

**NORTHWEST CORNER OF SOUTH UNION
STREET AND DUKE STREET**

TOTAL SITE AREA =	±0.2347 AC OR ±10,223 SF
TOTAL EXISTING IMPERVIOUS AREA =	±0.2287 AC OR ±9,960 SF
TOTAL PROPOSED IMPERVIOUS AREA =	±0.2189 AC OR ±9,535 SF
TOTAL DISTURBED AREA =	±0.3952 AC OR ±17,217 SF
TAX PARCEL IDENTIFICATION =	075.03-02-15 EXISTING/PROPOSED ZONE: W-1
ADDRESS:	101 DUKE STREET, ALEXANDRIA VA 22314

PARKING REQUIRED

2 SPACES PER UNIT X 6 UNITS = 12 SPACES

PARKING PROVIDED

12 SPACES (STANDARD SPACES WITHIN INDIVIDUAL UNIT GARAGES)

LOADING REQUIRED

NONE

CODE :	2015 VIRGINIA CONSTRUCTION CODE
USE GROUP :	R-3
CONSTRUCTION TYPE :	VA
ALLOWABLE HEIGHT :	50'
ALLOWABLE NUMBER OF STORIES:	4
ALLOWABLE AREA :	UNLIMITED
NFPA :	13R

A map of the study area in Washington, D.C. The map shows a grid of streets. Richmond Hwy runs diagonally from the top left. N. Patrick St, N. Washington St, Pendleton St, King St, Prince St, Duke St, S. Lee St, Union St, and Jefferson St run roughly parallel to each other. The POTOMAC RIVER is to the east. Major highways I-495 and I-236 are shown on the left. A black arrow points to the 'SITE' location on Prince St, between Duke St and S. Lee St. A north arrow is in the bottom right corner.

ZONING :	EXISTING ZONE: W-1; PROPOSED ZONE: W-1
MASTER PLAN :	OLD TOWN, OLD AND HISTORIC DISTRICT
SITE AREA (SQ. FT) (ACRES):	±0.2347 AC OR ±10,223 SF
USE:	EXISTING: COMMERCIAL PROPOSED: TOWNHOUSE RESIDENTIAL (SIX (6) FEE SIMPLE UNITS)

REQUIREMENT	REQUIRED	LOT 1	LOT 2	LOT 3	LOT 4	LOT 5	LOT 6	TOTAL
ZONE	W-1							
DENSITY (UNITS/ACRE)	30							--
FAR*	1.0 (2.0 W/ SUP)	1.83	1.90	1.56	1.56	1.90	1.64	1.72
GROSS FLOOR AREA (SF)	N/A	3846	3846	3846	3846	3846	3846	23076
FLOOR AREA (SF)	20,446 SF TOTAL W/ SUP	2930	2930	2930	2930	2930	2930	17580
LOT AREA (SF)	1,452 SF PER LOT	1602	1540	1875	1875	1540	1791	10223
SETBACKS (FT)								
FRONT - S. UNION ST.	0 FT	4.1	4.1	4.1	4.1	4.1	4.1	--
FRONT - DUKE ST.	0 FT	0.0	N/A	N/A	N/A	N/A	N/A	--
SIDE	8.0 FT	13.3	N/A	4.3**	4.2**	N/A	2.8**	--
REAR	8.0 FT	N/A	13.3	13.3	13.3	13.3	13.3	--
FRONTAGE/LOT WIDTH (FT)								
INTERIOR UNITS	18 FT	--	22.5	--	--	22.5	--	--
END UNITS	26 FT	22.48**	--	26.78	26.78	--	25.99**	--
OPEN SPACE (SF)	300 SF PER DU (1800 SF TOTAL)							
GROUND LEVEL	--	--	--	--	--	--	--	--
ROOFTOP	--	334	333	333	333	333	334	2000
AVERAGE FINISHED GRADE	--	13.69	13.92	14.22	14.36	13.97	14.02	--
HEIGHT (FT)	50 FT (MAX)	50	50	50	50	50	50	--
PARKING	2 SPACES PER UNIT (12 TOTAL)	2	2	2	2	2	2	12
TRIP GENERATION***	--	5.86	5.86	5.86	5.86	5.86	5.86	36
TREE CANOPY COVER****	25%	0	0	590 SF, 31%	590 SF, 31%	0	200 SF, 11%	1380 SF, 13.5%

(19.5%,

1. ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED PRIOR TO GROUND-DISTURBING ACTIVITIES (SUCH AS CORING, GRADING, FILLING, VEGETATION REMOVAL, UNDERGROUNDING UTILITIES, PILE DRIVING, LANDSCAPING, AND OTHER EXCAVATIONS AS DEFINED IN SECTION 2-151 OF THE ZONING ORDINANCE) OR A RESOURCE MANAGEMENT PLAN MUST BE IN PLACE TO PRESERVE AND/OR RECOVER SIGNIFICANT RESOURCES IN CONCERT WITH CONSTRUCTION ACTIVITIES. TO CONFIRM, CALL ALEXANDRIA ARCHAEOLOGY AT 703-746-4399.
2. THE APPLICANT SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-746-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.
3. THE APPLICANT SHALL NOT ALLOW ANY METAL DETECTION AND/OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY THE ALEXANDRIA ARCHAEOLOGY. FAILURE TO COMPLY SHALL RESULT IN PROJECT DELAY.

THE SITE CURRENTLY CONSISTS OF A THREE (3) LEVEL PARKING GARAGE, ORIGINALLY CONSTRUCTED IN 1945 AND UPDATED IN 1988, WITH APPROXIMATELY 72 SPACES. TWO CURB CUTS, AT DUKE AND UNION STREETS, PROVIDE ACCESS TO TWO OF THE THREE PARKING LEVELS. ACCESS TO THE THIRD LEVEL IS FROM A PRIVATE ALLEY ON THE WEST SIDE OF THE GARAGE. CURRENT ZONING DESIGNATION FOR THE PROPERTY IS W-1 AND IS LISTED AS "INDUSTRIAL" ON THE GENERALIZED LAND USE PLAN. THE PROPERTY RESIDES WITHIN THE OLD TOWN SMALL AREA PLAN AND ACROSS THE STREET FROM THE 2012 WATERFRONT SMALL AREA PLAN. PER MAP 9 IN THE SMALL AREA PLAN, HEIGHT IS LIMITED TO 50 FEET.

THE REDEVELOPMENT PROPOSES TO DEMOLISH EXISTING PARKING GARAGE AND CONSTRUCT SIX (6) TOWNHOUSE UNITS. THE END UNITS WILL BE UP TO 22.5' WIDE AND THE INTERIOR UNITS WILL BE 22' WIDE. THE TOWNHOUSES WILL BE FEE SIMPLE WITH LOT SIZES GREATER THAN 1,540 SF. EACH UNIT WILL CONTAIN A TWO CAR, ATTACHED GARAGE ACCESSIBLE FROM THE EXISTING 18.75 WESTERN PRIVATE ALLEY. TOTAL FAR WILL BE AT OR BELOW 2.0, AFTER ALLOWABLE FAR DEDUCTIONS FOR STAIRS, ELEVATORS, MECHANICAL AND BATHROOMS.

THE FIRST FLOOR WILL BE ELEVATED TOWARDS THE GRADE OF THE WESTERN ALLEY WITH STOOPS ALONG UNION STREET. THIS WILL ALSO KEEP THE BOTTOM FLOORS WELL ABOVE THE 100-YEAR FLOODPLAIN. OPEN SPACE WILL BE PROVIDED IN EACH INDIVIDUAL UNIT ON TERRACES.

THE SITE IS LOCATED IN THE CITY OF ALEXANDRIA OLD AND HISTORIC DISTRICT.

1. THERE ARE NO TIDAL WETLANDS, RPA'S, TIDAL SHORES, TRIBUTARY STREAMS, CONNECTED TIDAL WETLANDS, ISOLATED WETLANDS, HIGHLY ERODIBLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS OR WETLANDS LOCATED ON THIS SITE. THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. THE SITE IS LOCATED PARTIALLY WITHIN A MAPPED 100-YEAR FLOODPLAIN.
2. THERE ARE NO KNOWN AREAS OF MARINE CLAY DEPOSITS ONSITE, ACCORDING TO THE CITY MARINE CLAYS MAP.
3. THERE ARE NO KNOWN RESOURCE PROTECTION AREAS (RPA) ONSITE, ACCORDING TO THE CITY RECORD MAPS.
4. THERE IS NO KNOWN SOIL CONTAMINATION ON THIS PROPERTY.
5. THIS SITE IS WITHIN A COMBINED SEWER AREA.

1. SPECIAL USE PERMIT TO INCREASE FAR TO 2.0 (5-504.C).
2. MODIFICATION TO SIDE YARD REQUIREMENT FOR INTERIOR END TOWNHOUSE UNITS (LOTS 3,4,6) FROM 8.0' TO 4.3', 4.2', AND 2.8' RESPECTIVELY (5-506.B.1).
3. MODIFICATION TO LOT WIDTH REQUIREMENT FOR END UNITS FOR LOTS 1 AND 6 FROM 26.0' TO 22.48' AND 25.99' RESPECTIVELY (5-505.C.2).
4. MODIFICATION TO VISION CLEARANCE SETBACK (7-801).
5. MODIFICATION TO TREE CANOPY COVERAGE REQUIREMENT FROM 25% TO 0% FOR LOTS 1, 2, 5 AND TO 11% FOR LOT 6 (11-410.CC)

EXISTING LOT AREA: 10,223 SF

<u>PROPOSED LOTS</u>	<u>AVERAGE FINISHED GRADE</u>
LOT 1 = 1,602 SF	13.69 FT
LOT 2 = 1,540 SF	13.92 FT
LOT 3 = 1,875 SF	14.22 FT
LOT 4 = 1,875 SF	14.36 FT
LOT 5 = 1,540 SF	13.97 FT
LOT 6 = 1,791 SF	14.02 FT

TOTAL = 10,223 SF

SEE ARCHITECTURE PLANS FOR FAR TABULATIONS.

PROVIDED USING "INSTITUTE OF TRANSPORTATION ENGINEERS: TRIP GENERATION"

EXISTING USE: PARKING GARAGE WITH 72 SPACES SERVING SURROUNDING
RETAIL AND RESIDENTIAL USES

PROPOSED USE: RESIDENTIAL TOWNHOUSES

TOWNHOUSE* = 6 UNITS X 5.86 TRIPS/UNIT/DAY = 36 TRIPS/DAY (WEEKDAYS)*

*ITE CONDOMINIUM/TOWNHOUSE RATE 5.86 TRIPS/DWELLING UNIT

NOT APPLICABLE

1. OWNER: CUMMINGS INVESTMENTS ASSOCIATES, INC. PO BOX 231 ALEXANDRIA, VA 22313	3. LAND USE ATTORNEY: WIRE GILL LLP 1750 TYSONS BOULEVARD, SUITE 1500 TYSONS, VA 22102 ATTN: KEN WIRE	5. CIVIL ENGINEER: WALTER L. PHILLIPS, INC. 207 PARK AVENUE FALLS CHURCH, VA 22046 ATTN: TRAVIS P. BROWN, P.E.
2. DEVELOPER: ELEVENTH STREET DEVELOPMENT 24 WEST CEDAR STREET ALEXANDRIA, VA 22301 ATTN: GARRETT FERDLE	4. ARCHITECT: ODELL 111 VIRGINIA STREET, SUITE 401 RICHMOND, VA 23219 ATTN: SHAWN GLERUM, AIA	

COMPLETE STREETS POLICY TABLE	NEW	UPGRADED
CROSSWALKS (NUMBER)	-	-
STANDARD	-	-
HIGH VISIBILITY	-	-
CURB RAMPS	-	1
SIDEWALKS (LF)	-	236
BICYCLE PARKING (NUMBER OF SPACES)	-	-
PUBLIC/VISITOR	-	-
PRIVATE/GARAGE	-	-
BICYCLE PATHS (LF)	-	-
PEDESTRIAN SIGNALS	-	-

