

City of Cranston
Zoning Board of Review
Application

Application for exception or variation under the zoning ordinance “City of Cranston Zoning Code, December 1994 Edition as amended.”

To: Cranston Zoning Board of Review
35 Sockanosset Crossroad Suite 6
Cranston, RI 02920
Date: April 21, 2021

THE UNDERSIGNED HEREBY APPLIES TO THE ZONING BOARD OF REVIEW FOR AN EXCEPTION OR A VARIATION IN THE APPLICATION OF THE PROVISIONS OR REGULATIONS OF THE ZONING ORDINANCE AFFECTING THE FOLLOWING DESCRIBED PREMISES IN THE MANNER AND ON THE GROUNDS HEREINAFTER SET FORTH.

OWNER: Bryan White

ADDRESS: 145 Wayland Avenue, Cranston, RI ZIP CODE: 02920

APPLICANT: Gary White

ADDRESS: 96 Lakedell Drive, East Greenwich, RI ZIP CODE: 02818

LESSEE:

ADDRESS: ZIP CODE:

1. ADDRESS OF PROPERTY: 145 Wayland Avenue and 0 Elmhurst Avenue

2. ASSESSOR’S PLAT #: 12/5 BLOCK #: ASSESSOR’S LOT #: 294, 295, 296, 297 298, 299 WARD: 5

3. LOT FRONTAGE: 130' LOT DEPTH: 200' LOT AREA: 26,000 sq ft

4. ZONING DISTRICT IN WHICH PROPERTY IS LOCATED: A-6 6,000 sq ft 35'
(ZONE) (AREA LIMITATION) (HEIGHT LIMITATION)

5. BUILDING HEIGHT, PRESENT: NA PROPOSED: 28' +/-

6. LOT COVERAGE, PRESENT: Elmhurst Ave lots -0-% PROPOSED: 20% +/-

7. HOW LONG HAVE YOU OWNED THE ABOVE PREMISES? 10/14/20

8. ARE THERE ANY BUILDINGS ON THE PREMISES AT PRESENT? yes on Wayland Avenue lots

9. GIVE SIZE OF EXISTING BUILDING(S): Elmhurst Avenue lots vacant

10. GIVE SIZE OF PROPOSED BUILDING(S): new duplex 52' x 48' +/-

11. WHAT IS THE PRESENT USE? single family on lots on Wayland Avenue

12. WHAT IS THE PROPOSED USE? single family on Wayland Avenue; two family on Elmhurst Avenue lots

13. NUMBER OF FAMILIES FOR WHICH BUILDING IS TO BE ARRANGED: new building two family

14. DESCRIBE IN DETAIL THE EXTENT OF PROPOSED ALTERATIONS: Construct two family dwelling
on newly subdivided lot. Structure will be approximately 52' x 48'. Building
will have frontage on Elmhurst Avenue. Single family home at 145 Wayland Avenue
will remain. See attached narratives.

15. HAVE YOU SUBMITTED PLANS TO THE BUILDING OFFICIAL? yes

16. WERE YOU REFUSED A PERMIT? yes


17. PROVISION OR REGULATION OF THE ZONING ORDINANCE OR STATE ENABLING ACT UNDER WHICH APPLICATION FOR EXCEPTION OR VARIANCE IS MADE.

17.20.080 (Street access); 17.20.120 (Schedule of intensity regulations);
17.92.010 (Variances) and all other applicable sections of zoning code.

18. STATE GROUNDS FOR EXCEPTION OR VARIANCE IN THIS CASE: Applicant seeks relief from
extending Elmhurst Avenue all the way to Wooddale Avenue. Extension is proposed to allow
access to subject lots for driveway and utilities. Proposed duplex is offered rather than
two single family homes. The proposed configuration has been reviewed with the Public
Works and Fire Departments.

SIGNATURE OF APPELLANT(S) AND ATTORNEY (IF APPLICABLE) IS REQUIRED AND MUST BE LEGIBLE.


RESPECTFULLY SUBMITTED,


(OWNER SIGNATURE)

(401) 203-1557
 (PHONE NUMBER)

(OWNER SIGNATURE)

(PHONE NUMBER)


(APPLICANT SIGNATURE)

(401) 640-4169
 (PHONE NUMBER)

(LESSEE SIGNATURE)

(PHONE NUMBER)

(ATTORNEY SIGNATURE)

(401) 946-3800

(PHONE NUMBER)

Robert D. Murray, Esq.
(ATTORNEY NAME-PLEASE PRINT)

ATTORNEY ADDRESS: 21 Garden City Drive, Cranston, RI 02920

PRE-ZONING APPLICATION MEETING:

(PLANNING DEPT. SIGNATURE)

(DATE)

BRYAN WHITE (“Owner”)
GARY WHITE (“Applicant”)
145 Wayland Avenue, Cranston, RI 02920
AP No. 12/5 Lot Nos. 294-299

SUPPLEMENTAL PROJECT NARRATIVE 2

This zoning project narrative is offered to supplement the Project Narrative provided by Joe Casali Engineering, Inc. in connection with application of Gary White for the minor subdivision plan for 145 Wayland Avenue and the desire to subdivide the parcel to construct a duplex on the land fronting on Elmhurst Avenue.

The existing single family house at 145 Wayland Avenue would remain on a 13,650 foot lot. A new two family home is proposed to the rear of the existing home that would front on and have access off of Elmhurst Avenue. The duplex would be built on a lot comprised of 12,350 square feet. The lots are in a A-6 zone with a required minimum lot size of 6,000 square feet. The proposal is to build a duplex rather than two single family homes.

A preliminary application to the City Plan Commission is being submitted for a minor subdivision to re-plat the six (6) lots in to two (2) lots along with an application to the Zoning Board of Review. The six (6) existing lots total 26,000 square feet.

The Owner owns three assessor lots fronting on Wayland Avenue and three lots fronting on Elmhurst Avenue. Elmhurst Avenue is unimproved in front of the subject lots. Applicant proposes to extend Elmhurst Avenue approximately forty six (46) feet to allow access via a driveway and for utilities. This plan has been reviewed by Public Works and Fire Department officials as well as the Providence Water Supply Board.

The lots on Elmhurst Avenue look out over the rear of the Ocean State Job Lot parcel on Atwood Avenue.

Zoning board relief is requested to allow the proposed two-family dwelling to be built fronting on Elmhurst Avenue on a 12,350 square foot. The existing house, first constructed in 1909, and fronting on Wayland Avenue will be on a lot size of 13,650 square feet and encroaches with its corner sideyard that does not meet the front setback requirement of twenty five (25) feet by 3.8” (existing condition). The new proposed rear lot line is proposed to leave a setback for the existing house at 17.13 feet rather than the required 20 foot rear setback.

Presently the lots are configured:

Lot No. 294	4,000 square feet	40' x 100'
Lot No. 295	4,000 square feet	40' x 100'
Lot No. 296	5,000 square feet	50' x 100'
Lot No. 297	5,000 square feet	50' x 100'
Lot No. 298	4,000 square feet	40' x 100'
Lot No. 299	<u>4,000</u> square feet	50' x 100'
	26,000 square feet	

If the preliminary subdivision and zoning relief is granted the lot configurations will be:

New Parcel A	13,650 square feet (house at 145 Wayland Avenue)
New Parcel B	<u>12,350</u> square feet (proposed duplex on Wayland Avenue)
	26,000 square feet

The Applicant is simultaneously seeking Preliminary Plan approval from the City Plan Commission, subject to obtaining the required variance relief from the Zoning Board of Review.

The following variances are sought from the Zoning Board of Review

17.20.080 (Street Access)

No dwelling shall be erected on a lot which does not abut a public street for the full frontage of the lot.

17.20.120 (Schedule of intensity regulations)

Dimensional relief is sought to allow the applicant not to build the extension of Elmhurst Avenue for the full frontage of the subject lot.

For the existing house dimensional relief is sought for the rear setback line of 17.13 feet and the pre-existing side corner setback of 21.4 feet because 145 Wayland Avenue is on a corner lot and does not hold the 25 foot setback requirement.

17.92.010 (Variance for use and dimensional relief)

Variances are sought for use as a duplex in the A-6 zone and for the above stated dimensional relief on street frontage as well as the necessary relief for the exisiting house at 145 Wayland Avenue.

BRYAN WHITE (“Owner”)
GARY WHITE (“APPLICANT”)
145 Wayland Avenue, Cranston, RI 02920

NEIGHBORHOOD ANALYSIS

This analysis is compiled to review the land uses and lot sizes within the 400’ radius of the subject application for the property at 145 Wayland Avenue designated as Lot No. 294-299 on Assessor’s Plat No. 12/5.

The property is located in an A-6 zone and is surrounded by a mixed neighborhood of housing choices, land uses and businesses. The Tax Assessor identifies the following land uses in the area.

There are seventy five (75) parcels (not including the six subject lots) and they breakdown as follows:

<u>TYPES OF LAND USES</u>	<u>NUMBER OF PARCELS</u>
SINGLE FAMILY	41
TWO FAMILY	9
THREE FAMILY	1
MULTI HOUSE	1
RESIDENTIAL CONDO	2
RESIDENTIAL LAND UNDEVELOPED	13
RESIDENTIAL LAND OTHER	1
ACCESSORY COMMERCIAL LAND	2
LARGE BUSINESS	<u>5</u>
	75

If the minor subdivision is approved, the proposed duplex on Elmhurst Avenue will be on a lot proposed at 12,350 square feet. The existing home at 145 Wayland Avenue will remain on 13,650 square feet.

The average lot size within the 400’ radius for a **single family** house in the area is 8,657 square feet, excluding the Owner’s lot (41 in total). The average lot size for the nine (9) **two family** dwellings is 11,054 square feet. Both the proposed lot for the duplex will be larger than the average lot size for two family dwellings in the area. The remaining lot for the single family home at 145 Wayland Avenue will exceed the average lot size for single family houses in the radius

Prepared by:
Robert D. Murray, Esq.
Taft & McSally LLP
21 Garden City Drive
Cranston, RI 02920
(401) 946-3800 (O) rdmurray@taftmcsally.com

Dated: 4-22-21















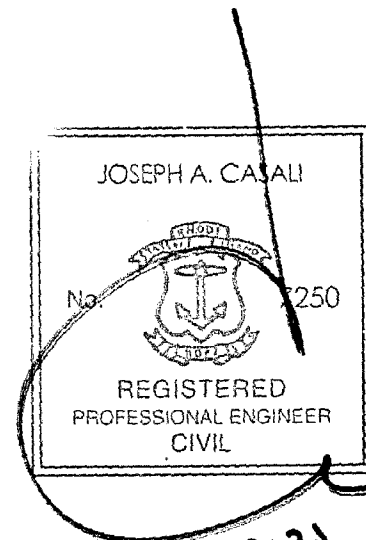
Project Narrative

For a Proposed

Minor Subdivision 145 Wayland Avenue

AP 12-5, Lots 294, 295, 296, 297, 298 & 299
Cranston, Rhode Island

Prepared for:
Mr. Bryan White
145 Wayland Avenue
Cranston, RI 02920



Submission Date:
April 2021

Submitted by:

JCE
JOE CASALI ENGINEERING, INC.
CIVIL • SITE DEVELOPMENT • TRANSPORTATION
DRAINAGE • WETLANDS • ISDS • TRAFFIC • FLOODPLAIN
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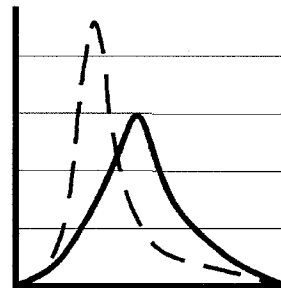


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APPENDICES

Appendix A: Soil Evaluation Test Hole Plan and Logs

1 INTRODUCTION

On behalf of our client, Mr. Gary White, Joe Casali Engineering, Inc. (JCE) has prepared the following Project Narrative to identify existing and proposed site conditions related to a proposed Minor Subdivision located at 145 Wayland Avenue in Cranston, Rhode Island. Specifically, the lots to be subdivided include City of Cranston’s Tax Assessor’s Plat Map (AP) 12-5, Lots 294, 295, 296, 297, 298 and 299.

2 SITE LOCATION AND PHYSICAL DESCRIPTION

2.1 Existing Conditions

According to the City of Cranston’s GIS website, AP 12-5, Lots 294, 295, 298 and 299 are each approximately 4,000 sq. ft. and Lots 296 and 297 are each approximately 5,000 sq. ft. According to a Class I Boundary Survey completed by Ocean State Planners, Inc. in January 2019 the subject parcels combine for a total area of 26,000 sq. ft. The subject parcels are currently in common ownership and consist of an existing 1,925 sq. ft. single-family dwelling. The parcels are bound by Elmhurst Avenue right-of-way to the north, Wooddale Avenue right-of-way to the east, Wayland Avenue right-of-way to the south, and existing residential parcels to the west.

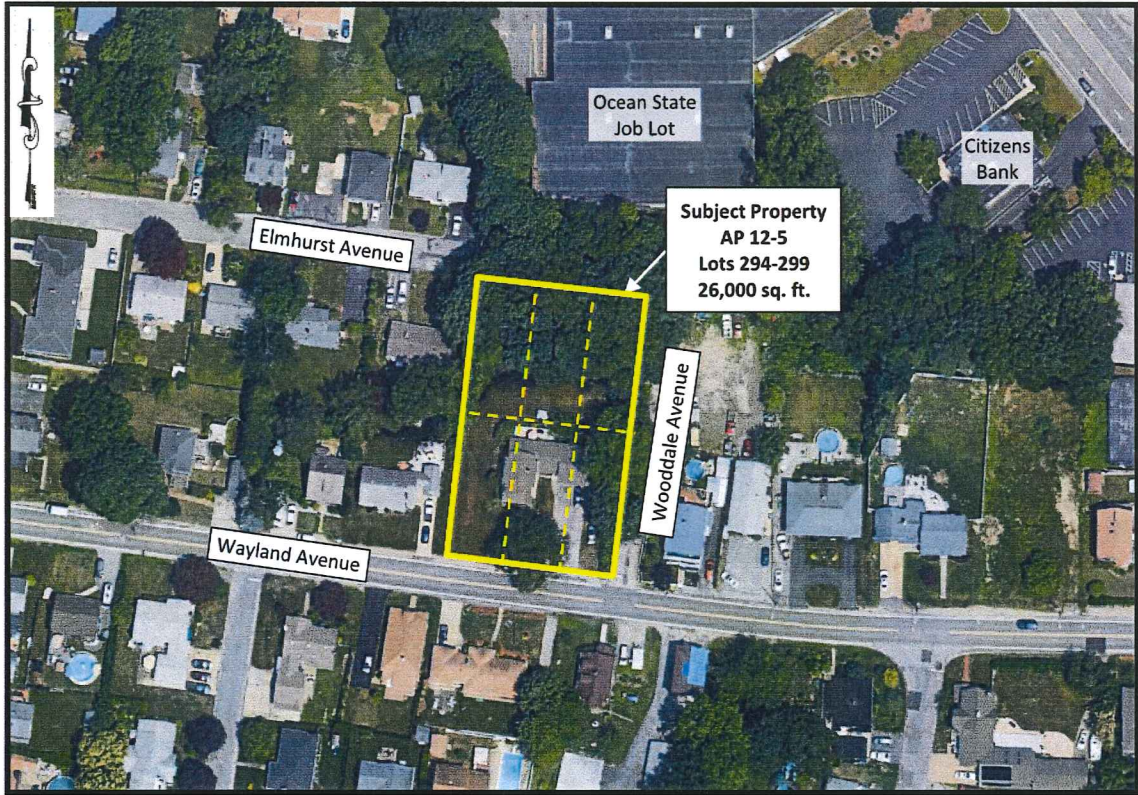


Figure 1 – Locus Map
NOT TO SCALE

2.2 Soil Classification

According to the *Web Soil Survey (WSS)* operated by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), produced by the National Cooperative Soil Survey, the soils on the site consist of Merrimac-Urban land complex, 0 to 8 percent slopes (MU) and Hinckley loamy sand, 8 to 15 percent slopes (HkC). JCE observed and documented excavation of three (3) soil evaluation test holes on the site in March 2021. In general, the soils on the site were found to consist of a thin layer of fill atop natural glacial outwash materials. The seasonal high groundwater table was not observed in any of the test hole excavations (greater than 120-inches below the ground surface); nor was a limiting layer (i.e. ledge) encountered. Soil evaluation test hole location plan and logs are included in Appendix A.

