

Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit 16-13, the Williston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 22 day of MAY, 2019.

*Kim Bell*  
 President/Administrator's signature

DP 16-13  
 PARCEL ID: 08062-015000

**Owner**

THREE FRIENDS PARTNERSHIP  
 CITORIK, KELLEY, KIDDER + POWELL INC.  
 9 RUSTIC WALK  
 SWANTON, VT 05488

**Applicant**

DOUSEVICZ, INC.  
 21 CARMICHAEL STREET, SUITE 201  
 ESSEX, VT 05452



DATE	1-27-17	REVISION	ADDED PROPERTY LINE DIMENSIONS	BY	GHY
DATE	10-13-16	REVISION	ADDED APPROVAL SIGNATURE BLOCK AND MADE EDITS FOR FINAL PLAN SUBMITTAL	BY	GHY
DATE	9-6-16	REVISION	REVISED GRADING / LANDSCAPING / STORMWATER PER NAAC AND PUBLIC WORKS COMMENTS	BY	GHY
SURVEY	CECA	<input type="checkbox"/> RECORD DRAWING	<input type="checkbox"/> DISCRETIONARY	DATE	7-21-16
DRAWN	GHY	<input checked="" type="checkbox"/> FINAL	<input type="checkbox"/> SKETCH/CONCEPT	YEAR	2015-41
CHECKED	GHY	<b>O'LEARY-BURKE</b> <b>CIVIL ASSOCIATES, PLC</b>		PLAN SHEET #	10
SCALE	1" = 40'			15 BLAIR PARK	COLOR RENDERINGS

**CODE SUMMARY**

**USE GROUP: (SEPARATED)**

	<u>(NFPA 101) 2015</u>	<u>IBC) 2015</u>
APARTMENT	RESIDENTIAL	R2
PARKING (UNCONDITIONED)	STORAGE	S2

**CONSTRUCTION TYPE:**

	<u>(NFPA 101)</u>	<u>IBC)</u>
COMBUSTIBLE (APARTMENTS)	V-III	VA
NON COMBUSTIBLE (PARKING)	II	II B

**BUILDING HEIGHT**

	<u>PROPOSED</u>	<u>CODE MAX.</u>
MAX GRADE TO ROOF	35'-6"	70'
STORIES ABOVE GRADE	3	4

**BUILDING AREA**

	<u>PROPOSED</u>	<u>CODE MAX.</u>
BASEMENT	26,376 SF	36,000 SF/FLOOR
GROUND FLOOR	27,331 SF	(IBC TABLE 506.2)
2ND FLOOR	25,869 SF	
3RD FLOOR	25,869 SF	

**OCCUPANCY:**

OCCUPANT LOAD: NFPA 101 TABLE 7.3.1.2 (200 SF/PERSON) = 397  
 GROUND FLOOR = 137  
 2ND FLOOR = 130  
 3RD FLOOR = 130

**FIRE RESISTANT RATINGS (IN HOURS) \***

STRUCTURAL FRAME:	1
FLOOR CONSTRUCTION:	1
ROOF STRUCTURE:	1
FLOOR STRUCTURE ABOVE PARKING:	1
INTERIOR NON-BEARING WALLS:	0
EXTERIOR NON-BEARING WALLS FULLY SHEATHED:	0.25
CORRIDOR WALLS & UNIT SEPARATIONS: (NFPA101 30.3.6.1.2 & 30.3.7.2)	0.5
KITCHEN, MECH ROOMS, TRASH ROOMS ETC:	1
ELEVATOR ENCLOSURE	1

**ENERGY CODE**

DESIGN EXCEEDS REQUIRMENTS OF VERMONT COMMERCIAL BUILDING ENERGY STANDARDS (2015)

FOUNDATIONS	R.10
WALLS	R.30
ROOF	R.60
PASS DOORS	R.10
WINDOWS	R. 3.8



**BLAIR PARK ELDER COMMUNITY**

15 Blair Park  
 WILLISTON, VT

CIVIL ENGINEER

- 1 SITE PLAN
- 2 SITE PLAN - NO ORTHO
- 3 GRADING PLAN
- 4 MAINTENANCE AND EROSION PLAN
- 5 LIGHTING PLAN
- 6 LANDSCAPING PLAN
- 7 PROJECT DETAILS & SPECIFICATIONS
- 8 WATER DETAILS & SPECIFICATIONS
- 9 SEWER DETAILS & SPECIFICATIONS

ARCHITECTURAL

- A1.1 GROUND FLOOR PLAN - WEST
- A1.2 GROUND FLOOR PLAN - EAST
- A2.1 SECOND FLOOR PLAN - WEST
- A2.2 SECOND & THIRD FLOOR PLAN - EAST
- A2.3 THIRD FLOOR PLAN - WEST
- A3.1 BASEMENT PLAN
- A3.2 BASEMENT PLAN
- A4.1 ROOF PLAN
- A4.2 ROOF PLAN
- A5.1 BUILDING ELEVATIONS
- A5.2 BUILDING ELEVATIONS
- A6.1 TYPICAL UNITS
- A7.1 BUILDING SECTIONS
- A8.1 WALL SECTIONS
- A8.2 STAIR & ELEVATOR SECTIONS
- A9.1 SCHEDULES

STRUCTURAL

- S0.1 STANDARD NOTES

MECHANICAL

- M1.1 FIRST FLOOR MECHANICAL PLAN

ELECTRICAL

- E1.0 SCHEDULES & DETAILS

**ABBREVIATIONS**

- ACT- ACOUSTIC CEILING TILE
- CLG- CEILING
- CONC- CONCRETE
- CRS- COURSES
- DR- DOOR
- ELEV- ELEVATION
- EXT- EXTERIOR
- FL- FLOOR
- GA- GAGE
- GALV- GALVANIZED
- GWB- GYPSUM WALL BOARD
- INT- INTERIOR
- MFR- MANUFACTURER
- OC- ON CENTER
- OD- OUTSIDE DIMENSION
- OHD- OVERHEAD DOOR
- PTD- PAINTED
- RM- ROOM
- RQD- REQUIRED
- SOG- SLAB ON GRATE
- SS- STAINLESS STEEL
- YD- YARD

**Civil Engineer:**  
 O'Leary-Burke Civil Associates  
 1 Corporate Drive, Suite #1  
 Essex Junction, VT 05452  
 802-878-9990

**Construction Manager:**  
 Dousevicz Inc.  
 21 Carmichael St., Suite #201  
 Essex, VT 05452  
 802-879-4477

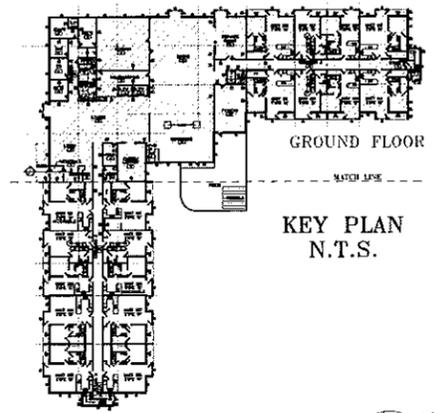
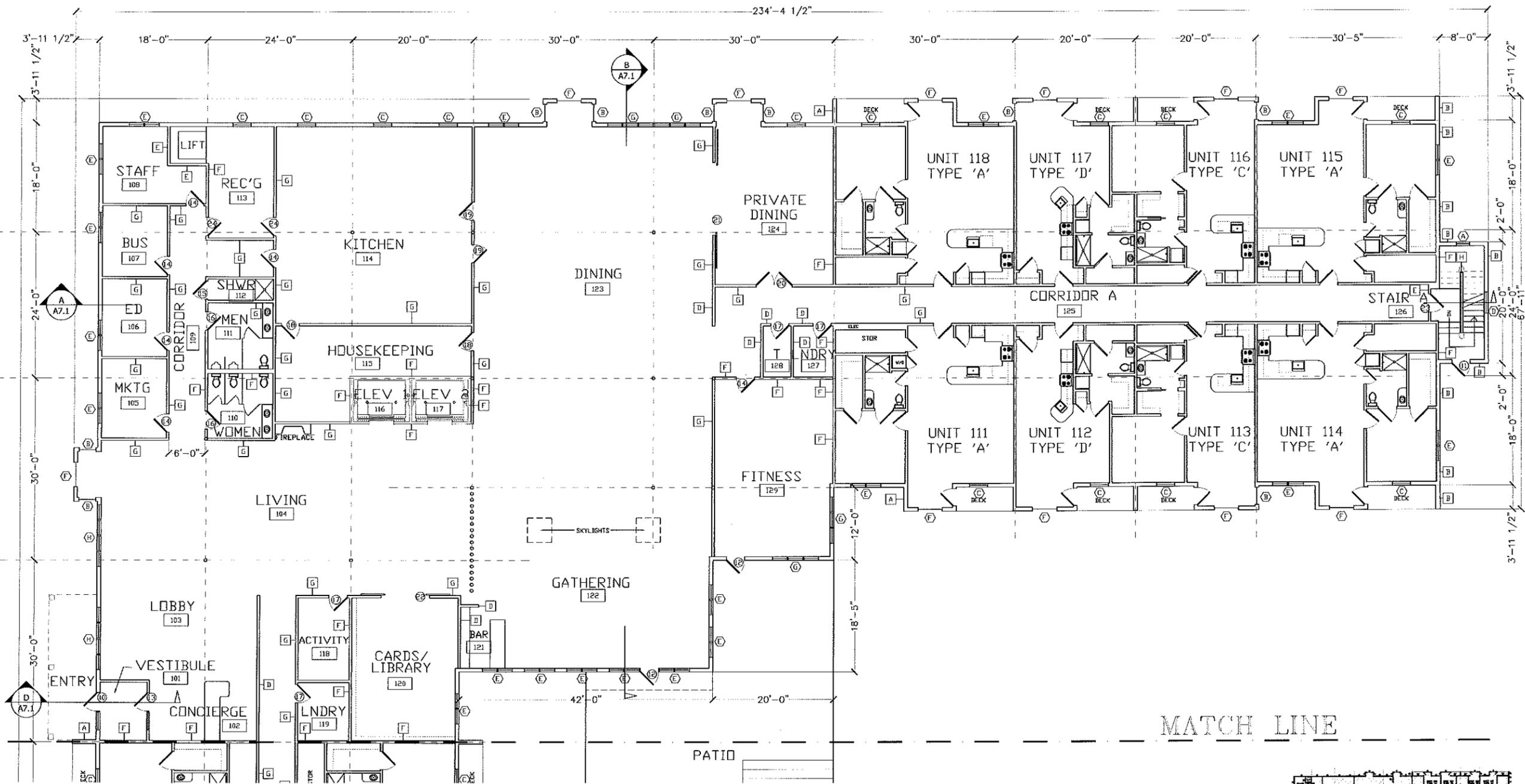
**MEP:**  
 -  
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 -

**Structural Engineer:**  
 Sharp Point  
 4398 NY-22  
 Plattsburgh, NY 12901  
 518-324-2828

**Architect:**  
 G V V ARCHITECTS INC  
 284 South Union St  
 Burlington, VT 05401  
 802-862-9631

*K. Blk, Z.A. 5/22/2017*

05 MAY 2017



*K. Belh, Z.A. 5/22/2017*

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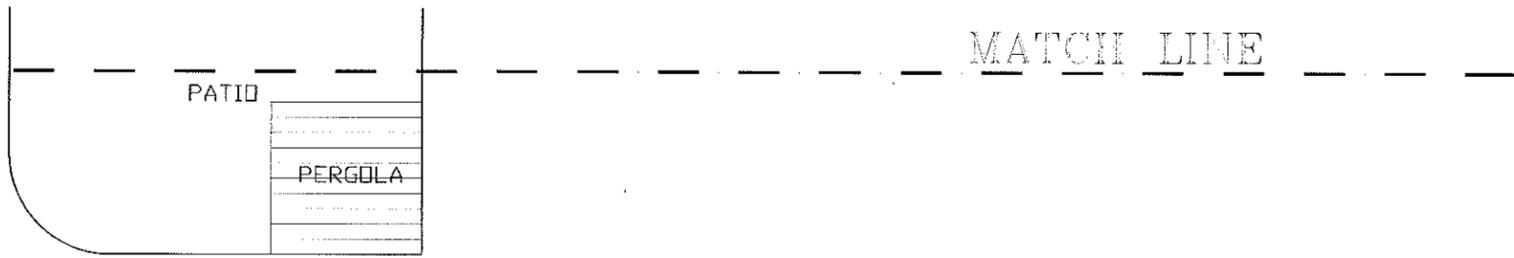
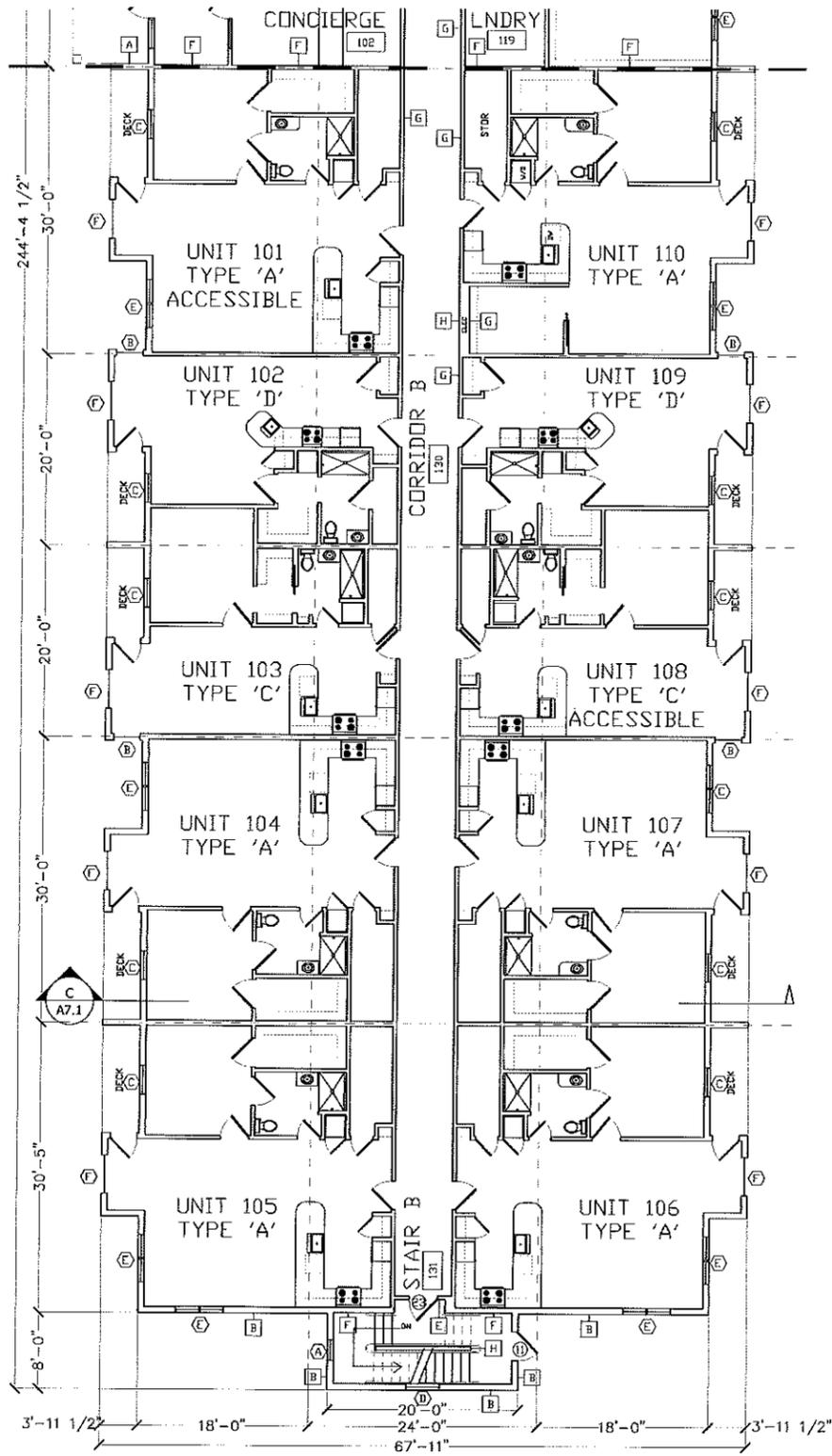
DATED: 05.05.17  
PROGRESS: 05.05.17

**GROUND FLOOR PLAN**

SCALE: 1/8" = 1'-0"

CD# WLB017

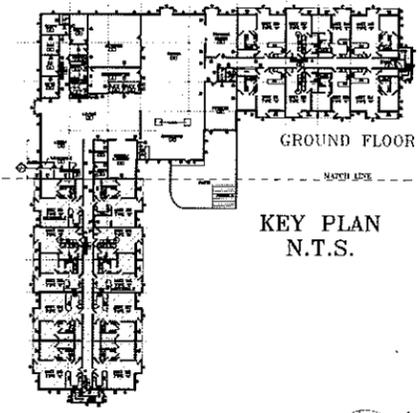
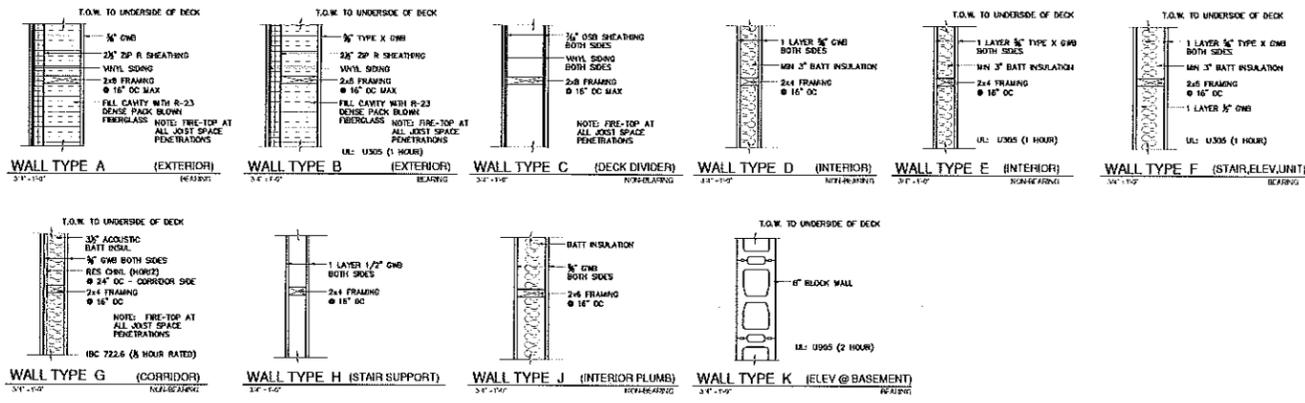
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MATCH LINE

**NOTE:**

1. ALL EXTERIOR WALLS ABOVE GRADE TO BE TYPE 'A' U.N.O. FOR FIRE RATING.
2. TOP OF ALL PARTITIONS TO BE DRAFT STOPPED.
3. FIRE RATED PARTITIONS TO EXTEND DECK-TO-DECK.
4. USE WATER RESISTANT GYPSUM BOARD AT ALL PLUMBING WALLS.



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DATED: HMBRY  
 PROGRESS: 05.05.17

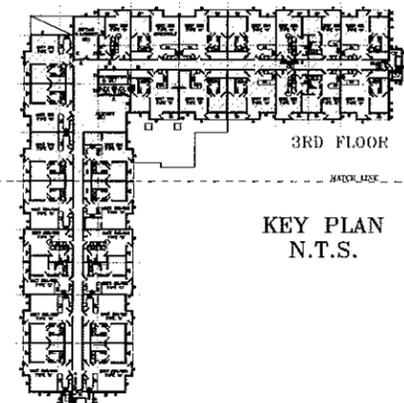
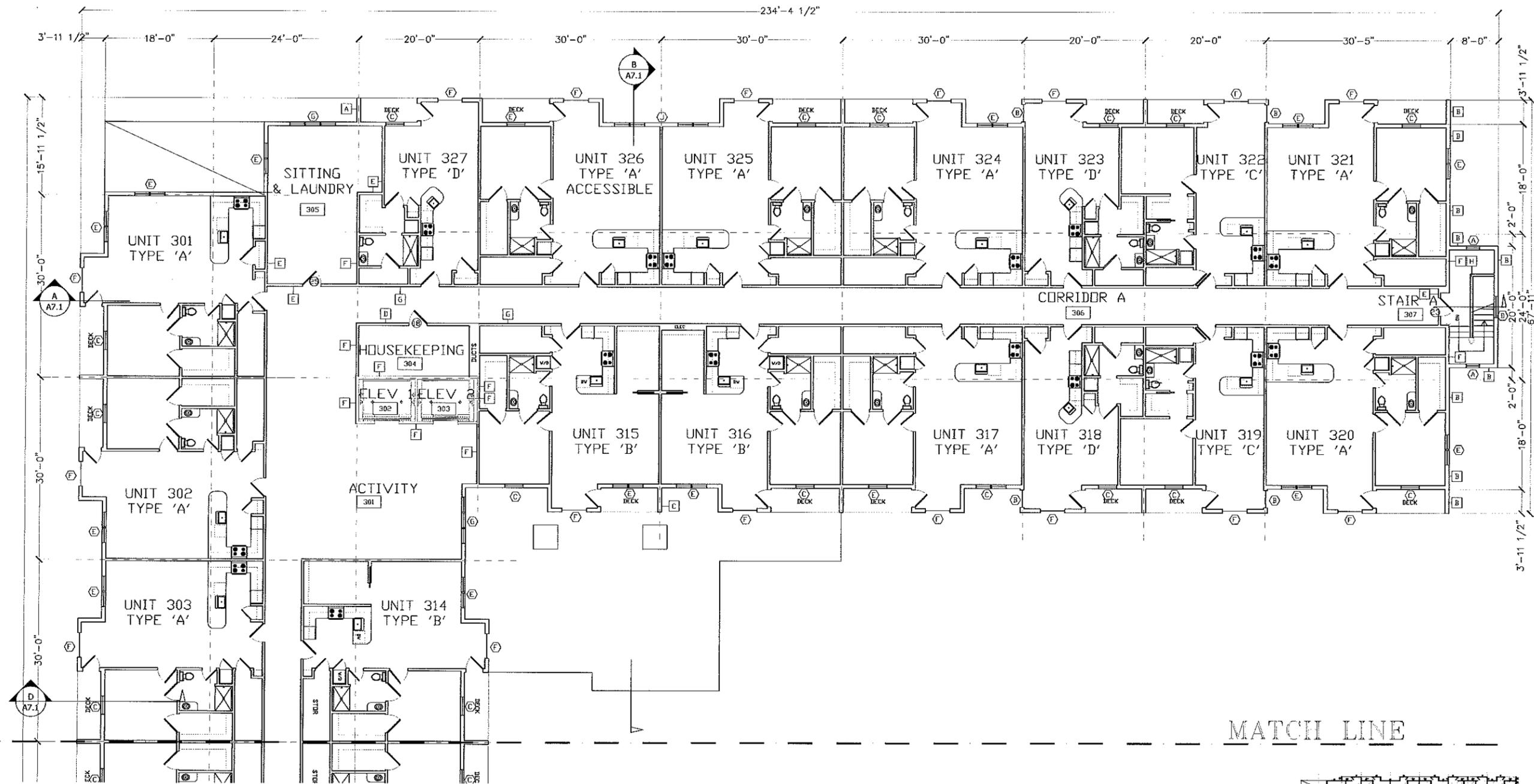
**GROUND FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"  
 ---CD# HMBRY---