CIVIL/LANDSCAPE

- P-0101 COVER SHEET
- P-0201 GENERAL NOTES
- P-0301 CONTEXT PLAN
- P-0302 EXISTING CONDITIONS PLAN
- P-0401 PRELIMINARY SITE PLAN
- P-0402 PRELIMINARY GEOMETRIC PLAN
- P-0403 PRELIMINARY OPEN SPACE PLAN
- P-0404 FLOODPLAIN NARRATIVE
- P-0405 PRELIMINARY SUBDIVISION PLAN
- P-0501 PRELIMINARY GRADING PLAN
- P-0701 PRELIMINARY SWM PLAN AND NARRATIVE
- P-0702 PRELIMINARY VRRM SPREADSHEET
- P-0703 ADEQUATE OUTFALL ANALYSIS
- P-1101 PRELIMINARY VEHICULAR MOVEMENT PLAN
- P-1102 PRELIMINARY GARBAGE TRUCK MOVEMENT PLAN
- P-1103 PRELIMINARY LIGHT DISTANCE PLAN AND PROFILE
- P-1201 EXISTING TREE SURVEY AND INVENTORY
- P-1202 PRELIMINARY LANDSCAPE AND HARDSCAPE PLAN
- P-1203 PRELIMINARY HARDSCAPE AND LANDSCAPE NOTES AND DETAILS
- P-1301 PRELIMINARY FIRE SERVICE PLAN

A0	ARCHITECTURAL SITE PLAN
A1	FLOOR PLANS
A2	BUILDING SECTIONS
A3	BUILDING SECTIONS
A4	ELEVATIONS
A5	PHOTO MONTAGE
A6	PHOTO MONTAGE
A7	PHOTO MONTAGE

WALTER L. PHILLIPS


INCORPORATED


Engineers • Surveyors • Planners • Landscape Architects • Arborists


ESTABLISHED 1945

207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

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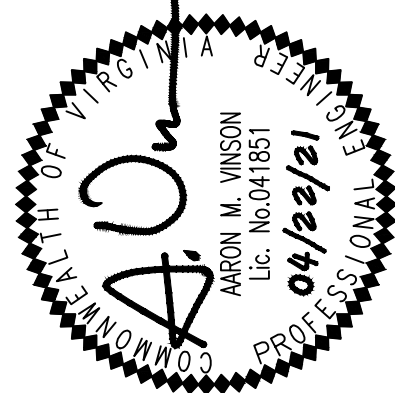


SCALE:

DATE: 10/21/2020

DRAWN: TB
CHECKED: TB/V

PLAN STATUS			
DATE	DESCRIPTION	DATE	DESCRIPTION
02/02/2020	STAGE I CONCEPT PLAN	04/02/2021	DSUP COMPLETENESS #2
21/08/2020	STAGE II CONCEPT PLAN	04/22/2021	DSUP VERIFICATION OF COMPLETENESS
22/04/2021	DSUP COMPLETENESS		

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**NORTHWEST CORNER OF SOUTH
UNION STREET AND DUKE STREET
DEVELOPMENT SPECIAL USE PERMIT**

CITY OF ALEXANDRIA, VIRGINIA

COVER SHEET

APPROVED	
SPECIAL USE PERMIT NO.	DSUP 2021-10012
DEPARTMENT OF PLANNING & ZONING	
DIRECTOR	DATE
DEPARTMENT OF PLANNING & ENVIRONMENTAL SERVICES	
SITE PLAN No.	
DIRECTOR	DATE
CHAIRMAN, PLANNING COMMISSION	DATE
DATE RECORDED	
INSTRUMENT NO.	DEED BOOK NO.
PAGE NO.	

DANE STREET
 16' (EXIST. WEST) 16' (EXIST. EAST)

B ←

ALLEY
 (EXIST. WEST)
 (PROPOSED)

ALLEY
 (EXIST. EAST)

A →

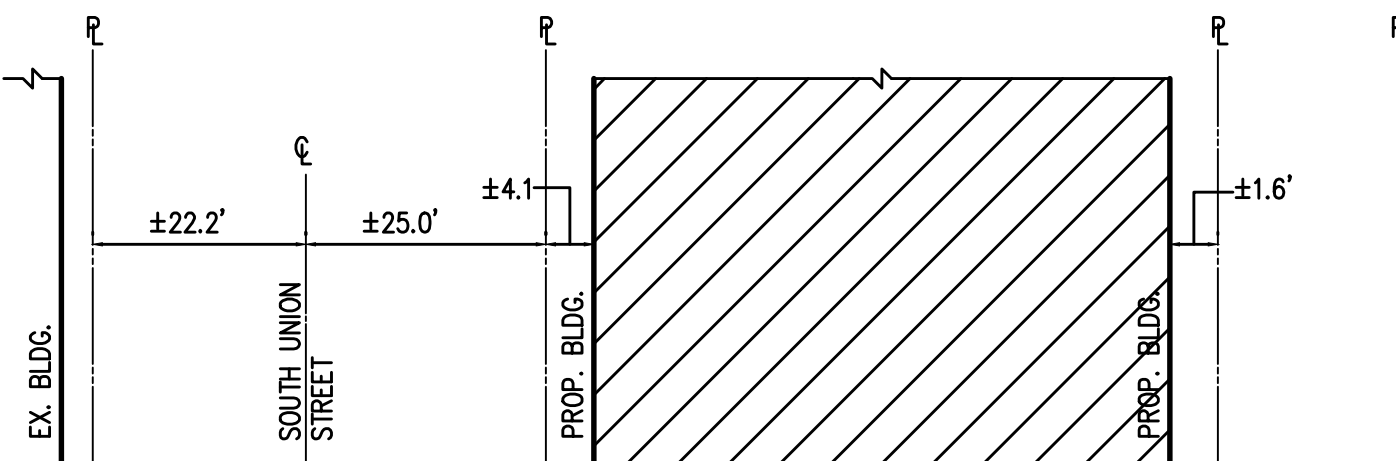
SOUTH UNION STREET
 (OFF PUBLIC RIGHT-OF-WAY (EXIST.))

B ←

SCALE: 1"=50'

The site plan shows a rectangular lot with a proposed building footprint indicated by diagonal hatching. The lot is bounded by Duke Street to the north and an existing building (EX. BLDG.) to the west. The proposed building footprint is divided into two sections by a vertical line. Dimensions are provided for the lot and the building footprint. The lot width is 32.1 feet, and the lot depth is 33.0 feet. The building footprint width is 32.8 feet, and the building footprint depth is 33.0 feet. The distance between the existing building and the proposed building footprint is 0.0 feet. The distance between the proposed building footprint and the lot boundary is 2.8 feet. The lot is labeled 'LOT 1' and the proposed building footprint is labeled 'PROPOSED BUILDING'.

NOT TO SCALE



NOT TO SCALE

SHEET: P-0201

SD 744	
CURB INLET TOP =	11.78
15"RCP IN (NORTH) =	9.58
12"RCP IN (WEST) =	9.68
12"RCP IN (S.EAST) =	9.58
15"RCP OUT (SD 746) =	8.90
SD 746	
CURB INLET TOP =	12.21
15"RCP IN (WEST) =	9.41
15"RCP IN (WEST) =	5.89
15"RCP IN (SD 744) =	6.88
18"RCP OUT (SD 740) =	8.51
18"RCP OUT (SD 740) =	5.53
SD 723	
MANHOLE TOP	10.86
15"RCP IN (S.WEST) =	5.78
15"RCP OUT (SD 741) =	5.62
SD 741	
GRATE INLET TOP =	10.58
15"RCP IN (SD 723) =	5.58
15"RCP OUT (SD 740) =	5.55
SD 740	
MANHOLE TOP =	11.07
15"RCP IN (SD 741) =	5.54
18"RCP IN (SD 746) =	5.04
15"RCP OUT (SD 727) =	4.96
SD 727	
MANHOLE TOP =	10.37
15"RCP IN (SD 740) =	4.91
15"RCP OUT (SD 728) =	4.89

PIPE SIZES ARE PER RECORD INFORMATION

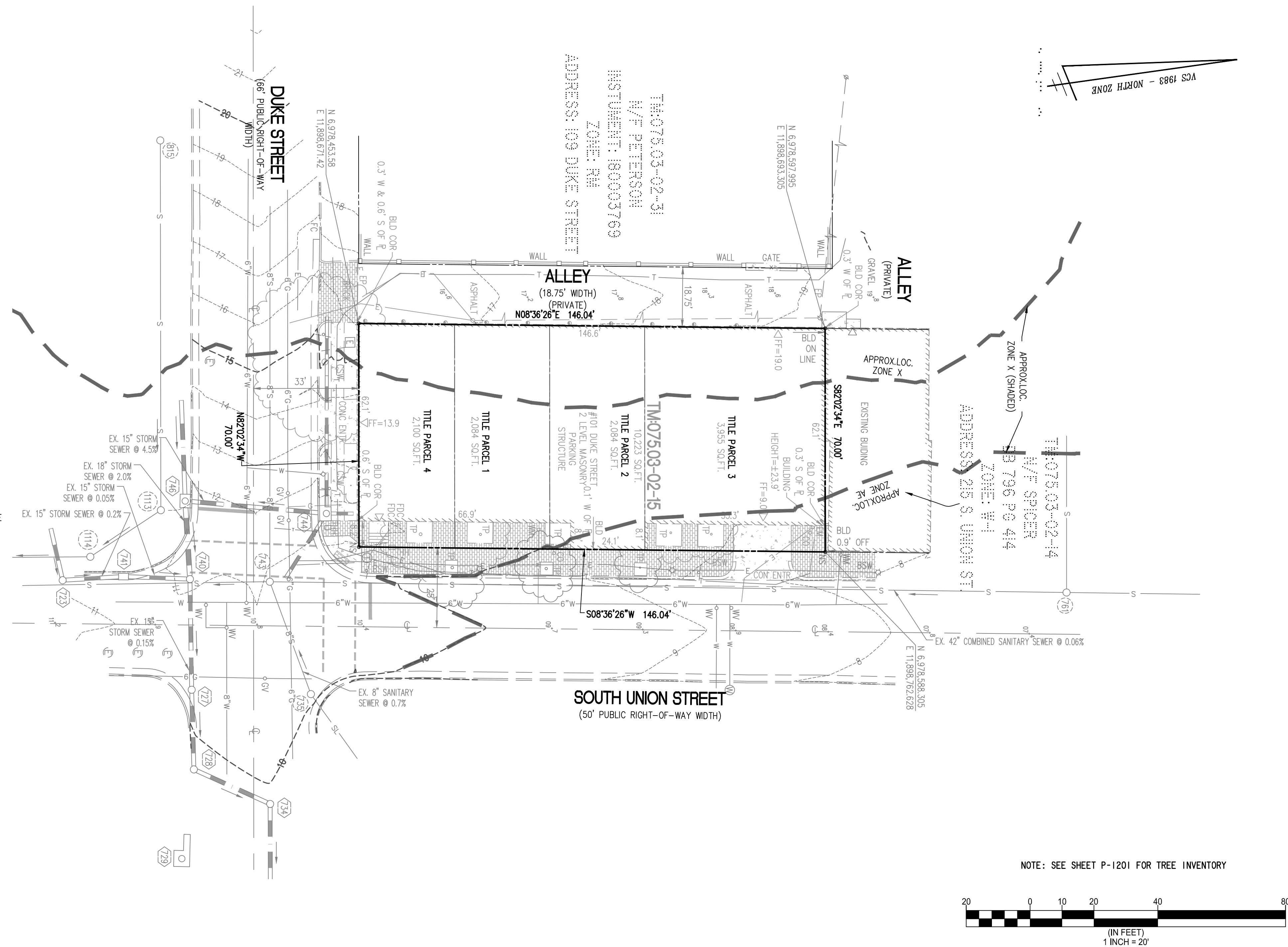
SMH 761	
MANHOLE TOP =	6.82
10" INV IN (WEST)=	0.07
8" INV IN (WEST)=	-4.4
42" INV OUT (SMH 743)=	-4.48
SMH 735	
MANHOLE TOP =	10.13
LAT INV IN (EAST)=	0.23
8" INV OUT (SMH 743)=	0.18
SMH 743	
MANHOLE TOP =	10.78
8" INV IN (SMH 735)=	-0.08
8" INV IN (WEST)=	-1.82
42" INV IN (SMH 761)=	-4.62
42" INV OUT (SOUTH)=	-4.72

