALS OF THE INSTALLATION. THE CLEANING CYCLE IS DEPENDANT ON A NUMBER OF FACTORS INCLUDING POLLUTANT LOAD, RAINFALL, TIME OF YEAR, BASIN CHANGES, UPSTREAM MITIGATION TACTICS AND INSTALLATION. BASED ON THE VARIETY OF FACTORS, A CLEANING SCHEDULE CAN BE CONSISTENT OR VARY WIDELY ON THE SAME DEVICE. THIS HIGHLIGHTS THE IMPORTANCE OF THE INSPECTION PROCESS IN THE OVERALL MAINTENANCE AND INTEGRITY OF THE UNIT. THE CLEANING IS GENERALLY DONE WITH A TWO-PERSON CREW AND A VACUUM PUMP SYSTEM. THE DURATION OF THE MAINTENANCE WILL DEPEND ON A NUMBER OF FACTORS BUT CAN TYPICALLY BE DONE IN ABOUT 2.5 HOURS WITH PROPERLY TRAINED INDIVIDUALS.

4.2 OPTION 1: CLEANING PROCEDURES - SURFACE CLEANING

IF THE CLEANING OF THE UNIT IS TO BE PREFORMED FROM THE SURFACE, THE OPERATOR SHOULD EXPECT A LONGER CLEANING TIME AND THE POTENTIAL FOR ADDITIONAL DISPOSAL CHARGES. THE FRONT CHAMBER OF THE UNIT WILL CONTAIN THE TRASH AND DEBRIS IN THE TRASH BASKET, ANY FLOATING HYDROCARBONS THAT HAVE NOT BEEN SKIMMED INTO THE OIL/HYDROCARBON RESERVOIR AND ACCUMULATED SEDIMENT ON THE BOTTOM OF THE UNIT.

CLEANING PROCEDURES ARE AS PER THE FOLLOWING:

4.2.1 THE UNIT SHOULD BE VISUALLY INSPECTED FROM THE SURFACE TO DETERMINE THE INTEGRITY OF THE TREAD PLATE LID, ALUMINUM HATCH OR OTHER ACCESS.
4.2.2 A VISUAL INSPECTION OF THE UNIT SHOULD BE DONE TO EVALUATE STRUCTURAL INTEGRITY AND DETERMINE IF ANY IMPACTED MATERIAL IS PRESENT IN THE DEVICE. IF THERE HAS BEEN A HAZARDOUS SPILL SEE SECTION 4.6

NOTE: WHEN THERE HAS BEEN AN OBVIOUS GASOLINE SPILL OR OTHER FLAMMABLE/HAZARDOUS MATERIAL IN THE UNIT, IMMEDIATE NOTIFICATION SHOULD BE GIVEN TO THE OWNER AND JURISDICTIONAL AUTHORITIES. THIS MANUAL IS FOR ROUTINE CLEANING OF STORM WATER DEBRIS AND ANY UNUSUAL OCCURRENCES SHOULD BE LEFT TO PROPERLY TRAINED AND EQUIPPED INDIVIDUALS.

4.2.3 THE TRASH BASKET SHOULD BE CLEANED BY EITHER USING A TRASH NETTING SYSTEM OR VACUUM TRUCK. IF CLEANING USING A NETTING SYSTEM, THIS MATERIAL CAN BE DISPOSED OF IN TRASH BAGS IN THE NORMAL MANNER.
4.2.4 THE SURFACE OIL/HYDROCARBON SEPARATION ZONE IN THE FRONT CHAMBER SHOULD BE REMOVED EITHER WITH SORBANTS OR WITH A VACUUM TRUCK.
4.2.5 THE STORMWATER CONTAINED IN THE AREA BETWEEN THE SURFACE WATER AND THE SEDIMENT ACCUMULATION CAN BE DECANTED TO MINIMIZE THE AMOUNT OF DISPOSAL REQUIRED. ANY DOWNSTREAM DISCHARGE NEEDS TO BE AFTER THE SURFACE CLEANING AND ONLY DOWN TO THE LEVEL OF THE BOTTOM OF THE OIL/HYDROCARBON RESERVOIR OR THE TOP OF THE SEDIMENT ACCUMULATION. ANY POLLUTANTS DISCHARGED DOWNSTREAM ARE THE RESPONSIBILITY OF THE CLEANING OPERATOR.
4.2.6 THE OIL/HYDROCARBON RESERVOIR NEEDS TO BE EVACUATED BY THE VACUUM EQUIPMENT.
4.2.7 THE SEDIMENT ACCUMULATED IN THE FRONT AND REAR CHAMBER CAN BE REMOVED BY THE VACUUM EQUIPMENT.
4.2.8 THE UNIT SHOULD BE PRESSURE WASHED DOWN TO REMOVE ANY POLLUTION ATTACHED TO THE BAFFLES, WALLS OR HYDROCARBON RESERVOIR.
4.2.9 ALL PARTS SHOULD BE INSPECTED FOR WEAR AND TEAR AND DOCUMENTED.
4.2.10 A MAINTENANCE REPORT (APPENDIX 3) SHOULD BE COMPLETED, WITH A COPY STAYING ON SITE AND A COPY BEING SENT TO THE LOCAL JURISDICTION.

4.3 OPTION 2: CLEANING PROCEDURES - CONFINED SPACE ENTRY

THE CLEANING PROCEDURES ARE SIMILAR FOR CONFINED SPACE ENTRIES EXCEPT THAT THE OSHA GUIDELINE APPLY AND NEED TO BE FOLLOWED. THE CONFINED SPACE ENTRY ALLOWS THE CREW TO DO A BETTER JOB OF CLEANING THE UNIT AND ALLOWS FOR THE TIME NEEDED AND DISPOSAL COST TO BE REDUCED.

CAUTION! ANY INSPECTION DONE IN A TRAFFIC AREA MUST MEET THE DOT GUIDELINES FOR ROADWAY WORK AND ADDITIONAL SAFETY PROCEDURE WILL BE NECESSARY.