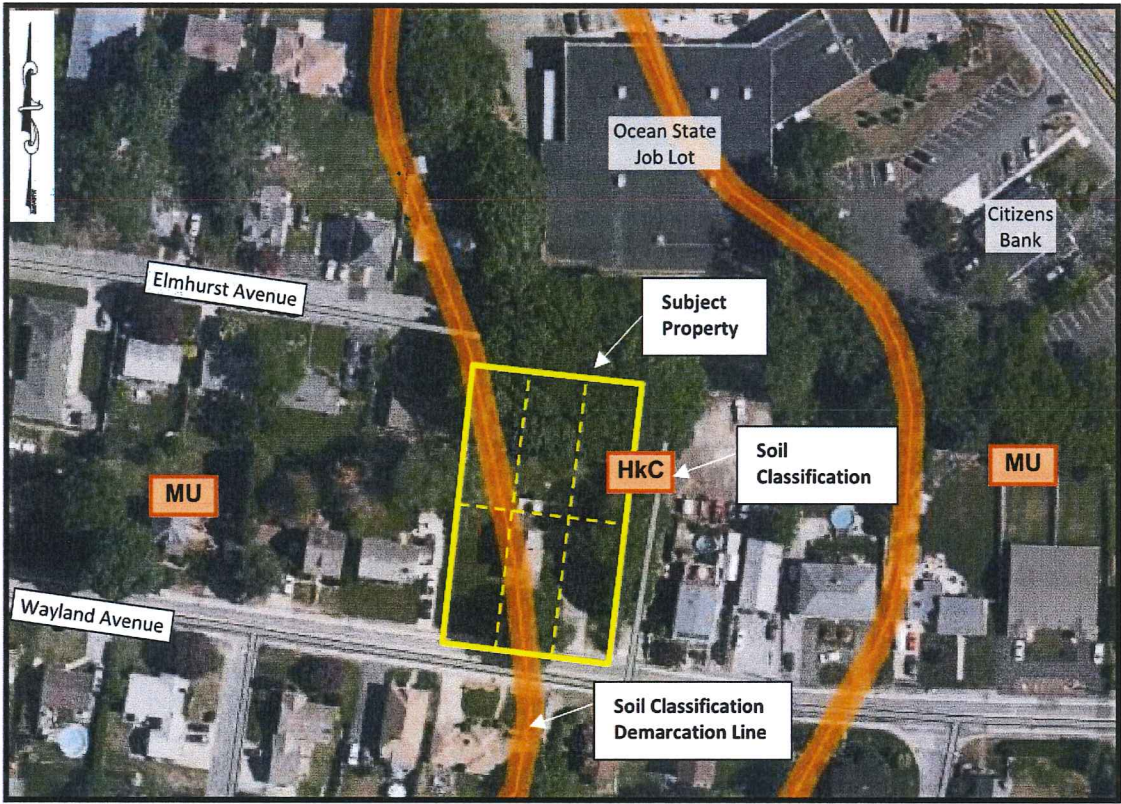


Figure 2 – Soils Map
NOT TO SCALE

2.3 Natural and Recreational Resource Inventory

Based upon a review of the Rhode Island Department of Environmental Management (RIDEM) Environmental Resource Map, there are no wetlands on or immediately adjacent to the subject parcels. The site is located within the Pocasset River Watershed (RIDEM Inventory #010900040609). Stormwater runoff from the subject parcel sheet flows in northeasterly

direction towards Atwood Avenue (RI Route 5), a state roadway. Stormwater runoff from the site is collected via existing catch basins within Atwood Avenue’s State Drainage System.

The project site is predominantly within RIDEM’s Groundwater Classification Zone GB, which is defined as “groundwater which may not be suitable for drinking water use without treatment due to known or presumed degradation.” The parcel is not located in a historic planning district, land conservation area, natural heritage area, or a wellhead protection area. There are no known existing public, recreational or cultural resources within the subject site.

2.4 Flood Zone Classification

The subject parcel is located within Zone X – areas determined to be outside of the 1% annual-chance flood hazard area, as shown on the Flood Insurance Rate Map (FIRM) for the City of Cranston, Map Number 44007C0313H, effective October 2, 2015. Land areas within Zone X are generally suitable for all development.



Figure 3 – FEMA Flood Insurance Rate Map
NOT TO SCALE

2.5 Zoning

According to the City of Cranston Zoning Ordinance, the site is currently within the A-6 (Residence A-6 District). The existing use, single-family dwelling, is allowed per the City of Cranston Zoning Ordinance. The proposed use, a multi-family duplex dwelling, will require a use variance from the Cranston Zoning Board of Review. The following are the current dimensional requirements for an A-6 zone:

Requirement	A-6 Zone
Minimum Lot Area	6,000 sq. ft.
Minimum Lot Width and Frontage	60 ft.
Minimum Front Yard Depth	25 ft.
Minimum Side Yard Depth	8 ft.
Minimum Rear Yard Depth	20 ft.
Maximum Building Height (Main)	35 ft.
Maximum Lot Coverage	30%

2.6 Easements

Based on a Class I Boundary Survey completed by Ocean State Planners, Cranston, Rhode Island, there are no known easements within the subject parcels.

2.7 Utilities (Elmhurst Avenue)

Water: An 8-inch asbestos concrete water main is located within Elmhurst Avenue. The water main terminates at an existing blow-off at the Elmhurst Avenue dead-end.

Sewer: An 8-inch asbestos concrete sewer main is located within Elmhurst Avenue that terminates at a sewer manhole approximately 50 feet west of the subject property.

Gas: A 4-inch steel gas line is located along the southern side of Elmhurst Avenue.

Electric/Communications: Electric and communication services are provided to the existing dwellings along Elmhurst Avenue via overhead lines located along the north side of the existing roadway.

3 PROPOSED SITE IMPROVEMENTS

3.1 General

The proposed project has been designed in general accordance with the current City of Cranston's Land Development and Subdivision Regulations. The proposed development includes a minor subdivision of the subject parcels into two (2) residential lots to accommodate the existing single-family dwelling located at 145 Wayland Avenue and a proposed duplex structure. An extension of Elmhurst Avenue is proposed to provide access to the duplex structure; utility connections to the proposed duplex will be provided via main extensions within Elmhurst Avenue.

Elmhurst Avenue is a public right-of-way which consists of an approximately 25-ft-wide roadway which terminates at a dead end just north and west of the subject parcels. The proposed development will extend the existing Elmhurst Avenue roadway 46 linear feet, built to City Standards. The private roadway has been designed with a 25-foot-wide paved travel way width, mimicking existing conditions. A retaining wall is proposed along the north and eastern sides of the northern parcel to limit grading required within the Elmhurst and Wooddale Avenue rights-of-way, and to limit tree clearing required which will help maintain vegetative buffer between the existing residences and the commercial development to the northwest.

3.2 Utilities

Water: The proposed duplex structure will be serviced via an extension of the existing 8-inch water main within Elmhurst Avenue. Per Providence Water requirements, the existing 8-inch water main will be extended to a new 2-inch blowoff and the end of the Elmhurst Avenue extension. 1-inch polyethylene water services are proposed off of the water main extension to each unit within the duplex structure.

Sewer: The proposed duplex structure will be serviced by municipal sewers. Gravity sewer services are proposed at the rear of the duplex structure, routed to a pump station manhole at the northwest corner of the site. Effluent will be pumped via a 1.25-inch low pressure force main into the existing sewer manhole located within Elmhurst Street.

Gas: The proposed duplex structure will be provided gas service by National Grid.

Electric/Communications: The proposed duplex structure will be provided electric/communications services via overhead wires from Elmhurst Avenue.

3.3 Drainage

There is no existing stormwater management system in place servicing the subject parcels. Generally, stormwater appears to sheet flow across the subject parcel, towards the north and east, across the Elmhurst Avenue and Wooddale Avenue rights-of-way, through adjacent commercial parcels and into the State-owned closed drainage system within RI Route 5 (Atwood Avenue).

The proposed development includes stormwater infrastructure designed in accordance with the *State of Rhode Island Stormwater Management Guidance* (document) for *Individual Single-Family Residential Lot Development*, February 2013. Negative impacts of stormwater have been minimized to the maximum extent practicable by minimizing the amount of stormwater runoff that flows off the subject lots. Stormwater mitigation measures include a rain garden for treatment of runoff from the proposed driveway and an underground infiltration system (UIC) for treatment and infiltration of rooftop runoff. These systems have been designed to capture and treat the water quality volume (1 inch of runoff from all new impervious surfaces); meaning these systems will capture 90% of the average annual volume of runoff generated. Sizing calculations are presented below:

Rain Garden:

- New Driveway and Sidewalk Area = 2,181 sq. ft.
- $WQ_v \text{ Required} = (2,181 \text{ sq. ft.} * 1\text{-inch} * 1/12 \text{ ft/in}) = 182 \text{ CF}$
- Rain Garden $WQ_v \text{ Provided} = 391 \text{ CF}$

Rooftop:

- Total Rooftop Area = 2,460 sq. ft.
- $WQ_v \text{ Required} = (2,460 \text{ sq. ft.} * 1\text{-inch} * 1/12 \text{ ft/in}) = 205 \text{ CF}$
- Rain Garden $WQ_v \text{ Provided} = 248 \text{ CF}$

As shown above, when looking at the project as a whole, the total water quality volume required for treatment is about 387 cubic feet. Via the implementation of a rain garden and underground infiltration system, the total water quality treatment volume provided is about 639 CF, exceeding the requirements of the *State of Rhode Island Stormwater Management Guidance for Individual Single-Family Residential Lot Development*, February 2013.

4 PERMIT REQUIREMENTS

4.1 City of Cranston Permit Requirements

4.1.1 Plan Commission

According to the City of Cranston's Land Development Regulations, and based on a pre-application meeting held with the City's Planning Department, the proposed development is considered a Minor Subdivision Project. The permitting schedule is as follows, and consists of abutter notification, a public meeting and Plan Commission Review and Approval: Preliminary Plan and Final Plan.

4.1.2 Zoning Board of Review

According to the City of Cranston's Zoning Ordinance, the proposed use – multi-family dwelling (duplex) is not permitted in an A-6 zone and therefore will require a Use Variance from the Zoning Board of Review.

During a pre-application meeting with the Planning Department, various design options for this site were considered. Based on the size of the parcel, two single-family homes are allowed by right, however, access would be difficult requiring a significant extension of Elmhurst Avenue. The Planning Department indicated support for the duplex option.

4.1.3 Veolia Water

The proposed sewer improvements will require review and approval from Veolia Water and the City of Cranston Department of Public Works.

4.1.4 Building Permit / Fire Department

A Building Permit will be required from the City of Cranston Building Official for construction of the proposed residential units.

4.2 Quasi-State and State Permit Requirements

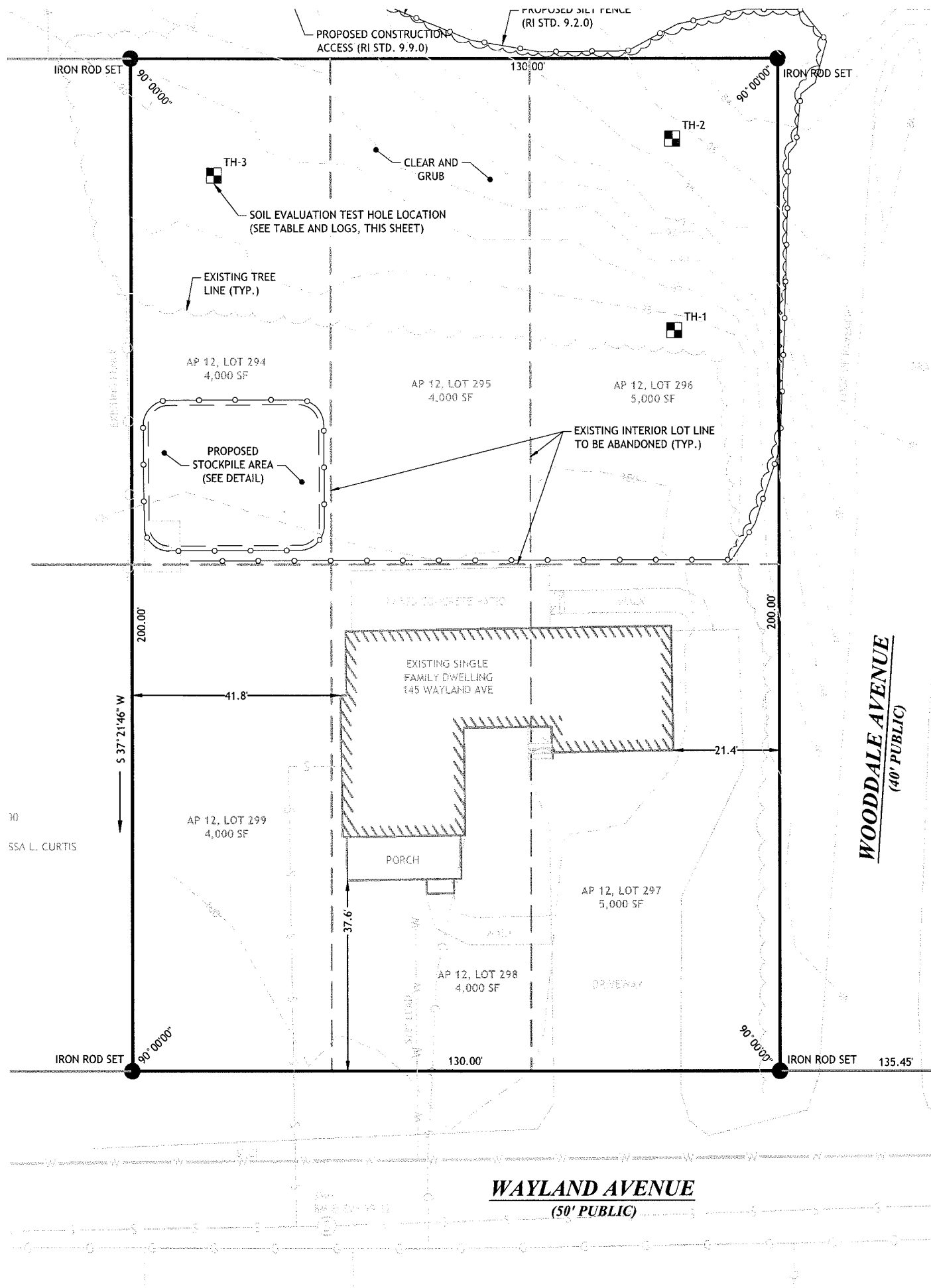
4.2.1 Providence Water Supply Board


The proposed water improvements will require review and approval from Providence Water Supply Board.

Appendix A

Soil Evaluation Test Hole Plan and Logs
prepared by Joe Casali Engineering, Inc.


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Test Pit Location: See Plan		Date Start / Finish: March 31, 2021		TH-1	
Ground Surface El. / Datum: 98.0		Conditions: Overcast, 65 deg. F			
Excavator Type: Wacker Neuson 3503 Mini-Excavator		Excavator Reach: Approx. 10-feet			
Operator: Bryan White		JCE Rep.: Daniel R. DeCesaris (RI P.E. No. 10162)		Page 1 of 1	
Depth (ft)	Sample Type/No.	Layer	Remarks	Soil and Rock Description	Estimted Hydraulic Conductivity
1		TS	Occasional cobbles/ boulders throughout; max. size = 12".	(0 - 10"): SILTY SAND (SM); Dark brown/black, dry, ~75% fine sand, ~15% nonplastic fines, ~10% fine gravel, TOPSOIL.	NA
2		FILL		(10 - 36"): SILTY SAND WITH GRAVEL (SM); Dark brown/brown, dry, ~60% fine to medium sand, ~25% nonplastic fines, ~15% fine to coarse gravel, FILL.	
3		GLACIAL DEPOSITS		Occasional cobbles/ boulders throughout; max. size = 20".	(36 - 120"): SILTY SAND WITH GRAVEL (SM); Brown, dry, ~65% fine to coarse sand, ~20% nonplastic fines, ~15% fine to coarse gravel. <i>Loamy Sand.</i>
4					
5					
6					
7					
8					
9					
10			Bottom of test hole at 10'. Open excavation backfilled with previously excavated material upon completion.		
11					
12					
Notes:				SHWT: Not Encountered	
				Impervious/Limiting Layer Depth: Not Encountered	
				Project Name: Bryan White, 145 Wayland Ave., Cranston	
				Project Number: 19-34a	
				JOE CASALI ENGINEERING, INC.	
					

Test Pit Location: <u>See Plan</u>		Date Start / Finish: <u>March 31, 2021</u>		TH-2	
Ground Surface El. / Datum: <u>87.0</u>		Conditions: <u>Overcast, 65 deg. F</u>			
Excavator Type: <u>Wacker Neuson 3503 Mini-Excavator</u>		Excavator Reach: <u>Approx. 10-feet</u>		Page 1 of 1	
Operator: <u>Bryan White</u>		JCE Rep.: <u>Daniel R. DeCesaris (RI P.E. No. 10162)</u>			
Depth (ft)	Sample Type/No.	Layer	Remarks	Soil and Rock Description	Estimlated Hydraulic Conductivity
1		TS		(0 - 10"): SILTY SAND (SM); Dark brown/black, dry, ~75% fine sand, ~15% nonplastic fines, ~10% fine gravel, TOPSOIL.	NA
		FILL		(10 - 32"): WELL GRADED SAND WITH SILT (SW-SM); Brown/gray, dry, ~75% fine to coarse sand, ~15% fine to coarse gravel, ~10% nonplastic fines, FILL.	
2		GLACIAL DEPOSITS		(32 - 100"): SILTY SAND WITH GRAVEL (SM); Gray, dry, ~60% fine to coarse sand, ~20% nonplastic fines, ~20% fine to coarse gravel, <i>Loamy Sand</i> .	HSG B 2.41 in/hr
3					
4					
5					
6					
7					
8					
9				Bottom of test hole at 100". Open excavation backfilled with previously excavated material upon completion.	
10					
11					
12					
Notes:				SHWT: <u>Not Encountered</u>	
				Impervious/Limiting Layer Depth: <u>Not Encountered</u>	
				Project Name: <u>Bryan White, 145 Wayland Ave., Cranston</u>	
				Project Number: <u>19-34a</u>	
				JOE CASALI ENGINEERING, INC.	



