

# DRESDNER ROBIN

## STORMWATER MANAGEMENT REPORT

320 VALLEY BROOK AVENUE

LOTS 4, 5 AND 6 OF BLOCK 68

TOWNSHIP OF LYNDHURST, BERGEN COUNTY, NEW JERSEY

DRESDNER ROBIN PROJECT NO.: 10938-002

**PREPARED FOR**

312 VALLEY BROOK, LLC  
320 VALLEY BROOK AVENUE  
LYNDHURST, NJ 07071

**PREPARED BY**

DRESDNER ROBIN  
55 LANE ROAD, SUITE 220  
FAIRFIELD, NEW JERSEY 07004

**DATE**

JANUARY 2020  
REVISED JULY 2021



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DANIEL G. REEVES, PE  
PROJECT MANAGER  
LICENSE NO. 24GE05292000

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## 1.0 INTRODUCTION

The proposed site (known as Lots 4, 5, & 6 in Block 68 in the Township of Lyndhurst, NJ) fronts Valley Brook Avenue to the northeast, mixed used building to the northwest, Livingston Avenue and single family residential properties to the southeast, and residential properties to the southwest. The site contains approximately 0.522 acres (22,750 square feet) of property and is situated in the B “Business” district. The site is currently developed with a three-story residential building, a single-story restaurant space, and a single-story commercial space. The site contains ancillary site improvements such as a garage, concrete walkways, asphalt parking, and grass areas. The existing lot consists of approximately 18,816 square feet (82.7%) of impervious coverage. The proposed project will increase the impervious coverage by approximately 1,500 square feet. This Project proposes to construct a three-story multi-residential building with associated parking areas, utilities, and landscaping. The proposed project will not disturb more than 1 acre, or increase impervious coverage by more than 0.25 acres, therefore the project is not classified as a “Major Development” per N.J.A.C. 7:8, and thus, is not subject to the regulations governing stormwater quantity, stormwater quality or groundwater recharge contained in the above listed regulations, however, is consistent with the purpose of these rules. This report will address stormwater pipe system conveyance.

## 2.0 STORM SEWER DESIGN

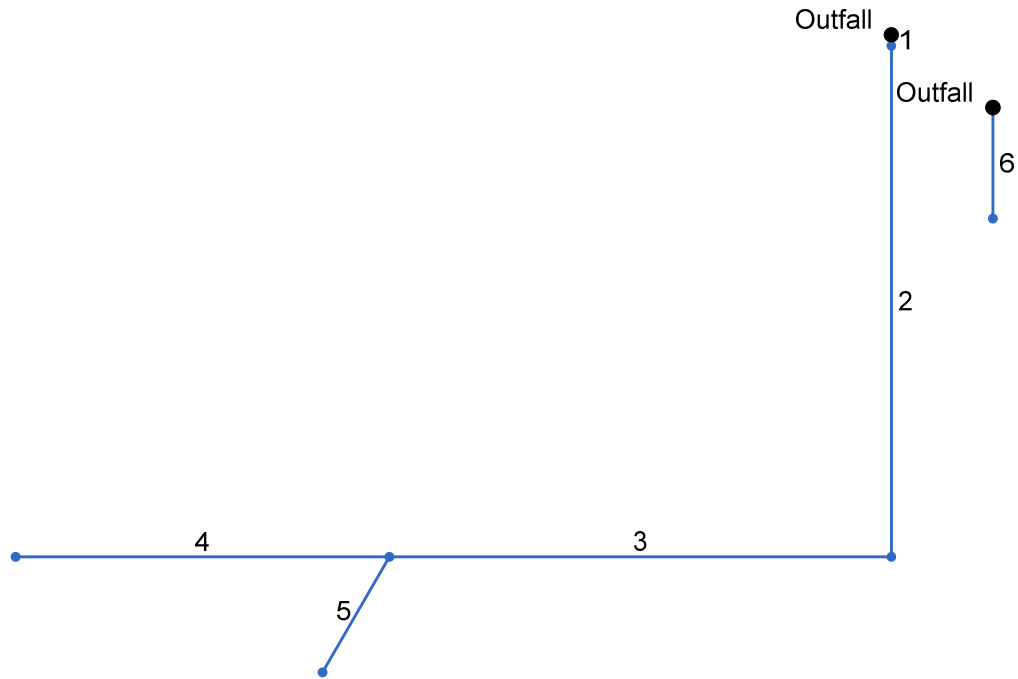
The proposed on-site storm sewer collection system has been designed to collect runoff from the proposed building and on-grade parking area. A 15” reinforced concrete pipe (RCP) storm sewer system exists within the Valley Brook Avenue Right-of-Way, along the north side of the property. The proposed on-site storm sewer conveyance system will connect to this pipe via an existing B-Inlet on the southwest corner of Valley Brook Avenue and Livingston Avenue. On-site storm sewer piping systems have been designed based upon a 25-year storm and detailed storm sewer pipe sizing calculations are located in **Appendix A** of this report. A supporting Inlet Area Map is located in **Appendix B** of this report.