CAUTION ! ALL OSHA CONFINED SPACE REQUIREMENTS SHOULD BE MET WHILE CLEANING THIS UNIT. AS PER THE FOLLOWING:

4.3.1 THE UNIT SHOULD BE VISUALLY INSPECTED FROM THE SURFACE TO DETERMINE THE INTEGRITY OF THE TREAD PLATE LID.
4.3.2 A VISUAL INSPECTION OF THE UNIT SHOULD BE DONE TO EVALUATE STRUCTURAL INTEGRITY AND DETERMINE IF ANY IMPACTED MATERIAL IS PRESENT IN THE DEVICE. IF THERE HAS BEEN A HAZARDOUS SPILL SEE SECTION 4.6

NOTE: WHEN THERE HAS BEEN AN OBVIOUS GASOLINE SPILL OR OTHER FLAMMABLE/HAZARDOUS MATERIAL IN THE UNIT, IMMEDIATE NOTIFICATION SHOULD BE GIVEN TO THE OWNER AND JURISDICTIONAL AUTHORITIES. THIS MANUAL IS FOR ROUTINE CLEANING OF STORM WATER DEBRIS AND ANY UNUSUAL OCCURRENCES SHOULD BE LEFT TO PROPERLY TRAINED AND EQUIPPED INDIVIDUALS.

4.3.3 A LADDER SHOULD BE INSERTED ON THE FRONT SIDE OF THE UNIT BETWEEN THE BAFFLES AND A SORBANT BLANKET LAID ON THE SURFACE OF THE WATER TO COLLECT ANY FREE OIL FLOATING ON THE SURFACE.
4.3.4 IN MOST UNITS, THE TRASH BASKET AND BAFFLES CAN BE REMOVED TO ALLOW EASIER ACCESS TO THE BOTTOM OF THE UNIT.
4.3.5 INSPECT THE ALUMINUM MESH IN THE TRASH BASKET. REPLACE AS NEEDED.
4.3.6 THE TRASH BASKET SHOULD BE CLEANED AND DIRECTLY DISPOSED OF IN GARBAGE BAGS.
4.3.7 THE STORMWATER CONTAINED IN THE AREA BETWEEN THE SURFACE WATER AND THE SEDIMENT ACCUMULATION CAN BE DECANTED TO MINIMIZE THE AMOUNT OF DISPOSAL REQUIRED. ANY DOWNSTREAM DISCHARGE NEEDS TO BE AFTER THE SURFACE CLEANING AND ONLY DOWN TO THE LEVEL OF THE BOTTOM OF THE OIL/HYDROCARBON RESERVOIR OR THE TOP OF THE SEDIMENT ACCUMULATION. ANY POLLUTANTS DISCHARGED DOWNSTREAM ARE THE RESPONSIBILITY OF THE CLEANING OPERATOR.
4.3.8 THE UNIT SHOULD BE PRESSURE WASHED DOWN TO REMOVE ANY POLLUTION ATTACHED TO THE BAFFLES, WALLS OR HYDROCARBON RESERVOIR.
4.3.9 THE LADDER CAN BE USED TO GET ON TO THE UNIT FLOOR AND REMOVE THE REST OF THE WATER AND SEDIMENT FROM THE BOTTOM OF THE UNIT.
4.3.10 THE WALLS SHOULD BE WIPED DOWN IN THE FRONT WITH A SORBANT BLANKET
4.3.11 THE FRESH COCONUT FIBER MESH SHOULD BE REPLACED IN THE FRAME AND THE FRAME ASSEMBLY RETURNED TO THE UNIT.
4.3.12 ALL PARTS SHOULD BE INSPECTED FOR WEAR AND TEAR AND DOCUMENTED.
4.3.13 REMOVE ALL EQUIPMENT FROM THE UNIT. REPLACE THE MANHOLE COVER AND THE GRATE IN THE CONCRETE LID.
4.3.14 A MAINTENANCE REPORT (APPENDIX 3) SHOULD BE COMPLETED, WITH A COPY STAYING ON SITE AND A COPY BEING SENT TO THE LOCAL JURISDICTION.

CLEANING EQUIPMENT

THE EQUIPMENT NEEDED TO CLEAN THE CRYSTALSTREAM UNIT IS:

- VACUUM TRUCK 750 GALLON
- PRESSURE WASHER
- SUBMERSIBLE PUMP
- GENERATOR
- SORBANT PADS (MYCELX™)
- 16-25 FT. LADDER
- GLOVES
- COCONUT FIBER MESH (ROLANKA INDUSTRIES)
- TRASH BAGS
- CRYSTALSTREAM LID HOOKS
- SEDIMENT/SILT GAUGE
- RUBBER BOOTS
- TESTING EQUIPMENT TO MEET OSHA CONFINED SPACE ENTRY REQUIREMENTS
- CONES
- BARRICADES
- CAUTION TAPE
- HARDHAT
- WATERPROOF SILICON CAULK
- ALUMINUM MESH (FOR TRASH BASKET)
- FLAT SHOVEL
- 20' ELECTRICAL CORD
- 5 GALLON BUCKET W/ROPE
- FIRST AID KIT CONTAINING EYE WASH
- TRIPOD SAFETY HARNESS RECOVERY APPARATUS

CALL CRYSTALSTREAM AT 1-800-748-6945 IF YOU NEED SUPPLIES OR PARTS.

DOCUMENTATION AND DISPOSAL

THE CLEANING OF THE UNIT SHOULD BE DOCUMENTED AND THE CONTENTS OF THE UNIT ESTIMATED AND RECORDED IN A LOG FOR INSPECTIONS. THIS DOCUMENTATION SHOULD MEET FEDERAL, STATE AND LOCAL GUIDELINES.

THE DISPOSAL OF THE TRASH, DEBRIS, WATER AND SEDIMENT SHOULD BE DONE AT AN APPROVED FACILITY AND THE PROPER PERMITS SHOULD BE OBTAINED TO TRANSPORT THE MATERIAL. SEDIMENT AND WATER SHOULD BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS. SEDIMENT SHOULD BE REMOVED TO A LANDFILL AND LIQUIDS TO A DECANTING FACILITY.

HAZARDOUS WASTE PROCEDURE

THE PRESENCE OF ANY HAZARDOUS MATERIAL INSIDE THE UNIT SHOULD PROMPT AN IMMEDIATE CALL TO THE JURISDICTION AND AN APPROPRIATE HAZARDOUS RESPONSE TEAM. THIS MATERIAL IS NOT PART OF THE STANDARD CLEANING OF THE DEVICE AND SHOULD BE TREATED WITH THE PROPER CARE AFFORDED SUCH SPILLS AS PER FEDERAL, STATE AND LOCAL GUIDELINES.