PIPE SIZES ARE PER RECORD INFORMATION

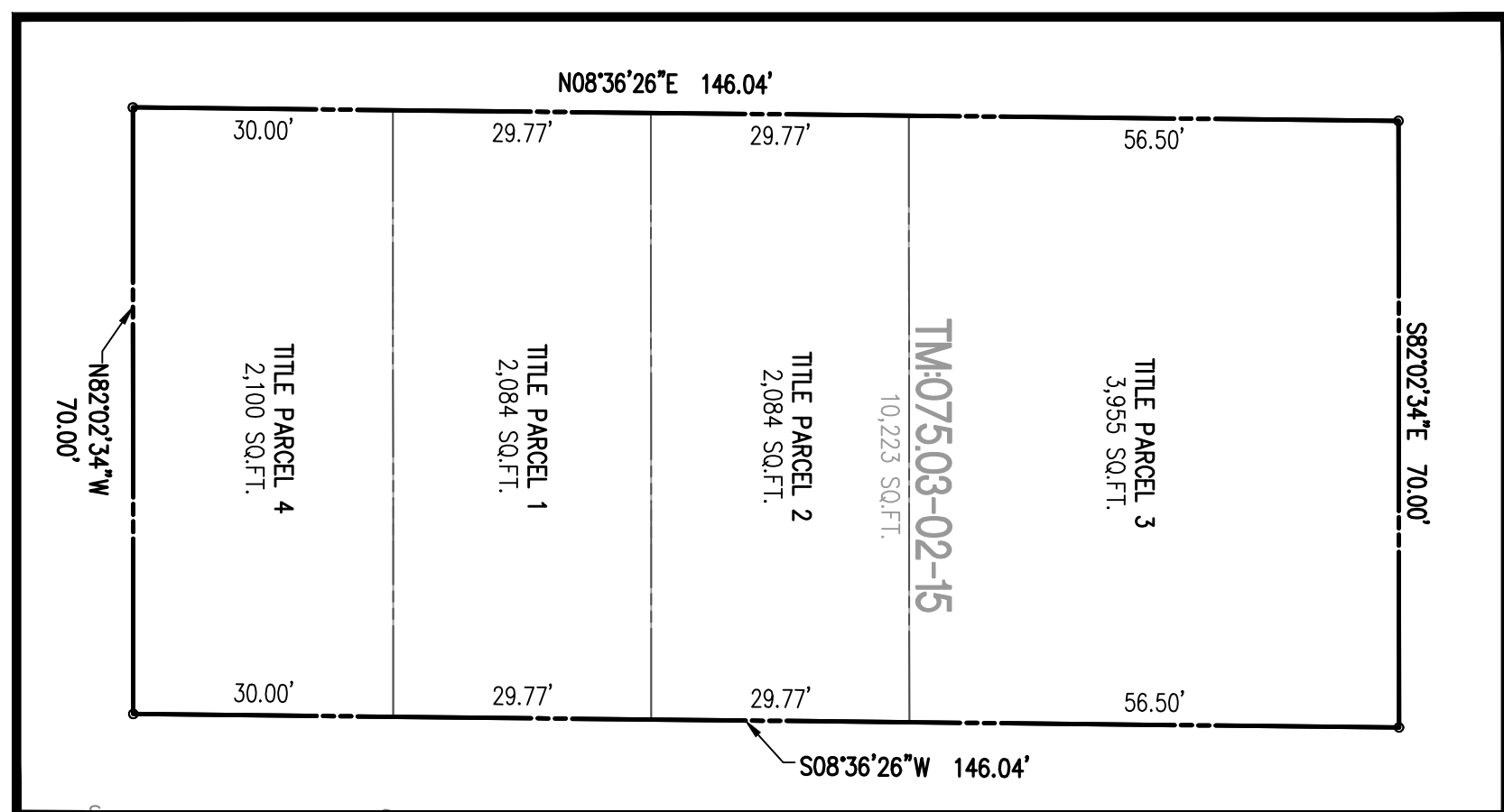
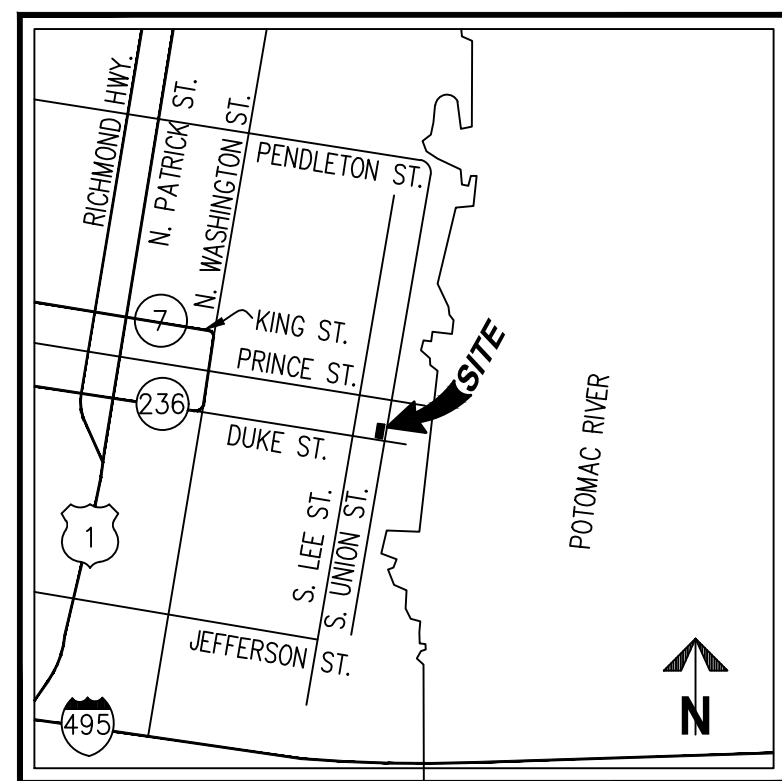
APPROX. LOC.	APPROXIMATE LOCATION
BUILD.	BUILDING
BSW.	BRICK SIDEWALK
CO.	CLEANOUT
CONC.	CONCRETE
CSW.	CONCRETE SIDEWALK
DB.	DEED BOOK
EM.	ELECTRIC METER
ENTR.	ENTRANCE
EP.	EDGE OF PAVEMENT
ESMT.	EASEMENT
FC.	HEADER CURB
FDC.	FIRE DEPARTMENT CONNECTION
FDC.	FIRE DEPARTMENT CONNECTION
FF.	FINISHED FLOOR ELEVATION
INV.	INVERT
N/F.	NOW OR FORMERLY
NS.	NAIL SET (PROPERTY CORNER)
PB.	PAGE
PL.	PROPERTY LINE
RCP.	REINFORCED CONCRETE PIPE
SD. 123	STORM SEWER STRUCTURE
SMH. 123	SEWER SEWER STRUCTURE
SO. FT.	SQUARE FEET
THH.	TELECOMMUNICATIONS HAND HOLE
TP.	TREE PIT
WM.	WATER METER
WV.	WATER VALVE
◇	FIRE HYDRANT
△	DOORWAY/ENTRANCE
◇	UTILITY POLE
☆	LIGHT POLE
— X —	FENCE
— E —	OVERHEAD WIRES
— G —	UNDERGROUND ELECTRIC LINE
— S —	UNDERGROUND GAS LINE
— SL —	UNDERGROUND SANITARY LINE
— SL —	UNDERGROUND SANITARY LATERAL LINE
— T —	UNDERGROUND STORM SEWER LINE
— W —	UNDERGROUND TELECOMMUNICATIONS LINE
○	TREE
~~~~~	LIMITS OF TREE CANOPY/VEGETATION
=====	CURB AND GUTTER
●	BOLLARD
⊞	ELECTRIC TRANSFORMER
—	SIGN
4	SPOT ELEVATION
⊞	ELECTRIC MANHOLE
⊞	WATER MANHOLE
⊞	TELECOMMUNICATIONS MANHOLE

1. THE SUBJECT PROPERTY DOES NOT LIE WITHIN THE CITY OF ALEXANDRIA RESOURCE PROTECTION AREA (RPA) AND THERE ARE NO KNOWN MAPPED RPA'S ON THIS PROPERTY.
2. THERE ARE NO STRUCTURES ON THE CITY LIST OF 100 YEAR OLD STRUCTURES ON OR ADJACENT TO THE SITE.

## 72 (WITHIN PARKING GARAG)



1. THE PROPERTY SHOWN HEREON IS DESIGNATED TO THE CITY OF ALEXANDRIA, VIRGINIA, AS TAX ASSESSMENT NUMBER 075.03-02-15 AND IS ZONED W-1 PER THE CITY OF ALEXANDRIA ZONING MAP. A ZONING REPORT WAS NOT PROVIDED TO THE SURVEYOR.
2. THE PROPERTY IS NOW IN THE NAME OF CUMMINGS INVESTMENT ASSOCIATES, INC., AS RECORDED IN DEED BOOK 501 AT PAGE 187, AMONG THE LAND RECORDS OF THE CITY OF ALEXANDRIA, VIRGINIA.
3. THIS PLAT AND THE SURVEY UPON WHICH IT IS BASED SHOWS ONLY THOSE IMPROVEMENTS THAT ARE OBSERVABLE AND CAN BE LOCATED USING NORMAL SURVEY METHODS. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION, MISS UTILITY MARKINGS AND EXISTING RECORDS. THERE ARE NO GUARANTEES, EITHER EXPRESS OR IMPLIED, THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED, OR THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE UNDERGROUND UTILITIES HAVE NOT BEEN PHYSICALLY LOCATED. WATER AND GAS LINE SIZES ARE FROM RECORD INFORMATION.
4. TOTAL AREA OF THE PROPERTY IS 10,223 SQUARE FEET OR 0.2347 ACRES.
5. THIS PLAT IS BASED ON A FIELD SURVEY BY THIS FIRM, DATED 10/19/2020.
6. THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR THE CITY OF ALEXANDRIA, VIRGINIA, MAP NUMBER 5155190041E, EFFECTIVE DATE JUNE 16, 2011, DESIGNATES THE PROPERTY AS BEING IN THE FOLLOWING ZONES:
  - ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
  - ZONE X (SHADED), AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD
  - ZONE AE, SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD WITH BASE FLOOD ELEVATIONS DETERMINED. (NOTE: THE LINE SHOWN HEREON IS BASED UPON THE 10' CONTOUR)
7. EASEMENTS, CONDITIONS, COVENANTS AND RESTRICTIONS, SHOWN AND/OR NOTED, ARE PER THE TITLE REPORT ISSUED BY WALKER TITLE, LLC, CASE NUMBER A2001356 EFFECTIVE DATE OCTOBER 15, 2020.
8. THE SITE SHOWN HEREON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS COMPUTED FROM A FIELD RUN VERTICAL CONTROL SURVEY AND IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983, [NAD 83(2011) [EPOCH:2010.0000]] AS COMPUTED FROM A FIELD RUN BOUNDARY AND HORIZONTAL CONTROL SURVEY THAT TIES THIS BOUNDARY AND THE BENCHMARK(S) SHOWN TO THE TOPCON GNSS RTK REFERENCE NETWORK. THE COMBINED FACTOR APPLIED TO THE FIELD DISTANCES TO DERIVE THE REFERENCED COORDINATES IS 0.99994766. THE FOOT DEFINITION USED FOR CONVERSION OF THE MONUMENT COORDINATES AND IN THE PERFORMANCE OF THIS SURVEY IS THE U.S. SURVEY FOOT. CONTOUR INTERVAL IS ONE FOOT.
9. THIS SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF, DAVID N. ISHERWOOD, L.S., FROM AN ACTUAL [X] GROUND OR [ ] AIRBORNE SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON OCTOBER 19, 2020; AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.


$$I^{\circ} = 20'$$


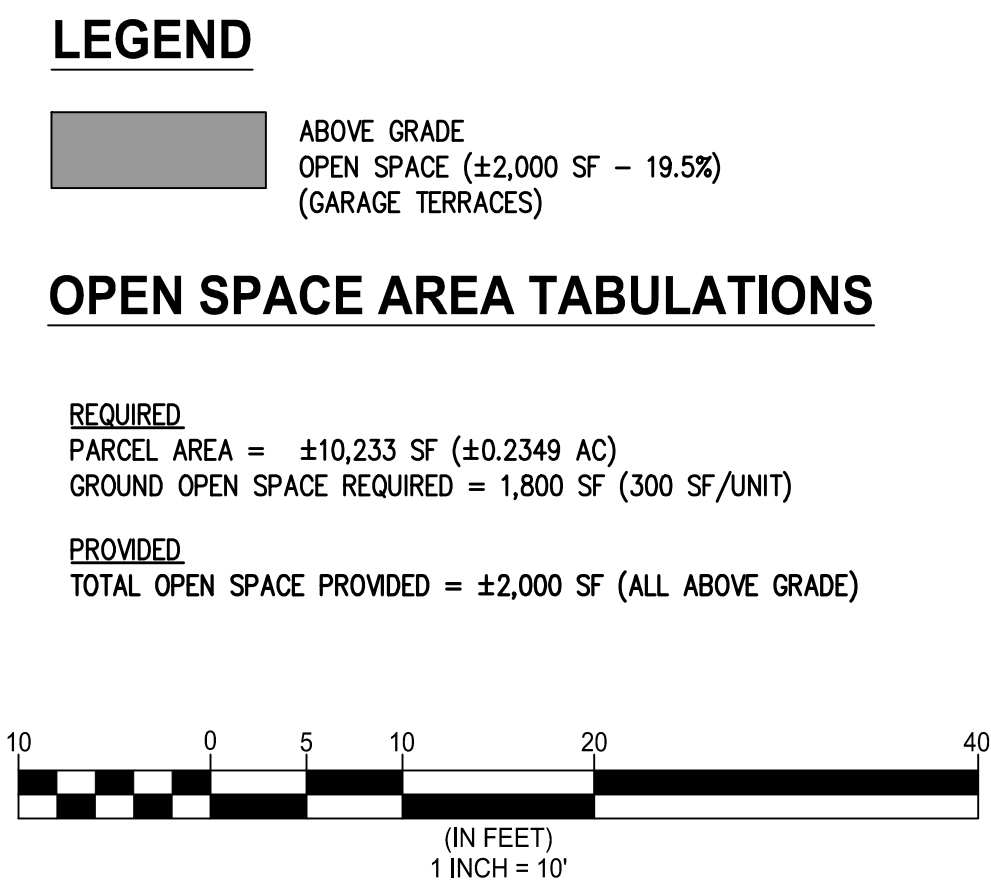