Test Pit Location: <u>See Plan</u>			Date Start / Finish: <u>March 31, 2021</u>		TH-3
Ground Surface El. / Datum: <u>97.0</u>			Conditions: <u>Overcast, 65 deg. F</u>		
Excavator Type: <u>Wacker Neuson 3503 Mini-Excavator</u>			Excavator Reach: <u>Approx. 10-feet</u>		
Operator: <u>Bryan White</u>			JCE Rep.: <u>Daniel R. DeCesaris (RI P.E. No. 10162)</u>		Page 1 of 1
Depth (ft)	Sample Type/No.	Layer	Remarks	Soil and Rock Description	Estimrated Hydraulic Conductivity
1		TS	Occasional cobbles throughout; max. size = 8"	(0 - 6"): SILTY SAND (SM); Dark brown/black, dry, ~75% fine sand, ~15% nonplastic fines, ~10% fine gravel, TOPSOIL.	NA
2		FILL		(6 - 60"): SILTY SAND WITH GRAVEL (SM); Brown, dry, ~65% fine to medium sand, ~25% nonplastic fines, ~10% fine to coarse gravel. FILL.	
3					
4					
5					
6					
7					
8					
9					
10		GLACIAL DEPOSITS		(60 - 120"): SILTY SAND WITH GRAVEL (SM); Brown/gray , dry, ~65% fine to coarse sand, ~20% nonplastic fines, ~15% fine to coarse gravel, <i>Loamy Sand</i> .	
11					
12					
Notes:				SHWT: <u>Not Encountered</u>	
				Impervious/Limiting Layer Depth: <u>Not Encountered</u>	
				Project Name: <u>Bryan White, 145 Wayland Ave., Cranston</u>	
				Project Number: <u>19-34a</u>	
				JOE CASALI ENGINEERING, INC.	
					

GENERAL NOTES:

1. CLASS I PROPERTY LINE AND CLASS III TOPOGRAPHIC SURVEY COMPLETED BY OCEAN STATE PLANNERS, INC. 1255 OAKLAWN AVE., CRANSTON, RI, IN JANUARY 2019.
2. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
3. THE ENTIRE PROJECT SITE LIES WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FIRM MAP FOR KENT COUNTY, RHODE ISLAND, MAP NUMBER 44007C0311H, EFFECTIVE DATE OCTOBER 2, 2015.
4. THERE ARE NO KNOWN FRESHWATER WETLANDS ON OR ADJACENT TO THE SUBJECT SITE, NOR ARE THERE ANY KNOWN HIGH HAZARD AREAS ON OR ADJACENT TO THE SUBJECT SITE.
5. SOILS EXISTING ON THE SITE CONSIST OF HINCKLEY LOAMY SAND, 8 TO 15% SLOPES (H-C). SOIL EVALUATIONS WERE OBSERVED AND DOCUMENTED BY JOE CASALI ENGINEERING, INC. IN MARCH 2021. SOIL EVALUATION LOGS ARE PRESENTED WITHIN THESE PLANS.
6. THERE ARE NO KNOWN EASEMENTS WITHIN THE PROJECT AREA.
7. PUBLIC WATER, SEWER, GAS AND ELECTRIC IS AVAILABLE FROM ELMHURST AVENUE AND FROM WAYLAND AVENUE.

SITE NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
2. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS, AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICAN WITH DISABILITIES ACT AND WITH ALL APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, WHICHEVER IS MORE STRINGENT.
3. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
4. ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
5. THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.
6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
7. ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
8. REFER TO ARCHITECTURAL PLANS, STRUCTURAL PLANS, PLUMBING PLANS AND ELECTRICAL PLANS FOR ACTUAL SIZE OF THE PROPOSED BUILDINGS AND WORK WITHIN 5 FEET OF THE PROPOSED BUILDINGS.
9. WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
10. ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER OR THE CITY.
11. THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION, UNLESS OTHERWISE NOTED ON THE SITE PLANS.
12. THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
13. ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
14. WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
15. LEDGE TO BE REMOVED BY MECHANICAL MEANS OR BY BLASTING.
16. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
17. ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
2. TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
3. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR TOWN RIGHT-OF-WAY.
4. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC, SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
5. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

DRAINAGE SYSTEM NOTES:

1. THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 HOPE PIPE OR AN APPROVED EQUAL UNLESS OTHERWISE NOTED ON THE SITE PLANS.
2. ALL RIM ELEVATIONS SHOWN ARE APPROXIMATE AND ARE TO BE SET FLUSH WITH FINAL GRADES.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

1. THE SILT FENCE / HAY BALE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
2. THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
3. ALL CATCH BASINS AND CULVERTS SHALL BE PROTECTED WITH STAKED HAYBALES (R.I. STD. 9.8.0) DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORM WATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE OUTLET PROTECTION (R.I. STD. 9.1.0), OR STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) OUTLET PROTECTION (STAKED HAYBALE OR STAKED HAYBALE WITH SILT FENCE) SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.
4. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STANDING OF VEGETATION IS MAINTAINED.
5. ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
6. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
7. THE SILT FENCE/HAYBALES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE/HAYBALES AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAY-BALES BECOMES FILLED WITH SEDIMENTS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER, TOWN ENGINEER, OR OWNER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
9. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993 AMENDED 2014.

MISCELLANEOUS UTILITY NOTES:

1. PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. OVERHEAD ELECTRIC AND TELEPHONE SERVICES ARE TO BE REMOVED BY THE APPROPRIATE UTILITY COMPANY AND COORDINATED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO PROPERLY SAFEGUARD THE PUBLIC FROM THEIR OPERATIONS.
4. THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OF PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES AND SHALL PROMPTLY REPAIR AT THEIR OWN EXPENSE ANY DAMAGE TO SUCH PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES TO THE SATISFACTION OF THE OWNER OR TOWN. ALL GRASSSED AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE LOAMED AND SEEDED.
5. EXISTING UTILITY FRAMES AND COVERS FOR SANITARY SEWER, WATER, GAS, STORM DRAINAGE AND OTHER UTILITIES SHALL BE ADJUSTED TO GRADE AS REQUIRED IN NEW PAVING AND PAVEMENT OVERLAY AREAS.
6. THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS AND ACTIVITIES TO WITHIN THE STREET LINES, EASEMENT AND/OR RIGHT-OF-WAY, AS SHOWN ON THE DRAWINGS.

BMP MAINTENANCE SCHEDULE:

1. ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
 - A. MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS ALL PIPES, INTAKE AND DISCHARGE STRUCTURES, CATCH BASIN SUMPS, AND MANHOLES.
 - B. INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/2 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.
2. UPON COMPLETION OF THE PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND CLEANING OF THE DRAINAGE SYSTEM AND ALL ASSOCIATED STRUCTURES.
3. ALL INSTALLATION, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 212 AND SECTION 708. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE INSTALLATION, CLEANING, INSPECTION, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRMC, 2010).
4. AFTER CONSTRUCTION, STORMWATER BMPs SHALL BE INSPECTED AND MAINTAINED BY THE OLD COUNTY VILLAGE CONDOMINIUM ASSOCIATION AS FOLLOWS:

CATCH BASINS/ DRAIN LINES

- INSPECTIONS SHALL BE PERFORMED A MINIMUM OF 2 TIMES PER YEAR (SPRING/FALL). UNITS SHALL BE CLEANED WHENEVER THE DEPTH OF SEDIMENT IS GREATER THAN OR EQUAL TO 2-FEET (LESS THAN 2-FEET FROM THE BOTTOM OF PIPE). ALL REMOVED SEDIMENT SHALL BE TESTED TO DETERMINE POLLUTANT CONTENT AND SHALL BE REMOVED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- THE INLET GRATE SHALL NOT BE WELDED TO THE FRAME SO THAT THE SUMP CAN BE EASILY INSPECTED AND MAINTAINED.

ROOF DRAIN LEADERS

- PERFORM ROUTINE ROOF INSPECTIONS QUARTERLY.
- KEEP ROOFS CLEAN AND FREE OF DEBRIS.
- KEEP ROOF DRAINAGE SYSTEMS CLEAR.

UNDERGROUND INFILTRATION SYSTEM

- INFILTRATION SYSTEMS SHALL BE INSPECTED ON A BI-ANNUAL BASIS TO ENSURE PROPER FUNCTIONS. INSPECTION PORTS SHALL BE USED TO VERIFY THAT THE SYSTEMS ARE DRAINING WITHIN 72 HOURS. IF THE SYSTEM FAILS TO DRAIN WITHIN 72-HOURS, THE SYSTEM SHALL BE CLEANED OR REPLACED AS NECESSARY.
- THE INFILTRATION SYSTEM SHALL BE INSPECTED BI-ANNUALLY FOR SEDIMENT ACCUMULATIONS. IF THE SYSTEM HAS ACCUMULATED 3 INCHES OF SEDIMENT, THE SEDIMENT SHALL BE REMOVED FROM THE INFILTRATION BASINS WHEN THE ACCUMULATION EXCEEDS 6 INCHES, OR WHEN WATER PONDS ON THE SURFACE OF THE INFILTRATION BASIN FOR MORE THAN 48 HOURS.
- SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
- THE OUTLET DEVICES SHALL BE CLEANED/REPAIRED WHEN NECESSARY.
- TRASH AND DEBRIS SHALL BE REMOVED WHEN NECESSARY OR ANNUALLY AT A MINIMUM.
- THE OUTFLOW WEIR SHOULD BE INSPECTED ANNUALLY TO ENSURE THAT IT IS FUNCTIONING PROPERLY.

INFILTRATION BASIN

- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE INFILTRATION BASINS SHALL BE INSPECTED AFTER THE FIRST TWO RAINFALL EVENTS OF AT LEAST 1.0 INCH TO ENSURE THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER, INSPECTIONS SHALL BE CONDUCTED ON A BI-ANNUAL BASIS AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL TO 2 INCHES.
- SILT AND SEDIMENT SHALL BE REMOVED FROM THE INFILTRATION BASINS WHEN THE ACCUMULATION EXCEEDS 6 INCHES, OR WHEN WATER PONDS ON THE SURFACE OF THE INFILTRATION BASIN FOR MORE THAN 48 HOURS.
- SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
- THE OUTLET DEVICES SHALL BE CLEANED/REPAIRED WHEN NECESSARY.
- TRASH AND DEBRIS SHALL BE REMOVED WHEN NECESSARY OR ANNUALLY AT A MINIMUM.
- THE OUTFLOW WEIR SHOULD BE INSPECTED ANNUALLY TO ENSURE THAT IT IS FUNCTIONING PROPERLY.

LOAMING & SEEDING NOTES:

SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:

1. AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS 'LOAM AND SEED' ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
2. THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
3. PRIOR TO SEEDING OR SODDING, FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
4. APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
5. SEEDING:
AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL. SEED SHALL BE APPROVED URI #2 OR APPROVED EQUAL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.

URI #2 IMPROVED SEED MIX, % BY WEIGHT:

40% CREEPING RED FESCUE
20% IMPROVED PERENNIAL RYEGRASS
20% IMPROVED KENTUCKY BLUEGRASS
20% KENTUCKY BLUEGRASS

RECOMMENDED SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

6. THE TOPSOIL IN THE SAND FILTER SHALL CONSIST OF 40% COMPOST AND 60% SAND (ASTM C-33) THE TOPSOIL SHALL ALSO HAVE AN ORGANIC CONTENT BETWEEN 8-10% AND THE PERCENT PASSING THE #200 SIEVE BETWEEN 2-5%. TYPICAL GRADATION OF THE TOP SOIL MIXTURE SHALL MEET THE FOLLOWING:

SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#10	75-90
#40	25-40
#100	4-10
#200	2-5

LEGEND

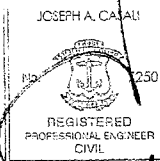
—	EXISTING PROPERTY LINE	—	EXISTING GAS LINE
- - -	ABUTTING PROPERTY LINE	—	PROPOSED GAS LINE
- - -	BUILDING SETBACK LINE	—	EXISTING WATER LINE
- - -	EXISTING CONTOUR	—	PROPOSED WATER LINE
- - -	PROPOSED CONTOUR	—	EXISTING WATER SHUT OFF VALVE
—	EXISTING STONE WALL	—	PROPOSED WATER SHUT OFF VALVE
—	EXISTING CURB	—	EXISTING SEWER LINE
—	PROPOSED CURB	—	PROPOSED SEWER LINE
—	EXISTING GUARD RAIL	—	EXISTING SEWER MANHOLE
—	EXISTING DRAIN LINE	—	PROPOSED SEWER MANHOLE
—	PROPOSED DRAIN LINE	—	N/F — NOW OR FORMERLY
—	EXISTING DRAINAGE MANHOLE	—	TREELINE
—	PROPOSED DRAINAGE MANHOLE	—	COMPOST FILTER SOCK
—	EXISTING CATCH BASIN	—	LOD — LIMIT OF DISTURBANCE
—	PROPOSED CATCH BASIN	—	TEST HOLE
—	EXISTING UTILITY POLE	—	BORING
—	PROPOSED UTILITY POLE		
—	EXISTING TELECOM DUCTBANK		
—	EXISTING ELECTRIC DUCTBANK		
—	RELOCATED ELECTRIC DUCTBANK		



LOCATION OF EXISTING UTILITIES SHOWN, ARE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION CALL DIGSAFE AT 1-888-DIG-SAFE
1-888-344-7233



JCE
JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRANSPORTATION
ENGINEERING, LANDSCAPE ARCHITECTURE
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300 (401) 944-1313 FAX WWW.JCEASALINC.COM



PROPOSED MINOR SUBDIVISION
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND
AP 12-5, LOTS 294, 295, 296, 297, 298 & 299

REVISIONS:	
NO.	DATE DESCRIPTION

DESIGNED BY:	WMLJR
DRAWN BY:	JAS/SEP
CHECKED BY:	JAC
DATE:	APRIL 2021
PROJECT NO:	19-34a

PRELIMINARY, NOT FOR
CONSTRUCTION

**GENERAL
NOTES &
LEGEND**

**SHEET
2 OF 7**

SEWER MAIN CONSTRUCTION NOTES:

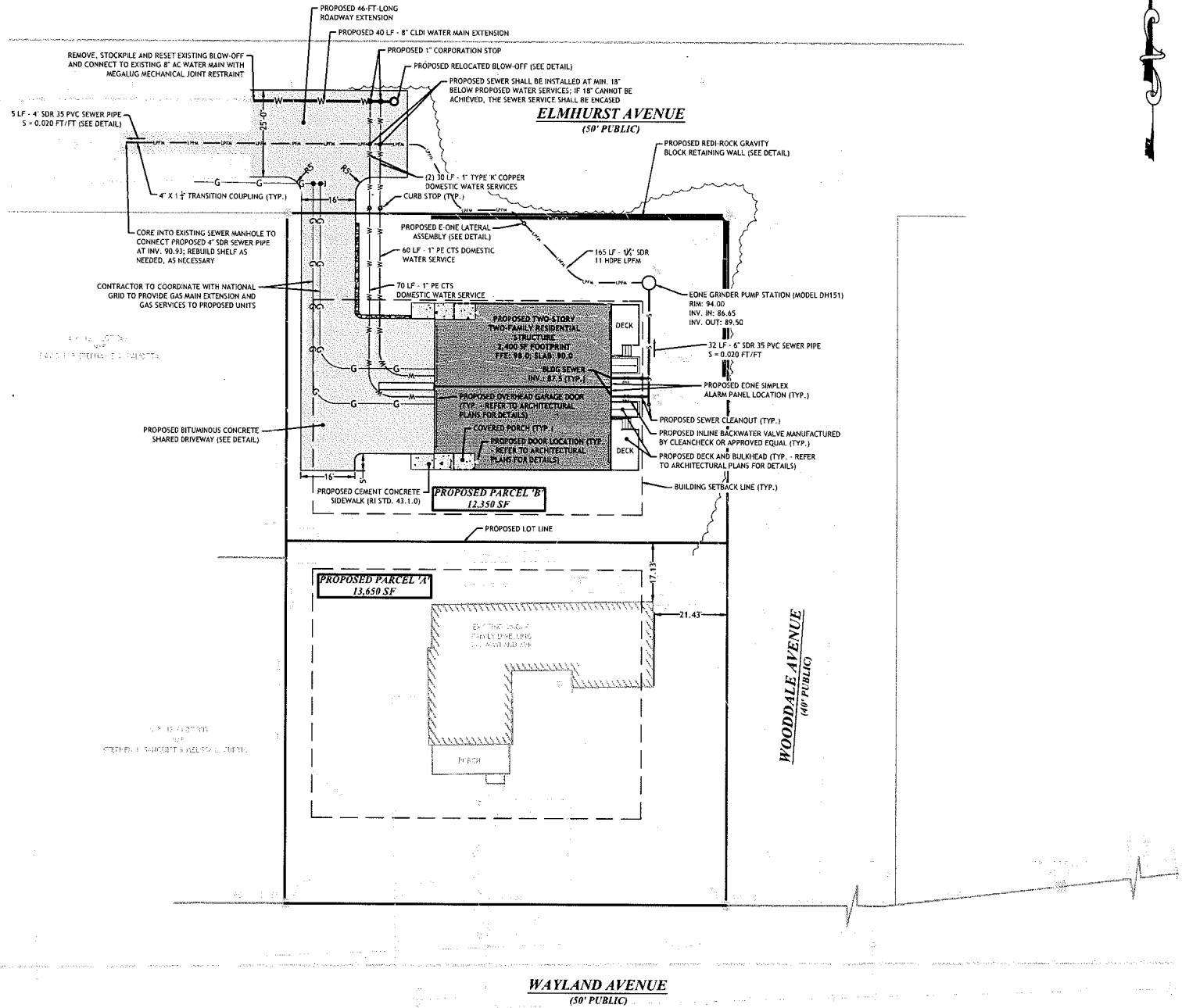
- FOR GENERAL SPECIFICATIONS REGARDING ALL CONSTRUCTION AS WELL AS THE SANITARY SEWERS THE CONTRACTOR SHALL REFERENCE THE CITY OF CRANSTON CITY CODE, CHAPTER 26, SEWERS, SPECIFICATIONS FOR HIGHWAYS COVERING RESIDENTIAL AND INDUSTRIAL PLAT DEVELOPMENTS, AND OTHER CITY OF CRANSTON DEPARTMENT OF PUBLIC WORKS GUIDELINES, RULES, REGULATIONS AND OTHER APPLICABLE LAWS, INCLUDING ANNEX A-DESIGN OF SEWERS (PROMULGATED 8/15/02). REGARDING SANITARY SEWER CONSTRUCTION, THE CONTRACTOR SHALL SPECIFICALLY REFERENCE THE TECHNICAL RELEASE #16 GUIDE FOR THE DESIGN OF WASTEWATER TREATMENT WORKS (PUBLISHED BY THE N.E. INTERSTATE WATER POLLUTION CONTROL COMMISSION).
- PRIVATE SEWERS AND SEWER EXTENSION INTO ADJACENT COMMUNITIES WHICH CONNECT TO THE CITY SEWER SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH THE CITY SEWER USE ORDINANCE AND THESE REGULATIONS UNLESS OTHERWISE APPROVED BY THE CITY PUBLIC WORKS DIRECTOR.
- ALL SANITARY SEWER CONSTRUCTION SHALL BE INSPECTED BY THE VEOLIA WATER NORTH AMERICA COLLECTIONS SYSTEM DEPARTMENT (VEOLIA-CRANSTON WPCF).
- NO PERSON SHALL MAKE A CONNECTION OF ROOF DOWNSPOUTS, FLOOR DRAINS, SUMP PUMPS, EXTERIOR FOUNDATION DRAINS, AREA WAY DRAINS, OR OTHER SOURCES OF SURFACE RUNOFF OR GROUNDWATER TO ANY COMPONENT OF THE SANITARY SEWER SYSTEM.
- NO GRAVITY SEWER MAIN SHALL BE LESS THAN EIGHT (8) INCHES (20.3 cm) DIAMETER.
- GRAVITY SEWER PIPE SHALL BE ASTM RIGID SCHEDULE 35 PVC PIPE FOR SEWER USE CONFORMING TO ASTM SPECIFICATIONS D-3034. ALL PIPES SHALL HAVE COMPRESSION POINTS WITH AN ELASTOMETRIC GASKET TYPE CONFORMING TO ASTM D-3212; OR AS APPROVED BY THE CITY PUBLIC WORKS DIRECTOR.
- MAIN GRAVITY SEWER PIPE SHALL BE INSTALLED BY USING A LASER INVERT MACHINE THAT SETS UP IN AN INVERT IN THE DOWNSTREAM MANHOLE. A TARGET WILL BE PLACED AT THE END OF EACH PIPE THAT IS INSTALLED TO ENSURE PROPER ALIGNMENT AND SLOPE.
- ALL SANITARY SEWER CONNECTIONS SHALL BE MADE GAS TIGHT.
- THE MINIMUM COVER SHALL BE FOUR (4) FEET OVER THE CROWN OF THE PIPE FOR ALL MAINS AND LATERALS EXCEPT THAT INSULATION MAY BE PROVIDED FOR SEWERS THAT CANNOT BE PLACED AT A DEPTH SUFFICIENT TO PREVENT FREEZING UPON THE APPROVAL OF THE PUBLIC WORKS DIRECTOR.
- SEWER LATERALS SHALL BE 6" PVC SCHEDULE 35 AND BE INSTALLED AT THE MINIMUM SLOPE OF AT LEAST ONE-QUARTER INCH PER FOOT. ALL PIPES SHALL HAVE COMPRESSION JOINTS.
- WHERE PRACTICAL, SEWER LATERALS SHALL BE TIED INTO A MANHOLE. A BORING MACHINE SHALL BE USED TO MAKE A HOLE THROUGH ANY MANHOLE STRUCTURE. A FLEXIBLE WATERTIGHT GASKET SHALL BE USED TO CONNECT THE STRUCTURE TO THE PIPE OR AN APPROVED WATERTIGHT FLEXIBLE SLEEVE. THE PIPE SHALL BE CEMENTED ON THE INSIDE OF THE MANHOLE TO MAKE THE INVERT CLEAN.
- WHERE SEWER LATERALS CONNECT TO A SEWER MAIN A WYE SHALL BE INSTALLED IN THE MAIN TO MAKE THE CONNECTION. A 6" SDR 35 ANGLE, NOT GREATER THAN 45°, IS TO BE USED TO PROVIDE THE PROPER FLOW ALIGNMENT.
- NO LATERAL MAY SERVICE MORE THAN ONE BUILDING OR PRIVATELY OWNED BUILDING UNITS.
- MINIMUM BEDDING MATERIAL REQUIREMENTS FOR SEWER PIPE INSTALLATION SHALL BE CLASS "B" AS DESCRIBED IN ASTM C-12 WITH A MINIMUM DEPTH OF SIX (6) INCHES.
- BEDDING MATERIAL SHALL BE COMPACTED EVENLY UNDER AND ON BOTH SIDES OF THE PIPE SO THAT THE PIPE REMAINS ALIGNED AND TRUE.
- BACKFILL SHALL BE INSTALLED IN LAYERS NO MORE THAN 8" THICK AFTER COMPACTION AND SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY ACCORDING TO AASHTO T-180.
- BACKFILL MATERIAL SHALL NOT CONTAIN FROZEN MATERIAL, LARGE DIRT CLOUDS, STONES, ORGANIC MATTER, OR UNSUITABLE MATERIALS. ADDITIONAL BACKFILL DETAILS, FOR CITY STANDARDS CR-10/5-1, WHICH ARE AVAILABLE IN THE DIVISION OF ENGINEERING.
- MANHOLES SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, ASTM C-478, LATEST EDITION; OR AS APPROVED BY THE DIRECTOR, AND SHALL HAVE O-RINGS OR BITUMINOUS BASED GASKETED JOINTS. A TWELVE-INCH (12") BEDDING OF COMPACTED 3/4-INCH CRUSHED STONE SHALL BE PLACED UNDERNEATH ALL MANHOLE STRUCTURES. THE MINIMUM INTERNAL DIAMETER SHALL BE FORTY-FOUR (48") INCHES. ALL MANHOLE JOINTS AND PINHOLES SHALL BE PARGED FROM THE OUTSIDE AND INSIDE TO PREVENT INFILTRATION. FOLLOWING WHICH, A BITUMINOUS COATING SHALL BE INSTALLED ON THE ENTIRE EXTERIOR. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A GASKETED, FLEXIBLE WATERTIGHT CONNECTION OR WITH ANOTHER WATERTIGHT CONNECTION ARRANGEMENT THAT ALLOWS FOR DIFFERENTIAL SETTLEMENT OF THE PIPE AND THE MANHOLE. ALL INVERTS AND TABLES SHALL BE CONSTRUCTED WITH SMOOTH RED SEWER BRICKS. AT LEAST ONE ROW OF RED SEWER BRICKS SHALL BE INSTALLED BETWEEN THE MANHOLE STRUCTURE AND THE SEWER COVERS FRAME, BUT NOT TO EXCEED A (MAX. OF 12" HIGH); THE BRICKS SHALL BE WELL CEMENTED BUT NO CEMENT IS ALLOWED ON THE FACE OF THE BRICKS.
- AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. DEVIATIONS OR CHANGES WILL NOT BE ALLOWED UNLESS APPROVED BY THE CITY PUBLIC WORKS DIRECTOR.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

SEWER MAIN ORDER OF PROCEDURE:

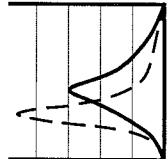
- THE OWNER OR THE DEVELOPER SHALL SUBMIT TO THE CITY OF CRANSTON'S DIRECTOR OF PUBLIC WORKS THE NAME OF THE QUALIFIED SEWER CONTRACTOR THAT WILL BE RESPONSIBLE FOR THE INSTALLATION OF THE SANITARY SEWER SYSTEM, TOGETHER WITH A BREAKDOWN OF ITEMS, QUANTITIES AND UNIT PRICES FOR THE PROJECT.
- NO WORK CAN COMMENCE ON ANY SEWER INSTALLATION WITHOUT THE DIRECTOR'S APPROVAL OF THE PLANS AND CONTRACTOR.
- THE CONTRACTOR THAT WAS APPROVED SHALL NOTIFY VEOLIA WATER OF NORTH AMERICA COLLECTIONS SYSTEM DEPARTMENT AND THE DIRECTOR OF PUBLIC WORKS FIVE (5) WORKING DAYS PRIOR TO COMMENCING ANY SEWER RELATED EXCAVATION. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION: COMPANY NAME, PHONE NUMBER AND ADDRESS OF BOTH THE DEVELOPER AND CONTRACTOR ALONG WITH THE NAME AND PHONE NUMBER OF THE SEWER CONTRACTOR'S FOREMAN.
- VEOLIA WATER SHALL INSPECT THE NEW PLAT CONSTRUCTION CONSISTING OF EXCAVATION, LAYING OF SEWER MAINS AND STREET LATERALS, INSTALLATION OF MANHOLES, AND BACKFILLING TO THE ELEVATION OF THE EXISTING GROUND, CAMERA INSPECTION, AND PRESSURE TESTING; AND SHALL PERFORM THE FLOW TEST. THE CONTRACTOR AT HIS CHOICE AND EXPENSE HAS THE OPTION OF USING A PRIVATE CONTRACTOR OR HIRING VEOLIA WATER TO CAMERA AND VIDEOTAPE THE SEWER SYSTEM. IF THE CONTRACTOR CHOOSES TO USE A PRIVATE CAMERA CONTRACTOR TO VIDEOTAPE THE SEWER SYSTEM AN INSPECTOR FROM VEOLIA WATER SHALL BE PRESENT FOR THE VIDEOTAPEING.
- AFTER THE SEWER SYSTEM HAS BEEN INSTALLED THE CONTRACTOR SHALL HAVE THE ENTIRE MANHOLES VACUUM TESTED: TEN (10) INCHES OF VACUUM FOR SIXTY (60) SECONDS, THEN THE GRAVITY SEWER PIPES SHALL BE TESTED FOR: FIVE (5) LBS OF PRESSURE FOR TEN (10) MINUTES. VEOLIA'S INSPECTOR SHALL BE PRESENT FOR ALL TESTING OF MANHOLES AND PIPES.
- AFTER THE TESTING OF THE MANHOLES AND PIPES THE CONTRACTOR SHALL HAVE THE ENTIRE SEWER SYSTEM FLUSHED AND CLEANED.
- NEXT THE SYSTEM SHALL BE CAMERA INSPECTED AND VIDEOTAPED.
- VEOLIA WATER SHALL REVIEW THE VIDEOTAPES AND WRITE A PUNCH LIST OF ALL OR ANY ITEMS THAT REQUIRE ATTENTION.
- AS A CONDITION OF THE FINAL ACCEPTANCE OF THE SANITARY SEWER SYSTEM, THE CONTRACTOR SHALL FORMALLY REQUEST, THROUGH THE CITY ENGINEERING DIVISION, A FINAL INSPECTION BY VEOLIA.
- BEFORE FINAL APPROVAL OF THE SEWER SYSTEM CAN BE GRANTED AND CERTIFICATES OF OCCUPANCY ARE ISSUED, THE CONTRACTOR SHALL SUBMIT TO VEOLIA TWO (2) SETS OF SEWER AS-BUILT PLANS WITH GIS COORDINATES FOR EACH MANHOLE. THE AS-BUILTS SHALL BE OF "COPY-TUFF" MEDIA AND IN COMPUTER .dxf OR AUTOCAD R14 OR AUTOCAD LT 2002 VERSION FILE FORMAT AND MEET THE FOLLOWING CRITERIA:
 - ALL RECORD PLANS ARE REQUIRED TO BE THE UNIFORM SIZE OF 20" x 40".
 - SCALE FOR THE PLANS: HORIZONTAL 1" = 40' AND VERTICAL 1" = 10'.
 - STATION FIGURES ARE TO BE SHOWN ON ALL MANHOLES.
 - DISTANCES OF LATERALS ARE TO BE SHOWN WITH DEPTHS OF THE END OF THE PIPE AT THE STREET LINE.
 - TIES TO THE "YYS", MANHOLES, AND ENDS OF LATERALS ARE TO BE SHOWN FROM PERMANENT STRUCTURES.
 - LEDGE AND SELECT MATERIALS ARE TO BE SHOWN ON THE PROFILE.
 - SLOPE, SIZE, LENGTH, AND TYPE OF PIPE ARE TO BE SHOWN ON THE PROFILE. ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO BE SHOWN ON THE PROFILE.
 - SEWER RECORD AND STORM DRAIN PLANS ARE TO BE DRAWN SEPARATELY.
 - THE RECORD PLAN SHALL BE DRAWN SO THAT THE NORTH DESIGNATION IS POINTING IN THE UPPER QUADRANT. AN ID TABLE NEEDS TO BE PROVIDED ON THE PLANS.
 - THE X AND Y COORDINATES SHALL BE THE NAD 83 RI STATE PLANE FEET COORDINATES.
 - ELEVATIONS SHALL BE BASED ON THE CITY OF CRANSTON 5 MEAN HIGH WATER (MHW) DATA FOR THE VERTICAL COORDINATES.
- FINAL APPROVAL AND ISSUANCE OF THE CERTIFICATES OF OCCUPANCY ARE CONTINGENT UPON THE OWNER/DEVELOPER'S SUBMISSION OF AN ACCEPTABLE, PERPETUAL OPERATION AND MAINTENANCE PLAN TO THE CITY AND VEOLIA FOR THE PRIVATE SEWAGE SYSTEM.