5.1 MAINTENANCE OVERVIEW

ALL OF THE COMPONENTS IN THE UNIT SHOULD BE INSPECTED AT EVERY CLEANING TO DETERMINE WEAR OR DAMAGE. IF ANY COMPONENTS ARE DAMAGED, PLEASE CONTACT CRYSTALSTREAM TECHNOLOGIES FOR AN EVALUATION OF THE DAMAGE AND A MAINTENANCE ESTIMATE.

PROJECT # 15-18

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Revisions:

No.	Date	Comments:
1	11/9/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: NTS

DRAWN BY: TK

DATE: 9/25/15

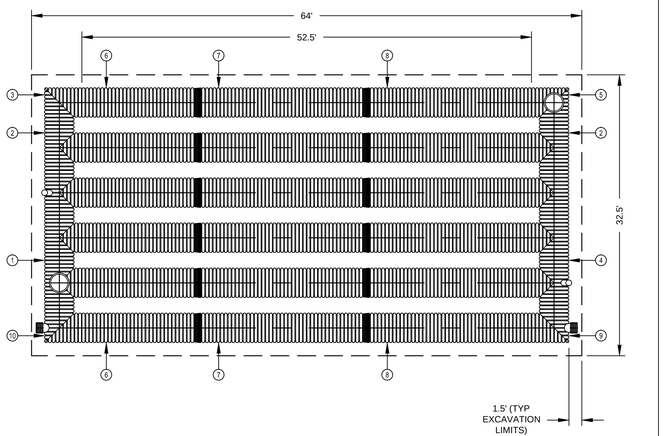
CRYSTAL STREAM DETAILS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining
Westchester County, NY

Sheet C-507

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D 15-18 BELDOTTI MANAGEMENT CORP\15-18_DETAILS 3-1-16.DWG

NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.



BILL OF MATERIALS

*THE COMPONENTS AND QUANTITIES LISTED HEREIN ARE NOT INTENDED TO BE A COMPREHENSIVE MATERIAL LIST. EXTRA COMPONENTS, NOT LISTED HEREIN, MAY BE NECESSARY TO COMPLETE THE CONSTRUCTION OF THE SYSTEM.

ITEM	QTY.	PART #	DESCRIPTION	MATERIAL	VENDOR	NOTE
1	1	3653ANC_1	36" TRIPLE MANIFOLD TEE W/24" RISER, W/8" CLEANOUT			See Detail
2	2	3651AN	36" SINGLE MANIFOLD TEE			See Detail
3	1	3698AN	36" X 90 DEGREE MANIFOLD BEND			See Detail
4	1	3653ANC_2	36" TRIPLE MANIFOLD TEE W/8" CLEANOUT			See Detail
5	1	3698ANC_1	36" X 90 DEGREE MANIFOLD BEND W/24" RISER			See Detail
6	6	Stick 1	36" PIPE STICK : SOIL TIGHT (FIELDCUT)			See Detail
7	6	36850020IB	36" PIPE STICK : SOIL TIGHT			See Detail
8	6	Stick 2	36" PIPE STICK : SOIL TIGHT (FIELDCUT)			See Detail
9	1	3698ANC_2	36" X 90 DEGREE MANIFOLD BEND W/12" STUB			See Detail
10	1	3698ANC_3	36" X 90 DEGREE MANIFOLD BEND W/12" STUB			See Detail
	18	3905AA	36" SPLIT COUPLER			STANDARD

NOMINAL DIAMETER	NOMINAL O.D.	TYPICAL SPACING "C"	TYPICAL SIDE WALL "X"	MIN. H (NON-TRAFFIC)	MIN. H (TRAFFIC)	MAX. H*
36" (900 MM)	42" 1067 MM)	63" (1600 MM)	18" (457 MM)	12" (292 MM)	12" (292 MM)	8' (2.4 M)

* MAXIMUM FILL HEIGHTS OVER MANIFOLD FITTINGS. CONTACT MANUFACTURER'S REPRESENTATIVE FOR INSTALLATION CONSIDERATIONS WHEN COVER EXCEEDS 8-FT.
**60" SYSTEMS REQUIRE CLASS I BACKFILL AROUND ALL FITTINGS.

NOTES:

1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
4. FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
5. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE. THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4'-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
8. COVER: MINIMUM COVER OVER ALL RETENTION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UPTO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. MAXIMUM FILL HEIGHT LIMITED TO 8-FT OVER FITTINGS FOR STANDARD INSTALLATIONS. CONTACT A SALES REPRESENTATIVE WHEN MAXIMUM FILL HEIGHTS EXCEED 8-FT FOR INSTALLATION CONSIDERATIONS.

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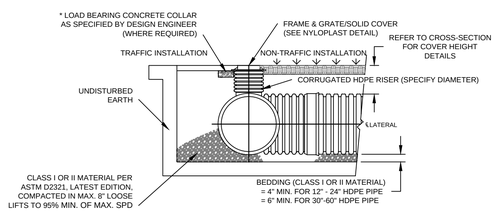
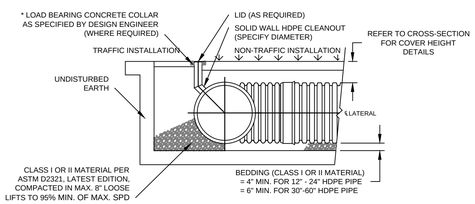
PLAN VIEW



SECTION A-A



SECTION B-B

* LOAD BEARING CONCRETE COLLAR SHALL BE CONSTRUCTED IN TRAFFIC AREAS SUCH THAT THE LIVE LOAD IS TRANSMITTED TO THE SURROUNDING SOIL AND NOT DIRECTLY TO THE RISER.

ADS RETENTION/DETENTION PIPE SYSTEM SPECIFICATION

SCOPE
THIS SPECIFICATION DESCRIBES ADS RETENTION/DETENTION PIPE SYSTEMS FOR USE IN NON-PRESSURE GRAVITY-FLOW STORM WATER COLLECTION
SYSTEMS UTILIZING A CONTINUOUS OUTFALL STRUCTURE.