**DRAWING: A1.2**

*K. Belli, Z.A. 5/22/2017*







*K. Belk, Z.A. 5/22/2017*

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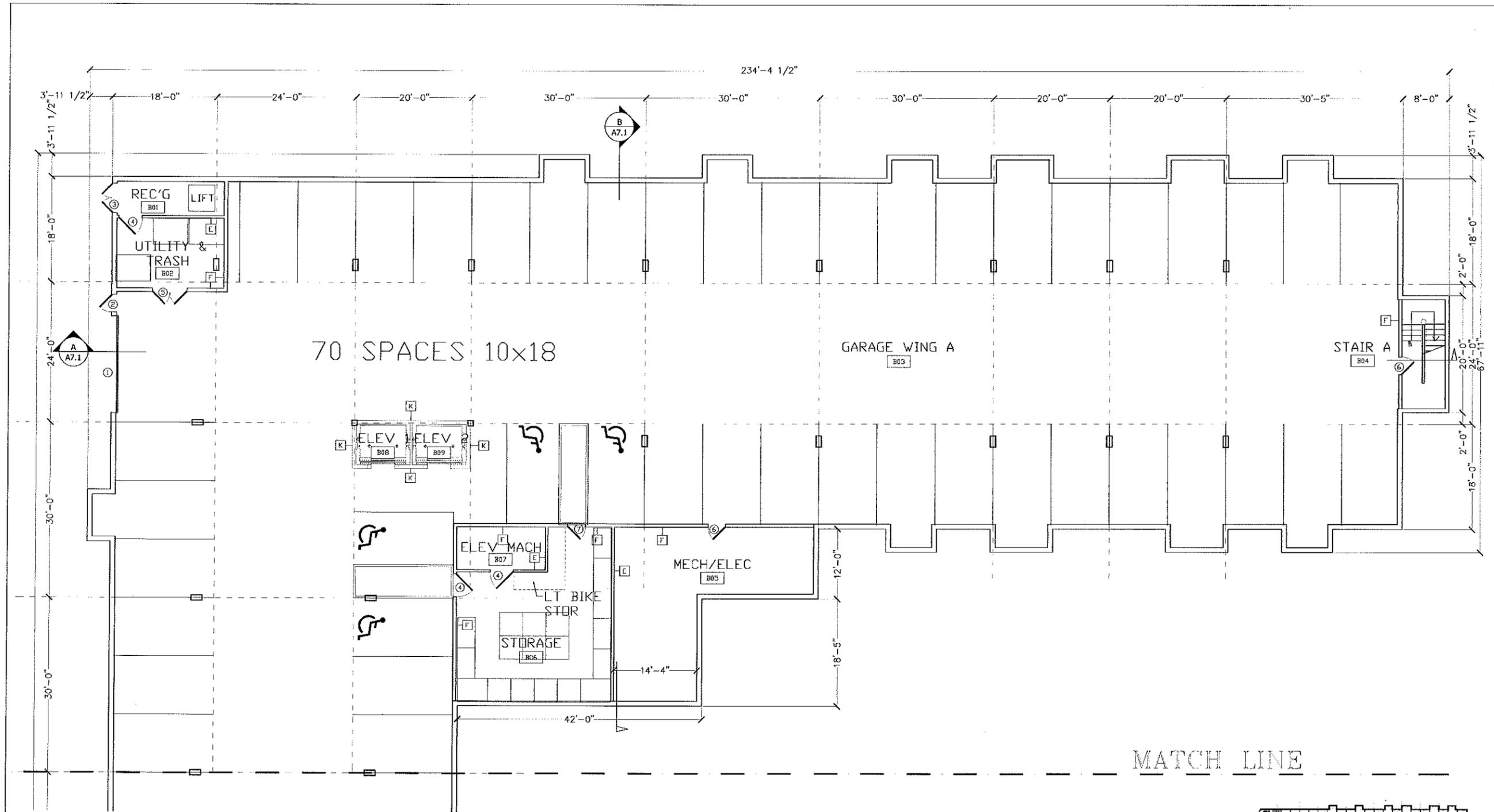
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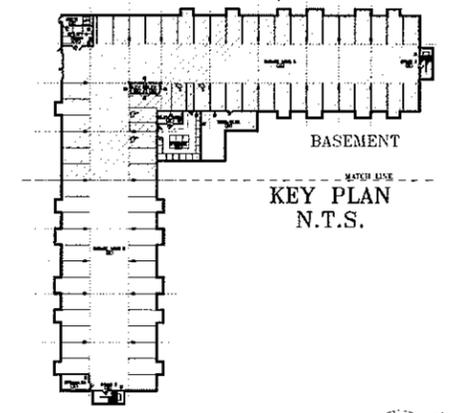
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 PROGRESS: MKDB17

3rd FLOOR PLAN  
 SCALE: 1/8" = 1'-0"  
 --CDE MKDB17--

DRAWING:  
**A2.3**



MATCH LINE



*K. Belh, Z.A. 5/22/2017*

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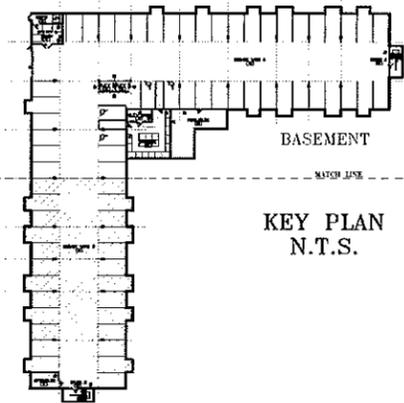
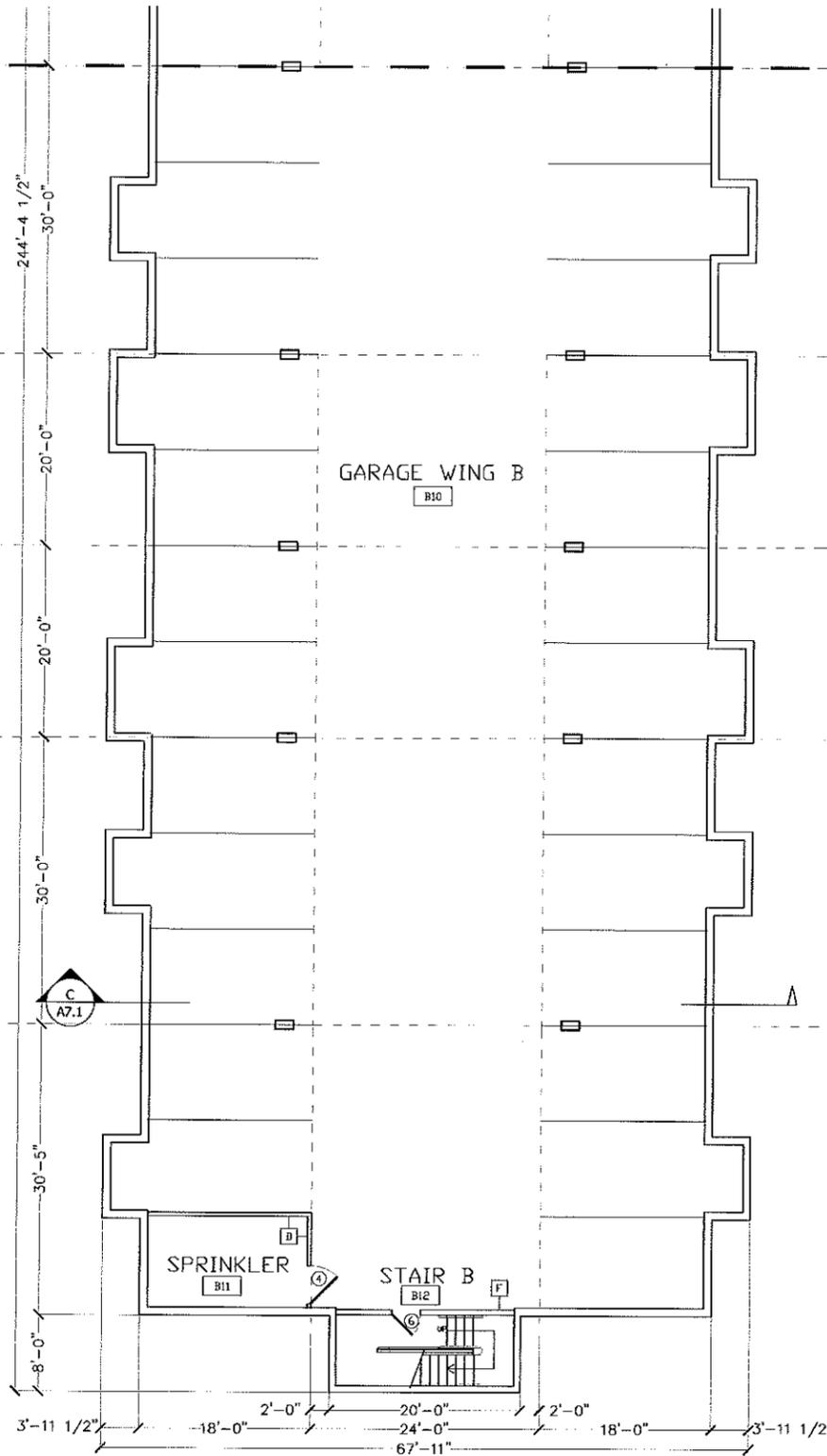
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DATE: 05.05.17  
MDD:YY  
PROGRESS

**BASEMENT PLAN**  
SCALE: 1/8" = 1'-0"  
--CDG MDD017--

**DRAWING:**  
**A3.1**

MATCH LINE



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BATEL HARRY  
 PROGRESS 05.05.17

**BASEMENT PLAN**

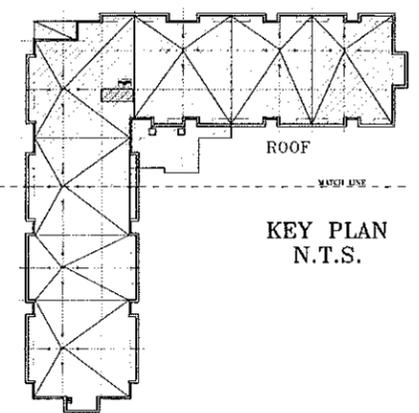
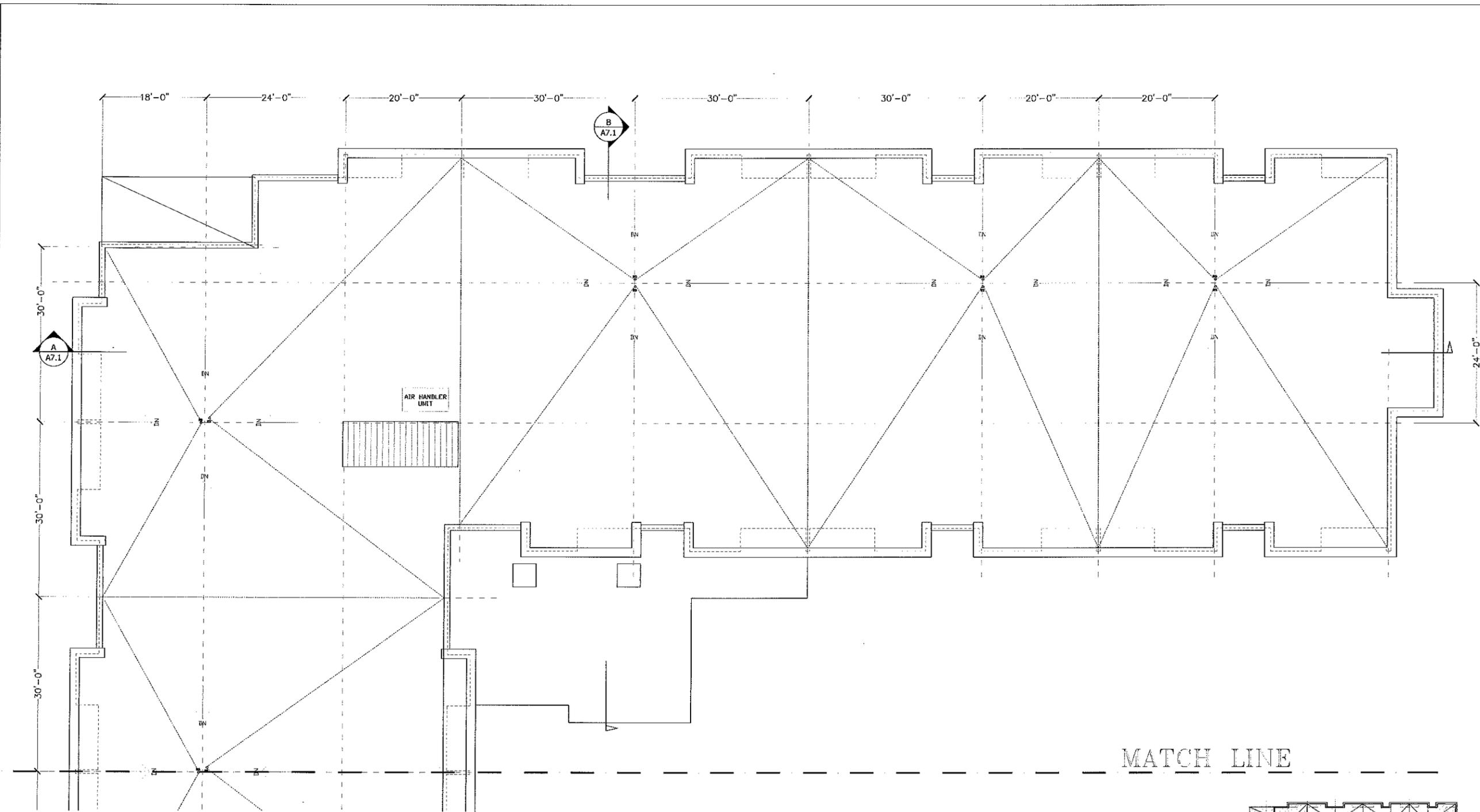
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**DRAWING:**  
**A3.2**

*K. Bell, Z.A. 5/22/2017*





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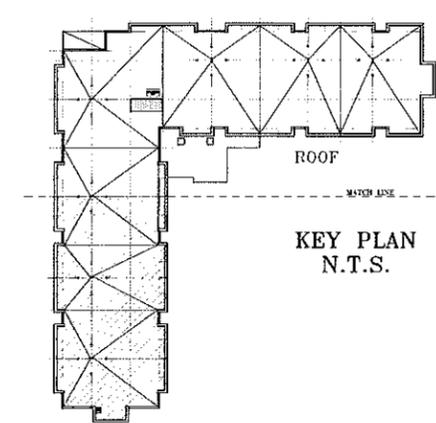
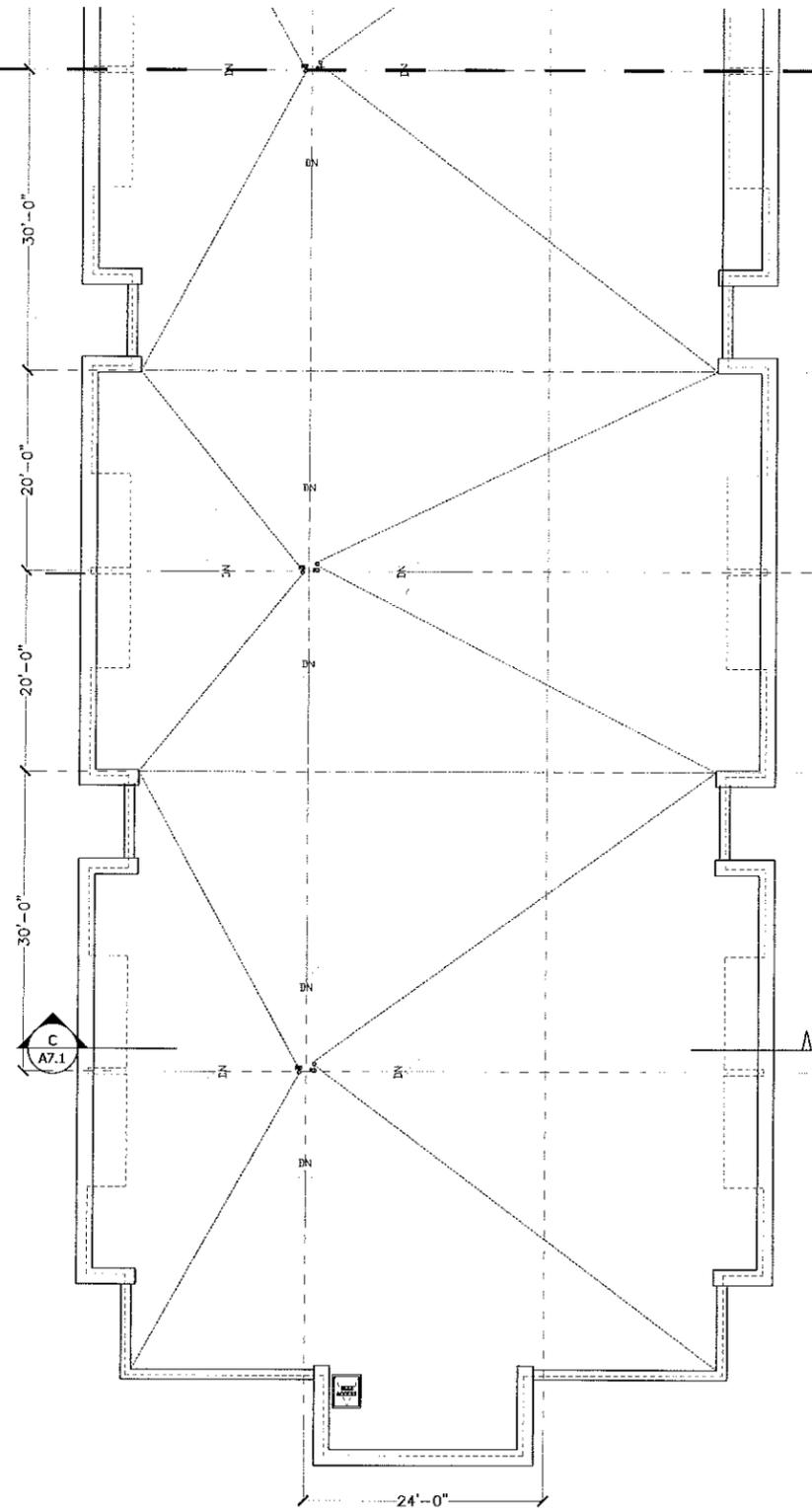
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DATE	MRD/YY
PROGRESS	05.05.17

**ROOF PLAN**  
 SCALE: 1/8" = 1'-0"  
 -CD# 1048017-

**DRAWING:**  
**A4.1**

MATCH LINE



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DATE: HARRY  
PROGRESS: 05.05.17

**ROOF PLAN**  
SCALE: 1/8" = 1'-0"  
--CB# MKDD17--

**DRAWING:**  
**A4.2**

*Ken Bell, Z.A. 5/22/2017*



ROOF ELEV 135'-6"  
 3rd FFE 121'-10"  
 2nd FFE 110'-11"  
 1st FFE 100'

NORTH



ROOF ELEV 135'-6"  
 3rd FFE 121'-10"  
 2nd FFE 110'-11"  
 1st FFE 100'

EAST



ROOF ELEV 135'-6"  
 3rd FFE 121'-10"  
 2nd FFE 110'-11"  
 1st FFE 100'

SOUTH

BASEMENT FFE 89'-1"

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DATED: 05.05.17  
 PROGRESS: 05.05.17

EXTERIOR ELEVATIONS  
 SCALE: 1/8" = 1'-0"  
 --CD# 05.05.17--

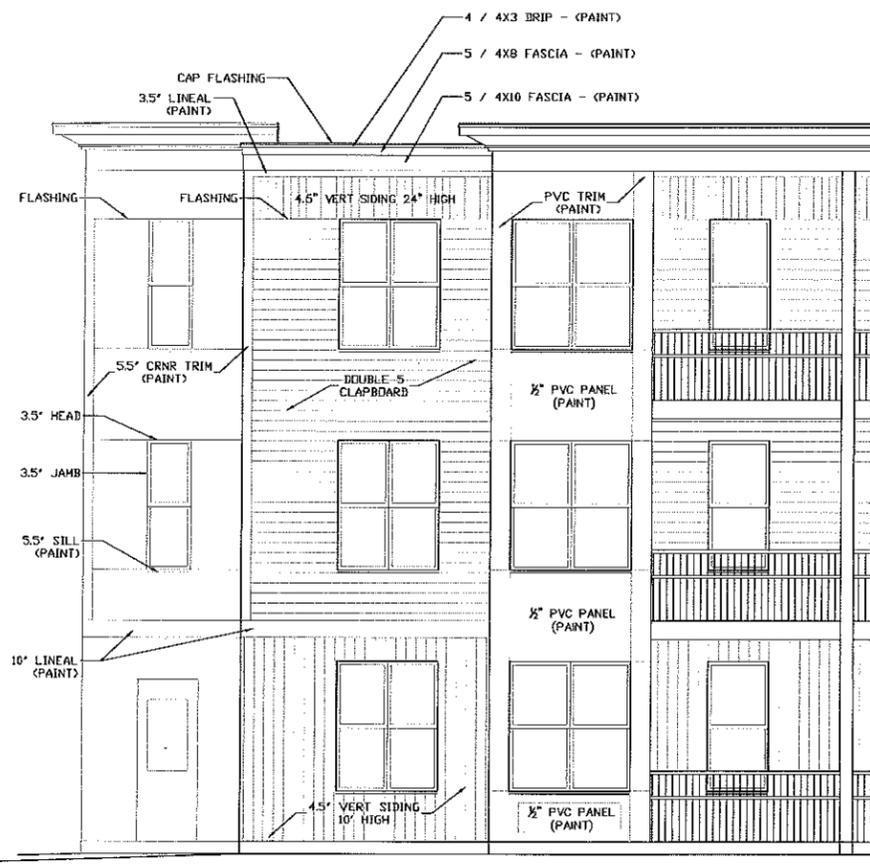
DRAWING:  
**A5.1**

*K. Bell, Z.A. 5/22/2017*



ROOF ELEV 135'-6"  
 3rd FFE 121'-10"  
 2nd FFE 118'-11"  
 1st FFE 109'

WEST



TYPICAL SIDING  
 SCALE: 1/4" = 1'-0"

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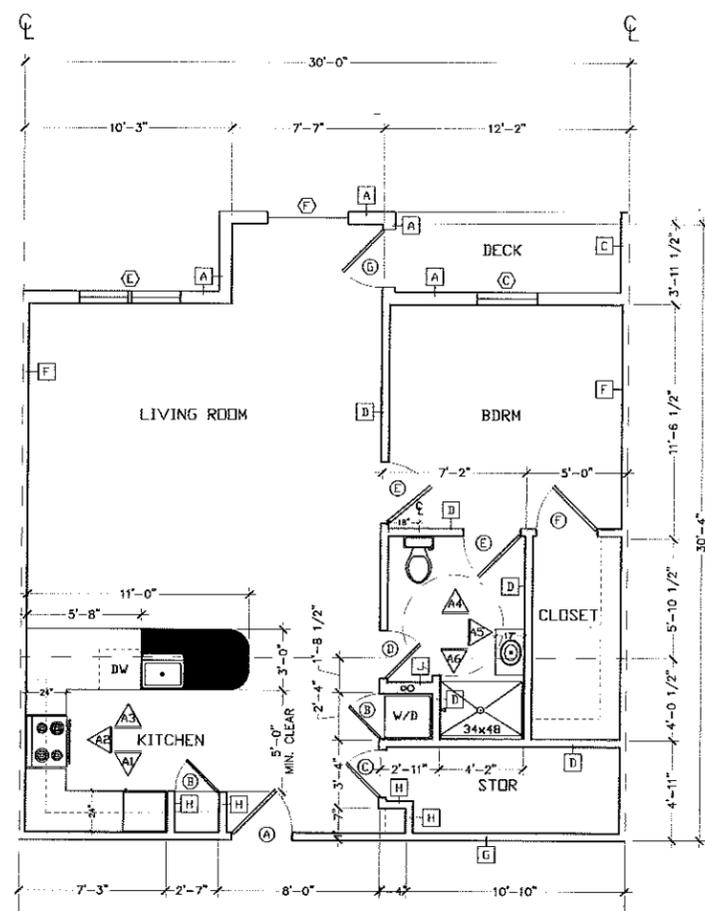
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DATED: MDDBY  
 PROGRESS: 05.05.17