## 3.0 CONCLUSION

In conclusion, the proposed drainage pattern for the subject site is generally in keeping with the existing drainage pattern. The proposed on-site storm sewer conveyance system is sized appropriately to handle the 25-year storm for the subject site. The project is not anticipated to have any negative impacts on the drainage patterns of the site, neighboring properties, or the area as a whole.

**APPENDIX A**  
**STORM SEWER PIPE**  
**CALCUATIONS**

# Hydraflow Storm Sewers Extension for Autodesk® AutoCAD® Civil 3D® Plan



# Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	2.000	0.10	0.57	0.96	0.10	0.55	10.0	15.1	4.9	2.68	14.44	6.47	15	5.00	31.77	31.87	32.14	32.53	35.15	34.85	A4-MANHOLE
2	1	92.000	0.08	0.47	0.95	0.08	0.45	10.0	14.3	5.0	2.26	6.13	4.08	15	0.90	31.97	32.80	32.53	33.40	34.85	36.05	A3-A4
3	2	90.000	0.27	0.39	0.97	0.26	0.37	10.0	13.5	5.2	1.93	6.77	3.95	15	1.10	32.90	33.89	33.40	34.44	36.05	36.93	A2-A3
4	3	67.000	0.07	0.07	0.97	0.07	0.07	10.0	10.0	5.8	0.39	6.46	1.66	15	1.00	33.99	34.66	34.44	34.90	36.93	37.60	A1.1-A2
5	3	24.000	0.05	0.05	0.88	0.04	0.04	10.0	10.0	5.8	0.25	6.46	1.36	15	1.00	33.99	34.23	34.44	34.43	36.93	37.63	A1.2-A2
6	End	20.000	0.47	0.47	0.99	0.47	0.47	10.0	10.0	5.8	2.70	5.00	4.13	15	0.60	32.00	32.12	32.65	32.78	34.97	34.70	D1-Manhole

Project File: Stormwater pipe analysis.stm

Number of lines: 6

Run Date: 1/17/2020

NOTES: Intensity = 54.89 / (Inlet time + 10.50) ^ 0.74; Return period = Yrs. 25 ; c = cir e = ellip b = box