PIPE REQUIREMENTS
ADS RETENTION/DETENTION SYSTEMS MAY UTILIZE ANY OF THE VARIOUS PIPE PRODUCTS BELOW:
- N-12 ST IB PIPE (PER AASHTO) SHALL MEET AASHTO M294, TYPE S OR ASTM F2306
- N-12 ST IB PIPE (PER ASTM F2648) SHALL MEET ASTM F2648
- N-12 MEGA GREEN ST IB SHALL MEET ASTM F2648
- N-12 WT IB PIPE (PER AASHTO) SHALL MEET AASHTO M294, TYPE S OR ASTM F2306
- N-12 WT IB PIPE (PER ASTM F2648) SHALL MEET ASTM F2648
- N-12 MEGA GREEN WT IB SHALL MEET ASTM F2648

ALL PRODUCTS SHALL HAVE A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS. ALL ST IB PIPE PRODUCTS ARE AVAILABLE AS
PERFORATED OR NON-PERFORATED. WT IB PIPE PRODUCTS ARE ONLY AVAILABLE AS NON-PERFORATED.
PRODUCT-SPECIFIC PIPE SPECIFICATIONS ARE AVAILABLE IN THE DRAINAGE HANDBOOK SECTION 1 *SPECIFICATIONS*

JOINT PERFORMANCE
PLAIN END /SOIL-TIGHT (ST IB):
ST IB PIPE SHALL BE JOINED USING A BELL & SPIGOT JOINT. THE BELL & SPIGOT JOINT SHALL MEET THE SOIL-TIGHT REQUIREMENTS OF ASTM F2306 AND
GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477.

PLAIN END PIPE & FITTINGS CONNECTIONS SHALL BE JOINED WITH COUPLING BANDS COVERING AT LEAST TWO FULL CORRUGATIONS ON EACH END OF
THE PIPE. GASKETED SOIL-TIGHT COUPLING BAND CONNECTIONS SHALL INCORPORATE A CLOSED-CELL SYNTHETIC EXPANDED RUBBER GASKET
MEETING THE REQUIREMENTS OF ASTM D1056 GRADE 2A2. GASKETS, WHEN APPLICABLE, SHALL BE INSTALLED BY THE PIPE MANUFACTURER.

WATERTIGHT (WT IB):
WT IB PIPE SHALL BE JOINED USING A BELL & SPIGOT JOINT. THE JOINT SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212
GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477. 12 - THROUGH 60 - INCH (300 TO 1500MM) DIAMETERS SHALL HAVE A BELL REINFORCED WITH A
POLYMER COMPOSITE BAND. THE BELL TOLERANCE DEVICE SHALL BE INSTALLED BY THE MANUFACTURER.

PIPE & FITTING CONNECTIONS SHALL BE WITH A BELL AND SPIGOT CONNECTION UTILIZING A SPUN-ON OR WELDED BELL AND VALLEY OR SADDLE
GASKET. THE JOINT SHALL MEET THE WATERTIGHT REQUIREMENTS OF ASTM D3212, AND GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477.
DETENTION SYSTEMS ARE SUBJECT TO GREATER LEAKAGE THAN TYPICAL SINGLE RUN STORM SEWER APPLICATIONS AND THEREFORE ARE NOT
APPROPRIATE FOR APPLICATIONS REQUIRING LONG-TERM FLUID CONTAINMENT OR HYDROSTATIC PRESSURE. FOR ADDITIONAL DETAILS REFER TO
TECHNICAL NOTE 7.01 *RAINWATER HARVESTING WITH HDPE CISTERNS*.

FITTINGS
FITTINGS SHALL CONFORM TO ASTM F2306 AND MEET JOINT PERFORMANCE INDICATED ABOVE FOR FITTINGS CONNECTIONS. CUSTOM FITTINGS ARE
AVAILABLE AND MAY REQUIRE SPECIAL INSTALLATION CRITERION.

INSTALLATION
INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321 AND ADS RECOMMENDED INSTALLATION GUIDELINES, WITH THE EXCEPTION THAT MINIMUM
COVER IN NON-TRAFFIC AREAS FOR 12 - THROUGH 60 - INCH (300 TO 1500MM) DIAMETERS SHALL BE ONE FOOT (0.3M). MINIMUM COVER IN TRAFFICKED
AREAS FOR 12 - THROUGH 36 - INCH (300 TO 900MM) DIAMETERS SHALL BE ONE FOOT (0.3M) AND FOR 42 - THROUGH 60 - INCH (1050 TO 1500MM)
DIAMETERS, THE MINIMUM COVER SHALL BE 2 FT (0.6M). BACKFILL SHALL CONSIST OF CLASS I MATERIAL ONLY. MINIMUM COVER HEIGHTS DO NOT
ACCOUNT FOR PIPE BUOYANCY. REFER TO ADS TECHNICAL NOTE 5.*05 HDPE PIPE FLOTATION FOR BUOYANCY DESIGN CONSIDERATIONS*. MAXIMUM
COVER OVER SYSTEM USING STANDARD BACKFILL IS 8-FT (2.4M); CONTACT A REPRESENTATIVE WHEN MAXIMUM FILL HEIGHT MAY BE EXCEEDED
ADDITIONAL INSTALLATION REQUIREMENTS ARE PROVIDED IN THE DRAINAGE HANDBOOK SECTION 6 *RETENTION/DETENTION*.

NOTES:

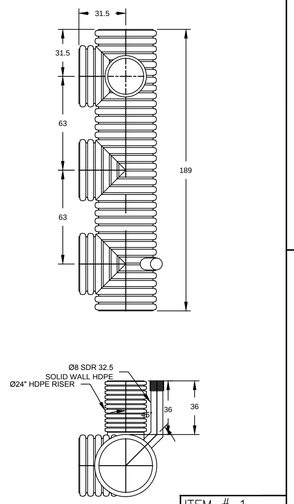
1) ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS, INLETS AND OUTLETS, SHALL BE VERIFIED BY THE ENGINEER PRIOR TO RELEASING FOR FABRICATION.
2) IN SITUATIONS WHERE A FINE-GRAINED BACKFILL MATERIAL IS USED ADJACENT TO THE PIPE SYSTEM, AND ESPECIALLY INVOLVING GROUND WATER CONDITIONS, CONSIDERATION SHOULD BE GIVEN TO THE USE OF GASKETED PIPE JOINTS. AT THE VERY LEAST THE PIPE JOINTS SHOULD BE WRAPPED IN A SUITABLE, NON-WOVEN GEOTEXTILE FABRIC TO PREVENT INFILTRATION OF FINES INTO THE PIPE SYSTEM.
3) CONSIDERATION FOR CONSTRUCTION EQUIPMENT LOADS MUST BE TAKEN INTO ACCOUNT.
4) ALL PIPE DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.
5) ALL RISERS TO BE FIELD EXTENDED OR TRIMMED TO FINAL GRADE.