SCALE: 1"=2000'

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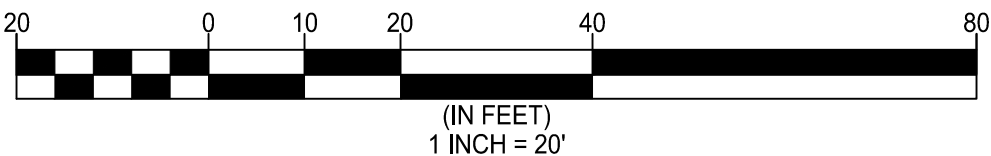






**SHEET: P-0403**





<b>APPROVED</b>		
SPECIAL USE PERMIT NO. _____ DSUP 2021-10012		
DEPARTMENT OF PLANNING & ZONING		
DIRECTOR _____		DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES		
SITE PLAN No. _____		
DIRECTOR _____		DATE _____
CHAIRMAN, PLANNING COMMISSION _____		DATE _____
DATE RECORDED _____		
INSTRUMENT NO. _____	DEED BOOK NO. _____	PAGE NO. _____




NOT TO SCALE

THE FOLLOWING INFORMATION IS PROVIDED BY VHB, DATED 10/20/2020. ADDITIONAL, MORE DETAILED INFORMATION REGARDING COMPLIANCE WITH FLOODPLAIN REGULATIONS WILL BE PROVIDED WITH FUTURE PLAN SUBMISSIONS.

THE 101 DUKE STREET PROPERTY, CURRENTLY A THREE-LEVEL PARKING GARAGE, IS PARTIALLY LOCATED WITHIN THE FEMA-MAPPED 100-YEAR AND 500-YEAR FLOODPLAIN FRINGE AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP (FIRM) PANEL 5155190041E, DATED JUNE 16, 2011 AND THE PRELIMINARY MAP DATED SEPTEMBER 30, 2020. THE 100-YEAR FLOOD ELEVATION IS MAPPED AT ELEVATION 10.0' AND THE 500-YEAR FLOOD ELEVATION AT 14.0' (NAVD83) BASED ON INTERPRETATION OF THE FLOOD INSURANCE STUDY FLOOD PROFILE (13P) FOR THE POTOMAC RIVER. NOTE THAT NO CHANGE IN THE FLOOD ELEVATIONS ARE PROPOSED IN THE SEPTEMBER 30, 2020 PRELIMINARY MAP; HOWEVER, THE MAPPED BOUNDARY IS SLIGHTLY DIFFERENT THAN THE 2011 MAP, MOST LIKELY DUE TO UPDATED GROUND SURFACE MAPPING USED BY FEMA.

EXISTING GRADES AT THE PROPERTY RANGE FROM APPROXIMATELY 8.6' AT THE NORTHEAST CORNER TO ABOVE 19.7' ALONG THE REAR ALLEY OF THE PROPERTY. THE PROPOSED PROJECT INCLUDES THE REMOVAL OF THE THREE-LEVEL PARKING GARAGE AND THE CONSTRUCTION OF SIX (6) ATTACHED TOWNHOUSES FRONTING SOUTH UNION STREET. THE LOWEST FLOOR ELEVATION OF THE PROPOSED TOWNHOUSES IS ELEVATION 14.5', WHICH WILL EXCEED THE 1-FOOT FREEBOARD REQUIREMENT PER SECTION 6-306(A) OF THE ZONING ORDINANCE. ENTRANCE TO THE UNITS FROM UNION STREET WILL BE VIA INDIVIDUAL STAIRS FROM THE EXISTING CURB. ENTRANCE FROM THE REAR WILL BE VIA INDIVIDUAL GARAGES FOR EACH UNIT ALSO AT ELEVATIONS RANGING BETWEEN 16.0' - 19.0. NO ACCESSIBLE SPACE OR ENCLOSURE IS PROPOSED BELOW THE LOWEST FLOOR ELEVATION. NO WATER HEATERS, FURNACES, ELECTRICAL DISTRIBUTION PANELS OR OTHER CRITICAL MECHANICAL OR ELECTRICAL INSTALLATIONS ARE PROPOSED TO BE INSTALLED BELOW THE 100-YEAR BASE FLOOD ELEVATION. TO ACHIEVE THE LOWEST FLOOR ELEVATION OF 14.5', COMPACTED FILL AND/OR STONE WILL BE PLACED WITHIN THE FOUNDATION OF THE PROPOSED TOWNHOUSES AND WITHIN THE MAPPED 100-YEAR FLOODPLAIN.

AS PER SECTION 6-306(E) AND 6-307(A), WE DO NOT ANTICIPATE THAT THE PROPOSED PROJECT WILL INCREASE THE WATER-SURFACE ELEVATION OF THE 100-YEAR FLOOD BY MORE THAN 0.5 FOOT, HOWEVER NO HYDRAULIC ANALYSIS HAS BEEN PREPARED TO-DATE. DUE TO THE SITE'S LOCATION AND ITS SCALE OF FLOOD PROPOSED IN COMPARISON TO THE SCALE OF THE POTOMAC RIVER AND THE 100-YEAR FLOODPLAIN VOLUME, WE ANTICIPATE THAT THE PROPOSED PROJECT WILL HAVE NO EFFECT ON THE 100-YEAR WATER SURFACE ELEVATION.



**WALTER L.  
PHILLIPS**  
INCORPORATED

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Engineers • Surveyors • Planners • Landscape Architects • Arborists

207 PARK AVENUE, FLOOR 3 CHICHI, WILMINGTON 22446

(703) 532-4163 Fax (703) 533-1301 [www.WLPHINC.com](http://www.WLPHINC.com)

PLAN STATUS			
DATE	DESCRIPTION	DATE	DESCRIPTION
10/21/2020	STAGE I CONCEPT PLAN	04/02/2021	DSUP COMPLETENESS #2
12/18/2020	STAGE II CONCEPT PLAN	04/22/2021	DSUP VERIFICATION OF COMPLETENESS
02/24/2021	DSUP COMPLETENESS		

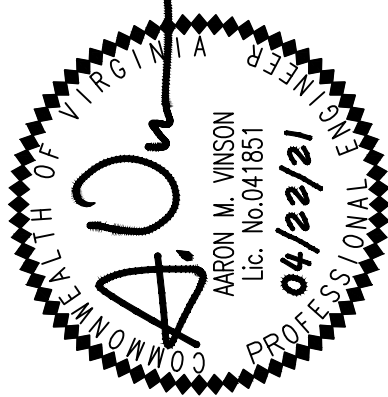
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DATE: 10/21/2020

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**NORTHWEST CORNER OF SOUTH  
UNION STREET AND DUKE STREET  
DEVELOPMENT SPECIAL USE PERMIT**

**CITY OF ALEXANDRIA, VIRGINIA**

## FLOODPLAIN NARRATIVE

<b>APPROVED</b>		
SPECIAL USE PERMIT NO. _____		DSUP 2021-10012
DEPARTMENT OF PLANNING & ZONING		
_____ DIRECTOR		_____ DATE
DEPARTMENT OF PLANNING & ENVIRONMENTAL SERVICES		
SITE PLAN No. _____		
_____ DIRECTOR		_____ DATE
_____ CHAIRMAN, PLANNING COMMISSION		
DATE RECORDED _____		_____