EXTERIOR ELEVATIONS  
 SCALE: 1/8" = 1'-0"  
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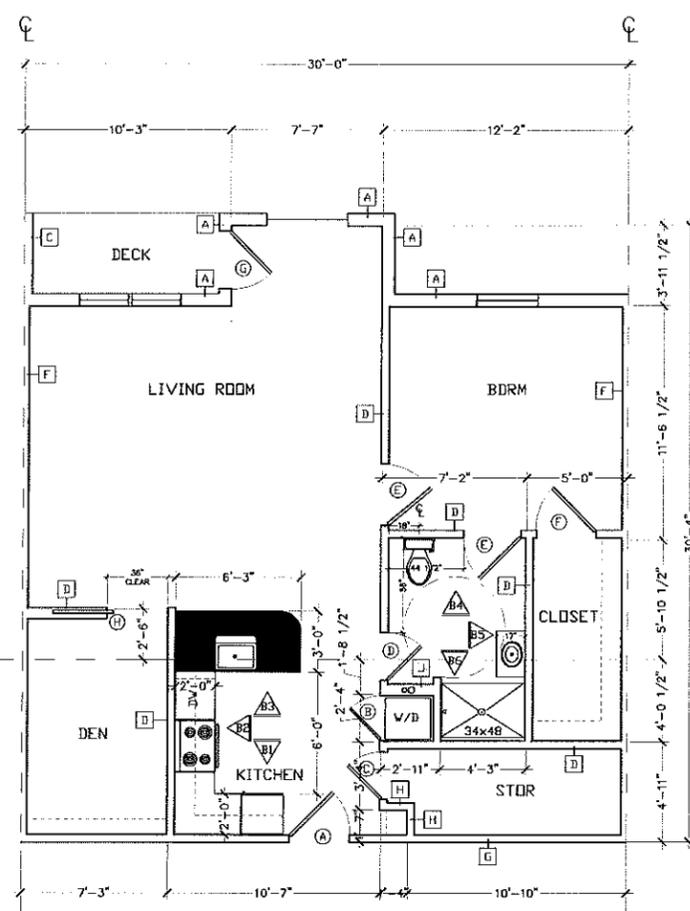
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*K. Bell, Z.A. 5/22/2017*

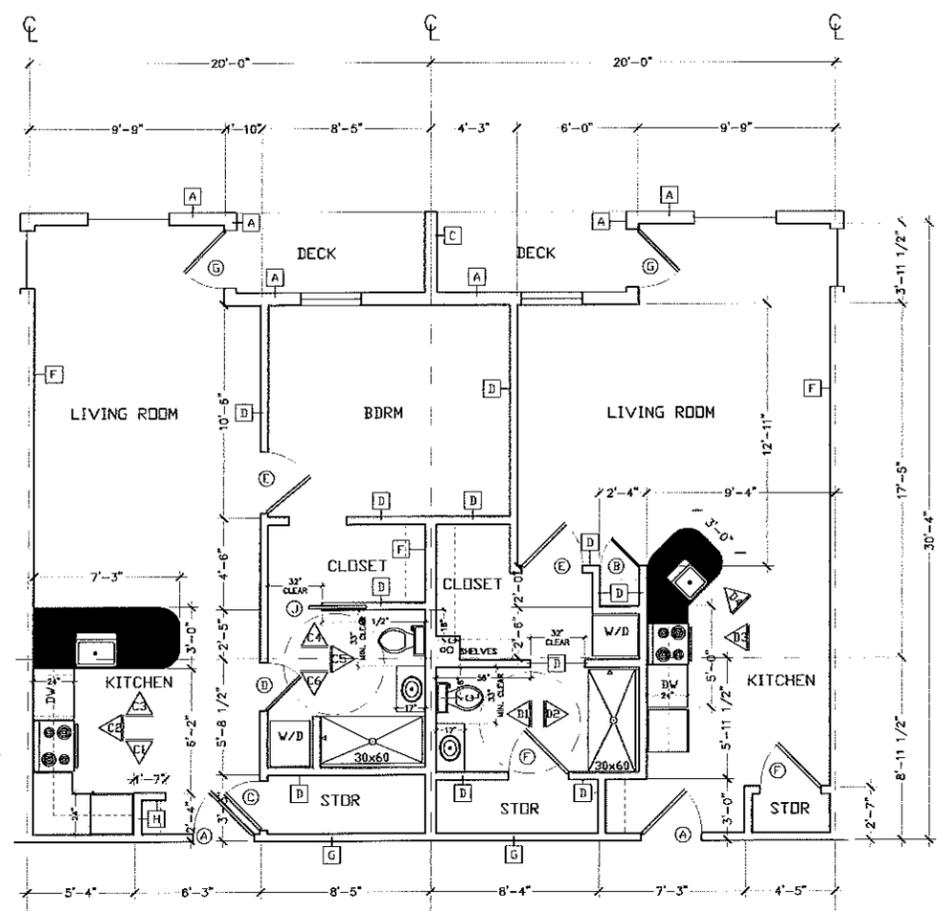


TYP UNIT 'A'

NOTE: WALL TYPES INDICATED ON ENLARGED PLANS ARE FOR UNIT TO UNIT CONNECTIONS ONLY. WHERE UNITS OCCUR AT ENDS, REFER TO FLOOR PLAN FOR WALL TYPES. 1 HOUR RATINGS MAY BE REQUIRED.



TYP UNIT 'B' w/den



TYP UNIT 'C'

TYP UNIT 'D'

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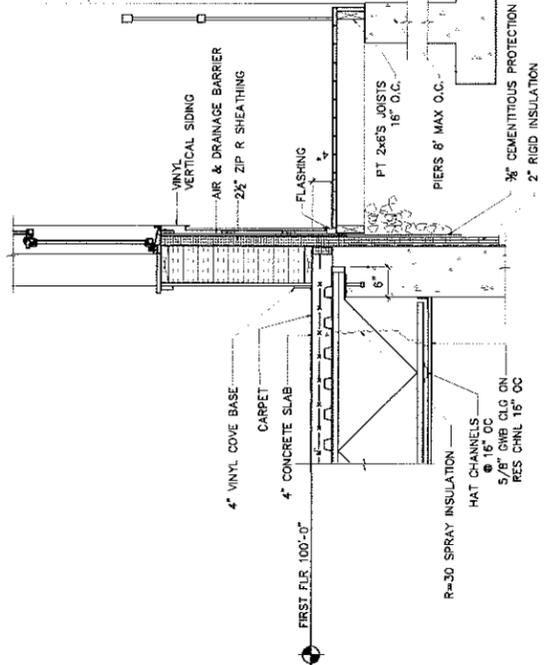
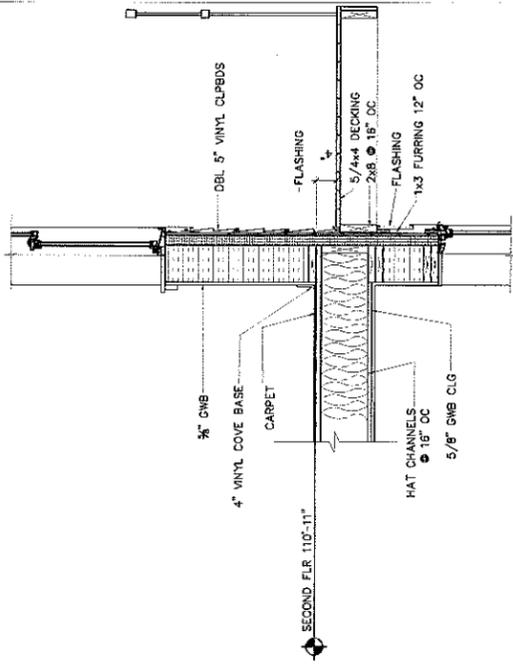
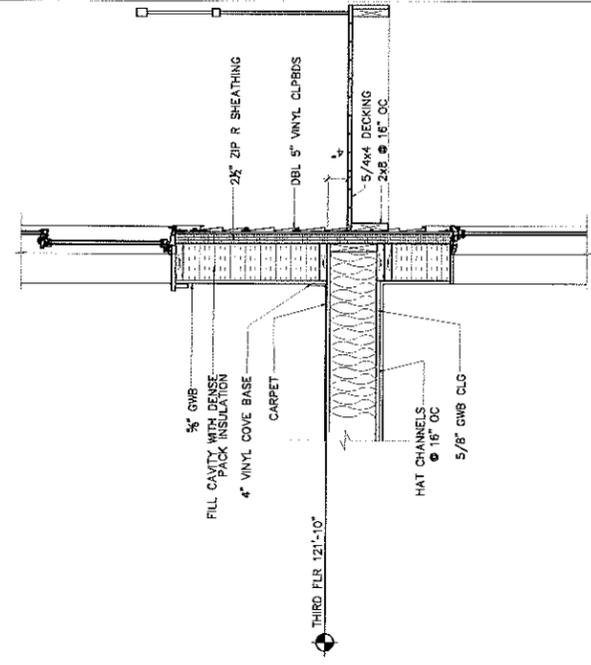
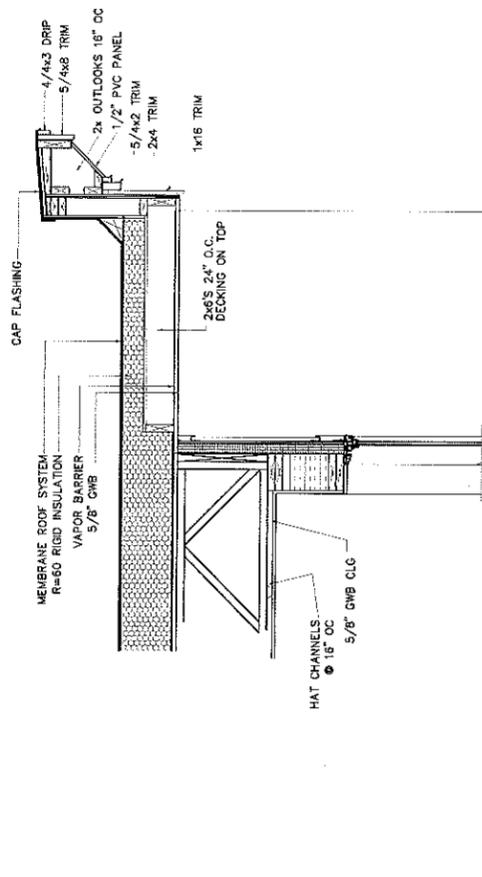
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 802-249-8931

DATED: MDDBY  
 PROGRESS: 03.03.17

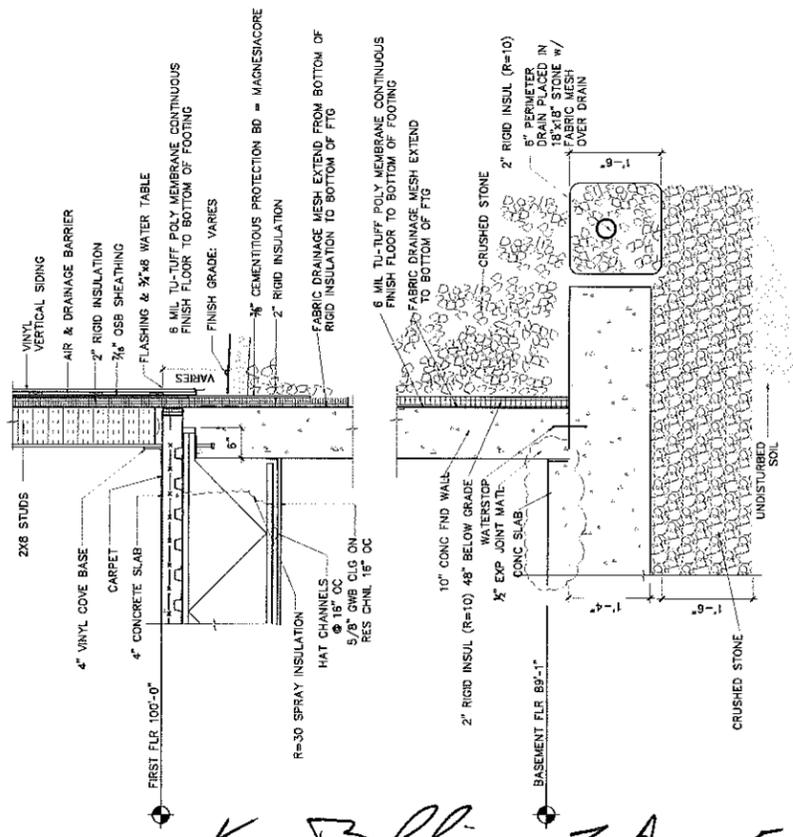
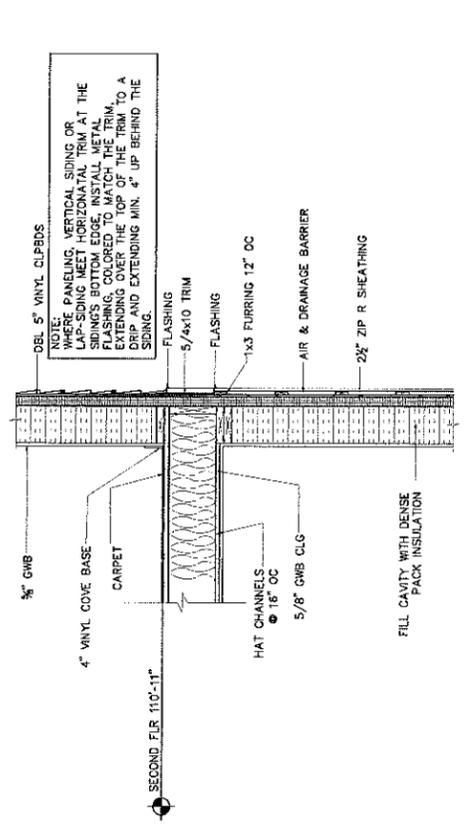
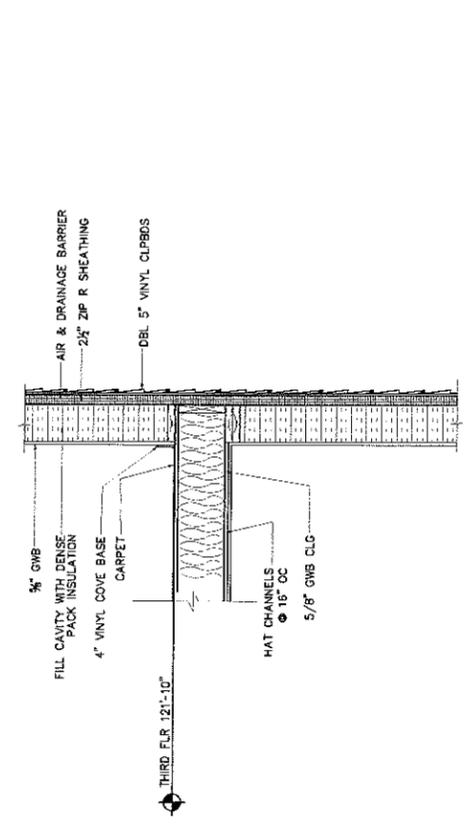
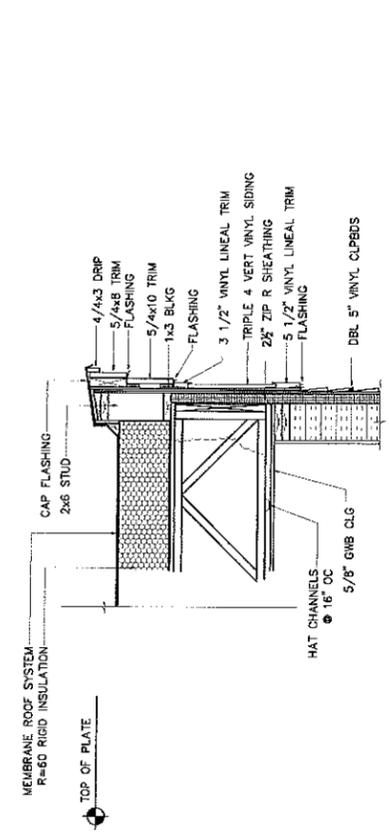
TYPICAL UNITS & WALL TYPES  
 SCALE: AS NOTED  
 --CDR MDDBY--

DRAWING:  
**A6.1**

*K. Blh, Z.A. 5/22/2017*



2 WALL SECTION AT EXT. DECK  
SCALE: 3/4" = 1'-0"



1 WALL SECTION (TYPICAL)  
SCALE: 3/4" = 1'-0"

*K. Bolli* Z.A. 5/22/2017

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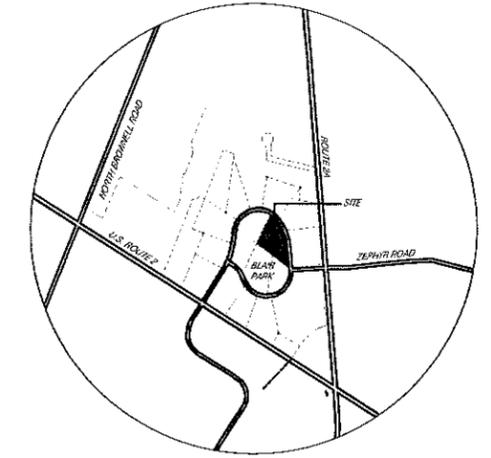
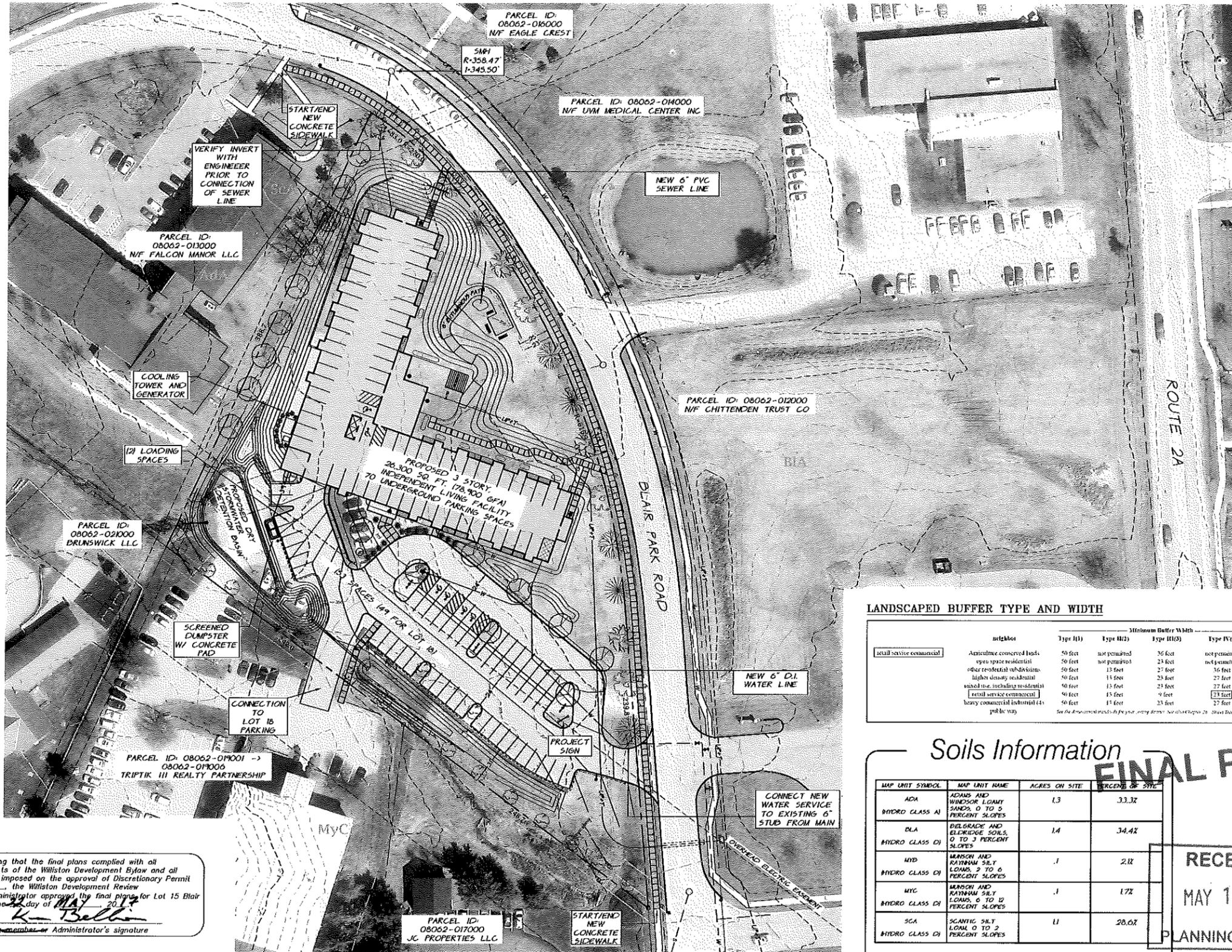
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DATED: 04/20/17  
PROGRESS: 05.05.17

WALL SECTIONS  
SCALE: 3/4" = 1'-0"

DRAWING:  
**A8.1**



Location Map  
Scale: 1" = 1000'

Legend

	PROJECT BOUNDARY
	OTHER PROPERTY LINE
	SETBACK
	SIDELINE OF EASEMENT
	CONTOUR LINE   U.S.G.S. DATUM 1
	PROPOSED FINISH GRADE CONTOUR
	EDGE OF WOODED AREA
	EXISTING SEWERLINE
	EXISTING WATERLINE
	EXISTING NATURAL GASLINE
	EXISTING/PROPOSED HYDRANT
	SOIL TYPE + BOUNDARY
	PROPOSED LIGHTS
	RETAINING WALL
	FLAG POLE
	UNDERDRAIN

[ NOTE - PROPOSED UTILITIES ARE SHOWN AS A SOLID LINE ]

Zoning Information

PARCEL INFO: LOT #15 BLAIR PARK (2.95 ACRES)  
 PARCEL #: 08062-015000  
 BUSINESS PARK ZONING DISTRICT (BPZD)

COVERAGE:  
 TOTAL LOT AREA: 2.95 ACRES  
 PROPOSED BUILDING COVERAGE: 21.0% (0.62 ACRES)  
 PROPOSED TOTAL COVERAGE: 44.6% (1.32 ACRES)

PARKING REQUIREMENTS:

Vehicle Spaces	Oil-Street Motor Vehicle Spaces	Total Bicycle Parking Spaces	Long Term Bicycle Parking Spaces
100 per dwelling	10% of vehicle	5% of vehicle	1 per 8 units

VEHICULAR REQUIREMENT: 10 SPACES PER DWELLING # OF DWELLINGS IN PROPOSED BUILDING: 72

VEHICULAR SPACES: 72 X 10 = 72 SPACES  
 BICYCLE SPACES (5% OF REQUIRED SPACES): 72 X .05 = 3.6 SPACE  
 LONG TERM BICYCLE SPACES (1 SPACE PER 8 UNITS): 72 / 8 X 1 = 9 SPACES

SPACES REQUIRED:  
 72 SPACES + 49 SPACES PERMITTED FOR LOT 18 = 121 SPACES

VEHICLE SPACES PROPOSED:  
 120 SPACES (173 UNDERGROUND, 53 SURFACE)

BICYCLE SPACES PROPOSED: 1 BIKE RACK

LONG TERM BICYCLE SPACES PROPOSED: INDOOR STORAGE FOR MINIMUM 9 BICYCLES (1 PER 8 UNITS)

LANDSCAPED BUFFER TYPE AND WIDTH

adjacent	Minimum Buffer Width			
	Type I(1)	Type II(2)	Type III(3)	Type IV(3)
retail service commercial	50 feet	not permitted	35 feet	not permitted
agriculture conserved lands	50 feet	not permitted	25 feet	not permitted
open space residential	50 feet	15 feet	25 feet	35 feet
other residential subdivisions	50 feet	15 feet	25 feet	27 feet
higher density residential	50 feet	15 feet	25 feet	27 feet
mixed use, including residential	50 feet	15 feet	25 feet	27 feet
retail service commercial	50 feet	15 feet	25 feet	27 feet
heavy commercial industrial (4) public way	50 feet	15 feet	25 feet	27 feet

Soils Information

MAP UNIT SYMBOL	MAP UNIT NAME	ACRES ON SITE	PERCENT OF SITE
ADA	ADAMS AND WINDSOR LOAMY SANDS, 0 TO 5 PERCENT SLOPES	1.3	33.3%
DLA	DELRIDGE AND ELDRIDGE SOILS, 0 TO 3 PERCENT SLOPES	1.4	34.4%
MYD	MARSON AND RAYNUM SILT LOAMS, 3 TO 6 PERCENT SLOPES	.1	2.1%
MYC	MARSON AND RAYNUM SILT LOAMS, 6 TO 12 PERCENT SLOPES	.1	1.7%
SCA	SCANTIC SILT LOAM, 0 TO 2 PERCENT SLOPES	1.1	28.6%

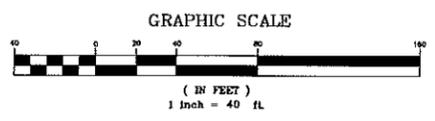
FINAL PLANS

RECEIVED  
MAY 17 2017

PLANNING/ZONING

Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit 16-13, the Williston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 20th day of May, 2017.