THE PROCEEDING DETAILS WERE GENERATED USING ADS DESIGN PRO®, A SOFTWARE PROGRAM DEVELOPED BY ADVANCED DRAINAGE SYSTEMS, INC. ("ADS"). THESE DRAWINGS ARE INTENDED TO DEPICT THE ADS COMPONENTS AS REQUESTED BY THE USER. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

THE UNDERSIGNED HERBY APPROVES THE ATTACHED DETAILS.

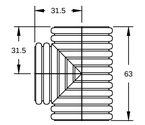
CUSTOMER DATE

36" TRIPLE MANIFOLD TEE W/24" RISER, W/8" CLEANOUT



ITEM # 1
QTY : 1
3653ANC_1

36" SINGLE MANIFOLD TEE



ITEM # 2
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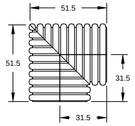
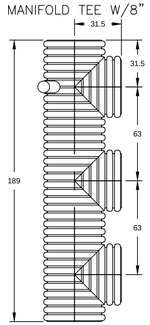
3651AN

36" X 90 DEGREE MANIFOLD BEND



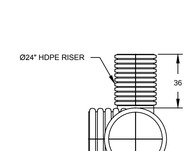
ITEM # 3
QTY : 1
3698AN

36" TRIPLE MANIFOLD TEE W/8" CLEANOUT



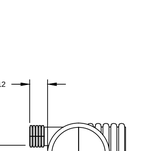
ITEM # 4
QTY : 1
3653ANC_2

36" X 90 DEGREE MANIFOLD BEND W/24" RISER



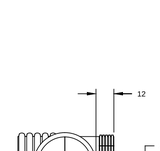
ITEM # 5
QTY : 1
3698ANC_1

36" X 90 DEGREE MANIFOLD BEND W/12" STUB



ITEM # 9
QTY : 1
3698ANC_2

36" X 90 DEGREE MANIFOLD BEND W/12" STUB



ITEM # 10
QTY : 1
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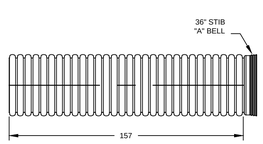
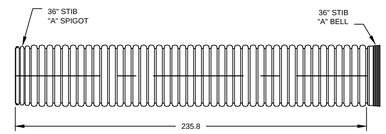
36" PIPE STICK : SOIL TIGHT (FIELDCUT)



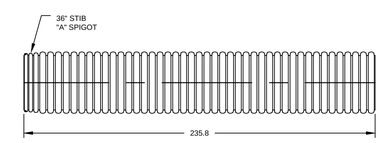
ITEM # 6
QTY : 6
Stick 1

36" PIPE STICK : SOIL TIGHT



ITEM # 7
QTY : 6
36850020IB

36" PIPE STICK : SOIL TIGHT (FIELDCUT)



ITEM # 8
QTY : 6
Stick 2

PROJECT # 15-18

Site Design Consultants
Civil Engineers • Land Planners
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Engineer:
Joseph C. Riina, P.E.
NYS Lic. No. 64431

Revisions:

No.	Date	Comments:
1	11/5/15	Town Comments
2	12/7/15	Town Comments
3	1/25/16	Town Comments
4	3/7/16	Town Comments

SCALE: NTS
DRAWN BY: TK
DATE: 9/25/15

CISTERN DETAILS

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet C-508

F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\CSD-15-18 BELDOTTI MANAGEMENT CORP15-18 CISTERN DETAILS.DWG

NOTE: UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW.


LOCATION MAP
NOT TO SCALE
Buffer to be restored, grass, vines and invasive species to be removed, and area re-planted
Wetland to be restored, vines and non-native species to be removed
Buffer to be restored, vines and non-native species to be removed
Porous pavement for parking area
Children's playground area
Buffer to be restored, grass removed and area re-planted
Buffer to be expanded, grass removed and area re-planted
Buffer to be restored, vines, non-native species, concrete and asphalt to be removed
PROPOSED BUILDING #1
F.F. ELEVATION = 315.0
PARKING ELEVATION = 305.0
PROPOSED BUILDING #2
F.F. ELEVATION = 317.2
PARKING ELEVATION = 307.2
POOL ELEVATION = 305.9
PROPOSED DECK (TYP.)
PROPOSED PATIO (TYP.)
PROPOSED SPLIT RAIL FENCE (TYP.)
PROPOSED MAIN ENTRANCE/EXIT
PROPOSED SIGN LOCATION
Buffer to be restored, grass removed and area re-planted
Proposed forebay to capture incoming sediments before they reach the watercourse and pond
Proposed removal of shallow sediments and re-seeding with wetland seed mix
Limits of existing watercourse
Limits of existing town regulated wetland
Limits of permanent buffer disturbance
Limits of wetland restoration area
Limits of buffer restoration and enhancement
PROPERTY LINE / RIGHT OF WAY
PROPOSED CURB
EDGE OF WETLAND
100' WETLAND BUFFER
SCALE: 1"=30'-0"
SAFE DIG
Before You Dig, Drill or Blast!

Plant Species Choices for Mitigation Area

Map Symbol	Quantity	Scientific Name	Common Name	Size
Trees				
Aru	11	Acer rubrum	Red maple	5' - 6'
Ns	6	Nyssa sylvatica	Black tupelo	5' - 6'
Qp	7	Quercus palustric	Pin oak	5' - 6'
Po	4	Platanus occidentalis	Syacamore	5' - 6'
Shrubs				
AC	21	Amelanchier canadensis	Shadblow	3' - 4'
CSe	21	Cornus sericea	Redosier dogwood	3' - 4'
Iv	36	Ilex verticillata	Winterberry holly	3' - 4'
SD	12	Salix discolor	Pussy willow	3' - 4'
ASe	12	Alnus serrulata	Speckled alder	4' - 5'
VC	33	Vaccinium corymbosum	Highbush blueberry	4' - 5'
VD	31	Viburnum dentatum	Arrowwood	4' - 5'

Buffer mitigation plan prepared by
Steve Marino, PWS, of Tim Miller Associates, Inc.
Revision date: January 21, 2016

NOTE:

1. *THIS IS NOT A SURVEY.* ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY JOSEPH R. LINK, DATED 03/07/15, LAST REVISED 06/08/15. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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Revisions:

No.	Date	Comments:
1	11/9/15	Town Comments
2	12/7/15	Town Comments
3	12/7/15	Town Comments

SCALE: 1" = 30'
DRAWN BY: TK
DATE: 9/25/15

WETLAND BUFFER MITIGATION

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet M-101

Wetland Buffer Mitigation Narrative and Specification
Parth Knolls
Hawkes Avenue, Town of Ossining, NY
January 21, 2016

Project Description

The applicant proposes the development of 53 rental units in conformance with the existing zoning. Some of the activities that are necessary for this development will occur within the 100 foot regulated setback to wetlands and 50 foot setback to watercourses. No filling or other disturbance to wetlands or watercourses is proposed. Existing site wetlands are associated with two watercourses that enter the site.