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National Flood Insurance Program

## FLOOD INSURANCE RATE MAP

---

**CITY OF ALEXANDRIA, VIRGINIA**  
Independent City

**PANEL 41 of 45**




FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALEXANDRIA, CITY OF	515519	0041	F

PRELIMINARY

9/30/2020



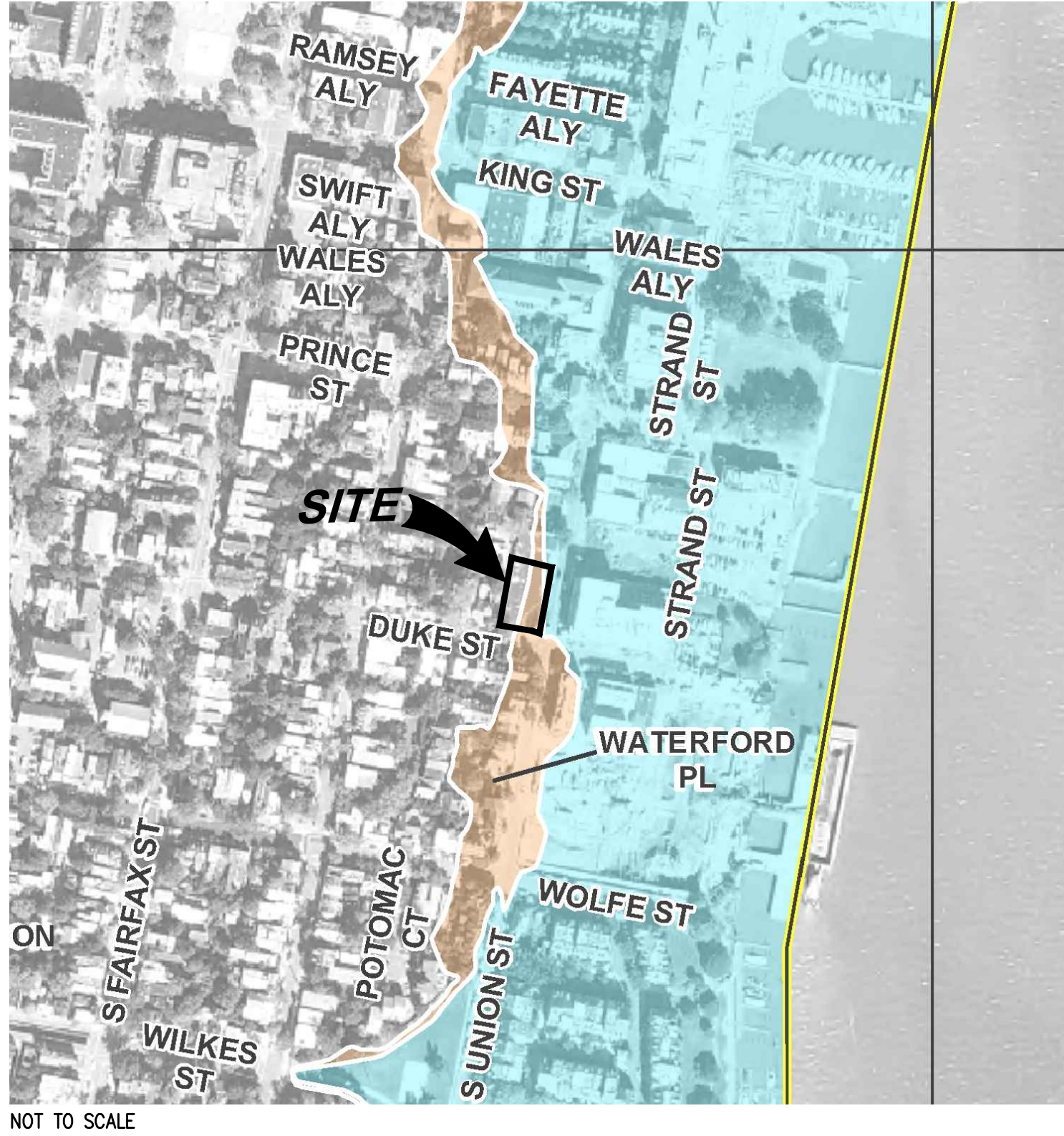
VERSION NUMBER

2.6.4.6

MAP NUMBER

5155190041F

MAP REVISED





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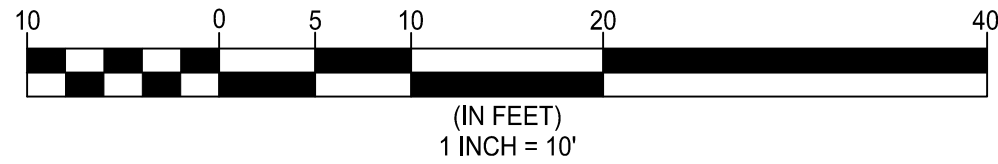
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ZONE: V  
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- # NOTES
1. THIS PLAN IS BASED ON A FIELD SURVEY PERFORMED BY WALTER L. PHILLIPS, INC.
  2. THIS PROPERTY IS LOCATED IN A COMBINED SEWER AREA.
  3. NO RPAS OR EXISTING SWM FACILITIES ARE CURRENTLY KNOWN TO EXIST ON THIS PROPERTY.
  4. THE PROPERTY IS PARTIALLY WITHIN THE 100-YEAR FLOODPLAIN.
  5. THERE ARE NO STRUCTURES ON THE CITY LIST OF 100 YEAR OLD STRUCTURES ON OR ADJACENT TO THE SITE.
  6. SEE COVER SHEET FOR PROPOSED ZONING AND PARKING TABULATIONS.

1. THE APPLICANT SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-746-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.
2. THE APPLICANT SHALL NOT ALLOW ANY METAL DETECTION AND/OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY. FAILURE TO COMPLY SHALL RESULT IN PROJECT DELAY.

**NORTHWEST CORNER OF SOUTH  
UNION STREET AND DUKE STREET  
DEVELOPMENT SPECIAL USE PERMIT**

**CITY OF ALEXANDRIA, VIRGINIA**

APPROVED		
SPECIAL USE PERMIT NO. _____		DSUP 2021-10012
DEPARTMENT OF PLANNING & ZONING		
DIRECTOR _____		DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES		
SITE PLAN No. _____		
DIRECTOR _____		DATE _____
CHAIRMAN, PLANNING COMMISSION _____		
DATE RECORDED _____		DATE _____
INSTRUMENT NO. _____	DEED BOOK NO. _____	PAGE NO. _____

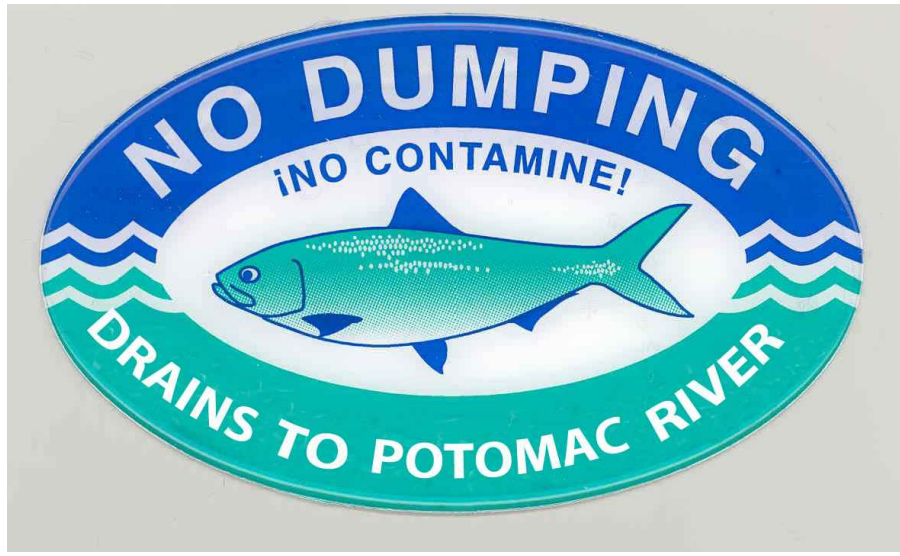






## NO DUMPING DETAIL

NOT TO SCALE



## NOTES

1. PROJECT SITE IS LOCATED WITHIN THE POTOMAC RIVER WATERSHED. ALL ONSITE INLETS AND PUBLIC INLETS WITHIN 50' OF SITE SHALL BE MARKED USING STANDARD CITY MARKERS.

## TYPICAL BMP DETAILS URBAN BIO-RETENTION

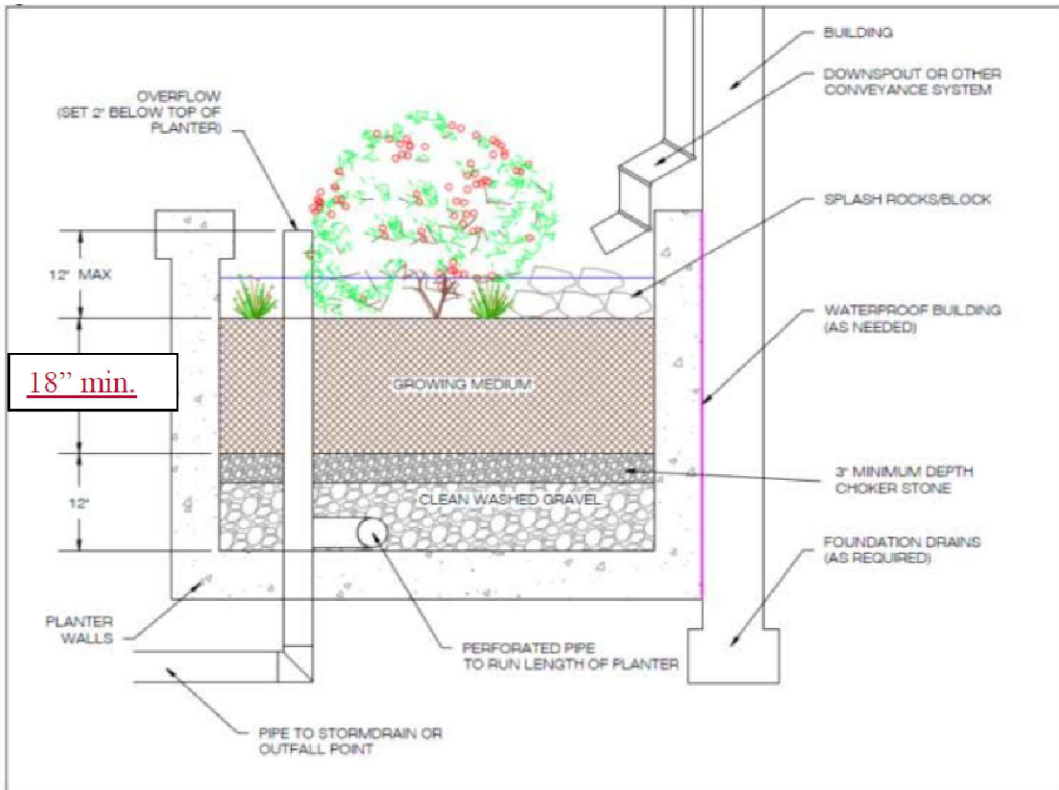
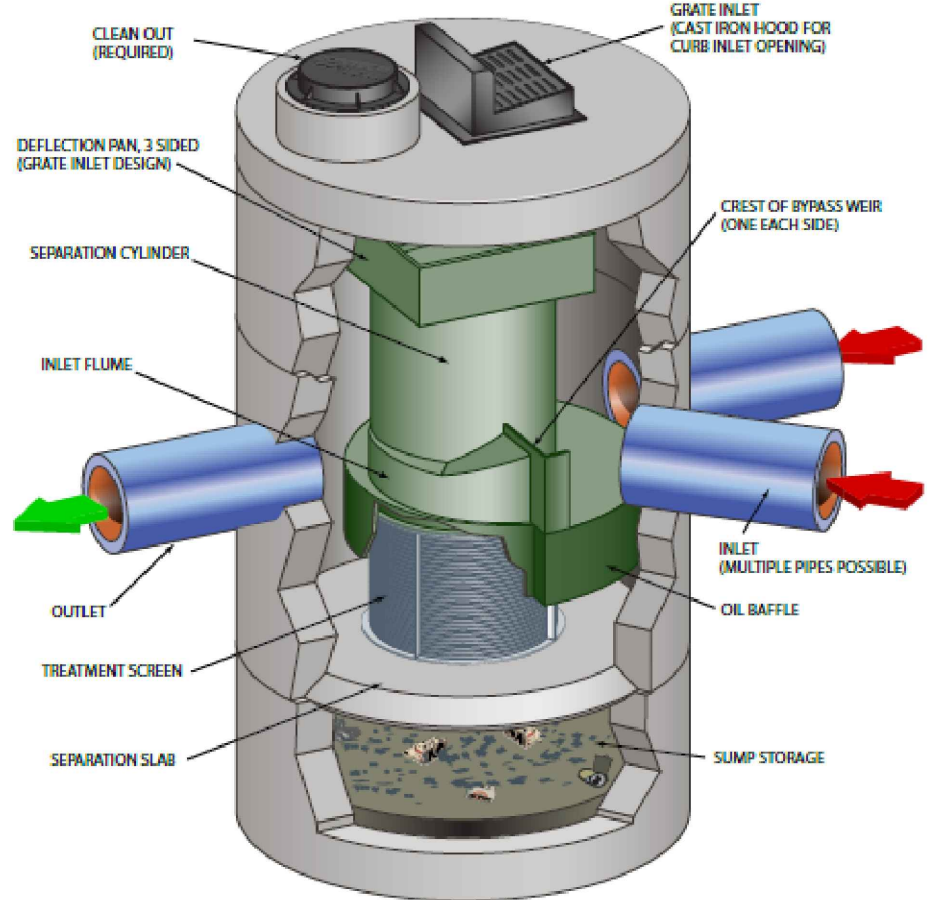


Figure 9-A.4. Stormwater Planter Cross-Section

THESE DETAILS ARE FOR INFORMATION PURPOSES ONLY AND SUBJECT TO ADJUSTMENT AND SUBSTITUTION AT FINAL ENGINEERING

## HYDRODYNAMIC SEPARATOR



THESE DETAILS ARE FOR INFORMATION PURPOSES ONLY AND SUBJECT TO ADJUSTMENT AND SUBSTITUTION AT FINAL ENGINEERING

Project Name: NORTHWEST CORNER OF SOUTH UNION ST AND DUKE ST  
Date: 2/24/2021  
Linear Development Project? No

CLEAR ALL

data input cells

constant values

calculation cells

final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → 0.40

Maximum reduction required: 10%  
The site's net increase in impervious cover (acres) is: 0  
Post-Development TP Load Reduction for Site (lb/yr): 0.06

Check: 2013 Draft Stds & Specs  
BMP Design Specifications List: Linear project? No  
Linear project? No  
Land cover areas entered correctly? Yes  
Total disturbed area entered? Yes

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be moved/managed				0.02	0.02
Impervious Cover (acres)				0.38	0.38
					0.40

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be moved/managed				0.03	0.03
Impervious Cover (acres)				0.37	0.37
Area Check	OK.	OK.	OK.	OK.	0.40

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
P (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Pre-Development	Listed	Adjusted ¹
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.02	0.02
Weighted Rv(turf)	0.25	0.25
% Managed Turf	4%	4%
Impervious Cover (acres)	0.38	0.38
Rv(impervious)	0.95	0.95
% Impervious	96%	96%
Total Site Area (acres)	0.40	0.40
Site Rv	0.92	0.92

Treatment Volume and Nutrient Load

Pre-Development Treatment Volume (acre-ft)	0.0304	0.0304
Pre-Development Treatment Volume (cubic feet)	1,325	1,325
Pre-Development TP Load (lb/yr)	0.83	0.83
Pre-Development TP Load per acre (lb/acre/yr)	2.11	2.11
Baseline TP Load (lb/yr) (0.41 lb/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		0.16

Adjusted Land Cover Summary:  
Pre-Development land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.  