ZONING CRITERIA	REQUIRED	PROPOSED PARCEL A	PROPOSED PARCEL B
ZONING DISTRICT	A-6	A-6	A-6
MINIMUM LOT AREA	6,000 SF	13,650 SF	12,350 SF
MINIMUM LOT WIDTH AND FRONTAGE	60 FT	130 FT	130 FT
MINIMUM FRONT YARD	25 FT	21.4 FT*	26 FT
MINIMUM REAR YARD	8 FT	N/A	N/A
MINIMUM SIDE YARD	30%	14.12%	20.90 FT
MAXIMUM LOT BUILDING COVERAGE	35 FT	<35 FT	34.25 FT

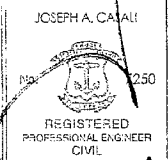
* EXISTING NON-CONFORMING CONDITION



SCALE (FEET)
0 10 20 40 80
1 INCH = 20 FT



JOE CASALI ENGINEERING, INC.
CIVIL - SITE DEVELOPMENT - TRANSPORTATION
DRAINAGE - WETLANDS - EROSION CONTROL - RECORDS
300 POST RD., WARRICK, RI 02886
(401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM



PROPOSED MINOR SUBDIVISION
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND
AP 12-5, LOTS 294, 295, 296, 297, 298 & 299

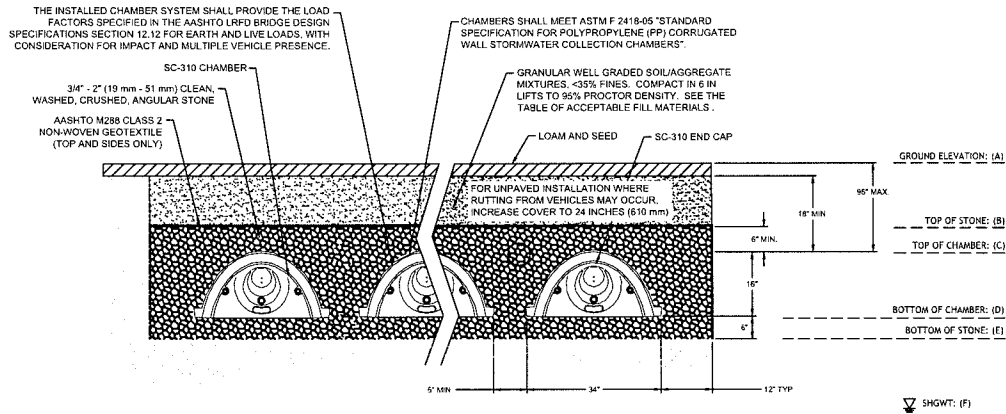
REVISIONS:	
NO.	DATE DESCRIPTION

DESIGNED BY:	WMLR
DRAWN BY:	JAS/SEP
CHECKED BY:	JAC
DATE:	APRIL 2021
PROJECT NO:	19-34g

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SITE AND UTILITY PLAN

SHEET 4 OF 7



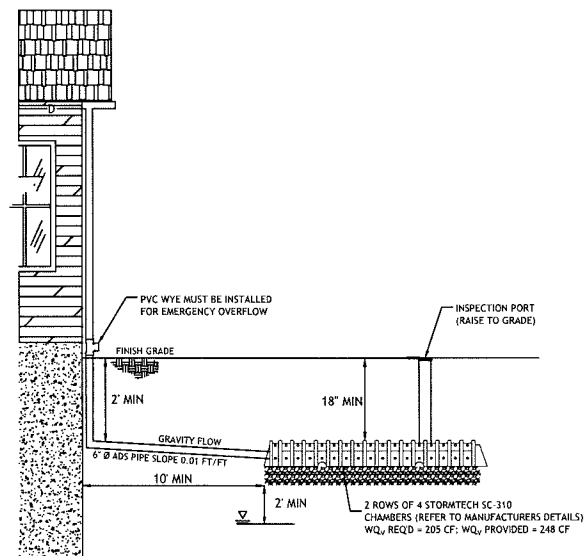
UNDERGROUND INFILTRATION SYSTEM NOTES:

- STORMTECH REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
- OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL SERVICES REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
- STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18" (457 mm) NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96" (2438 mm) INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24" (610 mm), MAXIMUM COVER IS 96" (2438 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
- AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
- STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
- THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
- STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM.

A (GROUND ELEVATION)	94.0
B (TOP OF STONE)	92.3
C (TOP OF CHAMBER)	91.8
D (BOTTOM OF CHAMBER)	90.5
E (BOTTOM OF STONE)	90.0
F (SHGWT)	88.0
DIST. E-F (SEP. TO SHGWT)	2.0'
TEST HOLE REFERENCE	TH-1

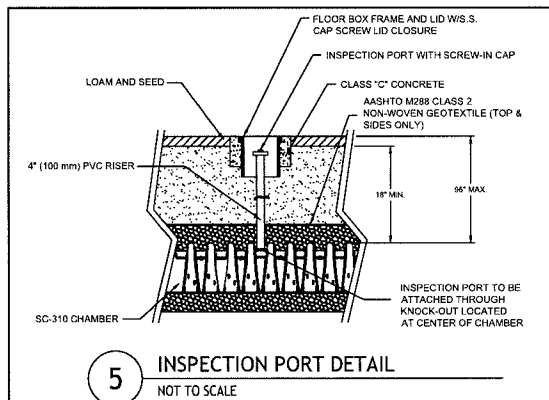
2 ROOFTOP UIC DETAIL

NOT TO SCALE



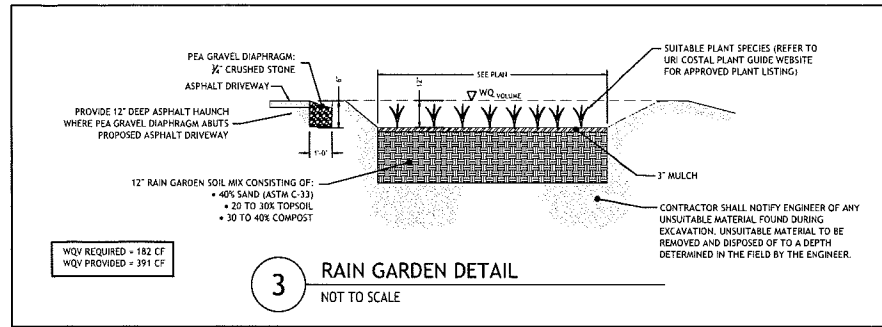
4 ROOFTOP INFILTRATION SYSTEMS - TYPICAL SECTION

NOT TO SCALE



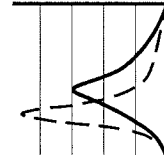
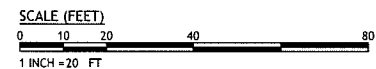
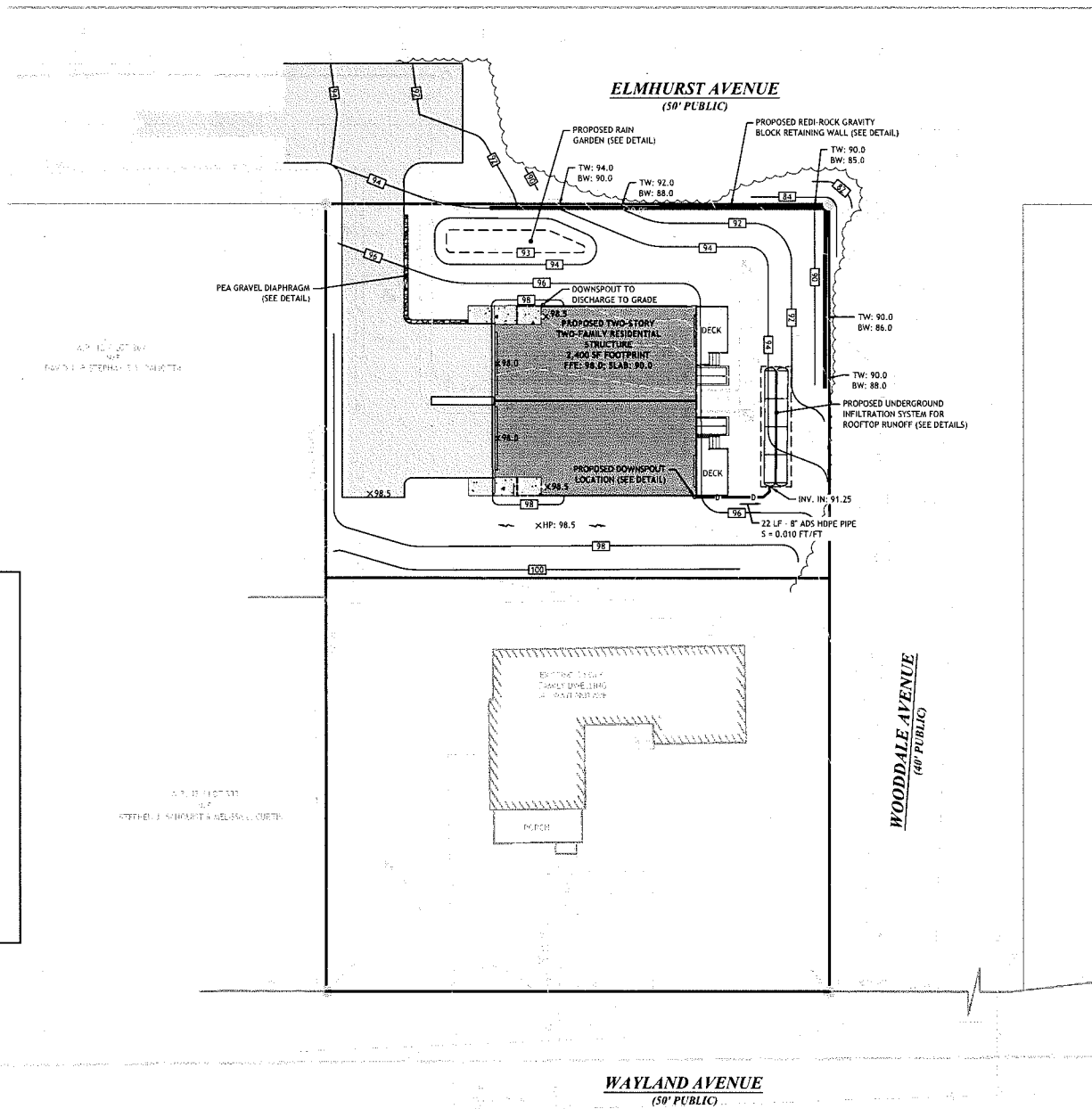
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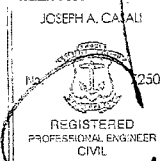


3 RAIN GARDEN DETAIL

NOT TO SCALE



JCE
JOE CASALI ENGINEERING, INC.
CIVIL SITE DEVELOPMENT, TRANSPORTATION, DRAINAGE, WATERWORKS, EROSION CONTROL
300 POST ROAD, WARWICK, RI 02888
401.944.1300 401.944.1313 FAX WWW.JCEONLINE.COM



PROPOSED MINOR SUBDIVISION
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND
AP 12-5, LOTS 294, 295, 296, 297, 298 & 299

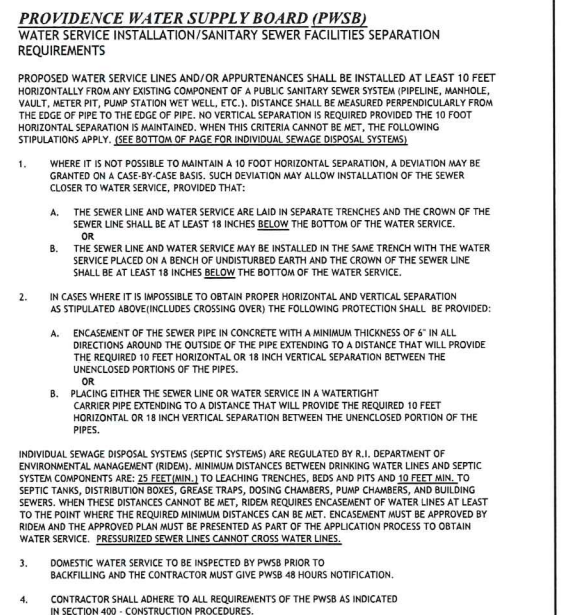
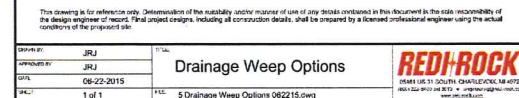
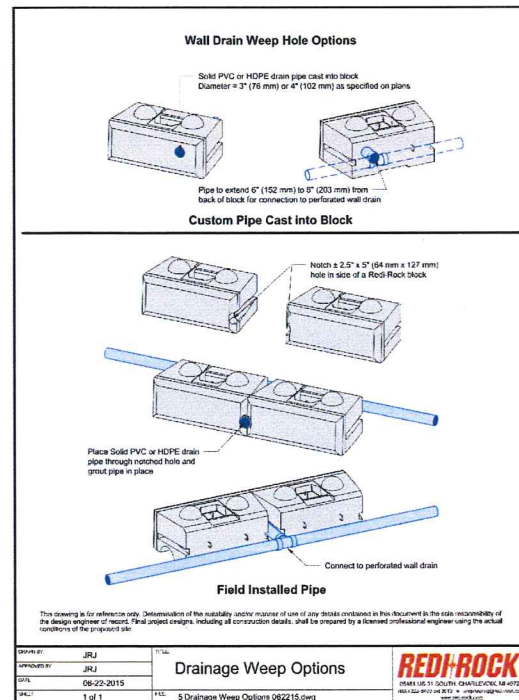
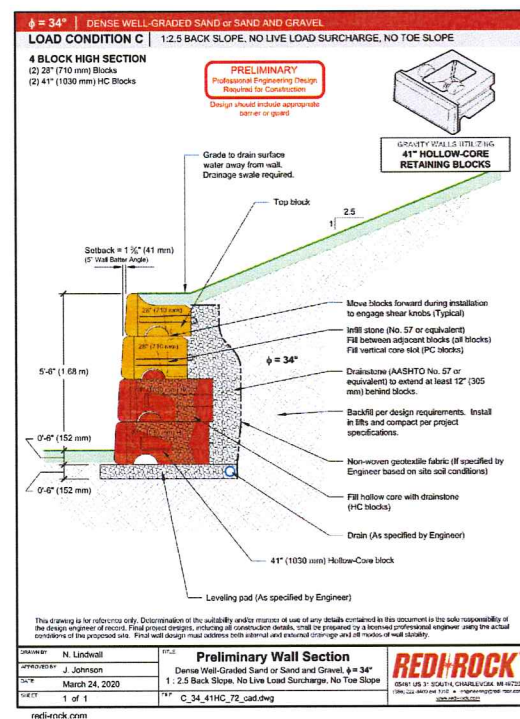
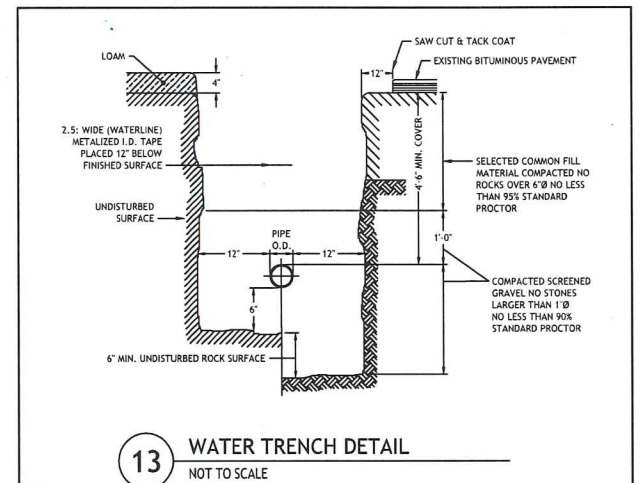
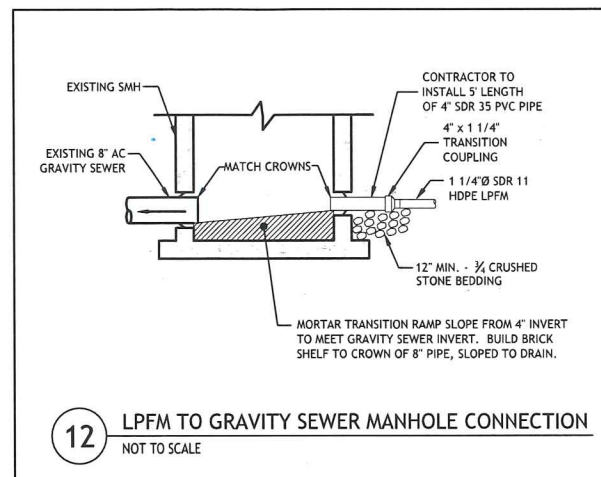
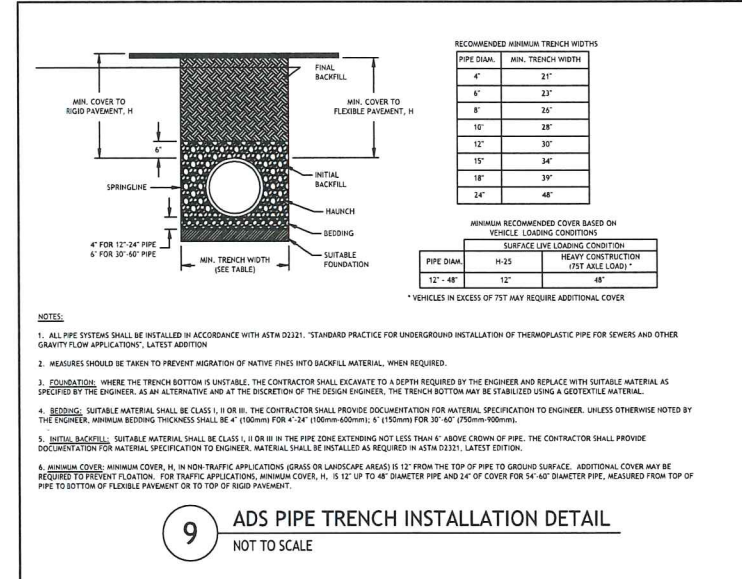
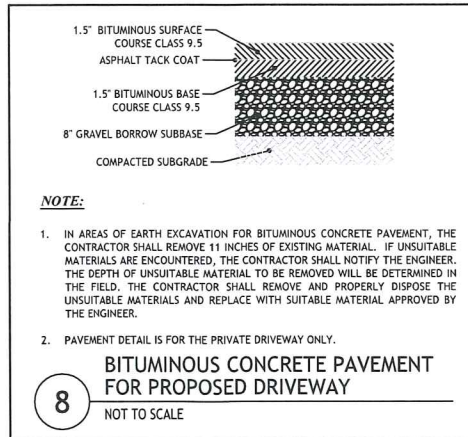
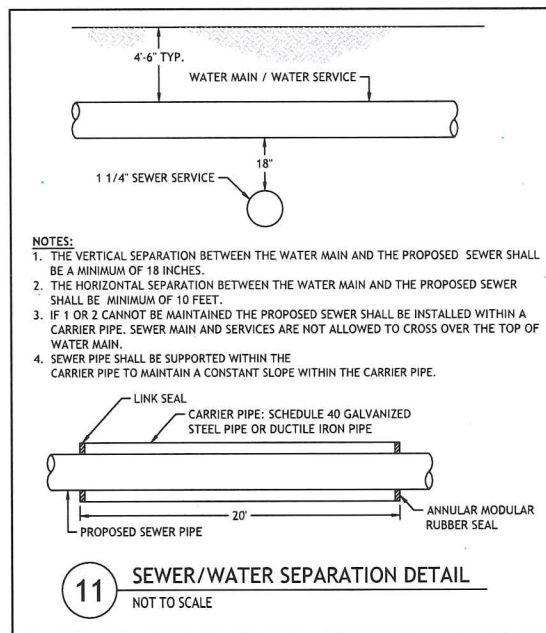
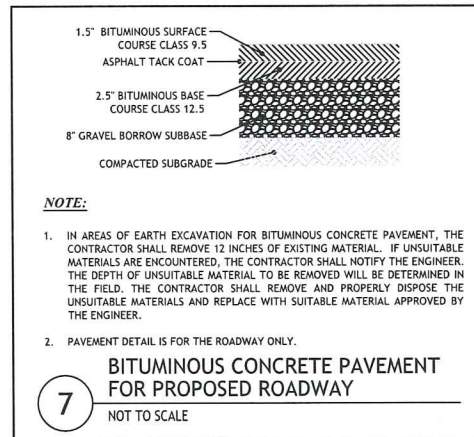
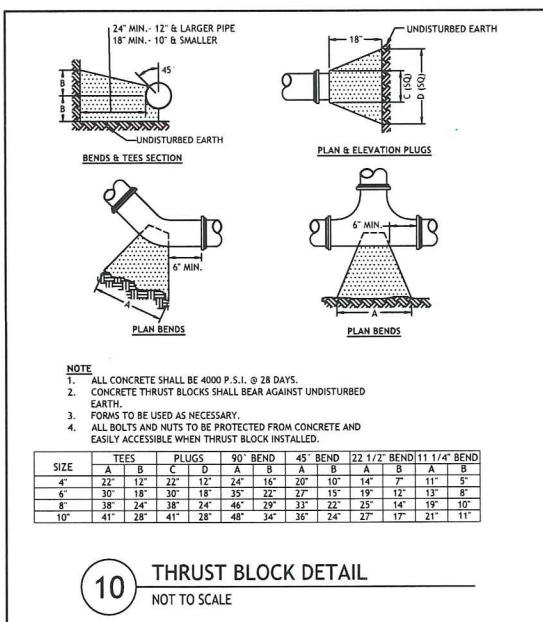
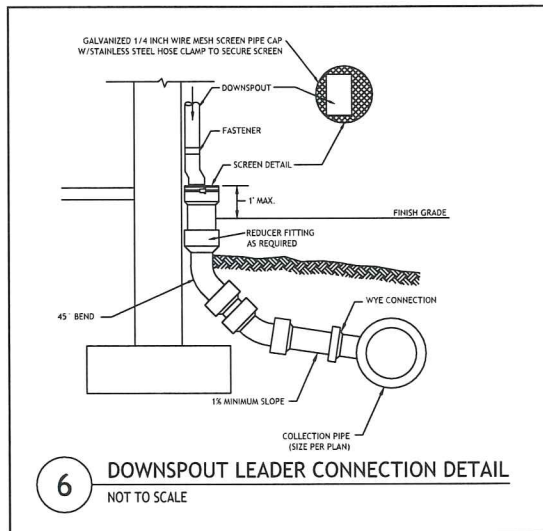
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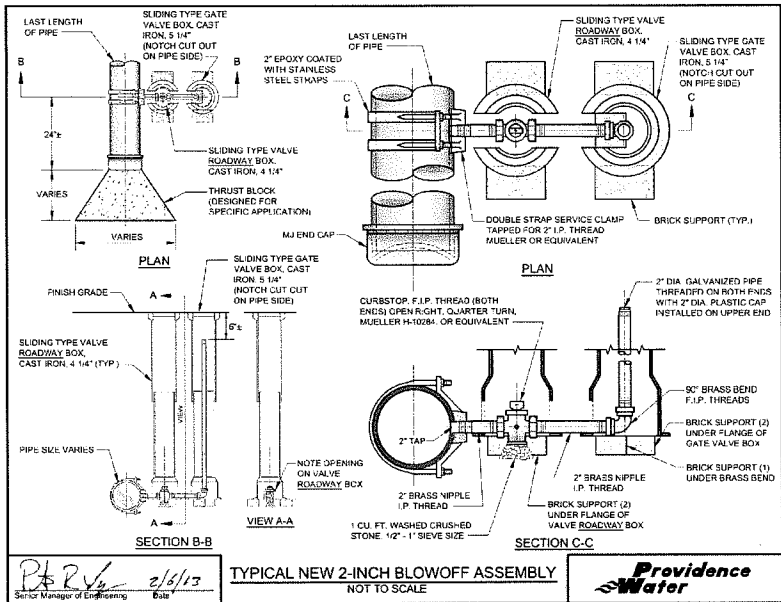
DESIGNED BY: WMLJR
DRAWN BY: JAS/SEP
CHECKED BY: JAC
DATE: APRIL 2021
PROJECT NO: 19-34a