*K. Bellis*  
 Deciding member or Administrator's signature



Owner  
 THREE FRIENDS REALTY  
 CITORIK, KELLEY, KIDDER + POWELL INC.  
 9 RUSTIC WALK  
 SWANTON, VT 05488

Applicant  
 DOUSEVICZ, INC.  
 21 CARMICHAEL STREET, SUITE 201  
 ESSEX, VT 05452

DP 16-13  
 PARCEL ID: 08062-015000



NOTE: THIS SKETCH PLAN IS CONCEPTUAL ONLY AND SHOULD NOT BE USED FOR PROPERTY CONVEYANCE PURPOSES.

DATE	REVISION	BY
3-21-17	REVISION LABELED WATER AND SEWER SPACES MATERIAL AND SIZE	BY GRT
1-21-17	REVISION ADDED PROPERTY LINE DIMENSIONS	BY GRT
10-13-16	REVISION ADDED APPROVAL SIGNATURE BLOCK AND MADE EDITS FOR FINAL PLAN SUBMITTAL	BY GRT
9-6-16	REVISION REVISED GRADING / LANDSCAPING / STORAGE WATER FOR HAAC AND PUBLIC WORKS COMMENTS	BY GRT

DESIGN: OBCA  
 RECORD DRAWING: DISCRETIONARY  
 SKETCH/CONCEPT: DISCRETIONARY

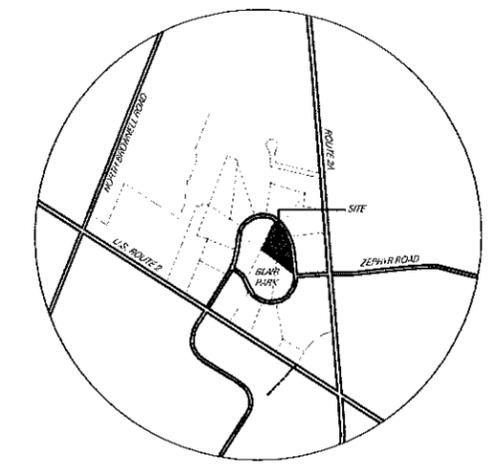
15 BLAIR PARK

O'LEARY-BURKE CIVIL ASSOCIATES, PLC

40-Scale Site Plan

1

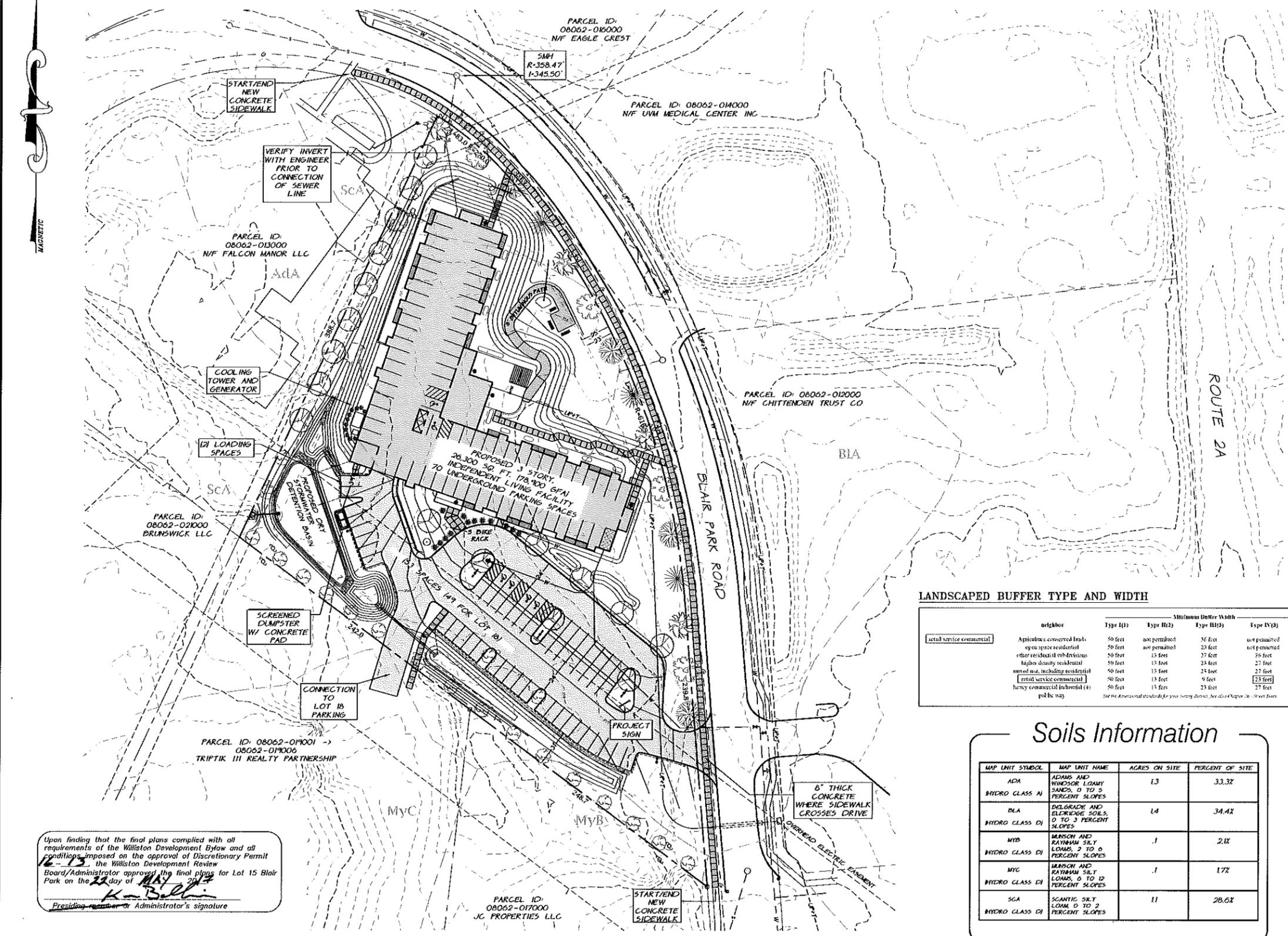
DP 16-13



Location Map  
Scale: 1" = 100'

Legend

- PROJECT BOUNDARY
  - OTHER PROPERTY LINE
  - SETBACK
  - SIDELINE OF EASEMENT
  - CONTOUR LINE (U.S.G.S. DATUM)
  - PROPOSED FINISH GRADE CONTOUR
  - EDGE OF WOODED AREA
  - EXISTING SEWERLINE
  - EXISTING WATERLINE
  - EXISTING NATURAL GASLINE
  - EXISTING/PROPOSED HYDRANT
  - SOIL TYPE + BOUNDARY
  - PROPOSED LIGHTS
  - RETAINING WALL
  - FLAG POLE
  - UNDERDRAIN
- (NOTE: PROPOSED UTILITIES ARE SHOWN AS A SOLID LINE)



LANDSCAPED BUFFER TYPE AND WIDTH

neighbor	Minimum Buffer Width				
	Type I(a)	Type II(a)	Type III(a)	Type IV(a)	
retail service commercial	Agriculture commercial	50 feet	not permitted	36 feet	not permitted
	open space residential	50 feet	not permitted	23 feet	not permitted
	other residential (subdivisible)	50 feet	13 feet	27 feet	26 feet
	higher density residential	50 feet	13 feet	23 feet	27 feet
	medium density residential	50 feet	13 feet	25 feet	27 feet
	retail service commercial	50 feet	13 feet	9 feet	23 feet
	heavy commercial (includes public use)	50 feet	13 feet	23 feet	23 feet

Soils Information

MAP UNIT SYMBOL	MAP UNIT NAME	ACRES ON SITE	PERCENT OF SITE
ADA	ADAMS AND WINDSOR LOAMY SANDS, 0 TO 5 PERCENT SLOPES	13	33.3%
BLA	DELGRADE AND ELKRUNGE SOILS, 0 TO 3 PERCENT SLOPES	14	34.4%
MYB	MARSON AND RAYHAM SILT LOAMS, 3 TO 6 PERCENT SLOPES	.1	2.1%
MYC	MARSON AND RAYHAM SILT LOAMS, 0 TO 10 PERCENT SLOPES	.1	1.7%
SGA	SCANTIC SILT LOAM, 0 TO 2 PERCENT SLOPES	11	28.6%

Zoning Information

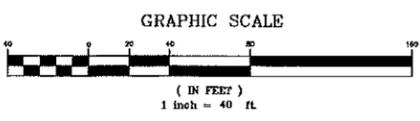
PARCEL INFO: LOT #15 BLAIR PARK (2.95 ACRES)  
 PARCEL # 08062-015000  
 BUSINESS PARK ZONING DISTRICT (BPZD)  
 COVERAGE:  
 TOTAL LOT AREA: 2.95 ACRES  
 PROPOSED BUILDING COVERAGE: 210X (0.62 ACRES)  
 PROPOSED TOTAL COVERAGE: 44.6X (13.32 ACRES)

PARKING REQUIREMENTS:

Category	Column A	Column B	Column C
Off-Street Motor Vehicle Spaces	100 per dwelling	50 per dwelling	1 per 5 units
Total Bicycle Parking Spaces	5 per 100 sq ft	5 per 100 sq ft	1 per 5 units
Long Term Bicycle Parking Spaces	1 per 5 units	1 per 5 units	1 per 5 units

VEHICULAR REQUIREMENT: 10 SPACES PER DWELLING  
 # OF DWELLINGS IN PROPOSED BUILDING: 72  
 VEHICULAR SPACES: 72 X 10 = 72 SPACES  
 BICYCLE SPACES (5% OF REQUIRED SPACES):  
 72 X .05 = 3.6 SPACE  
 LONG TERM BICYCLE SPACES (1 SPACE PER 5 UNITS):  
 72 / 5 X 1 = 14 SPACES  
 SPACES REQUIRED:  
 72 SPACES + 49 SPACES PERMITTED FOR LOT 15 = 121 SPACES  
 VEHICLE SPACES PROPOSED:  
 126 SPACES (73 UNDERGROUND, 53 SURFACE)  
 BICYCLE SPACES PROPOSED: 1 BIKE RACK  
 LONG TERM BICYCLE SPACES PROPOSED: INDOOR STORAGE FOR MINIMUM 9 BICYCLES (1 PER 5 UNITS)

Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit 16-13, the Williston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 22 day of MAY 2013.  
 Presiding member or Administrator's signature



**Owner**  
 THREE FRIENDS REALTY  
 GITORIK, KELLEY, KIDDER + POWELL INC.  
 9 RUSTIC WALK  
 SWANTON, VT 05488

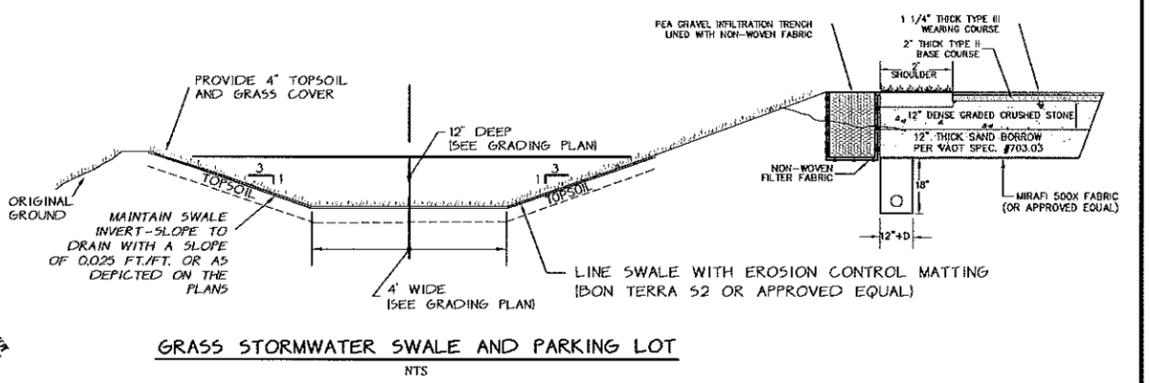
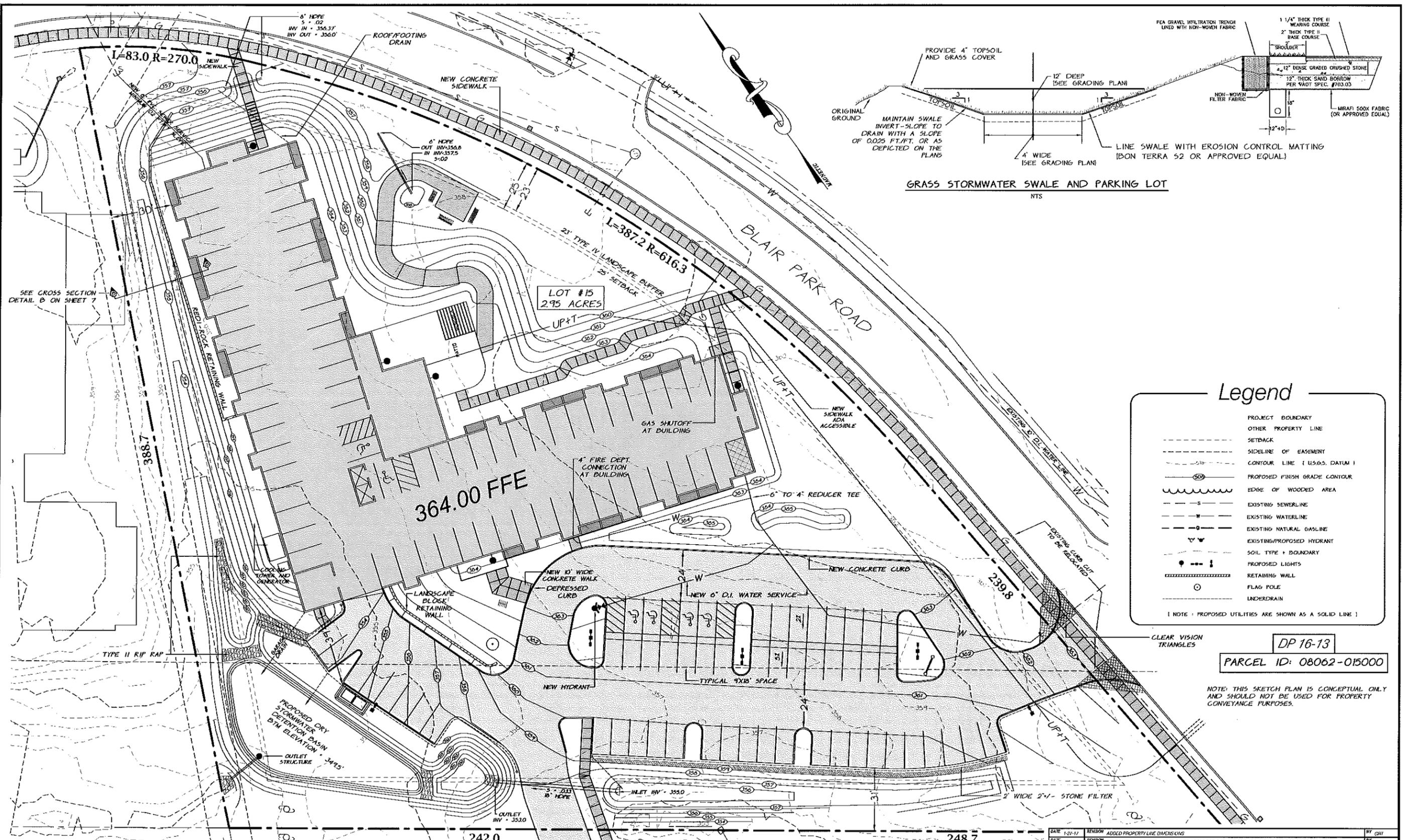
**Applicant**  
 DOUSEVICZ, INC.  
 21 CARMICHAEL STREET, SUITE 201  
 E55EX, VT 05452

DP-16-13  
 PARCEL ID: 08062-015000



DATE: 1-27-17	REVISION: ADDED PROPERTY LINE DIMENSIONS	BY: GRT
DATE: 10-13-16	REVISION: ADDED APPROVAL SIGNATURE BLOCK AND MADE EDITS FOR FINAL PLAN SUBMITTAL	BY: GRT
DATE: 0-6-16	REVISION: REVISED GRADING / LANDSCAPING / STORMWATER PER HAAC AND PUBLIC WORKS COMMENTS	BY: GRT
SURVEY: ORCA	RECORD DRAWING: <input type="checkbox"/> DISCRETIONARY	DATE: 12-30-15
DESIGN: ORCA	SKETCH/CONCEPT: <input checked="" type="checkbox"/>	DATE: 2015-41
DRAWN: GRT	<b>O'LEARY-BURKE</b>	FILE: 2015-41-56
CHECKED:	<b>CIVIL ASSOCIATES, PLC</b>	PLAN SHEET #
SCALE: 1"=40'	1 CORPORATE OFFICE SUITE #1 ESSEX CT 06030 PHONE: 860-299-0900 FAX: 860-299-0932 E-MAIL: info@oaburke.com	40-Scale Site Plan No Ortho
		<b>2</b>

NOTE: THIS SKETCH PLAN IS CONCEPTUAL ONLY AND SHOULD NOT BE USED FOR PROPERTY CONVEYANCE PURPOSES.



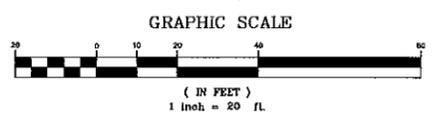
### Legend

- PROJECT BOUNDARY
- OTHER PROPERTY LINE
- SETBACK
- SIDELINE OF EASEMENT
- CONTOUR LINE (U.S.G.S. DATUM)
- PROPOSED FINISH GRADE CONTOUR
- EDGE OF WOODED AREA
- EXISTING SEWERLINE
- EXISTING WATERLINE
- EXISTING NATURAL GASLINE
- EXISTING/PROPOSED HYDRANT
- SOIL TYPE + BOUNDARY
- PROPOSED LIGHTS
- RETAINING WALL
- FLAG POLE
- UNDERDRAIN

[ NOTE - PROPOSED UTILITIES ARE SHOWN AS A SOLID LINE ]

DP 16-13  
 PARCEL ID: 08062-015000

NOTE: THIS SKETCH PLAN IS CONCEPTUAL ONLY AND SHOULD NOT BE USED FOR PROPERTY CONVEYANCE PURPOSES.



**Owner**  
 THREE FRIENDS PARTNERSHIP  
 CITORIK, KELLEY, KIDDER + POWELL INC.  
 9 RUSTIC WALK  
 SWANTON, VT 05488

**Applicant**  
 DOUSEVICZ, INC.  
 21 CARMICHAEL STREET, SUITE 201  
 ESSEX, VT 05452

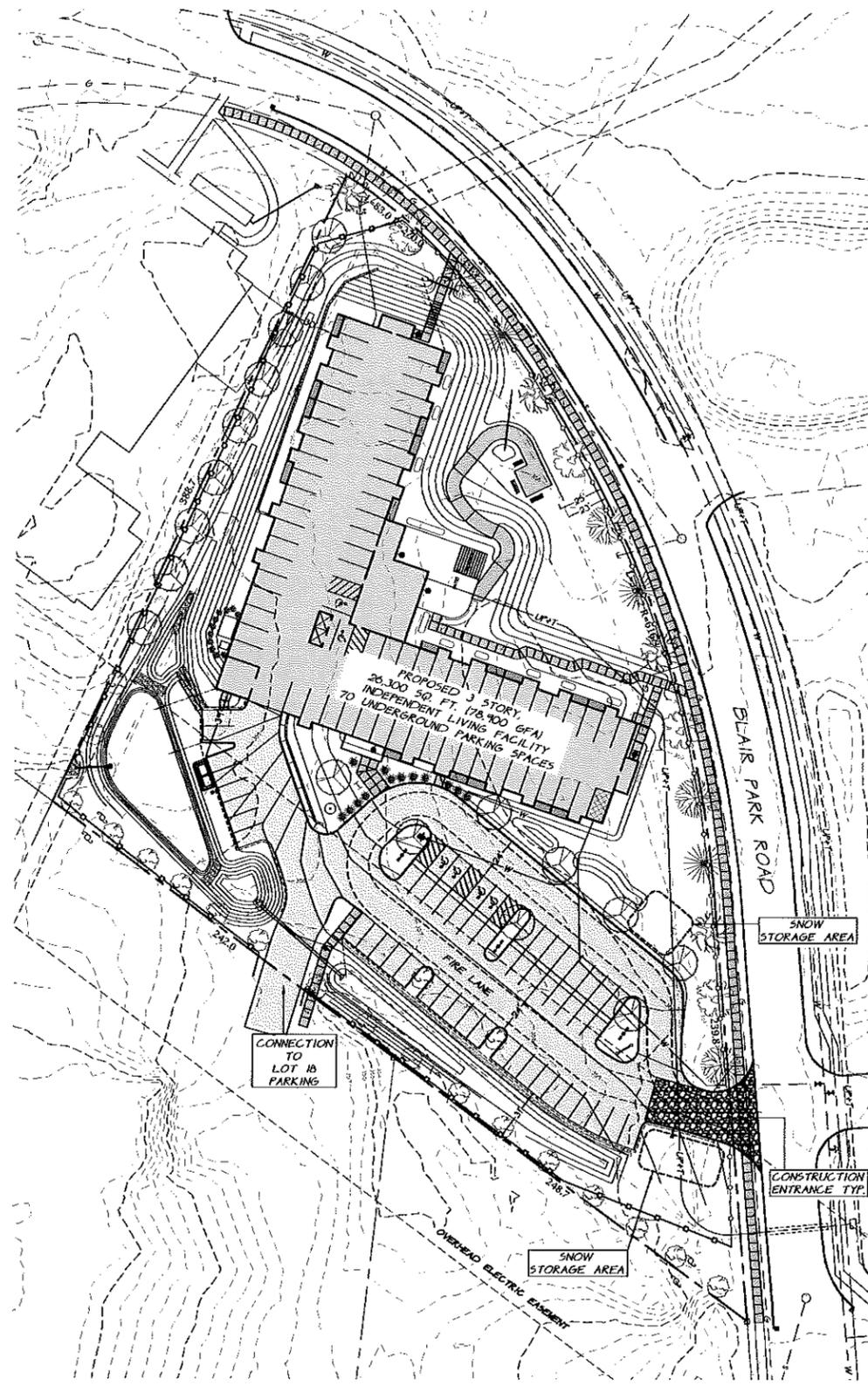
Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit 16-13, the Williston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 22 day of MAY 2015.