Adjusted total acreage is consistent with Post-Development acreage (minus acreage of new impervious cover).  
Column 1 shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	0.06
------------------------------------	------

Nitrogen Loads (Informational Purposes Only)

Pre-Development TN Load (lb/yr)	5.95	Final Post-Development TN Load (Post-Development & New Impervious) (lb/yr)	5.82
---------------------------------	------	----------------------------------------------------------------------------	------

Drainage Area A

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)					0.00	0.00
Managed Turf (acres)				0.03	0.03	0.25
Impervious Cover (acres)				0.37	0.37	0.95
Total					0.40	

Stormwater Best Management Practices (RR = Runoff Reduction)

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft ³ )	Runoff Reduction (ft ³ )	Remaining Runoff Volume (ft ³ )	Total BMP Treatment Volume (ft ³ )	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
14. Manufactured Treatment Devices (no RR)													
14.a. Manufactured Treatment Device- Hydrodynamic	0		0.19	0	0	658	658	20	0.00	0.41	0.08	0.33	

Site Results (Water Quality Compliance)

Area Checks

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.00	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	0.37	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.19	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.03	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft³) 1,294

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft ³ )	0	0	0	0	0	0
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.81	0.00	0.00	0.00	0.00	0.81
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.08	0.00	0.00	0.00	0.00	0.08
TP LOAD REMAINING (lb/yr)	0.73	0.00	0.00	0.00	0.00	0.73
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	0.81
TP LOAD REDUCTION REQUIRED (lb/yr)	0.06
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.08
TP LOAD REMAINING (lb/yr)	0.73
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr)	0.00
*** NO CREDIT TAKEN FOR URBAN BIO-RETENTION	

Total Nitrogen (For Informational Purposes)

POST-DEVELOPMENT TN LOAD (lb/yr)	5.82
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.00
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	5.82

Drainage Area A

	A Soils	B Soils	C Soils	D Soils	Total Area (acres): 0.40
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	Runoff Reduction Volume (ft ³ ): 0
Managed Turf -- disturbed, graded for yards or other turf to be moved/managed	0.00	0.00	0.00	0.03	
Impervious Cover	0.00	0.00	0.00	0.37	
CN (D.A. A)	97				

RV_{Developed} (watershed-inch) with no Runoff Reduction* 2.36  
RV_{Developed} (watershed-inch) with Runoff Reduction* 2.36  
Adjusted CN* 97

1-year storm 2.70  
2-year storm 3.20  
10-year storm 5.20

Use NOAA Atlas 14 (<http://hdsc.mws.nsoa.gov/hdsc/pf/ds/>)

PROJECT DESCRIPTION

DEVELOPMENT REDEVELOPMENT

DRAINAGE AREA	IMPERVIOUS AREA	PERVIOUS AREA	TOTAL
SITE AREA	0.22	0.02	0.23
ON-SITE TREATED	0.19	0.00	0.19
OFF-SITE TREATED	0.00	0.00	0.00
TOTAL TREATED/DETAINED	0.19	0.00	0.19
TOTAL UNDETAINED	0.03	0.02	0.04

WATER TREATMENT ON/OFF-SITE

BMP TYPE	AREA TREATED BY BMP (AC)	IMPERVIOUS AREA TREATED BY BMP (AC)	BMP TREATED EFFICIENCY (%)
HYDRODYNAMIC SEPARATOR	0.19	0.19	20%
TOTAL	0.19	0.19	

MISCELLANEOUS

TOTAL WQV TREATED YES NO  
DETENTION ON SITE YES NO  
PROJECT IS WITHIN WHICH WATERSHED? POTOMAC RIVER  
PROJECT DISCHARGES TO WHICH BODY OF WATER? POTOMAC RIVER  
WQV TREATMENT = 1,816 CF/AC OF IMPERVIOUS AREA  
= 1,816 CF/AC X 0.2189 AC = 398 CF

APPROVED SPECIAL USE PERMIT NO. DSUP 2021-10012  
DEPARTMENT OF PLANNING & ZONING  
DIRECTOR DATE  
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES  
SITE PLAN No.  
DIRECTOR DATE  
CHAIRMAN, PLANNING COMMISSION DATE  
DATE RECORDED  
INSTRUMENT NO. DEED BOOK NO. PAGE NO.

WALTER L. PHILLIPS INCORPORATED  
ESTABLISHED 1945  
Engineers • Surveyors • Planners • Landscape Architects • Arborists  
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046  
(703) 532-6163 Fax (703) 533-1301 www.WLPINC.com  
SCALE: DRAWN: TBAY  
CHECKED: DATE: 10/21/2020  
PLAN STATUS: N.T.S.

DATE DESCRIPTION DATE DESCRIPTION  
10/21/2020 STAGE I CONCEPT PLAN 04/02/2021 DSUP COMPLETENESS #2  