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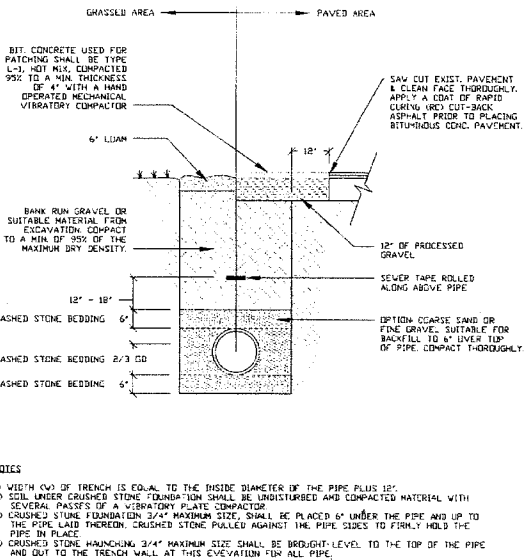
GRADING AND DRAINAGE PLAN

SHEET 5 OF 7

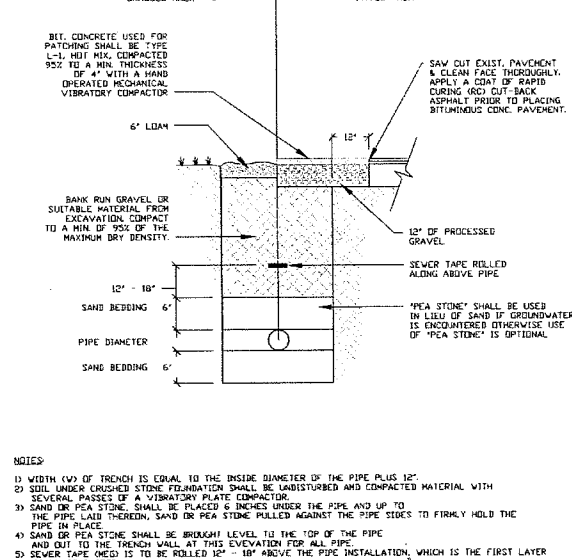




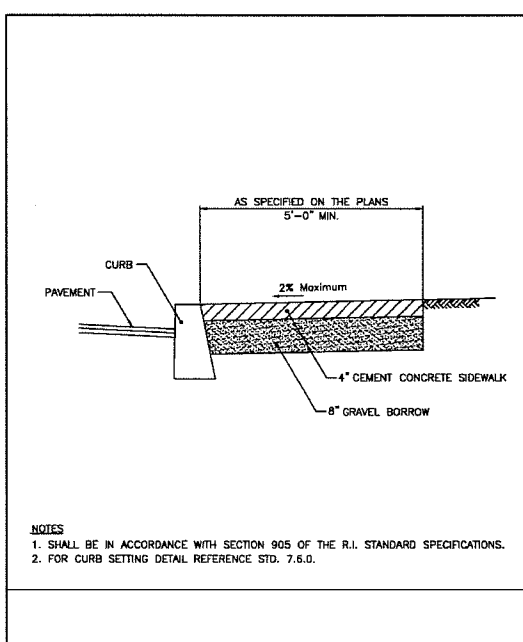
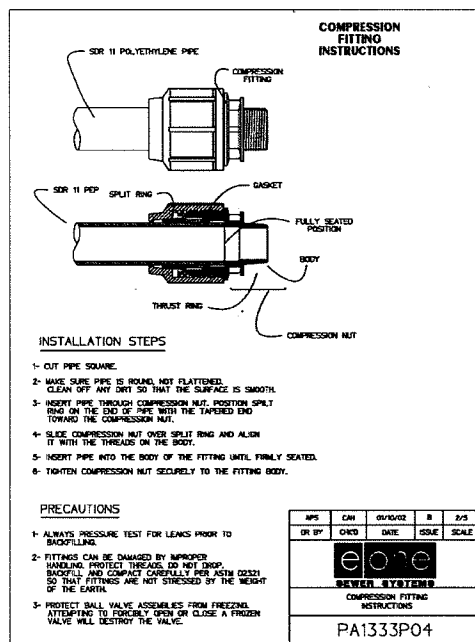
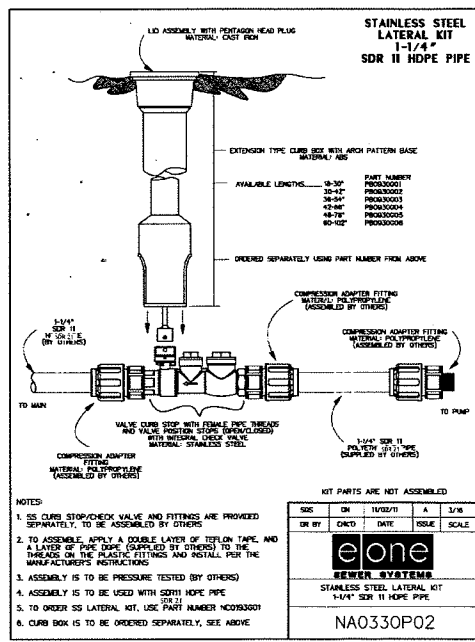
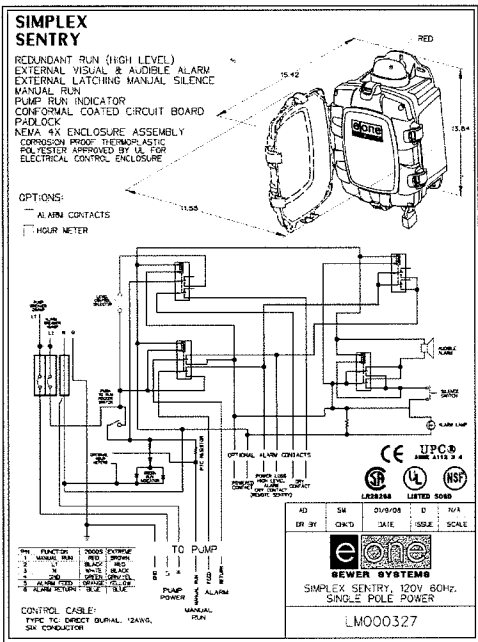
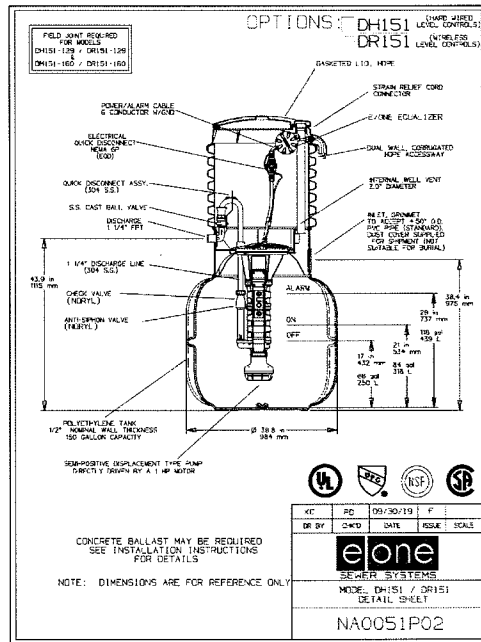
14 2-INCH BLOWOFF ASSEMBLY
NOT TO SCALE



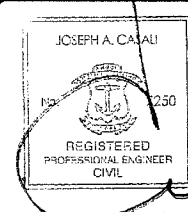
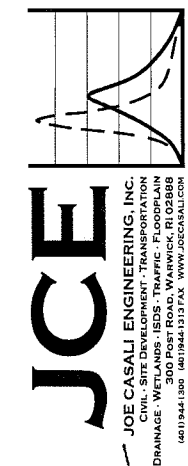
15 TYPICAL SEWER LINE TRENCH DETAIL
NOT TO SCALE



16 LOW PRESSURE SEWER TRENCH
NOT TO SCALE



RHODE ISLAND DEPARTMENT OF TRANSPORTATION				
CEMENT CONCRETE SIDEWALK				
NO.	BY	DATE	ISSUE	SCALE
1	WML	3/7/95		
2	WML	06/07/10		



PROPOSED MINOR SUBDIVISION
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND
AP 12-5, LOTS 294, 295, 296, 297, 298 & 299

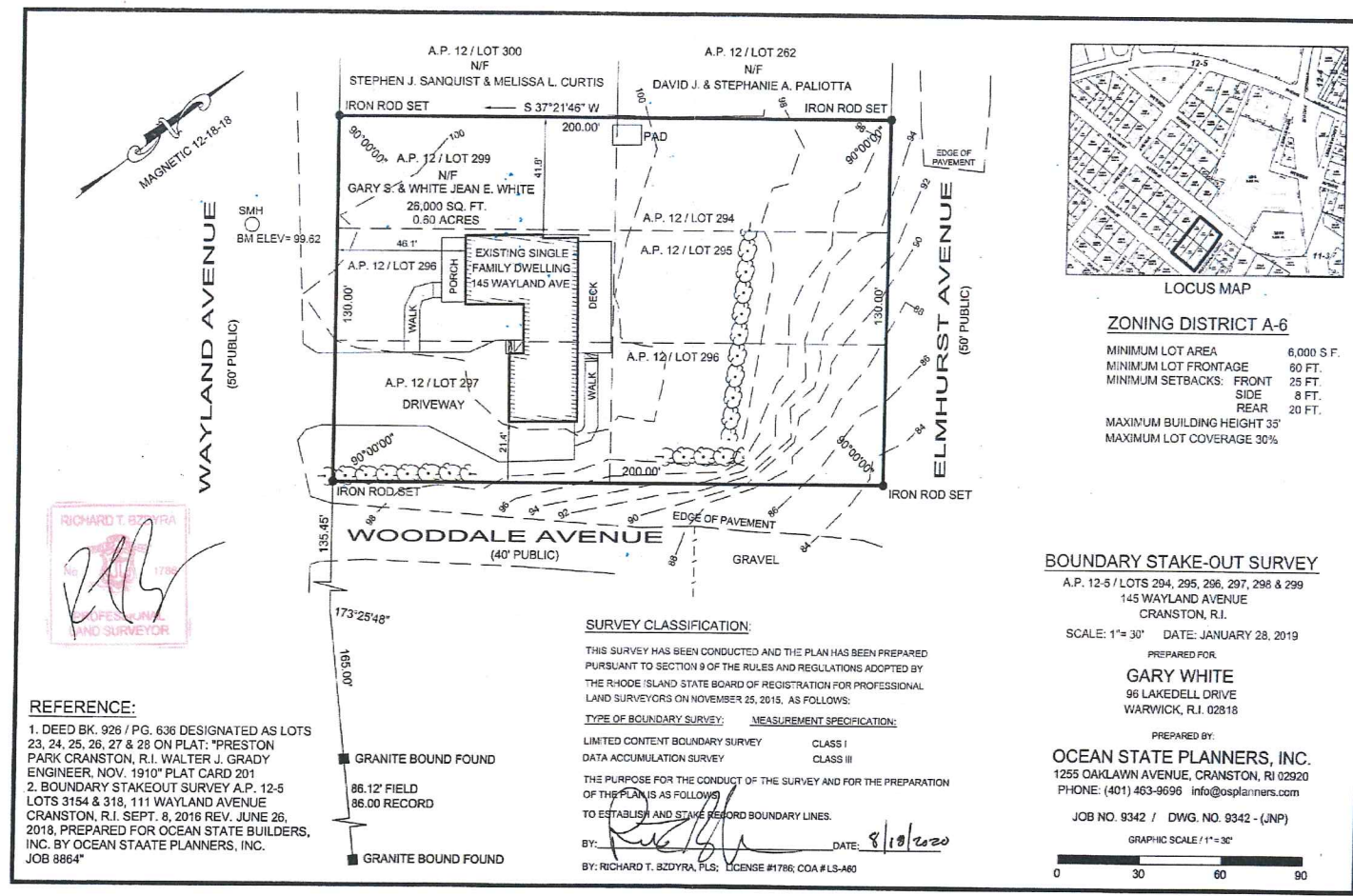
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2		