*K. Ball*  
 President/Member or Administrator's signature

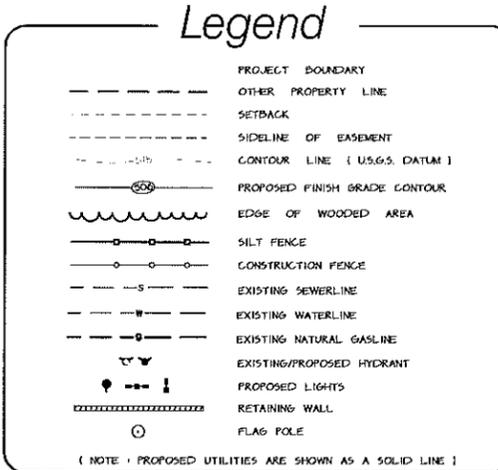


DATE	1-23-17	REVISION	ADDED PROPERTY LINE DIMENSIONS	BY	GBT
DATE	12-15-16	REVISION	RELOCATED DRAINAGE, ADDED PAVED AREAS FOR GAS AND FDC AT BUILDING PER FIRE CHIEF COMMENTS	BY	GBT
DATE	10-13-16	REVISION	ADDED APPROVAL SIGNATURE BLOCK AND MADE EDITS FOR FINAL PLAN SUBMITTAL	BY	GBT
DATE	6-6-16	REVISION	REVISED GRADING / LANDSCAPING / STORMWATER PER NMAC AND PUBLIC WORKS COMMENTS	BY	GBT
SURVEY	OCBA	DESIGN	OCBA	DATE	12-30-15
DESIGN	OCBA	DATE	12-30-15	DATE	2015-11
DRAWN	GBT	CHECKED	GBT	DATE	2015-11-26
SCALE	1" = 20'	PROJECT	15 BLAIR PARK	PLAN SHEET #	3
		DESIGNED BY	O'LEARY-BURKE CIVIL ASSOCIATES, PLC		
		SCALE	20-Scale Grading Plan		

MAGNETIC



NOTE: THIS SKETCH PLAN IS CONCEPTUAL ONLY AND SHOULD NOT BE USED FOR PROPERTY CONVEYANCE PURPOSES.

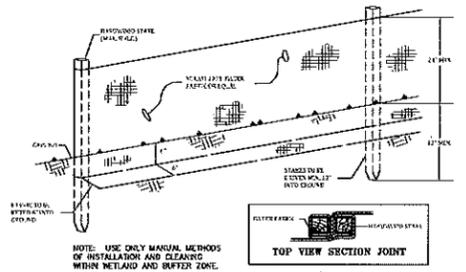


### GENERAL CONSTRUCTION SPECIFICATIONS

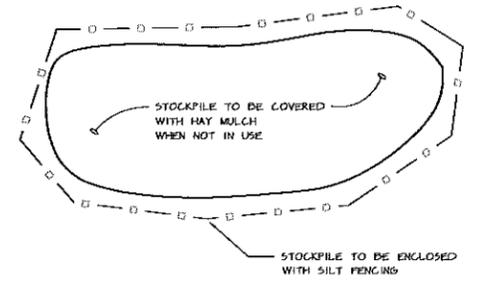
- ALL WORK AND MATERIALS SHALL BE APPROVED BY AND IN ACCORDANCE WITH THE LATEST VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE TOWN SPECIFICATIONS AND REQUIREMENTS, THE WRITTEN TECHNICAL SPECIFICATIONS, AND THESE PLANS.
- THE CONTRACTOR SHALL CONTACT ALL UTILITIES BEFORE EXCAVATION TO VERIFY THE LOCATION OF ANY UNDERGROUND LINES. THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-344-7233 AND THE TOWN OF WILLISTON PUBLIC WORKS DEPARTMENT PRIOR TO ANY EXCAVATION.
- UTILITIES INFORMATION SHOWN HEREON WERE OBTAINED FROM BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON. CONTRACTOR SHALL CONNECT OR RECONNECT ALL UTILITIES TO THE NEAREST SOURCE THROUGH COORDINATION WITH UTILITY OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING VEGETATION, PAVEMENT AND STRUCTURES NECESSARY TO CONSTRUCT THIS PROJECT UNLESS OTHERWISE NOTED ON THESE PLANS. THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIAL, DEBRIS AND TRASH FROM THE SITE UPON COMPLETION OF CONSTRUCTION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ENSURING THAT THE DUST CREATED AS A RESULT OF CONSTRUCTION DOES NOT CREATE A NUISANCE OR A SAFETY HAZARD. WHERE AND WHEN DEEMED NECESSARY BY THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO WET SECTIONS OF THE CONSTRUCTION AREA WITH WATER, APPLY CALCIUM CHLORIDE OR SWEEP ASPHALT ROADS WITH A POWER BROOM AS DUST CONTROL.
- ANY SURFACES, LINES, OR STRUCTURES WHICH HAVE BEEN DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THE CONDITION AT LEAST EQUAL TO THAT IN WHICH THEY WERE FOUND IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS.
- THE DESIGN ON THESE PLANS SHALL BE INSPECTED BY O'LEARY-BURKE CIVIL ASSOCIATES, ESSEX JUNCTION, VERMONT, TO ENSURE COMPLIANCE WITH THE PLANS AND REQUIREMENTS. O'LEARY-BURKE WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT MAY ARISE FROM THE FAILURE OF THE CONTRACTOR TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THAT THE PLANS CONVEY, AND FROM FAILURE TO HAVE BEEN NOTIFIED TO INSPECT THE WORKS AND TESTS IN PROGRESS.
- FOR ANY WORK WITHIN THE HIGHWAY RIGHT-OF-WAY A MINIMUM OF ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. CONTINUOUS TWO-WAY TRAFFIC WILL BE REQUIRED AT NIGHT, DURING PEAK-HOURS, AND WHENEVER POSSIBLE DURING ACTUAL CONSTRUCTION ACTIVITIES. UNIFORMED TRAFFIC CONTROL OFFICERS SHALL DIRECT TRAFFIC DURING PEAK HOURS WHEN THERE IS ONE-WAY TRAFFIC OR WHEN DEEMED NECESSARY BY THE TOWN OR STATE. TEMPORARY CONSTRUCTION SIGNS AND TRAFFIC CONTROL SIGNS SHALL BE ERRECTED BY THE CONTRACTOR IN ACCORDANCE WITH STATE AND TOWN STANDARDS.
- TO ENSURE COMPLIANCE WITH THE PLAN(S), THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE TOWN OF WILLISTON PUBLIC WORKS DEPARTMENT 24 HOURS IN ADVANCE OF STARTING ANY WORK, CUTTING THE PAVEMENT, BEGINNING THE INSTALLATION OF ANY UTILITIES, BRINGING IN ANY NEW GRAVEL FOR THE NEW BASE, PAVING, AND FINAL INSPECTION.
- THE HORIZONTAL AND VERTICAL SEPARATION FOR SEWER AND WATER LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE "TEN STATE STANDARDS - RECOMMENDED STANDARDS FOR WATER."
- TOPSOIL SHALL BE STOCKPILED, SEEDED, AND MULCHED UNTIL REUSED. SILT FENCES SHALL BE PLACED AND STAKED CONTINUOUSLY AROUND THE BOTTOM OF THE TOPSOIL PILES.
- HEALTHY EXISTING TREES ON AND ADJACENT TO THE SITE SHALL BE SAVED AND PROTECTED AS ORDERED BY THE ENGINEER.
- OPEN CUT AREAS SHALL BE MULCHED OUTSIDE OF ACTUAL WORK AREAS, AND BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED TO CONFINE SHEET WASH AND RUNOFF TO THE IMMEDIATE OPEN AREA AS ORDERED BY THE ENGINEER. THE CONTRACTOR SHALL REFERENCE ALL STORMWATER BMP'S PROVIDED BY THE STATE OF VERMONT.
- AT COMPLETION OF GRADING, SLOPES, DITCHES, AND ALL DISTURBED AREAS SHALL BE SMOOTH AND FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.
- FINISH SLOPES, DITCHES AND DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TOPSOIL AND BE FERTILIZED, SEEDED, LINED, AND MULCHED. TURF ESTABLISHMENT SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 621 OF THE VERMONT HIGHWAY DEPARTMENT SPECIFICATIONS AND THE SPECIFICATIONS INCLUDED ON THESE PLANS.
- ALL FILL SHALL BE PLACED IN 6 INCH LIFTS AND THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR, UNLESS OTHERWISE SPECIFIED.
- DRAINAGE COURSES AND STREAMS SHALL BE CONTROLLED IN DISTURBED CONSTRUCTION AREAS BY THE FOLLOWING METHODS:
  - PRESERVING NATURAL VEGETATION WHENEVER POSSIBLE;
  - AVOIDING UNNECESSARY DISTURBANCE OF SOILS;
  - EARLY INSTALLATION OF STORM PIPES AND DITCHES;
  - SEEDING AND MULCHING DIRECTLY UPON COMPLETION OF CONSTRUCTION;
  - CONSTRUCTION OF EROSION CONTROL DEVICES AS DIRECTED BY THE ENGINEER.
- THE SILT FENCES, DITCHES, AND OTHER EROSION CONTROL DEVICES, SHALL BE INSPECTED, MAINTAINED AND REPAIRED BY THE CONTRACTOR AFTER EVERY RAINFALL OR AS ORDERED BY THE ENGINEER UNTIL ALL DISTURBED AREAS HAVE BEEN GRADED AND APPROVED BY THE ENGINEER. THE MAINTENANCE OF THE EROSION CONTROL DEVICES WILL INCLUDE REMOVAL OF ANY ACCUMULATED SEDIMENTATION.
- PRIOR TO CONSTRUCTION, ALL MATERIALS SHALL BE APPROVED BY THE ENGINEER. ALL MATERIALS TO BE TAKEN OVER BY THE TOWN SHALL BE APPROVED BY THE PUBLIC WORKS DEPARTMENT.
- ALL WORK INCLUDING BUT NOT LIMITED TO SHALL CONFORM TO THE WILLISTON PUBLIC WORKS STANDARD SPECIFICATIONS

### EROSION CONTROL SPECIFICATIONS

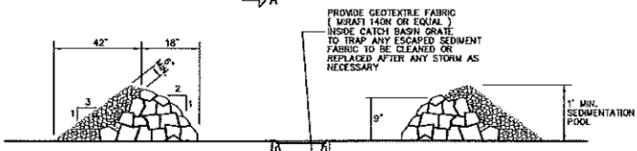
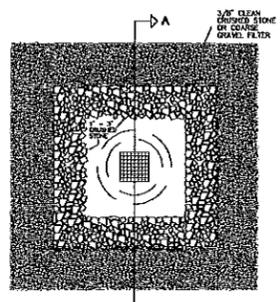
- SEE OTHER DRAWINGS OF THESE PLANS FOR ADDITIONAL STORMWATER AND EROSION CONTROL SPECIFICATIONS AND DETAILS.
- THE ROADWAY AND YARD FINISH GRADE SLOPES SHALL NOT BE STEEPER THAN 3 ON 1. THE FINISHED GRADE SLOPES SHALL BE IMMEDIATELY GRADED AND MULCHED.
- ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO NOVEMBER 1 OF EACH YEAR. ANY DISTURBED AREAS OUTSIDE OF THE ROADWAY SHALL BE IMMEDIATELY SEEDED AND MULCHED WITHIN 5 DAYS.
- THE EROSION CONTROL METHODS USED DURING CONSTRUCTION OF THE DEVELOPMENT SHALL PROCEED IN THE FOLLOWING SEQUENCE:
  - THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY SWALES, SILT FENCES, AND OTHER EROSION CONTROL MEASURES, IF REQUIRED AS ORDERED BY THE ENGINEER. THE EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AFTER EVERY RAINFALL UNTIL THE NEW IMPROVEMENTS ARE PAVED AND ALL DISTURBED AREAS HAVE BEEN GRADED. THE REPAIR OF THE EROSION CONTROL MEASURES WILL INCLUDE REMOVING ANY SEDIMENTATION. THE SEDIMENT MAY BE PLACED AS FILL IN THE LOW AREAS, IF APPROVED BY THE ENGINEER.
  - THE TOPSOIL SHALL BE REMOVED FROM THE AREAS TO BE GRADED AND STOCKPILED. A SILT FENCE SHALL BE PLACED CONTINUOUSLY AROUND THE BOTTOM OF THE PILE.
  - IN AREAS NEAR THE NEW CONSTRUCTION THE CONTRACTOR SHALL ENCLOSE THE TRUNKS OF TREES TO BE SAVED WITH WOODEN SNOW FENCING ALONG THE DRIPLINE TO PROTECT THE FROM HAZARD.
  - THE SITE GRADING WILL THEN BE DONE AND THE PIPELINES WILL BE INSTALLED IMMEDIATELY FOLLOWING GRADING. THE CONTRACTOR WILL INSTALL AND MAINTAIN INLET PROTECTION ALONG THE CATCH BASINS UNTIL THE ROADWAY HAS BEEN PAVED AND GRASS HAS BEEN ESTABLISHED ON THE SLOPES.
  - THE CONTRACTOR WILL TOPSOIL, SEED, AND MULCH THE DISTURBED AREAS AS SOON AS POSSIBLE FOLLOWING COMPLETION OF ADJACENT CONSTRUCTION.
  - OPEN CUT AREAS SHALL BE MULCHED OUTSIDE OF ACTUAL WORK AREAS, AND HAY DALES SHALL BE EMPLOYED TO CONFINE SHEET WASH AND RUNOFF TO THE IMMEDIATE OPEN AREA AS ORDERED BY THE ENGINEER.
- DURING CONSTRUCTION THE PROJECT SHALL BE IN COMPLIANCE WITH THE LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.



TEMPORARY SILT FENCE  
NTS



TEMPORARY FILL MATERIAL STOCKPILE  
NTS

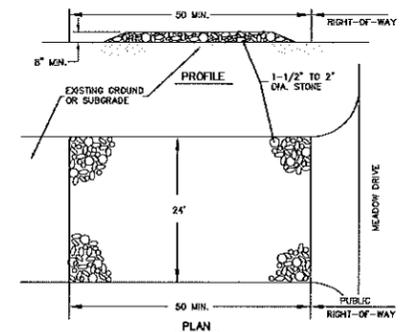


SECTION A - A  
INLET PROTECTION DETAIL  
NTS

### MULCHING SPECIFICATIONS

DISTURBED AREAS ARE TO BE MULCHED WITHIN A WEEK OF DISTURBANCE. HAY MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AT A RATE THAT IS SUFFICIENT TO PROVIDE ADEQUATE COVERAGE.

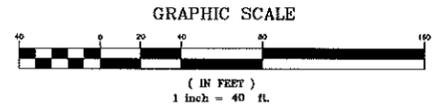
WHERE FINISH GRADE AND TOPSOILED, SEEDING AND MULCHING IS TO BE APPLIED WITHIN 48 HOURS.



STABILIZED CONSTRUCTION ENTRANCE  
NTS

**Owner**  
THREE FRIENDS PARTNERSHIP  
CITORIK, KELLEY, KIDDER + POWELL INC.  
9 RUSTIC WALK  
SWANTON, VT 05488

**Applicant**  
DOUSEVICZ, INC.  
21 CARMICHAEL STREET, SUITE 201  
ESSEX, VT 05452



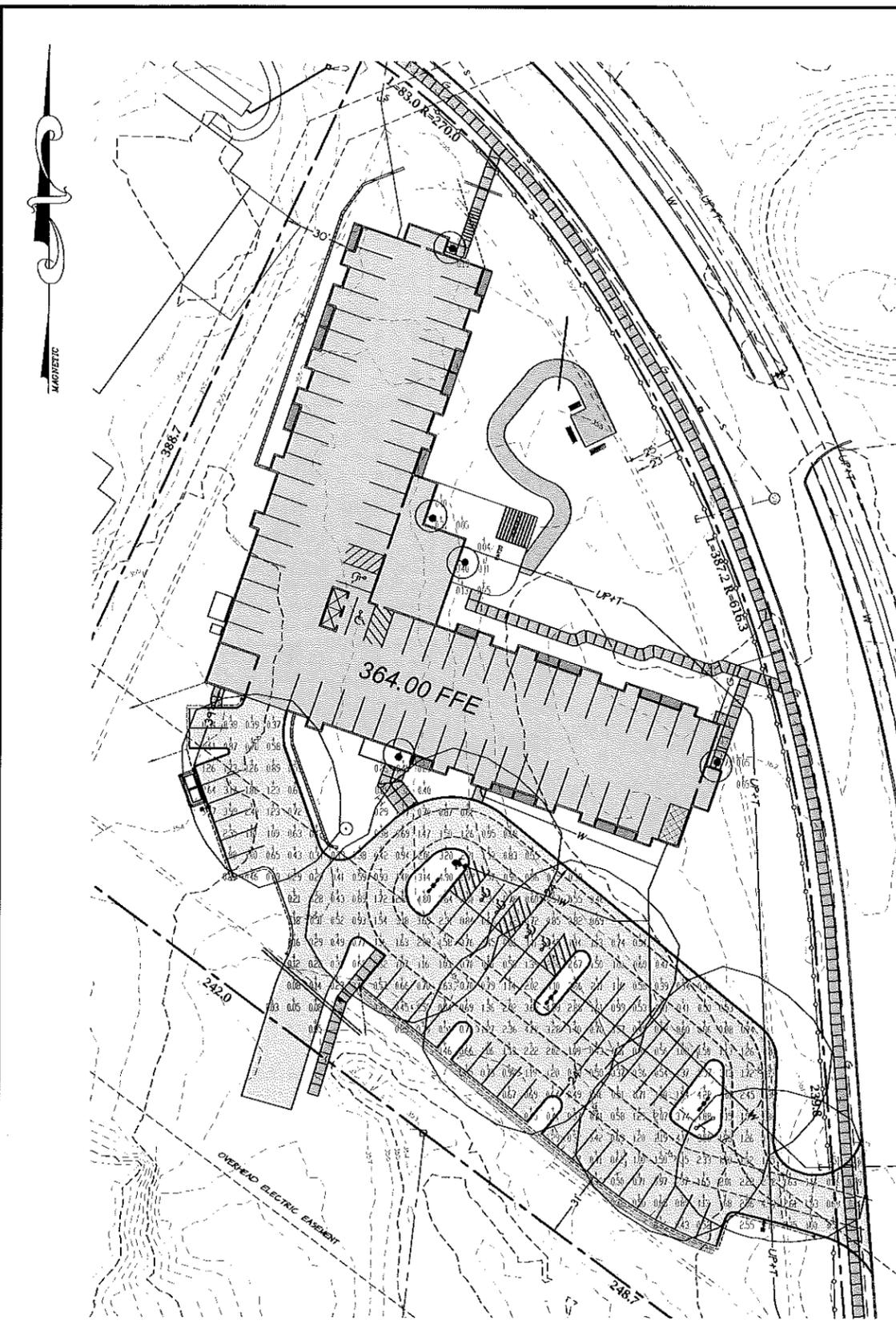
Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit 16-13, the Williston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 22 day of MAY, 2013.

*K. Bell*  
Administrator's signature



DP 16-13  
PARCEL ID: 08062-015000

DATE: 4-11-17	REVISION: FINISH EROSION CONTROL SPECIFICATIONS	BY: GBT
DATE: 1-27-17	REVISION: ADDED PROPERTY LINE DIMENSIONS	BY: GBT
DATE: 10-13-16	REVISION: ADDED APPROVAL SIGNATURE BLOCK AND MADE EDITS FOR FINAL PLAN SUBMITTAL	BY: GBT
DATE: 8-6-16	REVISION: REVISED GRADING / LANDSCAPING / STORMWATER PER H2AC AND PUBLIC WORKS COMMENTS	BY: GBT
SURVEY: ORCA	RECORD DRAWING: <input type="checkbox"/> CONCEPTUAL <input type="checkbox"/> SKETCH/CONCEPT	DATE: 12-30-15
DESIGN: ORCA	DESIGNER: O'LEARY-BURKE CIVIL ASSOCIATES, PLC	DATE: 2013-01-31
DRAWN: GBT	PROJECT: 15 BLAIR PARK	FILE: 2013-01-31
CHECKED: GBT	SCALE: 1"=40'	PLAN SHEET # 4



\*Note: Lighting values shown in BLUE illustrate the lighting coverage, while lighting value shown in RED have been used to calculate the uniformity ratio (max./min.)

NOTE: THIS SKETCH PLAN IS CONCEPTUAL ONLY AND SHOULD NOT BE USED FOR PROPERTY CONVEYANCE PURPOSES.

**Owner**  
 THREE FRIENDS PARTNERSHIP  
 CITORIK, KELLEY, KIDDER + POWELL INC.  
 9 RUSTIC WALK  
 SWANTON, VT 05488

**Applicant**  
 DOUSEVICZ, INC.  
 21 CARMICHAEL STREET, SUITE 201  
 ESSEX, VT 05452

DP 16-13  
 PARCEL ID: 08062-015000

### ALED4T78N

**RAB LIGHTING**

Project: \_\_\_\_\_ Type: \_\_\_\_\_  
 Prepared By: \_\_\_\_\_ Date: \_\_\_\_\_

Manufacturer: RAB Lighting  
 Model: ALED4T78N  
 Power: 100W  
 Voltage: 120V  
 Lumens: 10,000  
 Beam Angle: 120°

**Technical Specifications**

**Lighting:**  
 UL Listed  
 IESNA LM-79 & LM-80  
 Dark Sky Approved  
 EFC Listed  
 Optical  
 Lumen Maintenance  
 Replacement  
 Efficacy  
 Construction  
 IES Classification

**Ambient Temperature:**  
 Ambient Temperature  
 Cold Weather Storing  
 Thermal Management

**For use on LEED Buildings:**  
 LEED v4.1 Green Building  
 LEED v4.1 Green Building  
 LEED v4.1 Green Building

**LED Characteristics:**  
 LED Type  
 LED Color  
 LED Life  
 LED Efficiency

### ALED4T78N

**RAB LIGHTING**

**Technical Specifications (continued)**

**Electrical:**  
 Surge Protection  
 Other

**California Title 24:**  
 California Title 24  
 California Title 24

**Dimensions:**  
 Dimensions  
 Features

**Ordering Matrix:**

Part No.	Quantity	Unit	Color Temp.	Finish	Notes	Product	Dimensions	Weight
ALED 4T 78	1	Y	3000K	Antique Bronze				

### 18745 BILEVEL SENSOR FOR D10

**RAB LIGHTING**

For use with RAB lighting fixtures. The sensor is designed to detect motion and dim lights to 10% output at night. When motion is detected, lights return to 100% output. If no motion is detected for a five-minute period, lights return to 10% output.