12/18/2020 STAGE II CONCEPT PLAN 04/22/2021 DSUP VERIFICATION OF  
02/24/2021 DSUP COMPLETENESS

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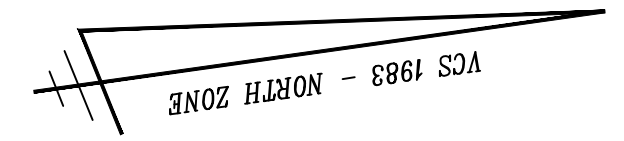
NORTHWEST CORNER OF SOUTH UNION STREET AND DUKE STREET  
DEVELOPMENT SPECIAL USE PERMIT  
CITY OF ALEXANDRIA, VIRGINIA

## PRELIMINARY VRRM SPREADSHEET

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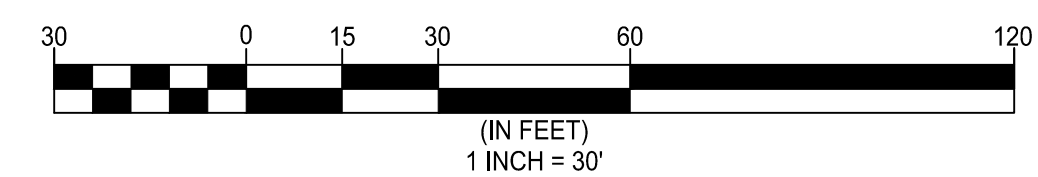
SHEET: P-0702





THE SITE OUTFALLS TO THE MUNICIPAL STORM SEWER SYSTEM LOCATED IN DUKE STREET AND SOUTH UNION STREET. BASED ON REVIEW OF CITY STORM SEWER MAPS (GIS), THE DISCHARGE OF THE 2-YEAR 24-HOUR STORM FROM THE SITE CAN BE CONVEYED UP TO THE LIMITS OF ANALYSIS (100 TIMES THE SITE AREA) WITHOUT CAUSING EROSION, SINCE ALL OF THE PIPES OR CULVERTS WITHIN THE LIMITS OF ANALYSIS ARE CONCRETE. THEREFORE, THE SITE MEETS CHANNEL PROTECTION REQUIREMENTS SPECIFIED IN THE CITY OF ALEXANDRIA STORMWATER CODE (ARTICLE XIII) AND NO ADDITIONAL STORMWATER DETENTION IS NECESSARY FOR THE PURPOSES OF CHANNEL PROTECTION.

THE SITE OUTFALLS TO THE MUNICIPAL STORM SEWER SYSTEM LOCATED IN DUKE STREET AND SOUTH UNION STREET. THE CITY OF ALEXANDRIA STORMWATER REQUIREMENTS SPECIFY THAT THE 24-HOUR STORM FLOW SHALL BE PROVIDED FOR THE 100-YEAR FLOOD. THE CITY OF ALEXANDRIA STORMWATER REQUIREMENTS SPECIFY THAT THE 24-HOUR STORM FLOW SHALL BE CONVEYED WITHIN THE SYSTEM UP TO THE LIMITS OF ANALYSIS AND THAT THE POST-DEVELOPMENT FLOW FOR THE 10-YEAR, 24-HOUR STORM MUST NOT EXCEED PRE-DEVELOPMENT LEVELS. REVIEW OF THE STORMWATER OUTFALL WITHIN THE LIMITS OF ANALYSIS INDICATES THAT DOWNSTREAM STORMWATER PIPES APPEAR TO BE ADEQUATE TO CONVEY THE 10-YEAR, 24-HOUR STORM FLOW. THE SYSTEM AND SITE DISCHARGE RATES WILL BE PROVIDED TO THE DEVELOPMENT LEVELS TO REDUCE THE OVERFLOW RATES. THEREFORE, THE SITE MEETS THE STORMWATER REQUIREMENTS SPECIFIED IN THE CITY OF ALEXANDRIA STORMWATER CODE (ARTICLE XII) AND NO ADDITIONAL STORMWATER DETENTION IS NECESSARY FOR THE PURPOSES OF FLOOD CONTROL. IT IS ALSO NOTED, THAT THIS SITE IS LOCATED AT THE BOTTOM OF THE LOCAL WATERSHED AND PARTIALLY IN THE 100-YEAR FLOODPLAIN AND DETENTION IS NOT TYPICALLY PROVIDED IN THIS AREA.

[illegible]

**NORTHWEST CORNER OF SOUTH  
UNION STREET AND DUKE STREET  
DEVELOPMENT SPECIAL USE PERMIT**

**CITY OF ALEXANDRIA, VIRGINIA**

## ADEQUATE OUTFALL ANALYSIS

DATE	DESCRIPTION	DATE	DESCRIPTION
10/21/2020	STAGE I CONCEPT PLAN	04/02/2021	DSUP COMPLETENESS #2
12/18/2020	STAGE II CONCEPT PLAN	04/22/2021	DSUP VERIFICATION OF
02/24/2021	DSUP COMPLETENESS		COMPLETENESS

<b>APPROVED</b>	
<b>SPECIAL USE PERMIT NO. _____ DSUP 2021-10012</b>	
<b>DEPARTMENT OF PLANNING &amp; ZONING</b>	
_____ DIRECTOR	_____ DATE
<b>DEPARTMENT OF PLANNING &amp; ENVIRONMENTAL SERVICES</b>	
SITE PLAN No. _____	
_____ DIRECTOR	_____ DATE
CHAIRMAN, PLANNING COMMISSION	DATE
DATE RECORDED _____	
INSTRUMENT NO. _____	DEED BOOK NO. _____ PAGE NO. _____



WALTER L. PHILLIPS

INCORPORATED

Engineers • Surveyors • Planners • Landscape Architects • Arborists

207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

(703) 532-6163 Fax (703) 533-1301 www.WLPINC.com

ESTABLISHED 1945

DATE: 10/21/2020

DRAWN: TB

CHECKED: TB

SCALE: 1"=20'

PLAN STATUS

DATE DESCRIPTION

10/21/2020 STAGE I CONCEPT PLAN

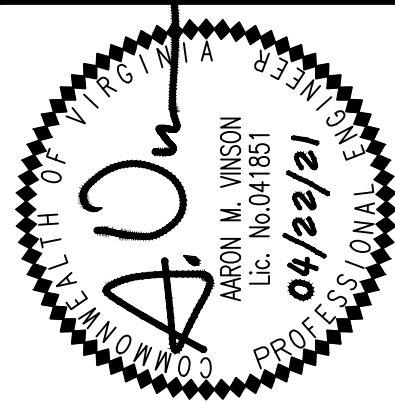
12/18/2020 STAGE II CONCEPT PLAN

02/24/2021

DATE DESCRIPTION

04/02/2021 DSUP COMPLETENESS #2

04/22/2021 DSUP VERIFICATION OF COMPLETENESS



REVISION APPROVED BY			
NO.	DESCRIPTION	DATE	APPROVED

NORTHWEST CORNER OF SOUTH UNION STREET AND DUKE STREET

DEVELOPMENT SPECIAL USE PERMIT

CITY OF ALEXANDRIA, VIRGINIA

PRELIMINARY VEHICULAR MOVEMENT PLAN

APPROVED

SPECIAL USE PERMIT NO. DSUP 2021-10012

DEPARTMENT OF PLANNING & ZONING

DIRECTOR

DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN No.

DIRECTOR

DATE

CHAIRMAN, PLANNING COMMISSION

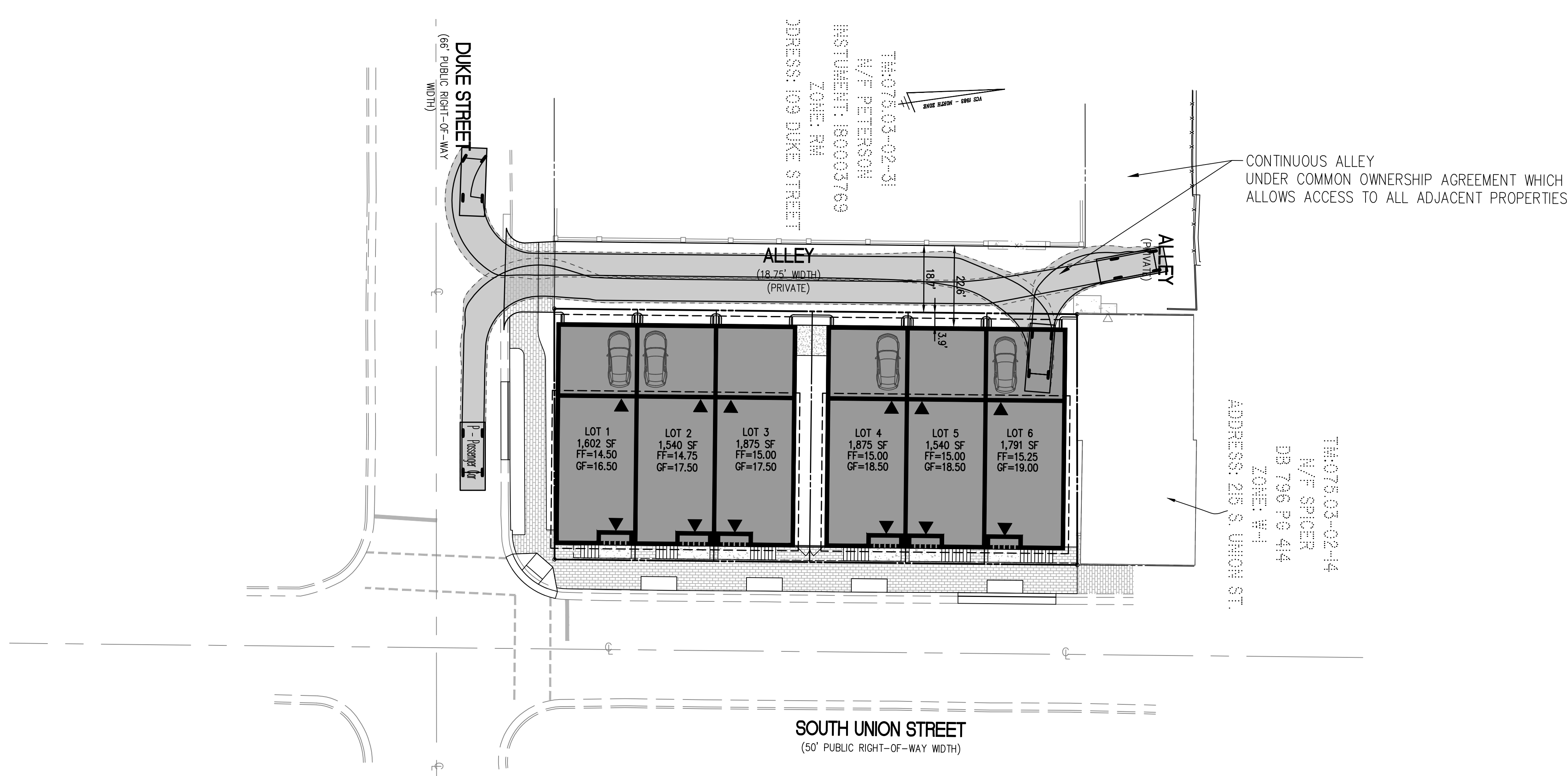
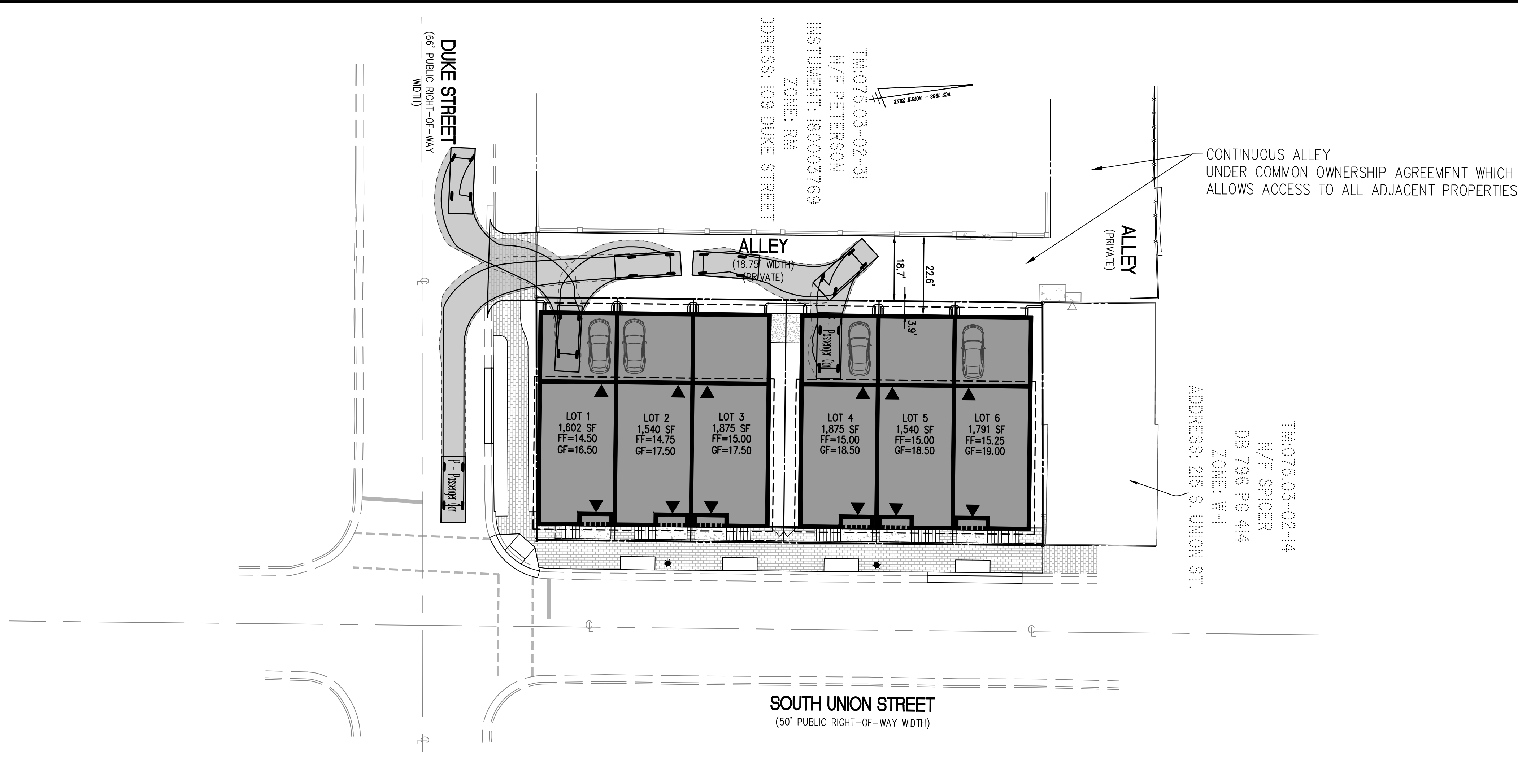
DATE

DATE RECORDED

INSTRUMENT NO.

DEED BOOK NO.

PAGE NO.



PROPOSED

EXISTING

LEGEND

CURB & GUTTER CG-2

TRANSITION FROM CG-6 TO CG-6R

SANITARY SEWER S

SANITARY LATERAL SL

CLEAN OUT C.O.

STORM SEWER

WATER MAIN W