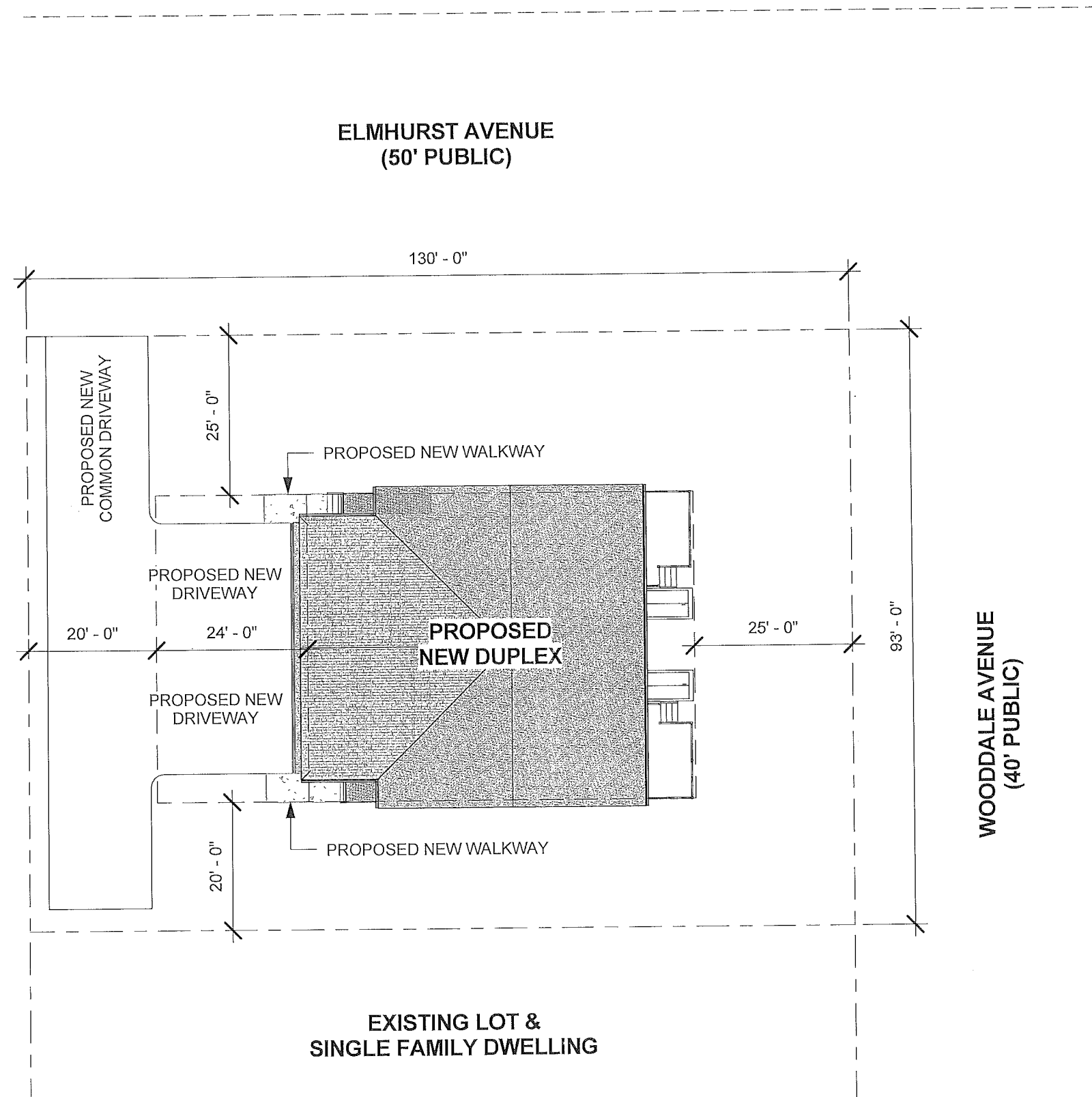
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CHECKED BY: JAC
DATE: APRIL 2021
PROJECT NO: 19-34a

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SITE DETAILS II

SHEET 7 OF 7





1 PROPOSED SITE PLAN
1" = 20'-0"

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ARCHITECTURAL DESIGN INC.

MASTER PLANNING | ARCHITECTURE | INTERIOR DESIGN | PROJECT MANAGEMENT | CONSULTING

4 HIXON STREET
BELLINGHAM, MASSACHUSETTS 02019
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CLIENT:

GARY WHITE
96 LAKEDELL DRIVE
EAST GREENWICH, RHODE ISLAND 02818

PROJECT:

DUPLEX DWELLING PROPOSED FOR
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND 02818

SITE PLAN

PROJECT NUMBER: 19-017

DATE: 2/16/2021

DRAWN BY: GJB

CHK'D BY: GJB

SKA-000

SCALE: 1" = 20'-0"

2/16/2021 10:51:56 PM



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CLIENT:

GARY WHITE
96 LAKEDELL DRIVE
EAST GREENWICH, RHODE ISLAND 02818

PROJECT:

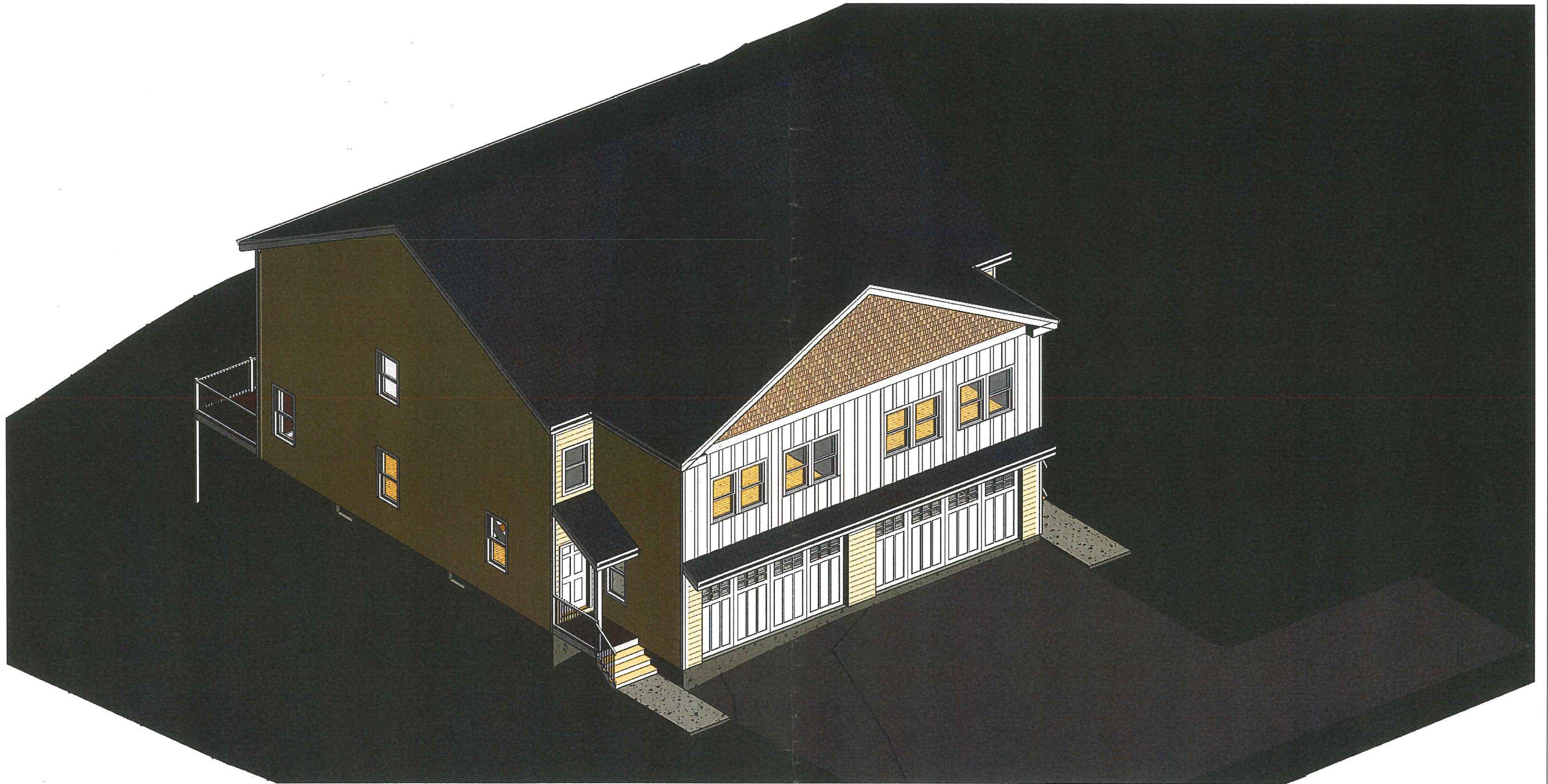
DUPLEX DWELLING PROPOSED FOR
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND 02818

RENDERING

PROJECT NUMBER: 19-017
DATE: 2/16/2021
DRAWN BY: GJB
CHK'D BY: GJB

SKA-001

SCALE: 12" = 1'-0"



PROPOSED OVERALL - 3D AXON VIEW
FRONT

PROGRESS PRINT - NOT TO BE USED FOR CONSTRUCTION

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CLIENT:

GARY WHITE
96 LAKEDELL DRIVE
EAST GREENWICH, RHODE ISLAND 02818

PROJECT:

DUPLEX DWELLING PROPOSED FOR
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND 02818

3D AXON VIEW

PROJECT NUMBER: 19-017

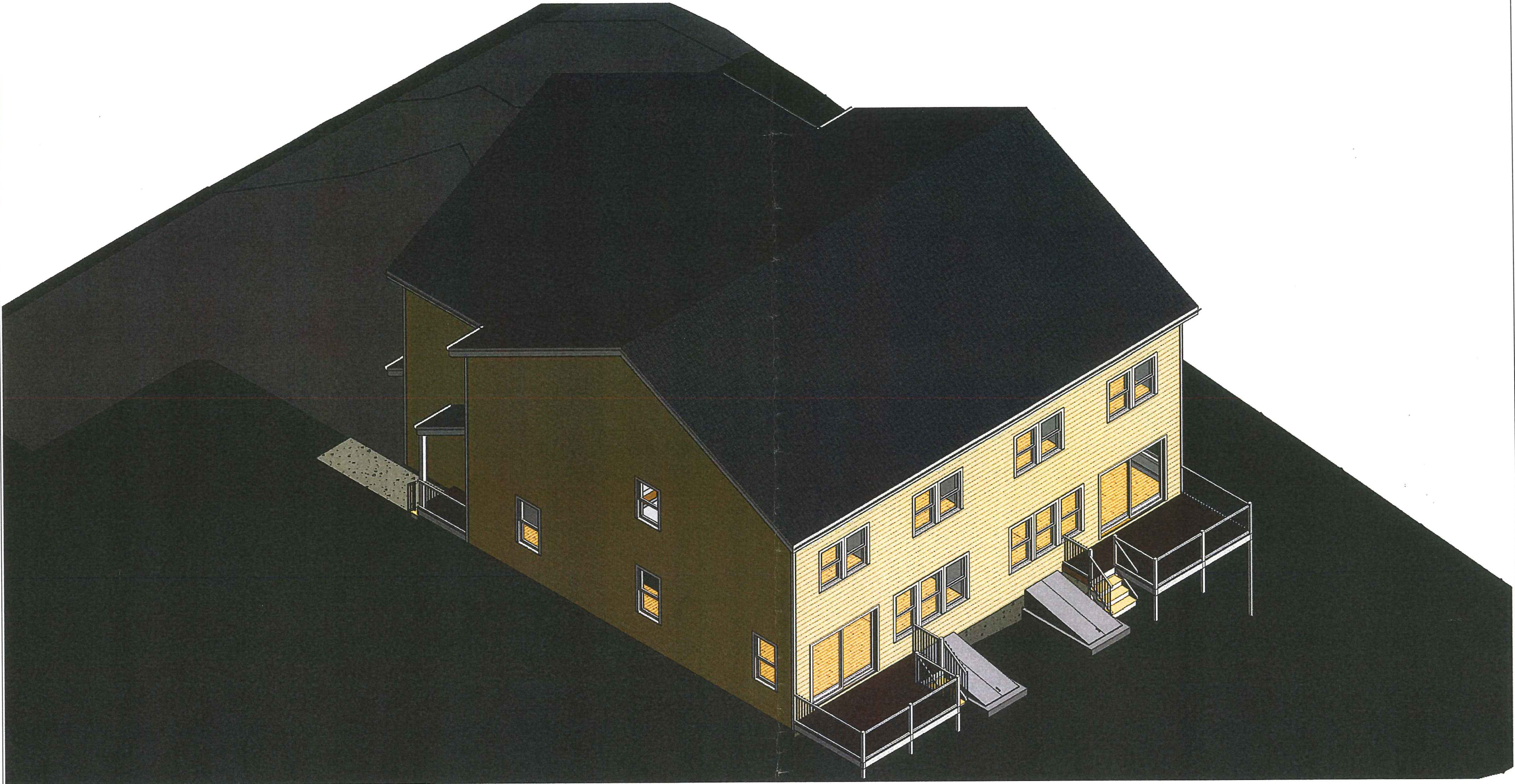
DATE: 2/16/2021

DRAWN BY: GJB

CHK'D BY: GJB

SKA-002

SCALE:



PROPOSED OVERALL - 3D AXON VIEW
REAR

PROGRESS PRINT - NOT TO BE USED FOR CONSTRUCTION

1

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BELLINGHAM, MASSACHUSETTS 02019
TEL: (508) 380-4540
EMAIL: buckinghamarchitecture@yahoo.com

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CLIENT: GARY WHITE
96 LAKEDELL DRIVE
EAST GREENWICH, RHODE ISLAND 02818

PROJECT: DUPLEX DWELLING PROPOSED FOR
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND 02818

3D AXON VIEW

PROJECT NUMBER: 19-017
DATE: 2/16/2021
DRAWN BY: GJB
CHK'D BY: GJB

SKA-003

SCALE:



① PROPOSED FRONT ELEVATION
1/8" = 1'-0"



② PROPOSED BACK ELEVATION
1/8" = 1'-0"

PROGRESS PRINT - NOT TO BE USED FOR CONSTRUCTION

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PROJECT:

DUPLEX DWELLING PROPOSED FOR
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND 02818

EXTERIOR ELEVATIONS

PROJECT NUMBER: 19-017

DATE: 2/16/2021

DRAWN BY: GJB

CHK'D BY: GJB

SKA-201

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

2/16/2021 10:52:12 PM



① PROPOSED RIGHT SIDE ELEVATION
1/8" = 1'-0"



② PROPOSED LEFT SIDE ELEVATION
1/8" = 1'-0"

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PROJECT:

DUPLEX DWELLING PROPOSED FOR
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND 02818