**IMPORTANT:**  
 READ CAREFULLY BEFORE INSTALLING FEATURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

**OPERATION (DIMMABLE DRIVER):**  
 - Ambient light above the sensor causes motion to keep feature lights on despite detected motion.  
 - High Motion in areas with no motion detectors on.  
 - After 5 minutes of no motion, the sensor will dim the lights of the fixture to 10% output.  
 - After 5 minutes of no motion, the sensor will dim the lights of the fixture to 10% output.

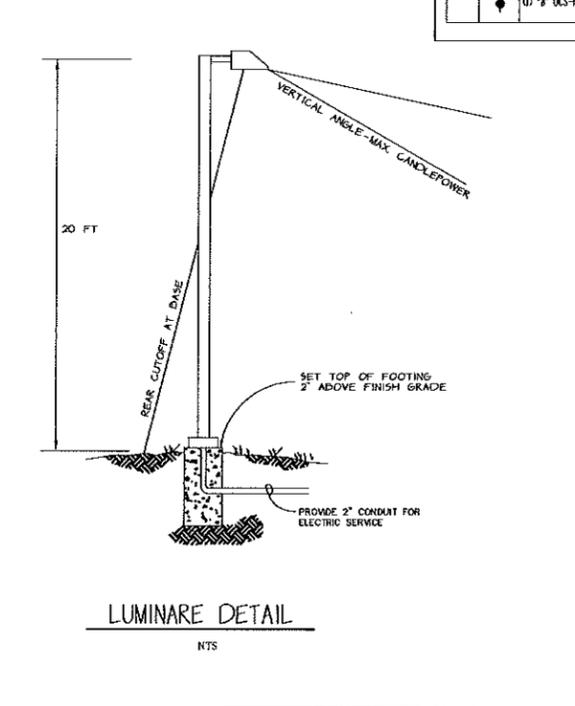
**Note**  
 ALL OUTDOOR PARKING AREA LIGHTING FIXTURES SHALL HAVE THE RAB 18745 BILEVEL SENSOR INSTALLED. THE SENSOR CAN BE PROGRAMMED TO DIM LIGHTS TO 10% (ADJUSTABLE) OUTPUT AT NIGHT, WHEN THE SENSOR DETECTS MOTION, LIGHTING FIXTURES WILL RETURN TO 100% OUTPUT. IF NO MOTION IS DETECTED FOR A TIME PERIOD OF FIVE MINUTES, LIGHT FIXTURES WILL DIM AGAIN TO 10% OUTPUT. THE SENSOR'S "CUT-OFF" FEATURE TURNS LIGHTS OFF COMPLETELY IN THE ABSENCE OF MOTION DETECTION. THIS FEATURE WILL BE DISABLED ENSURING THAT PARKING AREA LIGHTS REMAIN AT A MINIMUM OF 10% OUTPUT THROUGHOUT THE NIGHT.

### DISTRICT LED

**PROGRESS LIGHTING**

Model: P5623-2030K9

**Specifications:**  
 Description: District LED  
 Construction: District LED  
 Performance: District LED  
 Dimensions: District LED  
 Catalog number: District LED



Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit No. 2015-01-01, the Williston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 15th day of May, 2015.

*K. Bull*  
 Presiding member of Administrator's signature

**REVISIONS:**

DATE	REVISION	BY
10-13-12	REVISION ADDED PROPERTY LINE DIMENSIONS	BT
10-13-12	REVISION ADDED APPROVAL SIGNATURE BLOCK AND FINISH NOTES FOR FINAL PLAN SUBMITTAL	BT
06-16	REVISION REVISED GRADING / LANDSCAPING / STORMWATER PER HAAC AND PUBLIC WORKS COMMENTS	BT

**DESIGNER:** O'LEARY-BURKE CIVIL ASSOCIATES, PLC  
**DATE:** 12-30-15  
**SCALE:** 1" = 40'

### Legend

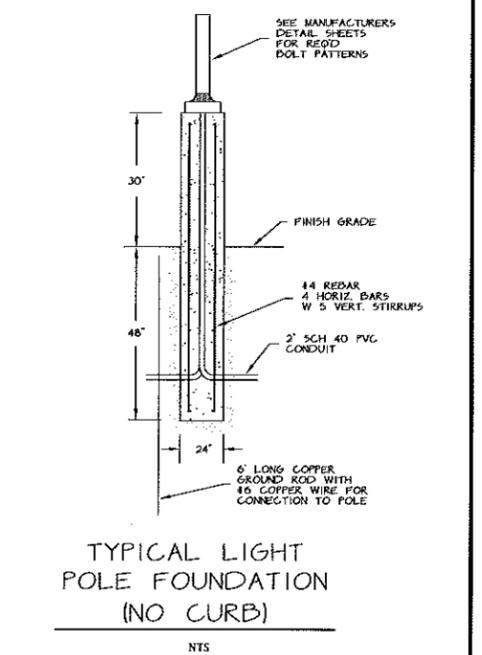
PROJECT BOUNDARY  
 OTHER PROPERTY LINE  
 SETBACK  
 SIDELINE OF EASEMENT  
 CONTOUR LINE (USGS DATUM)  
 PROPOSED FINISH GRADE CONTOUR  
 EDGE OF WOODED AREA  
 PROPOSED SWALE  
 EXISTING SEWERLINE  
 EXISTING WATERLINE  
 EXISTING NATURAL GASLINE  
 EXISTING/PROPOSED HYDRANT  
 SOIL TYPE + BOUNDARY  
 PROPOSED LIGHTS  
 RETAINING WALL  
 FLAG POLE

[ NOTE: PROPOSED UTILITIES ARE SHOWN AS A SOLID LINE ]

### Lot 15 Lighting Calculations

DCF file created by LitePro 2037 on 7/14/2015 10:59:30 AM

AREA NAME	FUNCTION	GRID / TYPE	FT PIS	SPAC	GROUP	AVG	MIN	MAX	UNIFORMITY	AVG/FT	AVG/FT
High Parking	High Parking	Parking / H-H	299	600	(C)	1.15	1.10	1.20	1.05	1.15	1.15
Low	Low	New Grid / H-H	18	600	(C)	0.80	0.75	0.85	0.75	0.80	0.80



GRAPHIC SCALE  
 1 inch = 40 ft

**O'LEARY-BURKE CIVIL ASSOCIATES, PLC**  
 1 CORPORATE DRIVE, SUITE #1  
 ESSEX, VT 05452  
 PHONE: 802-888-8888  
 FAX: 802-888-8888  
 E-MAIL: o'b@oleary-civil.com

**15 BLAIR PARK**  
 40-Scale Lighting Plan  
 PLAN SHEET # 5

### LANDSCAPING SPECIFICATIONS

ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO OCTOBER 1 OF EACH YEAR. ANY COMPLETED DISTURBED AREAS OUTSIDE THE IMMEDIATE WORK AREA SHALL BE IMMEDIATELY SEEDED AND MULCHED WITHIN 15 DAYS. ANY WORK PERFORMED AFTER OCTOBER 1 OF EACH YEAR SHALL BE STABILIZED WITH MULCH AND NETTING SUFFICIENT TO PREVENT EROSION AND SHALL BE IMMEDIATELY SEEDED AND REMULCHED AS SOON AS WEATHER PERMITS IN THE SPRING. THESE DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL AND BE SEEDED, FERTILIZED, LIVED, AND MULCHED IN ACCORDANCE WITH THE FOLLOWING:

- SEED MIXTURE IN AREAS OUTSIDE OF THE STREET LIMITS SHALL BE CONSERVATION MIX CONFORMING TO THE TABLE SHOWN BELOW. SEED MIXTURE IN AREAS WITHIN THE STREET LIMITS AND HOUSE LAWNS SHALL BE URBAN MIX CONFORMING TO THE TABLE SHOWN BELOW. FOR SEEDING BETWEEN SEPTEMBER 1 AND OCTOBER 1, WINTER RYE SHALL BE USED AT APPLICATION RATE OF 100 POUNDS PER ACRE.
- FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE CONFORMING TO THE STATE FERTILIZER LAW AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. DRY FERTILIZER, IF USED, SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. LIQUID FERTILIZER, IF USED, SHALL BE APPLIED IN A 1-2-1 RATIO WITH THE MINIMUM RATE TO INCLUDE 100 POUNDS OF NITROGEN, 200 POUNDS OF PHOSPHATE, AND 100 POUNDS OF POTASH PER ACRE.
- LIMESTONE SHALL CONFORM TO ALL STATE AND FEDERAL REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. THE LIMESTONE SHALL BE APPLIED AT A RATE OF TWO TONS PER ACRE AS DIRECTED.
- WITHIN 24 HOURS OF APPLICATION OF FERTILIZER, LIME, AND SEED, THE SURFACE SHALL BE MULCHED WITH A HAY MULCH. MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AS ORDERED BY THE ENGINEER.

### TREE PLANTING SPECIFICATIONS

- ALL TREES WILL BE SINGLE STEMMED AND TREE FORM PRUNED. PRUNE INJURED OR MASHED ROOTS.
- REMOVE BURLAP OR ROOT PROTECTION FROM TOP 1/3 OF BALL.
- TREE ROOT COLLAR SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE AT NURSERY. DO NOT OVER-EXCAVATE PIT.
- EXCAVATE 4" WIDE TREE PIT. BACKFILL WITH EXISTING SOIL UNLESS SOIL STRUCTURE IS POOR. SOIL SHALL BE COMPACTED BENEATH THE TREE BALL. FILL TREE PIT WITH SOIL MIX OF TWO PARTS TOPSOIL, ONE PART PEAT MOSS, ONE PART MANURE AND SIX OUNCES OF "MAGAMP" (7.40.60).
- ALL REFILED PITS WILL BE MULCHED WITH FOUR INCHES (4") OF COMPOSTED BARK MULCH AND WATERED IMMEDIATELY AFTER PLANTING.
- ALL BOLES WILL BE WRAPPED WITH TREE WRAP FROM GROUND LINE TO BASE OF LIVE CROWN.
- STAKE TREE USING STEEL OR HARDWOOD 2" X 4" STAKES. SECURE TREE WITH WIDE BELT-TYPE STRAPPING. DO NOT USE WIRE.
- FERTILIZE AND WATER AS NECESSARY.

URBAN MIX GRASS SEED		
% BY WEIGHT	lbs. LIVE SEED PER ACRE	TYPE OF SEED
37.5	45	CREeping RED FESCUE
37.25	37.5	KENTUCKY BLUEGRASS
31.25	37.5	WINTER HARDY PERENNIAL RYE
100	120 # LIVE SEED PER ACRE	

PROPOSED LANDSCAPING SCHEDULE				
SYMBOL	QUANTITY	COMMON NAME	BOTANIC NAME	SIZE
	4	ACCOLADE ELM	<i>Ulmus Accolade</i>	2.5'-3" Cal. BBB
	4	RED OAK	<i>Quercus Alba</i>	2.5'-3" Cal. BBB
	4	FREEMAN MAPLE	<i>Acer xfreemanii</i>	2.5'-3" Cal. BBB
	3	SWAMP WHITE OAK	<i>Quercus Rubra</i>	2.5'-3" Cal. BBB
	17	HONEYLOCUST	<i>Gleditsia triacanthos Imperialis</i>	2.5'-3" Cal. BBB
	20	SHADBLOW SERVICEBERRY	<i>Amelanchier canadensis</i>	12' HGT.
	25	PYRAMID YEw	<i>Taxus cuspidata</i>	5'-6' HGT.

Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit 16-117, the Williston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 22 day of MAY 2017.

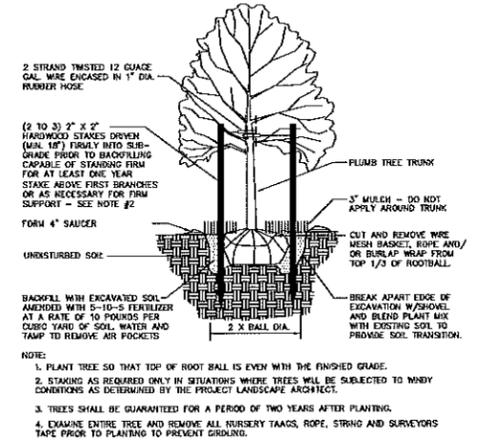
*K. Bull*  
 Planning Administrator's signature

DP 16-13  
 PARCEL ID: 08062-015000

NOTE: THIS SKETCH PLAN IS CONCEPTUAL ONLY AND SHOULD NOT BE USED FOR PROPERTY CONVEYANCE PURPOSES.

### Legend

- PROJECT BOUNDARY
  - OTHER PROPERTY LINE
  - SETBACK
  - SIDELINE OF EASEMENT
  - CONTOUR LINE ( U.S.G.S. DATUM )
  - PROPOSED FINISH GRADE CONTOUR
  - EDGE OF WOODED AREA
  - PROPOSED SWALE
  - EXISTING SEWERLINE
  - EXISTING WATERLINE
  - EXISTING NATURAL GASLINE
  - EXISTING/PROPOSED HYDRANT
  - SOIL TYPE & BOUNDARY
  - PROPOSED LIGHTS
  - RETAINING WALL
  - FLAG POLE
- ( NOTE : PROPOSED UTILITIES ARE SHOWN AS A SOLID LINE )



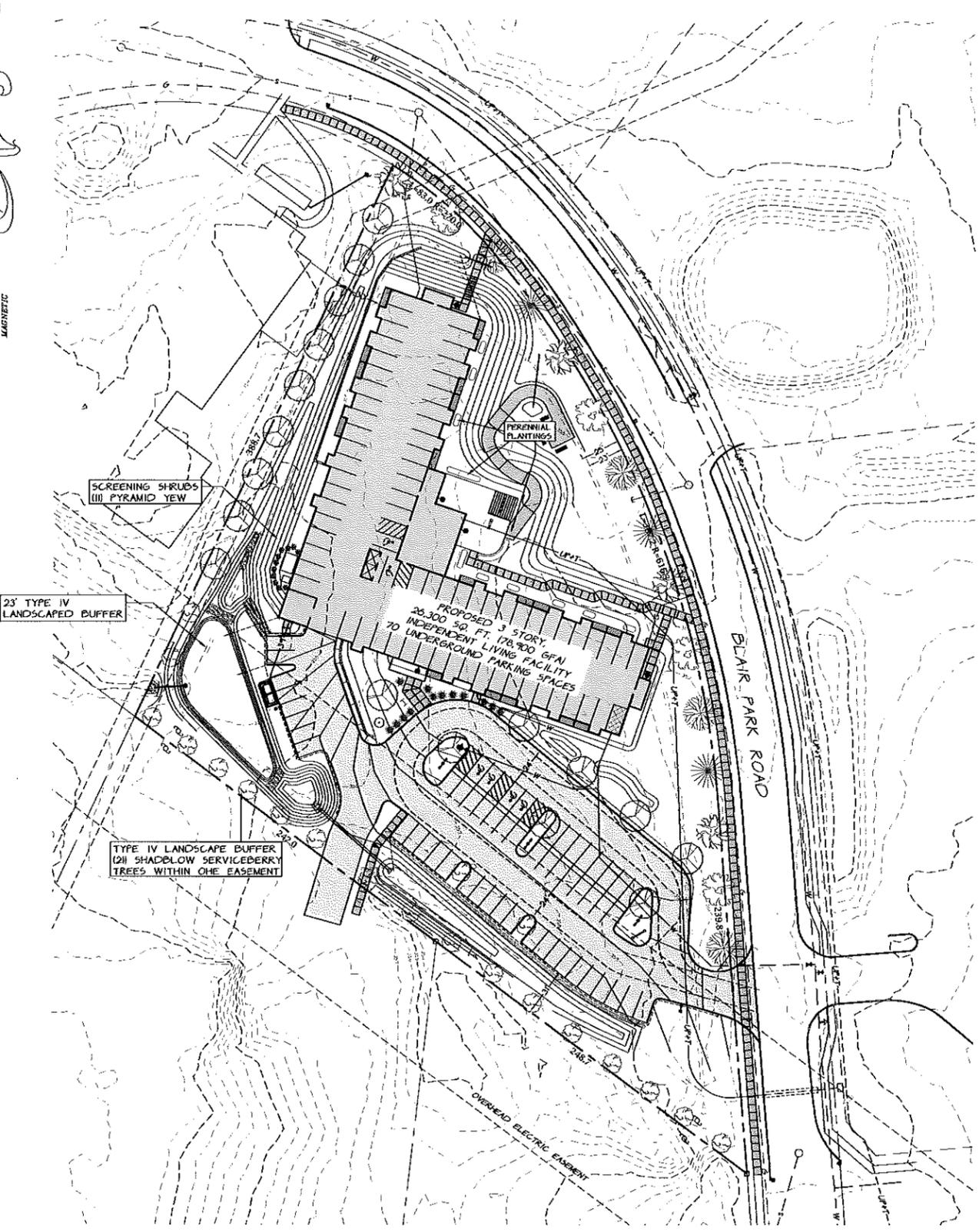
### TREE PLANTING

NTS

### LANDSCAPED BUFFER TYPE AND WIDTH

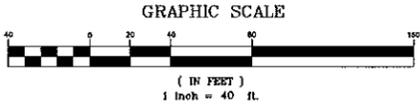
neighbor	Minimum Buffer Width			
	Type I(1)	Type II(2)	Type III(3)	Type IV(4)
residential commercial	50 feet	not permitted	36 feet	not permitted
agricultural conserved lands	50 feet	not permitted	25 feet	not permitted
open space residential	50 feet	13 feet	27 feet	36 feet
older residential subdivisions	50 feet	13 feet	23 feet	27 feet
higher density residential	50 feet	13 feet	23 feet	27 feet
open use, including residential	50 feet	13 feet	23 feet	27 feet
residential commercial (1)	50 feet	13 feet	23 feet	27 feet
residential commercial (2)	50 feet	13 feet	23 feet	27 feet
public way	50 feet	13 feet	23 feet	27 feet

See the Administration of the City for more information, including a map of the project area.



**Owner**  
 THREE FRIENDS PARTNERSHIP  
 CITORIK, KELLEY, KIDDER + POWELL INC.  
 9 RUSTIC WALK  
 SWANTON, VT 05488

**Applicant**  
 DOUSEVICZ, INC.  
 21 CARMICHAEL STREET, SUITE 201  
 ESSEX, VT 05452



DATE: 1-27-17	REVISION: ADDED PROPERTY LINE DIMENSIONS	BY: GRT
DATE: 10-13-16	REVISION: ADDED APPROVAL SIGNATURE BLOCK AND MADE FIXES FOR FINAL PLAN SUBMITTAL	BY: GRT
DATE: 9-6-16	REVISION: REVISED GRADING / LANDSCAPING / STORMWATER PER HAAC AND PUBLIC WORKS COMMENTS	BY: GRT
DRAWN: OBKA	RECORDED DRAWING	DATE: 12-30-15
DESIGN: OBKA	FINAL	DATE: 2015-11
CHECKED: GRT		DATE: 2015-11-26
SCALE: 1"=40'		PLAN SHEET #

**O'LEARY-BURKE CIVIL ASSOCIATES, PLC**

1 CORPORATE DRIVE, SUITE #1  
 ESSEX, VT 05452  
 PHONE: 802-890-7000  
 FAX: 802-890-7000  
 E-MAIL: OFFICE@OBKACPA.COM

**15 BLAIR PARK**

40-Scale Landscaping Plan

**6**



# WATER SPECIFICATIONS

## 1.1 GENERAL:

This item shall consist of the labor, equipment, and material required for the complete construction of the watermain and services which shall include excavation, backfilling, pipe, valves, tees, hydrants, elbows, reducers, and all other appurtenances necessary for a complete watermain system as indicated on the accepted drawings. All materials and installations shall be approved by the local municipal water authority.

## 1.2 WATER PIPE MATERIALS:

### DUCTILE IRON PIPE

Pipe shall be a minimum diameter of eight inches (8") and conform to current AWWA C110 or ANSI Specification A21.10. Push-on joint pipe shall be minimum thickness Class 52. Push-on joint accessories shall conform to applicable requirements of AWWA C111 or ANSI Specification A21.11.

Pipe shall be cement mortar-lined on the inside in accordance with AWWA C104 or ANSI Specification A21.4 except that the cement-lining thickness shall not be less than three-sixteenths inch (3/16"). A plus tolerance of one-eighths inch (1/8") will be permitted.

### 1.3 FITTINGS:

Ductile iron fittings shall be cement-lined, have 350 pounds working pressure, and be in accordance with AWWA C-104, C-111, and C-110 or C-153 for compact fittings. Mechanical joint nuts and bolts shall be high strength, low alloy steel per ANSI A-21.11. Ductile iron fittings larger than twelve inches (12") shall have a standard body length equal to Class 250 cast iron fittings. Cast iron Class 250 fittings will be allowed in lieu of ductile iron fittings in sizes larger than twelve inches (12"). All water fittings shall be lead free.

Mechanical reliners or an approved equal shall be used on all vertical bend and as shown on the plans.

### 1.4 GATE VALVE RESILIENT SEAT:

VALVES SHALL BE MANUFACTURED IN NORTH AMERICA TO MEET ALL REQUIREMENTS OF AWWA SPECIFICATIONS C-509. VALVES INELINE INCHES (12") AND SMALLER SHALL BE BUBBLE-TIGHT, ZERO LEAKAGE AT 250 PSI WORKING PRESSURE. VALVES IN LINE INCHES (12") AND SMALLER SHALL BE COUNTERCLOCKWISE, AND BE PROVIDED WITH A TWO INCH (2") SQUARE OPERATING NUT WITH AN ARROW CAST IN METAL TO INDICATE DIRECTION OF OPENING.

Each valve shall have maker's name, pressure rating, and year in which manufactured cast on the body. Prior to shipment from the factory, each valve shall be tested by hydrostatic pressure equal to twice the specified working pressure. Buried valves shall be installed with a valve box.

### 1.5 VALVE BOXES:

Cast iron three-piece slide-type; five and one-fourth inch (5 1/4") shaft; six foot (6') trench depth.

Cast iron cover marked "WATER" and indicating direction of opening.

### 1.6 FIRE HYDRANTS:

All hydrants are to be 3-way, 5" minimum diameter and limited to the following make: Kennedy Guardian K-81A.

Main Valve Opening: 5 1/4 inches

Nozzle Arrangement: Two 2 1/2 inch hose nozzles with (6) threads per inch. One 4 1/2 inch pumper nozzle with (4) threads per inch. 5" Storz connection

Inlet Connection: 6 inch mechanical joint

Operating Nut: Standard 1 inch pentagon

Direction of Opening: Counterclockwise

Color: Enamel yellow body, top color as determined by Town.

Depth of Bury: Hydrant shall be installed to the manufacturer's instructions with nozzles about 18" above finish grade.

### 1.7 HYDRANT BRANCHES:

Hydrant assemblies shall consist of a six inch (6") mechanical joint gate valve conforming to AWWA C-509, a four foot (4') length of six inch (6") Class 52 ductile iron pipe with a cement-lining, and the fire hydrant.

The hydrant shall have 18"-21" clearance between the center of the steamer cap and the ground. For single-family house subdivisions, there will be at least one hydrant at each intersection and a minimum of 500 feet (500') between hydrants with a minimum water flow of 500 gallons per minute with a 20 psi residual pressure from each hydrant.

### 1.8 WATER SERVICE CONNECTION:

#### A. GENERAL REQUIREMENTS

The Contractor shall install six inch (6") ductile iron water services as indicated on the Contract Drawings or as directed by the Engineer. Each service shall include a 6 inch (6") gate valve located at the property line.

#### B. INSPECTION AND TESTING

All pipe and fittings shall be inspected and tested in accordance with the manufacturer's specifications and the aforementioned AWWA Specifications. The Contractor shall furnish for approval certification from the pipe manufacturer that all tests have been performed with satisfactory results. Pipe shall not be installed without the Engineer's or Water Authority's approval.