Mitigation Proposal

The applicant is proposing a three-tier approach to mitigating the encroachments into federal wetlands.

Buffer Enhancement. The existing buffer has been historically disturbed for activities associated with the former residential/office use. Existing concrete paths, non-native edges and maintained lawn areas. dominate the buffer on the east side of the western watercourse, and on the north side of watercourse/pond at the south end of the site. It is proposed to remove existing concrete and asphalt, remove non-native shrubs and other vegetation, and cease the mowing of lawns within these areas.

Buffer Restoration. A total of 28 new trees and 166 new shrubs will be planted within the buffer areas to enhance and restore the buffer to a more natural condition. The plant list includes all native species commonly found in wetland and transitional areas in the Hudson Valley. As noted above, regular mowing will cease and seed mixes suitable for buffer and transitional areas will be applied, with one annual mowing occur in the fall to occur in these areas.

Wetland Restoration. The small fringing wetlands associated wit the watercourses are dominated by invasive plant species, including porcelainberry, oriental bittersweet, multifloral rose and others. It is proposed to actively remove these species by hand in those areas where the plants are most dominant. Wetland seed mix especially selected for riparian corridors will then be used in these areas.

Along the watercourse at the southern end of the site, sediment that has accumulated over the years after passing under the Hawkes Avenue culvert will be removed by machine and used as fill elsewhere on site. The newly exposed substrate will be hayed and seeded with wetland seed mix and planted with shrubs as shown on the accompanying plans.

Forebay Creation. In order to prevent future sediment deposition in the watercourse and wetland, a new "forebay" feature will be excavated in the buffer just downstream of the Hawkes Avenue culvert, in a location that is currently maintained as lawn. This shallow depressional areas is expected to allow sediment entering the system to settle out in a location that is more easily accessed and maintained.

Use of Porous Pavement and Creation of Nature Trails. In some portions of the buffer that are currently maintained as lawn, future disturbance needed to create the necessary number of parking spaces is unavoidable. In these areas the parking spaces will be made up of porous pavement in order to continue the groundwater recharge and filtering function of the buffer areas.

Nature trails are proposed from the proposed playground and pool areas to a wooden foot bridge across the restored stream channel to provide access to the natural areas on the western side of the stream. Wooden benches will be placed along the trail for rest or observation.

Planting Details

Plant choices for the wetland buffer were made according to existing site conditions and locally common species. All planting will proceed by hand. Materials will be brought to the site in good condition (see below) and then placed in central drop locations. The materials will then be hand-carried to their planting locations and in turn, planted by hand. Only rounded, shallow planting shovels will be used in this effort.

Criteria for selecting plant material will include (1) the plant's ability to withstand the expected light and saturation conditions; (2) its demonstrated survival on this site and other nearby sites; (3) the plant must be native and non-invasive; and (4) whether the plant material is available at nurseries in the same region as the site. The location of the trees and shrubs are coordinated with the proposed Landscape Plan (Sheet L-1) and the existing tree survey.

Planting will be done in spring or early summer (between April 1 and July 1). Shrubs may also be planted in the late summer to early fall (September 1 to October 30). In all cases, a hole will be dug twice as deep as the root ball. The only shovels allowed are rounded, shallow spades. The hole will then be backfilled with a thin layer (two to four inches) of rich, organic topsoil, the plant placed inside, the hole backfield to the top and then gently tamped down.

Container-grown plant material delivered to the job site will be inspected to assure moist soil/root masses. Any dry and light weight plants will not be accepted. If not planted immediately the container will be stored out of the sun and wind and kept moist (i.e., a means of watering will be provided and watering will occur daily). When removed from the containers, the plants will be the size of the specified container. If in leaf, the plants will appear healthy with no spots, leaf damage, discoloration, insects or fungus. If not in leaf, the buds will be firm and free of damage, discoloration, insects or fungus. Containers will be a minimum of quart size for shrubs and gallon size for trees. Plants not having an abundance of well developed terminal buds on the leaders and branches will be rejected. The stems and branches of all plants will be turgid and the cambium healthy or the plants rejected. Seeding within wetland areas should not be completed when there is more than two inches of standing water, or in areas that are likely to be flooded. Seeds should be broadcast by hand or knapsack seeder using the proper seeding rate (3.5 pounds per acre), and carefully proportioning seed for the entire area. Cover with a light layer of straw mulch following seeding.

Monitoring and Maintenance

At least one pre-construction meeting will occur between the chosen grading and/or planting contractor/subcontractor and the site environmental systems planner prior to beginning construction on site. The construction monitor will have experience in wetland construction and a Bachelor of Science degree in Natural and/or Physical Resources.

Monitoring and maintenance efforts for the mitigation plantings will take place over a three year period following construction. This will include bi-weekly visits for the first growing season, and then twice a year for the next two years, with additional inspections as required depending on conditions. The applicant's environmental monitor will conduct a survey of the site and site conditions will be noted and adjusted as necessary. An annual report will be provided to the Town of Ossining at the end of the growing season for each of the three years. These reports will include the following information:

1. All plant species, along with their estimated relative frequency and percent cover, shall be identified.
2. Vegetation cover maps, at a scale of one inch equals 30 or larger, shall be prepared for each growing season.
3. Photographs showing all representative areas of the mitigation site shall be taken at least once each year during the period between 1 June and 15 August.

Plantings will meet or exceed and 85 percent survival rate by the end of the second growing season. If this goal is not met, the site will be re-evaluated, and re-grading and/or replanting will be completed as necessary. Invasive species (i.e., oriental bittersweet, multifloral rose, etc.) will not constitute more than 10 percent of the vegetative community. If this goal is exceeded, measures will be taken to eradicate the invasive species.