EXTERIOR ELEVATION

PROJECT NUMBER: 19-017

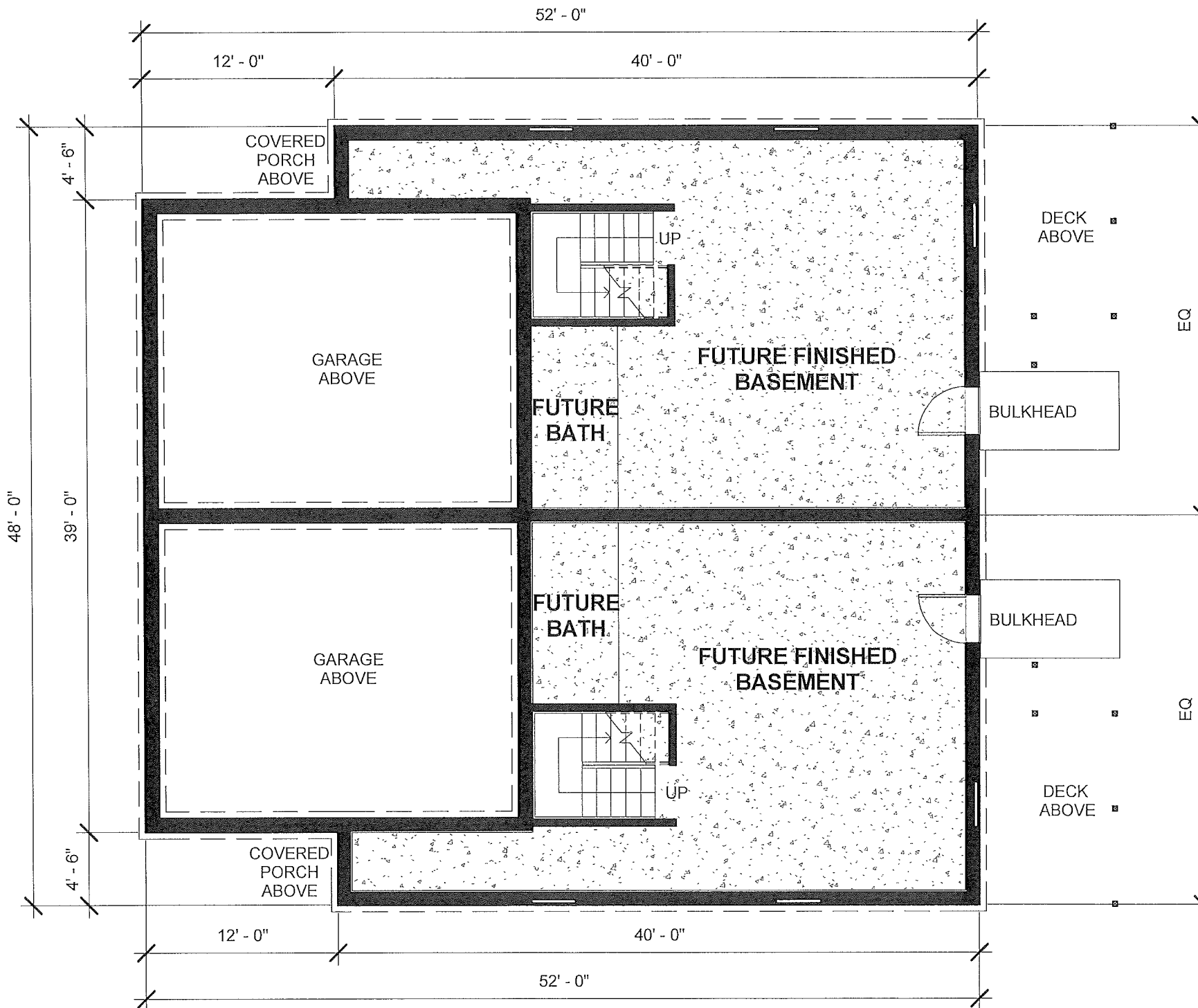
DATE: 2/16/2021

DRAWN BY: GJB

CHK'D BY: GJB

SKA-202

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



1 PROPOSED BASEMENT PLAN
1/8" = 1'-0"

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PROJECT: DUPLEX DWELLING PROPOSED FOR
145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND 02818

BASEMENT FLOOR PLAN

PROJECT NUMBER: 19-017

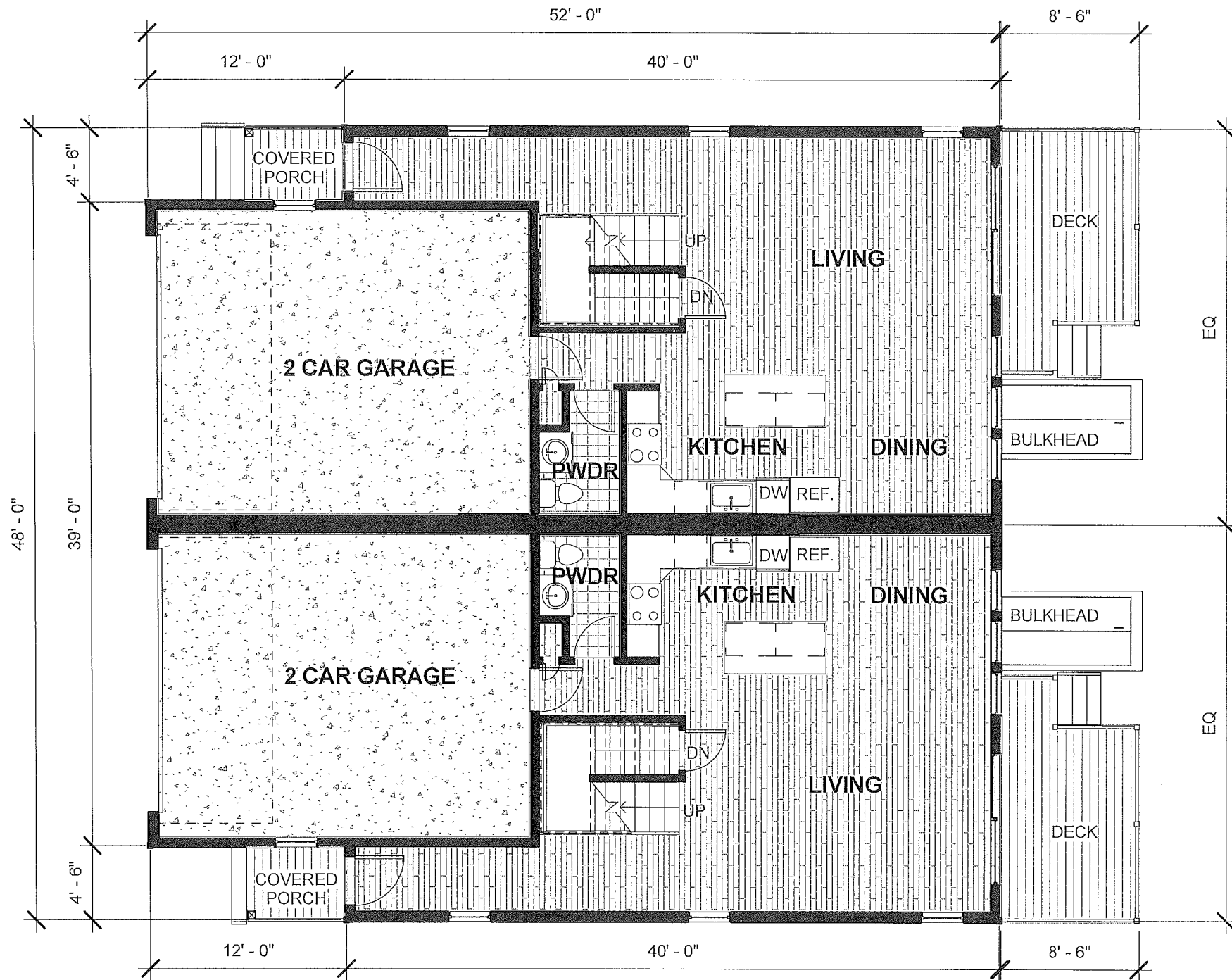
DATE: 2/16/2021

DRAWN BY: GJB

CHK'D BY: GJB

SKA-100

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



1 PROPOSED FIRST FLOOR PLAN
1/8" = 1'-0"

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PROJECT:

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145 WAYLAND AVENUE
CRANSTON, RHODE ISLAND 02818

FIRST FLOOR PLAN

PROJECT NUMBER: 19-017

DATE: 2/16/2021

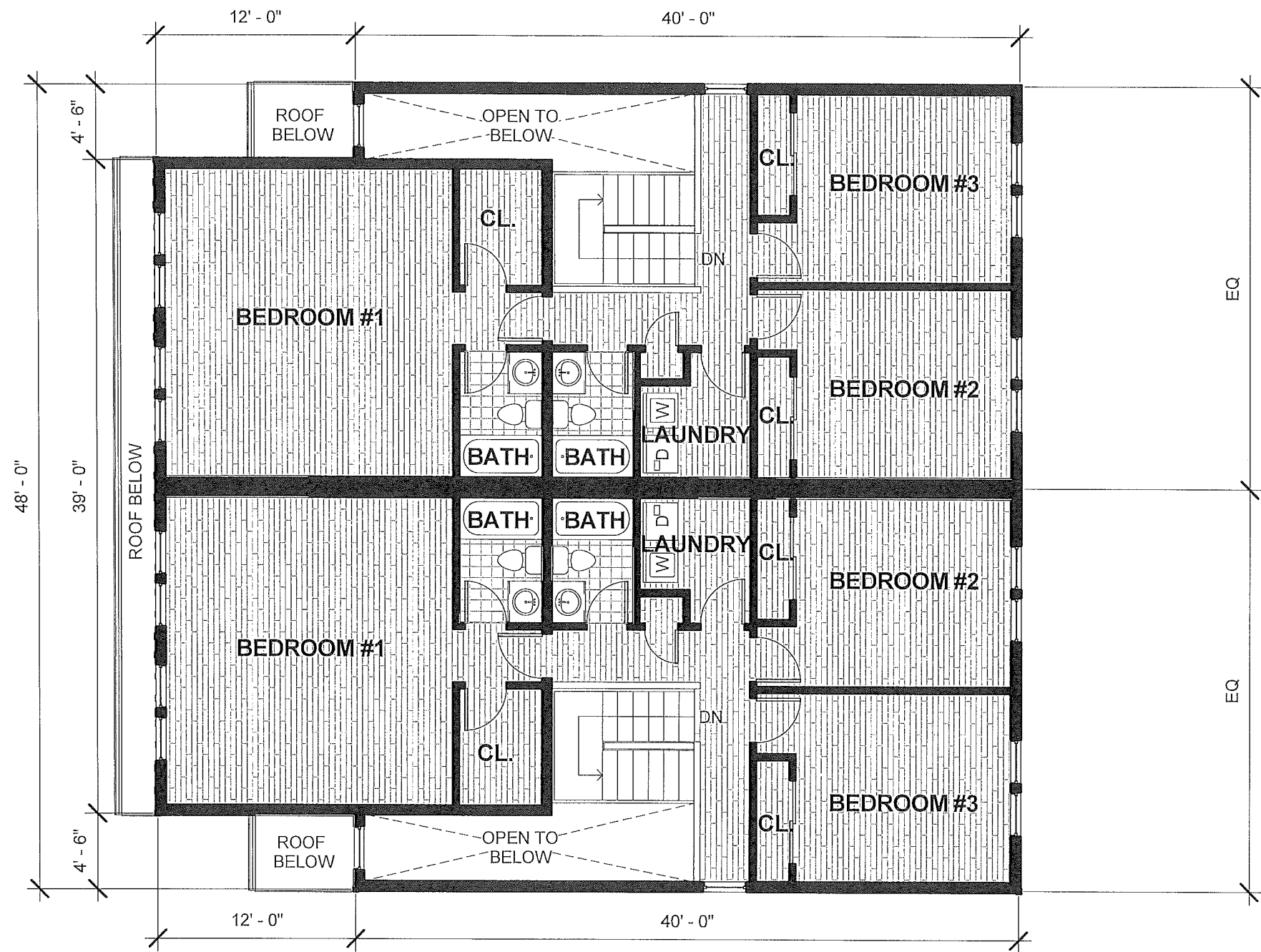
DRAWN BY: GJB

CHK'D BY: GJB

SKA-101

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

2/16/2021 10:52:08 PM



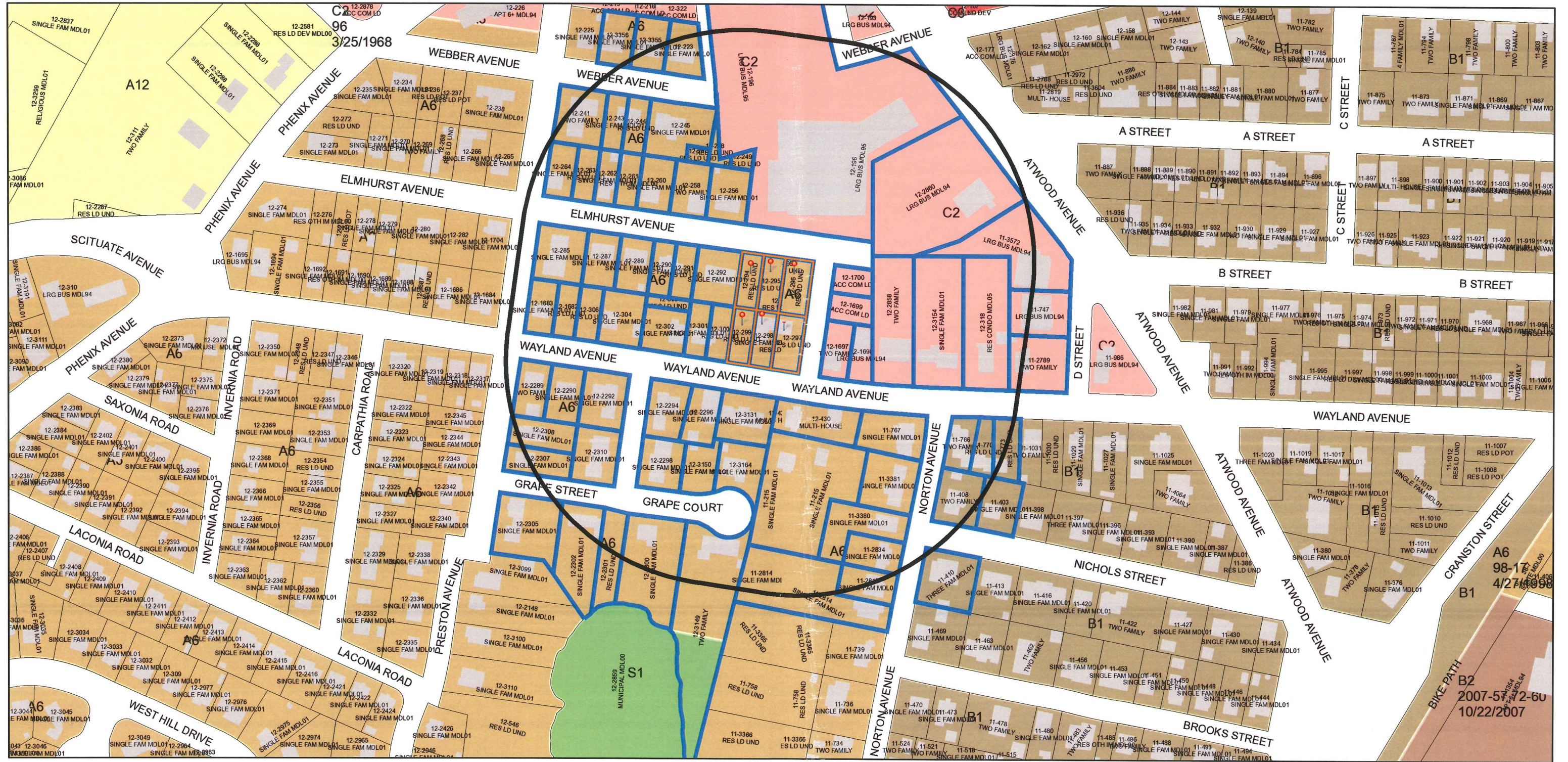
① PROPOSED SECOND FLOOR PLAN
1/8" = 1'-0"

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<div><div>BUCKINGHAM ARCHITECTURAL DESIGN INC.</div><div>MASTER PLANNING ARCHITECTURE INTERIOR DESIGN PROJECT MANAGEMENT CONSULTING</div></div> <div>4 HIXON STREET BELLINGHAM, MASSACHUSETTS 02019 TEL: (508) 380-4540 EMAIL: buckinghamarchitecture@yahoo.com</div>	<div>ANY REPRODUCTION, POSSESSION, OR USE OF THIS DRAWING OR ANY PART THERE OF WITHOUT WRITTEN PERMISSION OF BUCKINGHAM ARCHITECTURAL DESIGN INC, 4 HIXON STREET BELLINGHAM MASSACHUSETTS, IS PROHIBITED. VIOLATORS WILL BE PROSECUTED TO THE FULL EXTENT OF THE LAW.</div>	<div>CLIENT: GARY WHITE 96 LAKEDELL DRIVE EAST GREENWICH, RHODE ISLAND 02818</div> <div>PROJECT: DUPLEX DWELLING PROPOSED FOR 145 WAYLAND AVENUE CRANSTON, RHODE ISLAND 02818</div>	<div>SECOND FLOOR PLAN</div> <table><tr><td>PROJECT NUMBER: 19-017</td><td rowspan="4">SKA-102</td></tr><tr><td>DATE: 2/16/2021</td></tr><tr><td>DRAWN BY: GJB</td></tr><tr><td>CHK'D BY: GJB</td></tr><tr><td colspan="2">SCALE: 1/8" = 1'-0"</td></tr></table>	PROJECT NUMBER: 19-017	SKA-102	DATE: 2/16/2021	DRAWN BY: GJB	CHK'D BY: GJB	SCALE: 1/8" = 1'-0"	
PROJECT NUMBER: 19-017	SKA-102									
DATE: 2/16/2021										
DRAWN BY: GJB										
CHK'D BY: GJB										
SCALE: 1/8" = 1'-0"										

2/16/2021 10:52:09 PM

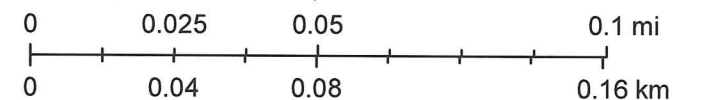
145 Wayland Ave 400' Radius Plat 12 Lots 294-299



3/22/2021, 9:47:09 AM

	Parcel Outlines		Buildings		A20		C1		M2
	Plat Boundaries		Zoning Dimensions		A12		C2		EI
	Parcel ID Labels		Historic Overlay District		A8		C3		MPD
	Streets Names		Zoning		A6		C4		S1
	Cranston Boundary		none		B1		C5		Other
	Parcels		A80		B2		M1		

1:2,102



City of Cranston
City of Providence, Department of Planning and Development