#### C. INSTALLATION

Pipes, fittings, and accessories shall be carefully handled to avoid damage. Prior to the date of acceptance of the project work by the Owner, the Contractor shall replace any new pipe or accessory found to be defective at any time, including after installation, at no expense to the Owner. All installation and testing shall be done in accordance with AWWA Standard C-600 and ANSI Specification A21.11.

All pipes showing cracks shall be rejected. If cracks occur in the pipe, the Contractor may, at his own expense and with the approval of the Engineer, cut off the cracked portions at a point at least twelve inches (12") from the visible limits of the crack and use the sound portion of the pipe. All pipes and fittings shall be cleared of all foreign matter and debris prior to installation and shall be kept clean until the time of acceptance by the Owner.

At all times, when the pipe laying is not actually in progress, the open ends of the pipe shall be closed by temporary watertight plugs or by other approved means. If water is in the trench when work is resumed, the plug shall not be removed until all danger of water entering the pipe has passed. The pipe shall be installed in trenches and at the line and grade shown on the Contract Drawings.

Any deflection joints shall be within the limits specified by the manufacturer. All piping and appurtenances connected to the equipment shall be supported so that no strain will be imposed on the equipment. If the equipment manufacturer's specifications include that piping loads are not to be transferred, the Contractor shall submit certification of compliance.

Concrete thrust blocks shall be installed on all plugs, tees, and bends deflecting 1/4 degrees or more. Care shall be taken to ensure that concrete will not come in contact with flanges, joints, or bolts. The required area of thrust blocks are indicated on the plans or shall be as approved by the Engineer.

Whenever sewers cross under watermains, the watermain shall be laid on such an elevation that the bottom of the watermain is at least 18 inches above the top of the sewer. This vertical separation shall be maintained for that portion of the watermain located within ten feet (10') horizontally of any sewer it crosses.

There shall be no physical connection between the distribution system and any pipe, pumps, hydrants, or tanks which are supplied or may be supplied with a water that is, or may be, contaminated. In instances where the use of different types of pipe require joining, the Contractor shall furnish and install all necessary adaptors.

All trenching safety standards shall be in conformance with all applicable State and Federal Guidelines and as specified on the Plans.

The Contractor shall, at all times, keep the trenches entirely free of water until the work is finished and ready for backfilling. After the various pipelines have been installed, the trenches and other areas to be filled shall be backfilled to subgrade with, wherever possible, material excavated from the trench. No backfilling will be allowed until all concrete masonry has set sufficiently, as determined by the Engineer.

All material for backfilling shall be free of roots, stumps, and frost. Materials used for backfilling trenches shall be free of stones weighing over 30 pounds. No stones measuring over one and one-half inches (1 1/2") in the longest dimension shall be placed within one foot (1') of the pipeline being backfilled.

Backfill for all pipelines shall be placed in six inch (6") layers, each layer being thoroughly compacted to not less than 95 percent of maximum dry density as determined by the ASTM D-1557 Standard Proctor. Particular precautions shall be taken in the placement and compaction of the backfill material in order not to damage the pipe or structure. The backfill shall be brought up evenly. All watermains shall be installed with a minimum cover depth of six (6').

Surplus excavated materials not used for backfill shall be disposed of in a manner satisfactory to the Engineer. All surplus material or spoil shall be removed promptly and disposed of so as not to be objectionable to abutters or to the general public.

Valve boxes are to be installed on all buried valves. The boxes shall be cast iron with a minimum five and one-fourth inch (5 1/4") diameter and long enough to extend from the valve to finished grade. The boxes shall enclose the operating nut and stuffing box of the valve. Valve boxes shall not transfer loads into the valve. Covers shall be close fitting and set-tight with the top of the cover flush with the top of the box rim. Covers shall be marked "Water" with an arrow indicating the direction of opening. Valve boxes shall be three piece slip-type.

The contractor shall provide a stable, temporary PVC marker approved by the Engineer of all gate valves, curb stops, and at the end of waterlines to a point six inches (6") above finish grade. The marker shall be seated securely into the ground.

#### C. FIELD TESTING

Except as otherwise directed, all pipelines shall be tested. Pipelines laid in excavation or bedded in concrete shall be tested prior to backfilling or the placing of concrete, and any exposed piping shall be tested prior to field painting. The Contractor shall furnish all gauges, testing plugs, caps, and all other necessary equipment and labor to perform leakage and pressure test in sections of an approved length. Each valued section or a maximum of one thousand feet (1,000') of the pipe shall be tested. All water required for testing shall be potable. All testing shall be conducted in the presence of the Engineer.

For the pressure test, the Contractor shall develop and maintain 200 pounds per square inch for two hours. Failure to hold the designated pressure for the two-hour period constitutes a failure of the section tested. The leakage test shall be performed concurrently with the pressure test. During the test, the Contractor shall measure the quantity of water required to maintain the test pressure. Leakage shall not exceed the quantity given by:

$$L = SD (\text{Square root of } P) / 148,000$$

where: L = Leakage in gallons/hour  
S = Length of pipeline tested  
D = Diameter of pipe in inches  
P = Average test pressure in psi

All testing shall be conducted in accordance with AWWA C-600 test revision. Should any section of the pipe fail either the pressure or leakage tests, the Contractor shall do everything necessary to locate and repair or replace the defective pipe, fittings, or joints at no expense to the Owner.

#### D. DISINFECTON

Chlorination of the watermain shall be conducted only after the main has been flushed and a clear stream is obtained as determined by the Engineer. The Contractor shall furnish all labor, equipment, materials, and tools necessary to disinfect the pipe and appurtenances in accordance with the AWWA Standard for Disinfecting Watermains, C-851, with the exception of the tablet method.

The method of disinfection shall be by the continuous feed method unless otherwise approved by the Engineer. After filling, flushing, and the addition of chlorine solution, the free chlorine concentration within the pipe shall be at least 25 mg/L. The chlorinated water shall remain in the main for a period of at least 24 hours. At the end of this period, the treated water in all portions of the main shall not have a residual of less than 10 mg/L of free chlorine. All disinfection shall be performed under the supervision of the Engineer. The disinfection process shall be deemed acceptable only after (2) samples of water from the flushed, disinfected main taken by the Engineer and tested at an approved laboratory show no evidence of bacteriological contamination. Disinfection shall conform to the latest AWWA C-851 revision.

The pipeline and appurtenances shall be maintained in an uncontaminated condition until final acceptance. Disinfection shall be repeated when and where required to no expense to the Owner until final acceptance by the Owner.

#### E. FROST PROTECTION OF SHALLOW WATERLINES

Waterlines with less than six feet six inches (6'6") of cover over the crown, or where indicated on the plans, shall be protected against freezing by installation of four inch (4") thick Styrofoam SM insulating sheets with a total width of four feet (4') or twice the pipe diameter, whichever is greater. The sheets shall be placed six inches (6") above the crown of the main after completion of the six inch (6") lift immediately above the crown. Care shall be exercised by the Contractor during backfill and compaction over the styrofoam sheets to prevent damage to the sheets. Styrofoam SM sheets shall meet the compressive strength requirements of ASTM D1621-73 and shall be as manufactured by Dow Chemical Company, Midland, Michigan, or equivalent. In no case shall the waterlines have less than the feet (6') of cover over the top of the pipe, as approved by the Town of Essex.

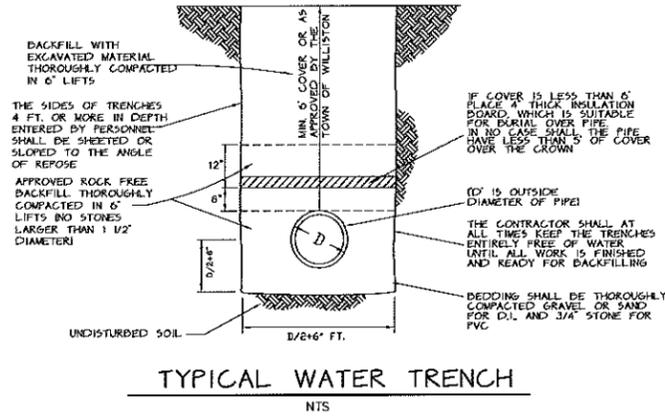
#### F. INSTALLATION OF WATER SERVICE LINES AND METERS

Upon receipt of the certification of the water system and concurrence by the Town, as well as receiving all necessary permits, the contractor may begin to install water service lines and schedule installation of water meters along the approved section of the water main.

A meter location should be chosen by the contractor which is easily accessible. To avoid unnecessary damage to new siding, the houses should be pre-wired from the proposed meter location to the outside reader. The Town will provide the wire.

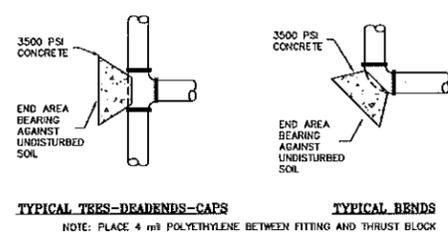
Additional information on the procedures for installation of water meters is contained in the water use ordinance.

The contractor is to install all water meters 1.5" and larger. The town will install all water meters smaller than 1.5".

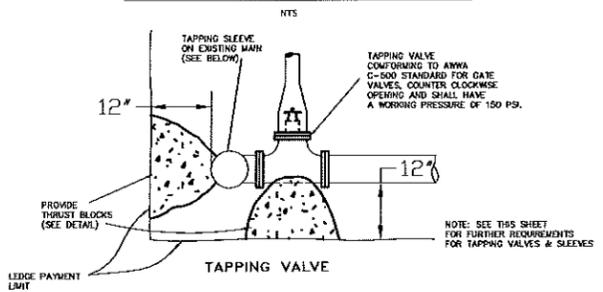


SOIL TYPE - SAND				
SIZE	6"	8"	12"	
FITTING	2	2	5	
1 1/4" & 2 1/2"	2	2	5	
45°	2	4	9	
90°	4	8	17	
TEES OR END CAPS	3	6	12	
VALVES	2	2	2	

SO FT BEARING AREA  
BASED ON 100 PSI WORKING PRESSURE PLUS 100 PSI SURGE ALLOWANCE AND BEARING CAPACITY OF 2000 LBS/50 FT



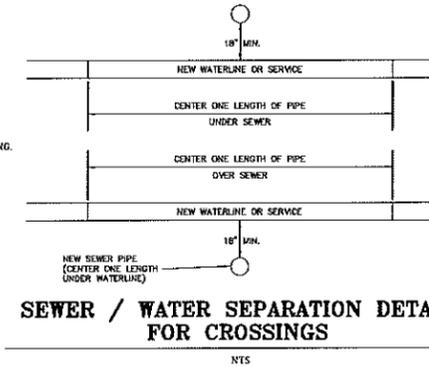
## THRUST BLOCK END AREA



#### NOTES

# 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED, THE SEWER LINE SHALL BE CONSTRUCTED TO WATERLINE STANDARDS, A MINIMUM OF 20 FEET BEYOND EACH SIDE OF 20 FEET BEYOND EACH SIDE OF THE CROSSING.

The pipeline and appurtenances shall be maintained in an uncontaminated condition until final acceptance. Disinfection shall be repeated when and where required to no expense to the Owner until final acceptance by the Owner.



#### NOTE: WATER LINE SEPARATION

SEWER AND STORM LINES SHALL BE LAID AT LEAST 10' HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN AS MEASURED EDGE TO EDGE. WHEREVER IMPOSSIBLE TO MAINTAIN THE 10' VERTICAL SEPARATION, THE SEWER/STORM LINE SHALL BE CONSTRUCTED TO NORMAL WATER LINE STANDARDS AND PRESSURE TESTED TO AWWA WATERLINE STANDARDS PRIOR TO BACKFILLING OR THE SEWER/STORM LINE SHALL BE SLEEVED.

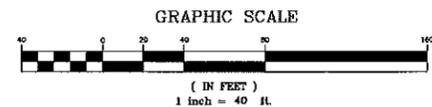
#### NOTE: WATER LINE CROSSINGS

SEWER AND STORM LINES CROSSING WATER MAINS SHALL BE LAID BENEATH THE WATERMAIN WITH AT LEAST 18" VERTICAL CLEARANCE BETWEEN THE OUTSIDE OF THE WATER LINE AND THE OUTSIDE OF THE SEWER/STORM. WHEN IT IS IMPOSSIBLE TO MAINTAIN THE 18" VERTICAL SEPARATION: 1) THE CROSSING SHALL BE ARRANGED SO THAT ONE FULL LENGTH OF SEWER/STORM IS CENTERED ABOVE OR BELOW THE WATER LINE WITH THE SEWER/STORM JOINTS AS FAR AS POSSIBLE FROM THE WATER JOINTS; 2) THE SEWER/STORM PIPE MUST BE CONSTRUCTED TO WATER LINE STANDARDS FOR A MINIMUM DISTANCE OF 20 FEET EITHER SIDE OF THE CROSSING OR A TOTAL OF THREE PIPE LENGTHS WHICHEVER IS GREATER; 3) THE SECTION CONSTRUCTED TO WATER LINE STANDARDS MUST BE PRESSURE TESTED TO MAINTAIN 50 PSI FOR 15 MINUTES WITH NO LEAKAGE PRIOR TO BACKFILLING BEYOND ONE FOOT ABOVE THE PIPE TO ASSURE WATER TIGHTNESS; 4) WHERE A WATER MAIN CROSSES UNDER A SEWER/STORM, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER/STORM TO PREVENT DAMAGE TO THE WATER MAIN.

NOTE: THIS SKETCH PLAN IS CONCEPTUAL ONLY AND SHOULD NOT BE USED FOR PROPERTY CONVEYANCE PURPOSES.

**Owner**  
THREE FRIENDS PARTNERSHIP  
CITORIK, KELLEY, KIDDER + POWELL INC.  
9 RUSTIC WALK  
SWANTON, VT 05488

**Applicant**  
DOUSEVICZ, INC.  
21 CARMICHAEL STREET, SUITE 201  
ESSEX, VT 05452



DP 16-13  
PARCEL ID: 08062-015000

Upon finding that the final plans complied with all requirements of the Millston Development Bylaw and all conditions imposed on the approval of Discretionary Permit #... the Millston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 22nd day of MAY, 2014.

*[Signature]*  
Residing at... or Administrator's signature



DATE: 1-27-17	REVISION: ADDED PROPERTY LINE DIMENSIONS	BY: GRT
DATE: 10-13-16	REVISION: ADDED APPROVAL SIGNATURE BLOCK AND MADE EDITS FOR FINAL PLAN SUBMITTAL	BY: GRT
DATE: 6-6-16	REVISION: REVISED GRADING/LANDSCAPING/STORMWATER PER HAAC AND PUBLIC WORKS COMMENTS	BY: GRT
SURVEY: OBCA	<input type="checkbox"/> RECORD DRAWING <input type="checkbox"/> DISCRETIONARY	DATE: 1-14-16
DESIGN: OBCA	<input checked="" type="checkbox"/> FINAL <input type="checkbox"/> SKETCH/CONCEPT	DATE: 2/15-11
DRAWN: GRT	<b>O'LEARY-BURKE</b>	DATE: 2/15-11
CHECKED:	<b>CIVIL ASSOCIATES, PLC</b>	DATE: 2/15-11
SCALE: 1"=40'	1 CORPORATE DRIVE, SUITE #1 ESSEX, VT 05452 TEL: 878-6600 FAX: 878-6603 EMAIL: OBL@OBLCA.COM	DATE: 2/15-11
<b>15 BLAIR PARK</b>		DATE: 2/15-11
<b>WATER DETAILS AND SPECIFICATIONS</b>		DATE: 2/15-11
8		DATE: 2/15-11

# GENERAL SEWER SPECIFICATIONS

## GENERAL:

THIS ITEM SHALL CONSIST OF THE EXCAVATION AND BACKFILLING REQUIRED FOR THE COMPLETE CONSTRUCTION OF GRANTY SANITARY SEWER MAINS AND ALL APPURTENANCES CONSTRUCTION RELATED THERETO, INCLUDING CHIMNEYS, SERVICE CONNECTIONS, TRUST BLOCKS, AND OTHER ITEMS NECESSARY FOR A COMPLETE SANITARY SEWER SYSTEM AS INDICATED ON THE DRAWINGS.

## MATERIALS:

### A. TYPES OF PIPE

TYPES OF PIPE WHICH SHALL BE USED FOR THE VARIOUS PARTS OF WORK ARE AS FOLLOWS:  
GRAVITY SEWERS SHALL BE PVC SOLID WALL PIPE MEETING ASTM SPECIFICATIONS D-3034 OR F879.

### B. PVC SEWER PIPE

PVC SEWER PIPE SHALL CONFORM IN ALL RESPECTS TO THE LATEST REVISION OF ASTM SPECIFICATIONS D-3034 OR F879, TYPE PS41 POLY(VINYL CHLORIDE) (PVC) SEWER PIPE AND FITTINGS, SERIES 3. WALL THICKNESS OF ALL PVC SHALL MEET ASTM SPECIFICATIONS FOR SD353 PIPE. ALL PIPE AND FITTINGS SHALL BE CLEARLY MARKED AS FOLLOWS:

MANUFACTURER'S NAME AND TRADEMARK  
NOMINAL PIPE SIZE  
WATERLINE DESIGNATION 124540 PVC  
LEAD "TYPE PS41 POLY(VINYL CHLORIDE) (PVC) SEWER PIPE" OR  
PS 46 PVC SEWER PIPE  
DESIGNATION ASTM D-3034 OR F879

JOINTS SHALL BE PUSH-ON TYPE USING ELASTOMERIC GASKETS AND SHALL CONFORM TO ASTM D-3212. THE GASKETS SHALL BE FACTORY INSTALLED.

THE PIPE SHALL BE FURNISHED IN NOMINAL 13 FOOT LENGTHS. SUFFICIENT NUMBERS OF SHORT LENGTHS AND FULL MACHINE FITTINGS SHALL BE PROVIDED FOR USE AT MANHOLES, CHIMNEYS, AND CONNECTIONS. ALL CONNECTIONS WILL REQUIRE THE USE OF MANUFACTURED FITTINGS. FIELD FABRICATED, SADDLE-TYPE CONNECTIONS WILL NOT BE CONSIDERED ACCEPTABLE.

ANY PIPE OR FITTING HAVING A CRACK OR OTHER DEFECT OR WHICH HAS RECEIVED A SEVERE BLOW SHALL BE MARKED REJECTED AND REMOVED AT ONCE FROM THE WORK SITE. ALL FIELD CUTS ARE TO BE MADE WITH SAW AND 90 DEGREE WIRE BUCK. BEVEL THE CUT END TO THE SAME AS THE FACTORY BEVEL, AND REMOVE ALL INTERIOR BURRS. MEASURE AND PLACE A HOLDING MARK ON THE PIPE BEFORE ASSEMBLING.

THE PIPE INSTALLED UNDER THIS SPECIFICATION SHALL BE INSTALLED SO THAT THE INITIAL DEFLECTION, MEASURED AS DESCRIBED BELOW, SHALL BE LESS THAN FIVE PERCENT (5%).

DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. THE DEFLECTION TEST SHALL BE RUN USING A ROD BALL OR MANHOLE HAVING A DIAMETER EQUAL TO 80 PERCENT OF THE INSIDE DIAMETER OF THE PIPE. NO MECHANICAL PULLING DEVICES SHALL BE USED DURING THE DEFLECTION TESTS. ALL PIPE NOT MEETING THE DEFLECTION TEST SHALL BE REEXCAVATED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

THE MANHOLE WATER STOP GASKET AND STAINLESS STEEL CLAMP ASSEMBLY MUST BE APPROVED BY THE ENGINEER PRIOR TO THE INSTALLATION OF ANY PIPE.

THE CONTRACTOR WILL SUBMIT CERTIFICATION THAT THE MATERIALS OF CONSTRUCTION HAVE BEEN SAMPLED, TESTED, AND INSPECTED, AND THAT THEY MEET ALL THE REQUIREMENTS—INCLUDING WALL THICKNESS—in ACCORDANCE WITH ASTM C-3034 OR ASTM F879 FOR ALL PIPE AND FITTINGS TO BE INCLUDED IN THE PROJECT WORK.

PVC PIPE SHALL NOT BE INSTALLED WHEN THE TEMPERATURE DROPS BELOW 32 DEGREES FAHRENHEIT OR COOL ABOVE 100 DEGREES FAHRENHEIT. DURING COOL WEATHER, THE FLEXIBILITY AND IMPACT RESISTANCE OF PVC PIPE IS REDUCED.

EXTRA CARE IS REQUIRED WHEN HANDLING PVC PIPE DURING COLD WEATHER. PVC PIPE SHALL NOT BE STORED OUTSIDE AND EXPOSED TO PROLONGED PERIODS OF SUNLIGHT AS PIPE DISCOLORATION AND REDUCTION IN PIPE IMPACT STRENGTH WILL OCCUR. CANVAS OR OTHER WASTE MATERIAL SHALL BE USED TO COVER PVC PIPE STORED ON-SITE.

### C. MANHOLES

THE CONTRACTOR SHALL CONSTRUCT REINFORCED CONCRETE MANHOLES AND DROP MANHOLES TO THE DIMENSIONS AT THE LOCATIONS SHOWN ON THE CONTRACT DRAWINGS. ALL PRECAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE ASTM SPECIFICATIONS C478. THE EXTERIOR OF THE MANHOLE SHALL BE COATED WITH A WATERPROOF SEALANT.

THE FOOTING SHALL BE CLASS B PRECAST CONCRETE AND SHALL CONFORM TO THE DIMENSIONS INDICATED ON THE PLANS.

SHIELDS SHALL BE CONSTRUCTED WITH HARDENED RED SEWER BRICK. ALL BRICK SHALL BE TYPE SS MEETING THE STANDARDS IN ASTM C32. INVERTS FOR SEWER MANHOLES SHALL BE AS SHOWN ON THE PLANS AND DETAILS.

INVERTS SHALL HAVE THE EXACT SHAPE OF THE SEWER TO WHICH THEY ARE CONNECTED, AND ANY CHANGE IN SIZE OR DIRECTION SHALL BE GRADUAL AND EVEN.

ALL CONSTRUCTION OF SEWER MANHOLES MUST BE CARRIED OUT TO ENSURE WATER-TIGHT WORK. ANY LEAKS IN MANHOLES SHALL BE CAULKED AND COMPLETELY REPAIRED TO THE SATISFACTION OF THE ENGINEER OR THE ENTIRE STRUCTURE SHALL BE REMOVED AND REBUILT. REPAIRS SHALL ONLY BE ALLOWED TO THE EXTERIOR OF THE MANHOLE.

ALL MANHOLES ARE TO BE PROVIDED WITH COPOLYMER POLYPROPYLENE PLASTIC RINGS WITH STEEL REINFORCEMENT TIE-BARS. ALL MANHOLES SHALL BE PROVIDED WITH TIGHT, GRAY, CAST IRON MANHOLE FRAMES AND COVERS. ALL IRON CASTINGS SHALL BE THOROUGHLY CLEANED AND THEN COATED WITH HOT TAR BEFORE BEING DELIVERED. FRAMES AND COVERS SHALL BE LEADENED TO 248 TPC C, OR AN APPROVED EQUIV. AND HAVE A MINIMUM WEIGHT OF 400 POUNDS. MANHOLE COVERS SHALL HAVE THE WORD SEWER PRINTED ON THEM.