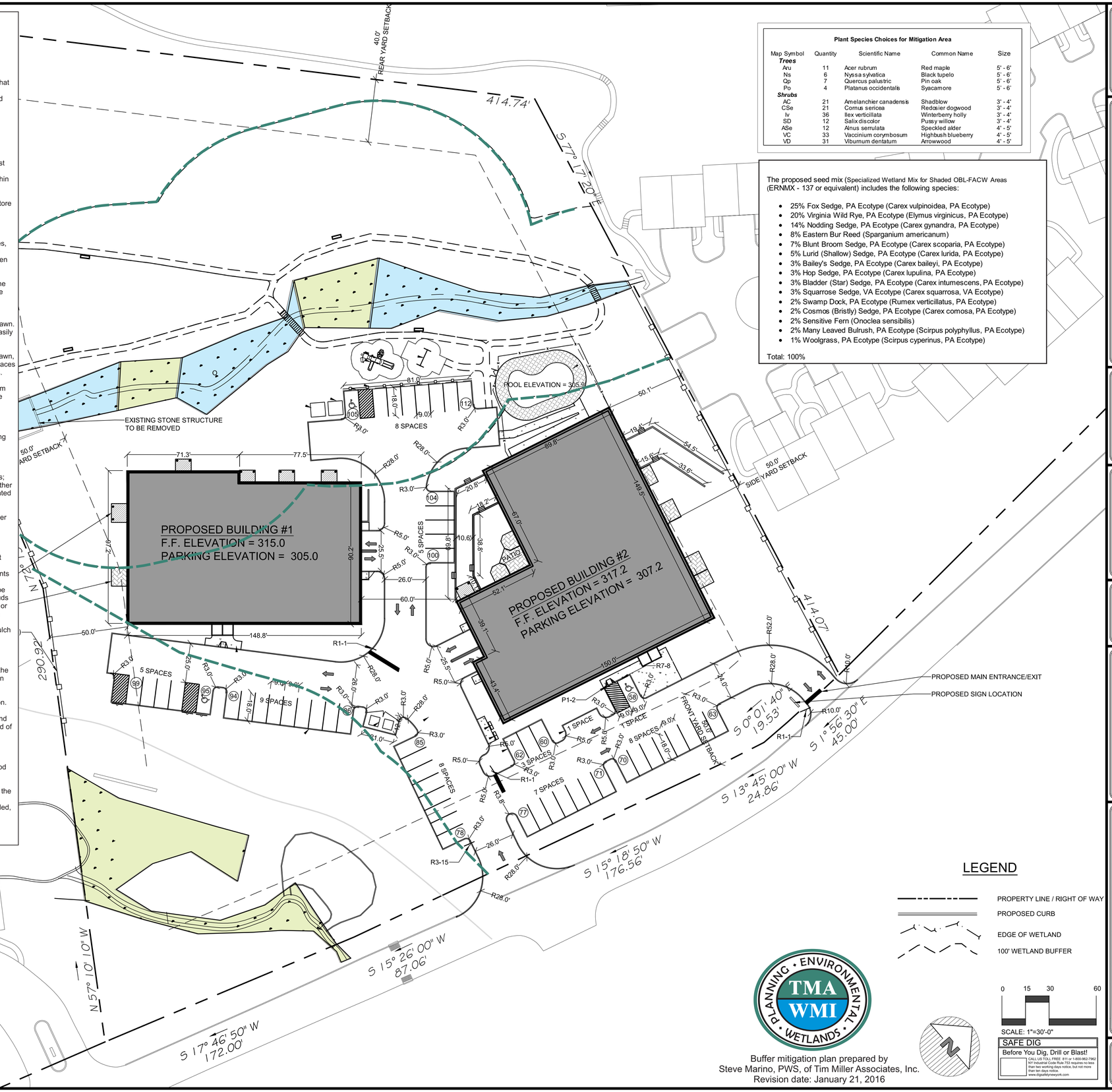
Plant Species Choices for Mitigation Area

Map Symbol	Quantity	Scientific Name	Common Name	Size
Trees				
Aru	11	Acer rubrum	Red maple	5' - 6'
Ns	6	Nyssa sylvatica	Black tupelo	5' - 6'
Qp	7	Quercus palustric	Pin oak	5' - 6'
Po	4	Platanus occidentalis	Sycamore	5' - 6'
Shrubs				
AC	21	Amelanchier canadensis	Shadblow	3' - 4'
CSe	21	Cornus sericea	Redosier dogwood	3' - 4'
Iv	36	Ilex verticillata	Winterberry holly	3' - 4'
SD	12	Salix discolor	Pussy willow	3' - 4'
ASe	12	Alnus serrulata	Speckled alder	4' - 5'
VC	33	Vaccinium corymbosum	Highbush blueberry	4' - 5'
VD	31	Viburnum dentatum	Arrowwood	4' - 5'

The proposed seed mix (Specialized Wetland Mix for Shaded OBL-FACW Areas (ERNMX - 137 or equivalent) includes the following species:

- 25% Fox Sedge, PA Ecotype (Carex vulpinoidea, PA Ecotype)
- 20% Virginia Wild Rye, PA Ecotype (Elymus virginicus, PA Ecotype)
- 14% Nodding Sedge, PA Ecotype (Carex gynandra, PA Ecotype)
- 8% Eastern Bur Reed (Sparganium americanum)
- 7% Blunt Broom Sedge, PA Ecotype (Carex scoparia, PA Ecotype)
- 5% Lurid (Shallow) Sedge, PA Ecotype (Carex lurida, PA Ecotype)
- 3% Bailey's Sedge, PA Ecotype (Carex baileyi, PA Ecotype)
- 3% Hop Sedge, PA Ecotype (Carex lupulina, PA Ecotype)
- 3% Bladder (Star) Sedge, PA Ecotype (Carex intumescens, PA Ecotype)
- 3% Squarrose Sedge, VA Ecotype (Carex squarrosa, VA Ecotype)
- 2% Swamp Dock, PA Ecotype (Rumex verticillatus, PA Ecotype)
- 2% Cosmos (Bristly) Sedge, PA Ecotype (Carex comosa, PA Ecotype)
- 2% Sensitive Fern (Onoclea sensibilis)
- 2% Many Leaved Bulrush, PA Ecotype (Scirpus polyphyllus, PA Ecotype)
- 1% Woolgrass, PA Ecotype (Scirpus cyperinus, PA Ecotype)