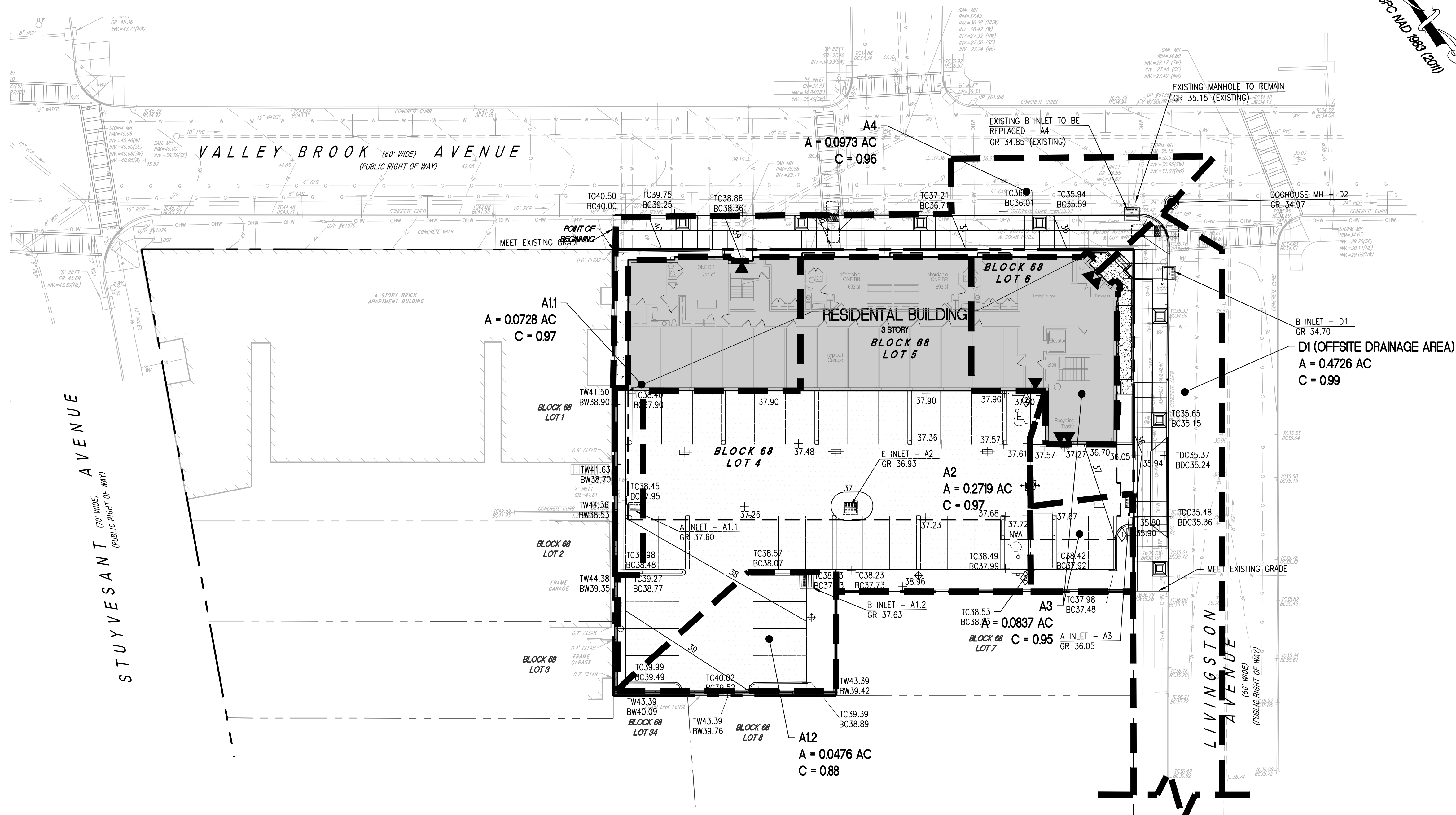
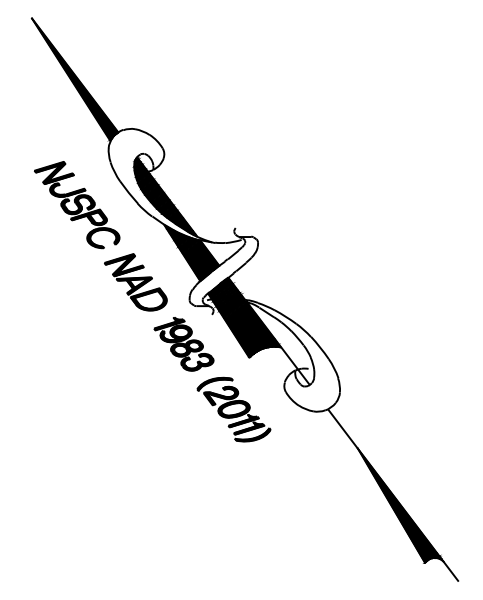
**APPENDIX B**