PRECAST RISERS AND BASES FOR MANHOLES SHALL CONFORM TO ASTM SPECIFICATIONS C-361. THE PIPE OPENING IN THE PRECAST MANHOLE RISER SHALL HAVE A CAST-IN-PLACE FLEXIBLE GASKET OR AN EQUIVALENT SYSTEM FOR PIPE INSTALLATION AS APPROVED BY THE ENGINEER. JOINTS BETWEEN MANHOLE RISERS SHALL BE RUBBER "O" RING SEALS OR SOFT BUTYL JOINT SEALER (ROPE FORT).  
THE MANHOLE COVER FRAMES SHALL BE SET TO FINAL GRADE ONLY AFTER THE BASE COURSE PAVING HAS BEEN COMPLETED. MANHOLES SHALL BE CONSTRUCTED TO GRADE WITH AT LEAST TWO, AND NOT MORE THAN FIVE, COURSES OF BRICK, WITH THE EXCEPTION OF INVERTS. ALL SURFACES OF MANHOLE BRICKWORK SHALL BE PLASTERED WITH CEMENT MORTAR, THE PLASTER BEING CARRIED UP AS THE BRICKWORK PROGRESSES, AND ALL MANHOLE LIFT HOLES SHALL BE GROUTED INSIDE AND OUT WITH EXPANDING GROUT.

MANHOLES SHALL BE PLACED AT ALL CHANGES IN SLOPE, SIZE, ALIGNMENT OF PIPE, AT THE ENDS OF EACH LINE, AND AT LEAST EVERY 300 FEET.

### F. MASONRY

EACH BRICK SHALL BE WETTED AND COMPLETELY SOAKED IN MORTAR AT ITS BOTTOM, SIDES, AND ENDS IN ONE OPERATION WITH CARE BEING TAKEN TO FILL EVERY JOINT. BRICKWORK SHALL BE WELL-BONDED, AND JOINTS SHALL BE AS CLOSE AS PRACTICABLE. NO BRICK MASONRY SHALL BE LAID IN WATER NOR SHALL ANY WATER BE ALLOWED TO RUN ON OR AROUND ANY BRICK MASONRY UNTIL IT HAS SET AT LEAST 24 HOURS. NO MASONRY SHALL BE LAID IN FREEZING WEATHER.

THE BRICK FOR ORDINARY BRICKWORK SHALL BE COMMON HARD-BURNED CLAY BRICK. ALL BRICK SHALL BE REGULAR AND UNIFORM IN SHAPE AND SIZE WITH PLANE, PARALLEL BEDS AND FACES. ORDINARY BRICK SHALL CONFORM TO ASTM SPECIFICATION C-32, LATEST VERSION, AND SHALL BE GRADE SS.

BRICK MASONRY SHALL BE LAID IN PORTLAND CEMENT MORTAR COMPOSED OF ONE PART PORTLAND CEMENT AND TWO PARTS OF SAND, MEASURED BY VOLUME, TO WHICH NOT MORE THAN 10 POUNDS OF LIME SHALL BE ADDED FOR EACH BAG OF CEMENT. WATER FOR MORTAR SHALL BE CLEAN AND ONLY AN AMOUNT SUFFICIENT TO PRODUCE A WORKABLE MORTAR SHALL BE USED. MORTAR SHALL BE USED WITHIN ONE HOUR FROM THE TIME THE CEMENT WAS ADDED TO THE MIX.

THE SAND FOR MORTAR FOR BRICK MASONRY SHALL BE UNIFORM GRADED, CLEAN, SHARP, AND CONTAIN NO GRADES LARGER THAN WILL PASS A ONE-EIGHTH INCH (1/8") MESH SCREEN.

## CONSTRUCTION METHODS:

### A. EXCAVATION:

EXCAVATIONS SHALL BE MADE TO A POINT AT LEAST SIX INCHES (6") BELOW THE PIPE TO BE Laid TO ACCOMMODATE THE BEDDING MATERIAL. ALL EXCAVATIONS ARE TO BE KEPT DRY WHILE PIPE IS BEING Laid AND UNTIL EACH JOINT AND PIPE HAS BEEN INSPECTED BY THE ENGINEER AND APPROVAL GIVEN TO COMMENCE BACKFILLING OPERATIONS.

### B. LAYING SEWER PIPE

THE BELL END OF THE PIPE SHALL FACE UPWARD AT ALL TIMES AND BE PLACED IN SUCH A POSITION AS TO MAKE THE INVERT EVEN WHEN THE SUCCEEDING SECTION IS INSERTED. WHERE REQUIRED BY ADVERSE GRADING CONDITIONS, THE CONTRACTOR SHALL FILL ANY GULLY TO MAKE A SATISFACTORY BEDDING FOR THE SEWER PIPE. THE FILL SHALL BE PRELIMINARILY COMPACTED TO A 95 PERCENT DRY DENSITY BY THE AASHTO-T-99, METHOD A (STANDARD PROCTOR) TEST, UPON WHICH THE SIX INCHES (6") OF BEDDING MATERIAL SHALL BE PLACED.

ANY PIPE WHICH IS NOT LAID TO GRADE AND ALIGNMENT SHALL BE RELIED TO THE SATISFACTION OF THE ENGINEER. THE BEDDING MATERIAL SHALL BE PLACED AND COMPACTED ON EACH SIDE OF THE PIPE TO A HEIGHT EQUAL TO ONE-HALF THE PIPE DIAMETER AND FOR THE FULL WIDTH OF THE EXCAVATED TRENCH AND AS SHOWN ON THE ACCEPTED PLANS.

### C. BACKFILL:

BACKFILL SHALL CONSIST OF APPROVED MATERIAL PLACED IN SIX INCH (6") LAYERS WITH EACH LAYER BEING THOROUGHLY COMPACTED TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO-T-99 STANDARD PROCTOR BY MEANS APPROVED BY THE ENGINEER.

THE BACKFILL SHALL BE BROUGHT UP EVENLY ON BOTH SIDES OF THE PIPE FOR ITS FULL LENGTH, WALKING OR WORKING ON THE COMPLETED PIPELINE, EXCEPT AS MAY BE NECESSARY IN TAMPING OR BACKFILLING, SHALL NOT BE PERMITTED UNTIL THE TRENCH HAS BEEN BACKFILLED TO A HEIGHT OF AT LEAST TWO FEET (2') ON THE TOP OF THE PIPES. DURING CONSTRUCTION, ALL OPENINGS TO THE PIPELINES SHALL BE PROTECTED FROM THE ENTERING OF EARTH OR OTHER MATERIALS.

### D. CONCRETE CRADLE AND EMBASEMENT FOR PIPE:

WHERE REQUIRED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, A CONCRETE CRADLE SHALL BE USED TO BOLSTER AND SUPPORT THE PIPE. WHERE REQUIRED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, CONCRETE EMBASEMENT OR SEWER WALL BE MADE TO PROTECT NEARBY WELLS OR WATERLINES FOR STREAM CROSSINGS OR FOR SIMILAR PURPOSES. ALL CONCRETE WILL BE CLASS B AS DEFINED IN THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION, SECTION 501, AND WILL MEET THE REQUIREMENTS OF THAT SECTION.

### E. FROST PROTECTION FOR SHALLOW SEWERS:

SEWERS WITH LESS THAN FIVE AND ONE-HALF FEET (5 1/2') OF COVER OVER THE CROWN OR WHERE INDICATED ON THE PLANS SHALL BE PROTECTED AGAINST FREEZING BY INSTALLATION OF TWO 2" THICK (4" TOTAL) STYROFOAM INSULATING SHEETS WITH A TOTAL WIDTH OF FOUR FEET (4') OR TWICE THE PIPE DIAMETER, WHICHEVER IS GREATER. THE SHEETS SHALL BE PLACED SIX INCHES (6") ABOVE THE CROWN OF THE SEWER AFTER COMPACTION OF THE SIX INCH LIFT IMMEDIATELY ABOVE THE CROWN. CARE SHALL BE EXERCISED BY THE CONTRACTOR DURING BACKFILL AND COMPACTION OVER STYROFOAM SHEETS SHALL MEET THE COMPRESSIVE STRENGTH REQUIREMENTS OF ASTM D1821-73 AND SHALL BE AS MANUFACTURED BY DOW CHEMICAL COMPANY, WILKINSON, OR EQUAL. IN NO CASE SHALL THE SEWER LINES HAVE LESS THAN FOUR (4) FEET OF COVER OVER THE TOP OF THE PIPE.

### F. LEAKAGE TESTS AND ALLOWANCES FOR GRAVITY SEWERS:

THE LOW PRESSURE AIR TEST WILL BE USED TO SIMULATE INFILTRATION OR EXFILTRATION RATES INTO OR OUT OF ALL GRAVITY SEWERS. THE CONTRACTOR WILL FURNISH ALL FACILITIES AND PERSONNEL FOR CONDUCTING THE TEST.

FINAL ACCEPTANCE OF THE SEWER SHALL DEPEND UPON THE SATISFACTORY PERFORMANCE OF THE SEWER UNDER TEST CONDITIONS. THE TEST SHALL BE PERFORMED ON PIPE BETWEEN ADJACENT MANHOLES AFTER BACKFILLING HAS BEEN COMPLETED AND COMPACTED.

ALL TEES, TIES, LATERALS, OR END-OF-SIDE SEWER STUBS SHALL BE PLUGGED WITH FLEXIBLE-JOINT CAPS, OR AN ACCEPTABLE ALTERNATE, SECURELY FASTENED TO WITHSTAND THE INTERNAL TEST PRESSURE. SUCH PLUGS OR CAPS SHALL BE READILY REMOVABLE, AND THEIR REMOVAL SHALL PROVIDE A SOCKET SUITABLE FOR MAKING A FLEXIBLE-JOINTED LATERAL CONNECTION OR EXTENSION.

PRIOR TO TESTING FOR ACCEPTANCE, THE PIPE SHOULD BE CLEANED BY PASSING THROUGH THE PIPE A FULL GAUGE SQUEEGE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THE PIPE CLEANED IMMEDIATELY FOLLOWING THE PIPE CLEANING. THE PIPE INSTALLATION SHALL BE TESTED WITH LOW-PRESSURE AIR.

AIR SHALL BE SLOWLY SUPPLIED TO THE PLUGGED AIR INSTALLATION UNTIL THE INTERNAL AIR PRESSURE REACHES FOUR POUNDS PER SQUARE INCH (4.0 PSI) GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY SUBMERGE THE PIPE. AT LEAST TWO MINUTES SHALL BE ALLOWED FOR TEMPERATURE STABILIZATION BEFORE PROCEEDING FURTHER.

THE PIPELINE SHALL BE CONSIDERED ACCEPTABLE WHEN TESTED AT AN AVERAGE PRESSURE OF THREE POUNDS PER SQUARE INCH (3.0 PSI) GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY SUBMERGE THE PIPE IF:

1. THE TOTAL RATE OF AIR LOSS FROM ANY SECTION TESTED IN ITS ENTIRETY BETWEEN MANHOLE AND CLEANOUT STRUCTURE DOES NOT EXCEED 2.0 CUBIC FEET PER HOUR; OR
2. THE SECTION UNDER TEST DOES NOT LOSE AIR AT A RATE GREATER THAN 0.0030 CUBIC FEET PER MINUTE PER SQUARE FOOT OF INTERNAL PIPE SURFACE.

THE REQUIREMENTS OF THIS SPECIFICATION SHALL BE CONSIDERED SATISFIED IF THE TIME REQUIRED IN SECONDS FOR THE PRESSURE TO DECREASE FROM 3.5 OR 2.5 PSI GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY SUBMERGE THE PIPE IS NOT LESS THAN THAT COMPUTED ACCORDING TO THE FOLLOWING TABLE:

DIAMETER (INCHES)	TIME (SEC./100 FT.)
3	10
4	18
6	40
8	70
10	110
12	158
15	248
18	336
21	484
24	634
27	785
30	935
33	1085
36	1235
39	1385
42	1535

THE TABLE GIVES THE REQUIRED TEST TIME IN SECONDS PER 100 FOOT LENGTHS OF PIPE FOR A GIVEN DIAMETER. IF THERE IS MORE THAN ONE PIPE SIZE IN THE SECTION OF LINE BEING TESTED, COMPUTE THE TIME FOR EACH DIAMETER AND SUM THE TIMES TO FIND THE TOTAL REQUIRED TEST TIME.

IF THE PIPE INSTALLATION FAILS TO MEET THESE REQUIREMENTS, THE CONTRACTOR SHALL DETERMINE AT HIS OR HER OWN EXPENSE THE SOURCE OF LEAKAGE AND SHALL REPAIR (IF THE EXTENT AND TYPE OF REPAIRS PROPOSED BY THE CONTRACTOR APPEAR REASONABLE TO THE ENGINEER) OR REPLACE ALL DEFECTIVE MATERIALS OR WORKMANSHIP. THE COMPLETED PIPE INSTALLATION SHALL MEET THE REQUIREMENTS OF THIS TEST BEFORE BEING CONSIDERED ACCEPTABLE.

SINCE THIS TEST DOES NOT DETERMINE THE TIGHTNESS OF MANHOLES, THEY SHALL BE TESTED SEPARATELY. THE EXFILTRATION LEAKAGE ALLOWANCE OUT OF MANHOLES SHALL BE NO GREATER THAN ONE GALLON PER DAY PER VERTICAL FOOT TO DEPTH. THE MANHOLE SHALL BE FILLED WITH WATER TO A POINT ONE FOOT (1') ABOVE THE HIGHEST POINT BETWEEN MANHOLE SECTIONS. IN AREAS OF HIGH GROUNDWATER, THERE SHALL BE NO VISIBLE LEAKAGE DUE TO INFILTRATION. IF A VACUUM TEST IS DESIRED, THE FOLLOWING PROCEDURE SHALL BE FOLLOWED: (THIS PREFERRED METHOD OF TESTING MANHOLES FOR LEAKAGE INVOLVES THE USE OF A DEVICE FOR SEALING THE TOP OF THE MANHOLE CONE SECTION AND PUMPING AIR OUT OF THE MANHOLE, CREATING A VACUUM AND HOLDING THE VACUUM FOR A PRESCRIBED PERIOD.)

1. ALL LIFTING HOLES AND EXTERIOR JOINTS SHALL BE FILLED AND POINTED WITH AN APPROVED NON-SHRINKING MORTAR. THE COMPLETED MANHOLE SHALL NOT BE BACKFILLED PRIOR TO TESTING. MANHOLES WHICH HAVE BEEN BACKFILLED SHALL BE EXCAVATED TO EXPOSE THE ENTIRE EXTERIOR PRIOR TO VACUUM TESTING OR THE MANHOLE SHALL BE TESTED FOR LEAKAGE BY MEANS OF A HYDROSTATIC TEST. REPAIRS SHALL ONLY BE MADE TO THE EXTERIOR OF THE MANHOLE.
2. ALL PIPE AND OTHER OPENINGS INTO THE MANHOLE SHALL BE SANITARY PLUGGED IN A MANNER TO PREVENT DISPLACEMENT.
3. A PLATE WITH AN INFLATABLE RUBBER RING THE SIZE OF THE TOP OF THE MANHOLE SHALL BE INSTALLED BY INFLATING THE RING WITH AIR TO PRESSURE ADEQUATE TO PREVENT LEAKAGE OF AIR BETWEEN THE RUBBER RING AND MANHOLE WALL.
4. AIR SHALL THEN BE PUMPED OUT OF THE MANHOLE THROUGH AN OPENING IN THE PLATE UNTIL A VACUUM IS CREATED INSIDE OF THE MANHOLE EQUAL TO TEN INCHES (10") OF MERCURY ON AN APPROVED VACUUM GAUGE. THE REMOVAL OF AIR SHALL THEN BE STOPPED AND THE TEST TIME BEGUN.
5. THE VACUUM MUST NOT DROP TO BELOW NINE INCHES (9") OF MERCURY WITH A TWO MINUTE TEST PERIOD. IF MORE THAN A ONE INCH (1") DROP IN VACUUM OCCURS WITHIN THE TWO MINUTE TEST PERIOD, THE MANHOLE HAS FAILED AND SHALL BE REPAIRED OR RECONSTRUCTED AND THEN RETESTED.
6. FOLLOWING SATISFACTORY TEST RESULTS, THE MANHOLE MAY BE BACKFILLED.

IT IS NOTED THAT ALL EXISTING SANITARY SEWERS SHALL BE KEPT OPERATIONAL UNTIL NEW WORK HAS BEEN TESTED AND APPROVED BY THE ENGINEER. AT SUCH TIME, EXISTING SEWERS AND SEWER SERVICES SHALL BE CONNECTED TO THE NEW SEWERS.

### G. LEAKAGE AND PRESSURE TESTING FOR FORCE MAIN

ALL PIPELINES SHALL BE TESTED IN ACCORDANCE WITH THE VERMONT DEPARTMENT OF WATER RESOURCES ENVIRONMENTAL PROTECTION RULES, LATEST EDITION. A LEAKAGE AND PRESSURE TEST SHALL BE PERFORMED CONCURRENTLY.

THE HYDROSTATIC TEST PRESSURE SHALL BE A MINIMUM OF 50 PSI AT THE HIGHEST POINT ALONG THE TEST SECTION AND SHALL NOT VARY BY MORE THAN FIVE PSI DURING THE ENTIRE TWO HOUR TEST. IF AND WHEN DURING THE TEST THE PRESSURE DROPS BY FIVE PSI, THE QUANTITY OF WATER REQUIRED TO RESTORE THE TEST PRESSURE SHALL BE MEASURED.

AT THE END OF THE TWO HOUR TEST, THE PRESSURE SHALL BE RETURNED TO THE TEST PRESSURE AND THE ADDITIONAL VOLUME OF WATER MEASURED. THE TOTAL AMOUNT OF WATER USED DURING AND AT THE END OF THE TEST SHALL CONSTITUTE THE ACTUAL LEAKAGE. THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE DETERMINED BY THE FOLLOWING FORMULA:

$$L = 50(P)^2 / 133,200$$

WHERE:  
L = LEAKAGE IN GALLONS PER HOUR  
D = DIAMETER OF PIPE IN INCHES  
P = AVERAGE TEST PRESSURE IN PSI  
S = LENGTH OF PIPE BEING TESTED

### H. CLEANING PIPELINES AND APPURTENANCES:

UPON COMPLETION OF CONSTRUCTION, ALL DIRT AND OTHER FOREIGN MATERIAL SHALL BE REMOVED FROM PIPELINES AND THEIR APPURTENANCES. NO MATERIALS SHALL BE LEFT IN THE PIPELINES TO IMPEDEN NORMAL FLOW THROUGH THEM.

### I. SEWER SERVICE CONNECTIONS:

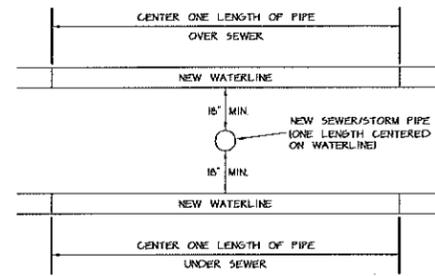
WHERE REQUIRED ON THE PLANS, SEWER SERVICE CONNECTIONS FOR ONE HOUSE SHALL BE CONSTRUCTED OF SIX INCH (6") PIPE UNLESS OTHERWISE NOTED ON THE PLANS OF THE TYPE MATERIAL SPECIFIED UNDER THIS SECTION. THE PIPE SHALL BE LAID AND ITS JOINTS MADE AS REQUIRED FOR SEWER CONSTRUCTION IN THIS SPECIFICATION.

OPEN ENDS OF PIPES SHALL BE PROPERLY SEALED TO PREVENT DAMAGE AND INTRUSION OF FOREIGN MATTER WHERE HOODUP TO THE BUILDING SEWER IS NOT CONCURRENT WITH SEWER MAIN CONSTRUCTION. ADDITIONALLY, THE CONTRACTOR WILL PROVIDE A PVC PIPE TEMPORARY MARKER APPROVED BY THE ENGINEER FROM THE SEWER SERVICE INVERT UP TO TWENTY-FOUR INCHES (24") ABOVE THE FINISHED GRADE. THE MARKER SHALL BE SEALED SECURELY INTO THE GROUND FOR EASE IN RELOCATING THE END OF SEWER SERVICE CONNECTION FOR HOODUP TO THE BUILDING SEWER.

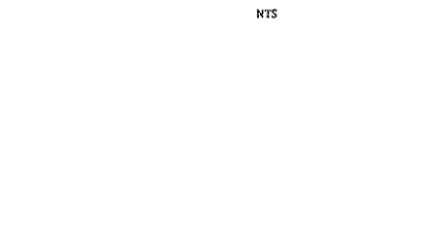
IN THE CASE OF RECONNECTION OF EXISTING SERVICES, SUCH RECONNECTIONS WILL BE MADE ONLY AFTER THE NEW SEWER MAIN HAS BEEN COMPLETED, TESTED, AND ACCEPTED. THE EXCAVATION, BEDDING MATERIAL, INSTALLATION, AND BACKFILL FOR SERVICE CONNECTIONS SHALL BE THE SAME AS FOR SEWER MAINS.

### J. CLEANOUTS FOR GRAVITY SEWERS:

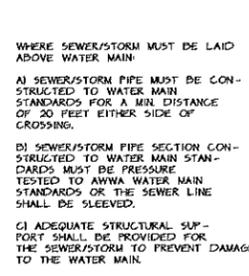
CLEANOUTS FOR GRAVITY SEWERS AND FORCE MAINS SHALL BE PROVIDED EVERY 100 FT OR WHERE THE SUM OF BENDS = 45 DEGREES. CLEANOUT FRAMES AND COVERS SHALL BE OF TOUGH GRAY CAST IRON. CASTINGS SHALL BE TRUE TO PATTERN AND FREE FROM FLAWS. THE BEARING SURFACE OF CLEANOUT FRAMES AND COVERS AGAINST EACH OTHER SHALL BE MACHINED TO GIVE CONTINUOUS CONTACT THROUGHOUT THEIR OVERTURNMENT. ALL IRON CASTINGS SHALL BE THOROUGHLY CLEANED AND THEN COATED WITH HOT COAL TAR BEFORE BEING DELIVERED.



SEWER, STORM / WATER SEPARATION DETAIL FOR CROSSINGS



TYPICAL SANITARY + STORM TRENCH



NOTE: WATER LINE SEPARATION



SANITARY SEWER SERVICE CONNECTION

Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit No. 24, the Williston Development Review Board/Administrator approved the final plans for Lot 15 Blair Park on the 15th day of MAY, 2015.  
*R. Zell*  
Residing member or Administrator's signature

Owner  
THREE FRIENDS PARTNERSHIP  
CITORIK, KELLEY, KIDDER + POWELL INC.  
21 CARMICHAEL STREET, SUITE 201  
9 RUSTIC WALK  
SWANTON, VT 05488

Applicant  
DOUSEVICH, INC.  
21 CARMICHAEL STREET, SUITE 201  
ESSEX, VT 05452



DATE	1-24-17	REVISION	ADDED PROPERTY LINE DIMENSIONS	BY	GRT
DATE	10-13-16	REVISION	ADDED APPROVAL SIGNATURE BLOCK AND MADE CHANGES FOR FINAL PLAN SUBMITTAL	BY	GRT
DATE	9-5-16	REVISION	REVISED GRADING (LANDSCAPING) / STORMWATER PER HAAC AND PUBLIC WORKS COMMENTS	BY	GRT
SUBMIT	ORCA	<input type="checkbox"/> RECORD DRAWING	<input type="checkbox"/> DISCRETIONARY	DATE	7-14-16
DESIGN	ORCA	<input checked="" type="checkbox"/> FINAL	<input type="checkbox"/> SPLIT/CONCEPT	DATE	JUN 2015-41
OWNER	GRT			FILE	2015-41-58
DRAWN	GRT			PLAN SHEET #	9
SCALE	1"=40'				

DP 16-13  
PARCEL ID: 08062-015000

15 BLAIR PARK  
SEWER DETAILS AND SPECIFICATIONS