Total: 100%



LEGEND

- PROPERTY LINE / RIGHT OF WAY
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER

Buffer mitigation plan prepared by
Steve Marino, PWS, of Tim Miller Associates, Inc.
Revision date: January 21, 2016

SCALE: 1"=30'-0"

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NY Industrial Code Rule 753 requires no less than two working days notice, but not more than ten days notice.
www.digalertnewyork.com

NOTE:
1. *THIS IS NOT A SURVEY.* ALL SURVEY INFORMATION SHOWN ON THIS PLAN HAS BEEN TAKEN FROM SURVEY MAP PREPARED BY JOSEPH R. LINK, DATED 03/07/15, LAST REVISED 06/08/15. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

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F:\2015\15-18 BELDOTTI MANAGEMENT CORP\ENGINEERING\CAD\C3D-15-18 BELDOTTI MANAGEMENT CORP\15-18 SITE PLAN 12-17-15 ALT.DWG

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PROJECT # 15-18

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Engineer:
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Revisions:

No:	Date	Comments:
1	10/15/15	Town Comments
2	12/7/15	Town Comments
3	12/7/15	Town Comments

SCALE: 1" = 30'
DRAWN BY: TK
DATE: 9/25/15

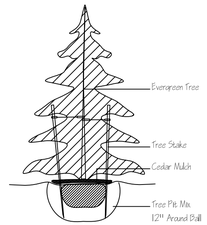
BUFFER MITIGATION NOTES

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Town of Ossining Westchester County, NY

Sheet M-102

Parth Knolls Plant List 12-2-15				
Abb.	Botanical Name	Common Name	Size	Quan.
Deciduous Trees				
AC	Aesculus carnea	Red Horsechestnut	2-2.5" cal., 14-16' Ht.	4
AS	Acer saccharum	Sugar Maple	2-2.5" cal., 14-16' Ht.	5
LS	Liquidambar styraciflua	Sweetgum	2-2.5" cal., 14-16' Ht.	2
MSo	Magnolia soulangiana	Saucer Magnolia	2-2.5" cal., 14-16' Ht.	1
PA	Platanus acerifolia	London Planetree	2-2.5" cal., 14-16' Ht.	2
QR	Quercus rubra	Red Oak	2-2.5" cal., 14-16' Ht.	8
Evergreen Trees				
IO	Ilex opaca	American Holly	8-10' Ht.	1
PG	Picea glauca	White Spruce	8-10' Ht.	6
PS	Pinus strobus	White Pine	10-12' Ht.	8
TP	Thuja plicata	Giant Arborvitae	8-10' Ht.	9
Minor Deciduous Trees				
CFa	Cornus florida alba	White Dogwood	7-8' Ht.	4
CFr	Cornus florida rubra	Pink Dogwood	7-8' Ht.	2
MS	Magnolia stellata	Star Magnolia	7-8' Ht.	2
OA	Oxydendron arboretum	Sourwood	8-10' Ht.	4
PT	Prunus thundercloud	Thundercloud Plum	7-8' Ht.	5
PY	Prunus yedoensis	Yoshini Cherry	7-8' Ht.	5
Hedge				
IG	Ilex glabra	Inkberry	2.5-3' Ht.	42

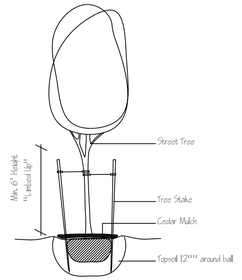
Notes:
1. All plants to be healthy, full and typical of the species, and shall meet the American Standards for Nursery Stock, latest edition. Mulch plant beds and the base of woody plants with 1.5-2" shredded cedar bark. All plants shall be planted in recognized spring and fall planting periods unless specific approval otherwise is given by the project Landscape Architect.
2. All areas not covered with impervious surfaces to be planted with lawn grass in the following ratio by species: 50% Perennial Rye, 25% Bluegrass and 25% Creeping Fescue. 95% coverage to be guaranteed.
3. If quantities indicated on the plant list differ from those on the plan, the plan quantities shall be used.
4. All plants to be warranteed by the contractor to be healthy and in good physical condition for one year or two full growing seasons after planting. Contractor shall maintain the site in a safe condition at all times, and shall clear the site of debris on completion of work. Post construction the owner shall maintain the site in a safe condition.
5. Sod for all lawn areas to be a minimum of 6" depth of loamy topsoil approved by the project Landscape Architect. For shrubs and tree pits topsoil to be used in backfilling to the extents shown on the details.



Tree Planting Detail

0' 2' 4'

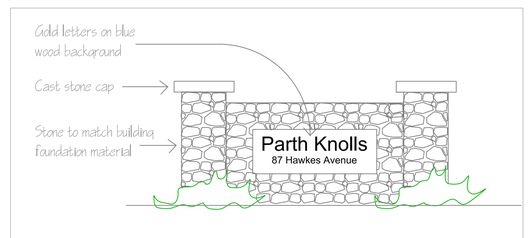
Graphic Scale



Tree Planting Detail

0' 2' 4'

Graphic Scale

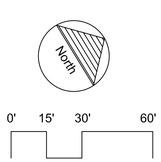


Entrance Sign

0' 0.5' 2'

Graphic Scale

Notes:
1. All base data by others. No representation or warranty is express or implied as to accuracy of same.
2. This Landscape Plan is for illustration of plant material purposes only. Please refer to Engineer or Surveyor drawings for all other site plan and site features information.
3. All environmental concerns subject to local, state and/ or federal jurisdiction must be reviewed and approved by appropriate agencies.
4. Developer/ builder is responsible for maintaining a safe site during construction and until future owners take possession of the site, or portions thereof, at which time the new owners will take full responsibility for maintaining a safe site through proper maintenance, modification and/ or replacement of plant material as necessary.



Graphic Scale

Stephen Lopez Landscape Architect	Tim Miller Associates, Inc. 10 North Street, Cold Spring, NY 10516 (845) 265-4400, Fax: 265-4418	
STEPHEN N. LOPEZ No. 000990 LICENSED LANDSCAPE ARCHITECT STATE OF NEW YORK	Landscape Plan for development of Parth Knolls, LLC 87 Hawkes Avenue Town of Ossining, Westchester County, NY Date: December 7, 2015 Rev. 3-1-16	Sheet L-1