**INLET DRAINAGE AREA MAP**

# DRESDNER ROBIN

DRESDNER ROBIN ENVIRONMENTAL MANAGEMENT, INC.  
 1 EVERTRUST PLAZA, SUITE 901, JERSEY CITY, NJ 07302  
 TEL: 201.217.9200 FAX: 201.217.9607  
 NJ CERTIFICATE OF AUTHORIZATION: 246A27926000

JERSEY CITY ■ FAIRFIELD ■ ASBURY PARK ■ CHERRY HILL



NO.	DATE	DESCRIPTION	BY
REVISIONS:			

OWNER:  
**312 VALLEY BROOK, LLC**  
 320 VALLEY BROOK AVENUE  
 LYNDHURST, NJ 07071

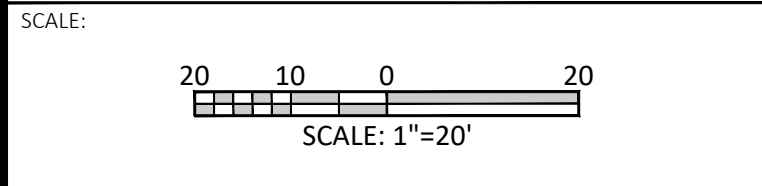
APPLICANT:  
**312 VALLEY BROOK, LLC**  
 320 VALLEY BROOK AVENUE  
 LYNDHURST, NJ 07071

DRAWING TITLE:  
**INLET DRAINAGE AREA MAP**

PROJECT:  
**320 VALLEY BROOK AVENUE**

LOCATION:  
 312-318 & 324 VALLEY BROOK AVENUE  
 LOTS 4, 5 & 6, BLOCK 68  
 TOWNSHIP OF LYNDHURST  
 BERGEN COUNTY, NEW JERSEY

**GRANT B. LEWIS**  
 PROFESSIONAL ENGINEER  
 NJ LICENSE NUMBER 24GE04809200



DRAWN BY: <b>GRG/LV</b>	CHECKED BY: <b>GBL</b>	DRAWING NUMBER: <b>C-439</b>
SCALE: <b>1"=20'</b>	DATE: <b>JAN 2020</b>	
JOB NO: <b>10938-002</b>	SHEET <b>01</b> OF <b>01</b>	

LABEL	DRAINAGE AREAS						"C" VALUE				
	DRNG (SF)	DRNG (ACRES)	PERV (SF)	PERV (ACRES)	IMPERV (SF)	IMPERV (ACRES)	PERV	IMPERV	"C" VALUE	INTENSITY	Q (CFS)
A1.1	3173	0.0728	137	0.0031	3036	0.0697	0.51	0.99	0.97	6.8	SEE APPENDIX C
A1.2	2074	0.0476	459	0.0105	1615	0.0371	0.51	0.99	0.88	6.8	SEE APPENDIX C
A2	11846	0.2719	418	0.0096	11428	0.2624	0.51	0.99	0.97	6.8	SEE APPENDIX C
A3	3644	0.0837	290	0.0067	3354	0.0770	0.51	0.99	0.95	6.8	SEE APPENDIX C
A4	4239	0.0973	296	0.0068	3944	0.0905	0.51	0.99	0.96	6.8	SEE APPENDIX C
D1	20586	0.4726	81	0.0019	20505	0.4707	0.51	0.99	0.99	6.8	3.175

- REFERENCES:
- EXISTING CONDITIONS SHOWN BASED ON DRAWING ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY 312-318 & 324 VALLEY BROOK AVENUE, LOTS 4, 5 & 6, BLOCK 68, TOWNSHIP OF LYNDHURST, BERGEN COUNTY, NEW JERSEY," PREPARED BY DRESDNER ROBIN FOR MELI PLUMBING, AND DATED 04/18/2018.
  - ARCHITECTURAL BACKGROUND PROVIDED BY VIRGONA + VIRGONA ON 11/19/2019.