FIRE HYDRANT PLUG

OVERHEAD WIRES

UTILITY POLE

UNDERGROUND ELECTRIC UE

TELEPHONE T

GAS MAIN G

ELECTRICAL E

TRANSFORMER

HANDICAP RAMP (CG-12)

GUARDRAIL

FENCE

TRAFFIC FLOW

LIGHT

DOOR

TREES

CONTOURS

SPOT ELEVATION

DRAINAGE FLOW DIRECTION

TC TOP OF CURB

BC BOTTOM OF CURB

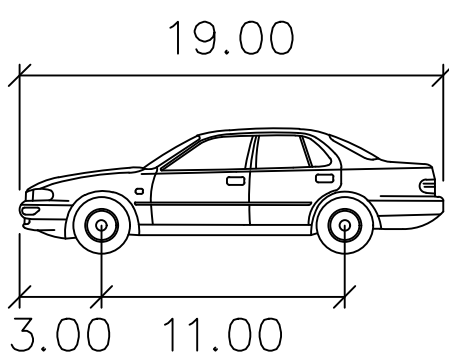
TW TOP OF WALL

BW BOTTOM OF WALL

HP HIGH POINT

TEST PIT TP

LIMITS OF CLEARING AND GRADING



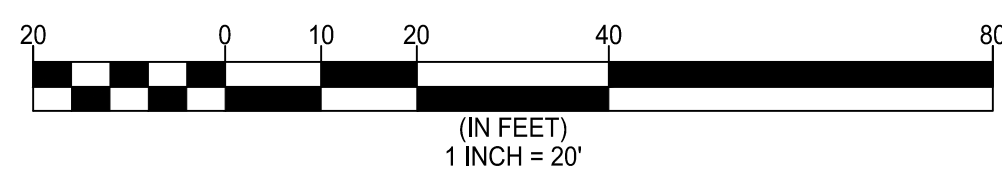
P CAR feet

Width : 7.00

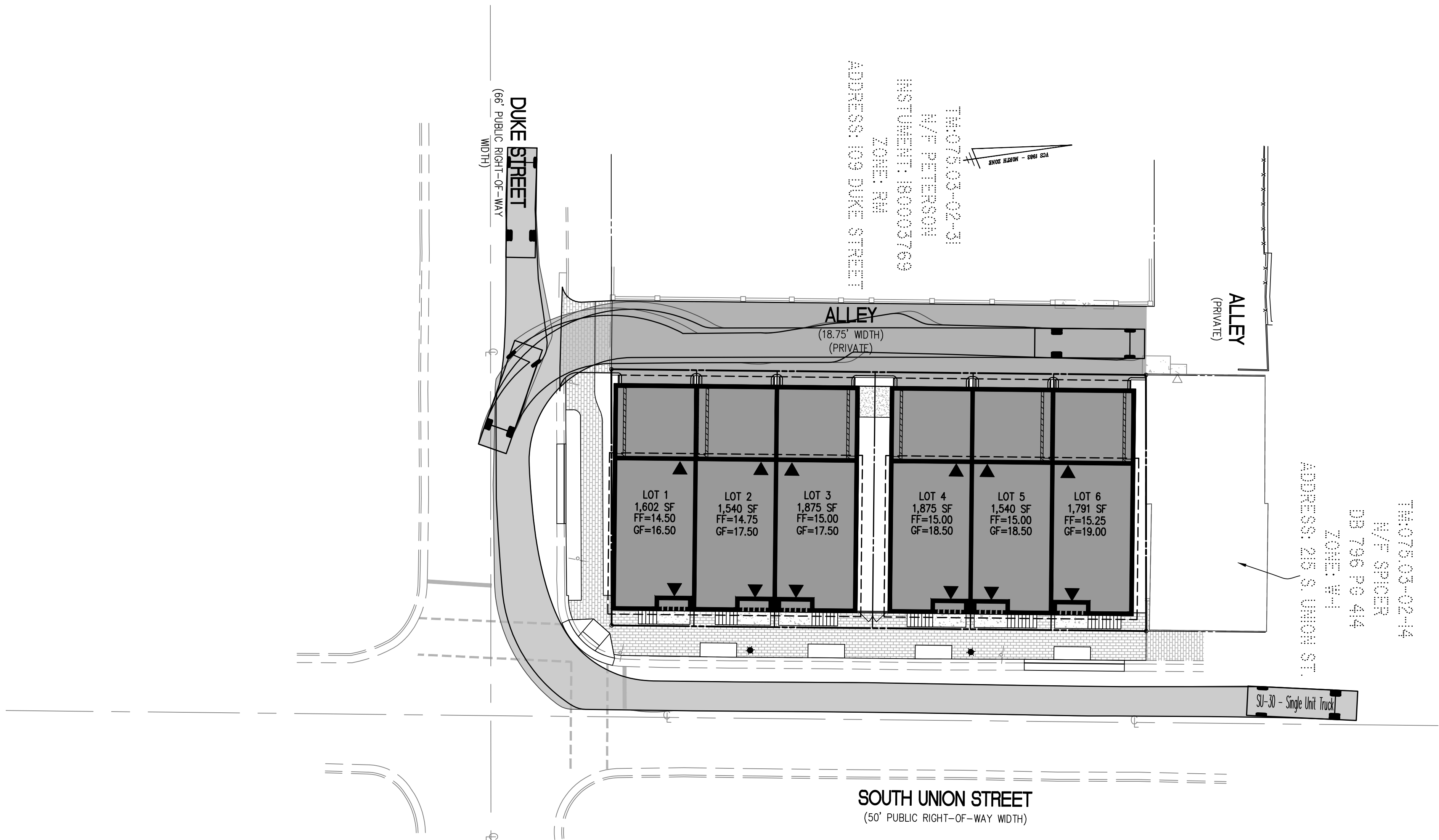
Track : 6.00

Lock to Lock Time : 6.0

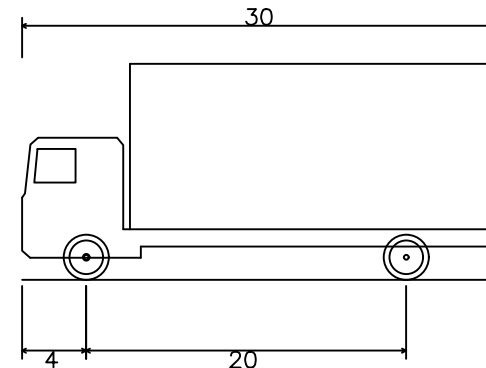
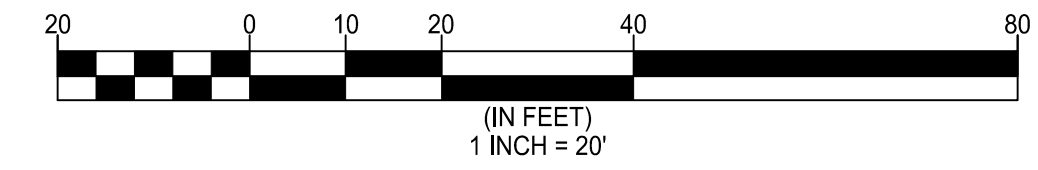
Steering Angle : 31.6







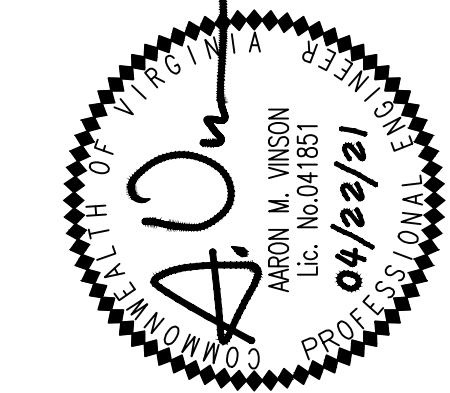
LEGEND		
PROPOSED	DESCRIPTION	EXISTING
	CURB & GUTTER CG-2	
	TRANSITION FROM CG-6 TO CG-6R	
	SANITARY SEWER	
	SANITARY LATERAL	
	CLEAN OUT	
	STORM SEWER	
	WATER MAIN	
	FIRE HYDRANT PLUG	
	OVERHEAD WIRES	
	UTILITY POLE	
	UNDERGROUND ELECTRIC	
	TELEPHONE	
	GAS MAIN	
	ELECTRICAL	
	TRANSFORMER	
	HANDICAP RAMP (CG-12)	
	GUARDRAIL FENCE	
	TRAFFIC FLOW	
	LIGHT	
	DOOR	
	TREES	
	CONTOURS	
	SPOT ELEVATION	
	DRAINAGE FLOW DIRECTION	
	TOP OF CURB	
	BOTTOM OF CURB	
	TOP OF WALL	
	BOTTOM OF WALL	
	HIGH POINT	
	TEST PIT	
	LIMITS OF CLEARING AND GRADING	



SU-30 - Single Unit Truck  
Overall Length 30.000ft  
Overall Width 8.000ft  
Overall Body Height 13.500ft  
Min Body Ground Clearance 8.000ft  
Track Width 8.000ft  
Lock-to-lock time 31.80°  
Max Steering Angle (Virtual) 31.80°

### TRASH COLLECTION NOTE

TRASH WILL BE ROLLED FROM INDIVIDUAL GARAGES TO THE DUKE STREET FRONTAGE ON COLLECTION DAYS AND PICKED UP BY CITY TRASH SERVICE.



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**NORTHWEST CORNER OF SOUTH UNION STREET AND DUKE STREET**  
DEVELOPMENT SPECIAL USE PERMIT  
CITY OF ALEXANDRIA, VIRGINIA

**PRELIMINARY GARBAGE TRUCK MOVEMENT PLAN**

APPROVED  
SPECIAL USE PERMIT NO. _____ DSUP 2021-10012  
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES  
SITE PLAN No. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____











## TREE COVER CALCULATIONS

GROSS SITE AREA	10223 SF
EXCEPTIONS, DEDUCTIONS	0 SF
ZONE	W-1
PERCENT REQUIRED	25 %
TOTAL TREE COVER REQUIRED	2556 SF
TREE COVER PROVIDED BY PRESERVING TREES	0 SF
TREE COVER REQUIRED BY PLANTING	2555.8 SF
TREE COVER PROPOSED BY PLANTING	1380 SF
TOTAL TREE COVER PROVIDED	1380 SF

WAIVER REQUESTED FOR REMAINDER  
OF CANOPY COVERAGE REQUIREMENT

## TREES

KEY	BOTANICAL NAME	COMMON NAME	QTY	CAL.	HT.	COMMENTS	CANOPY CREDIT UNIT (SF)	TOTAL (SF)
CF	Cornus florida	Flowering Dogwood	2	1.5"	6'-7"	B&B, full specimen	250	500.00
MV	Magnolia virginiana	Sweetbay Magnolia	2	1.5"	6'-7"	B&B, full specimen, 3-4 trunks	250	500.00
PA	Platanus x acerifolia 'Bloodgood'	Bloodgood London Planetree	2	2"-2.5"	12'-14'	B&B, full specimen, STREET TREES	1250	2500.00
QW	Quercus phellos	Willow Oak	1	2"-2.5"	12'-14'	B&B, full specimen, STREET TREES	1250	1250.00

ONSITE TOTAL = 1,000 SF
ROW TOTAL = 3,750 SF

## SHRUBS

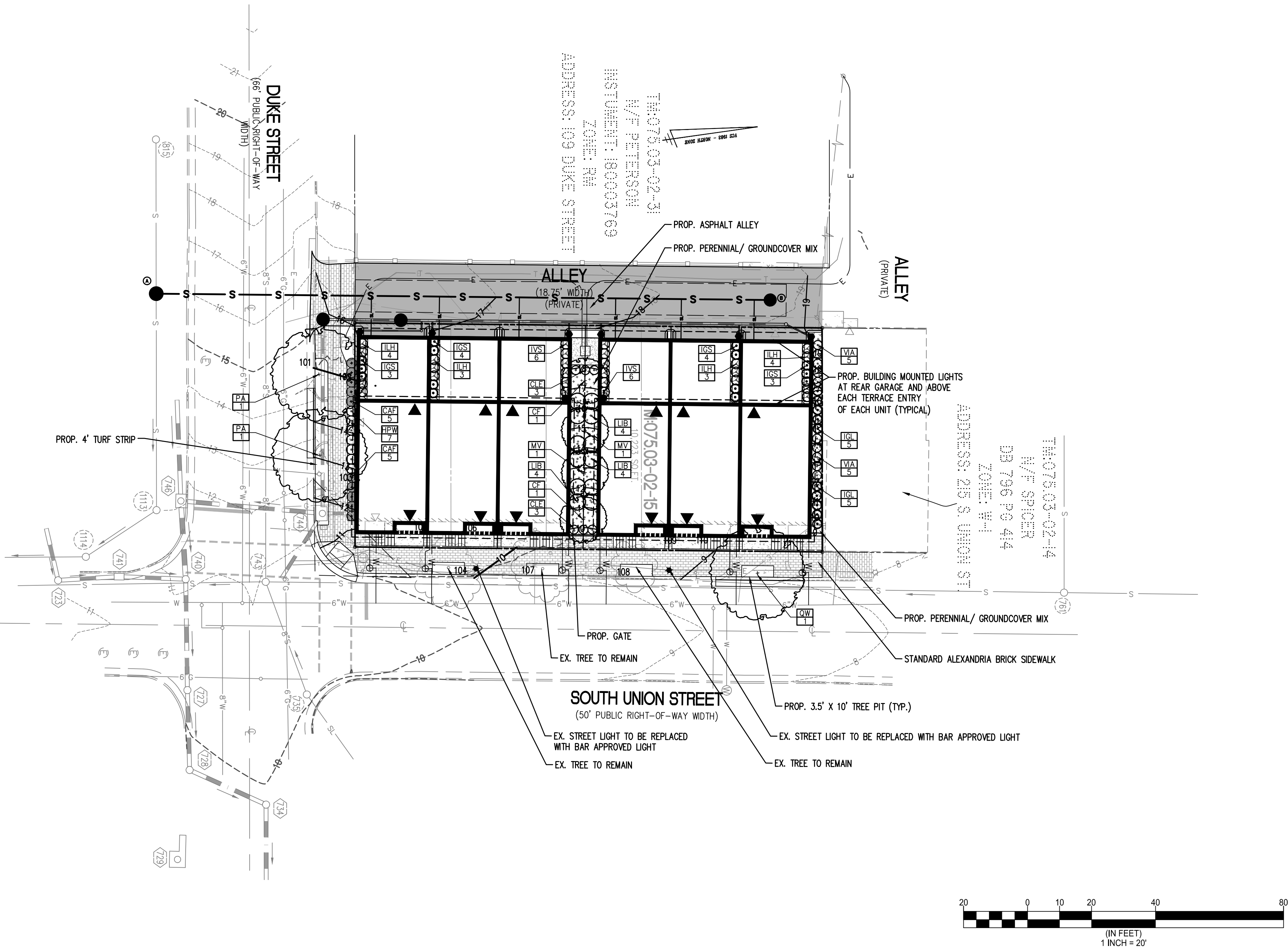
KEY	BOTANICAL NAME	COMMON NAME	QTY	HEIGHT	SPREAD	COMMENTS	CANOPY CREDIT UNIT (SF)	TOTAL (SF)
CLE	Clethra alnifolia 'Hummingbird'	Hummingbird Summersweet Clethra	6	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	10	60
CAF	Cornus 'Farrow' Arctic Fire	Arctic Fire Dogwood	0	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	*	
HPW	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea	0	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	*	
ICL	Ilex glabra	Inkberry	10	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	10	100
IGS	Ilex glabra 'Shamrock'	Shamrock Inkberry	0	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	*	
IVS	Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	0	15"-18"	15"-18"	#3 cont, full vigorous, well-rooted & established	*	
ILH	Itea virginica 'Little Henry'	Little Henry Sweetspire	0	15"-18"	15"-18"	#3 cont, full vigorous, well-rooted & established	*	
LIB	Lindera benzoin	Spicebush	12	24"-30"	24"-30"	#3 cont, full vigorous, well-rooted & established	10	120
VBA	Viburnum acerifolium	Mapleleaf Viburnum	10	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	10	100

TOTAL = 380 SF  
* NO CREDIT CLAIMED

## PERENNIALS/ GROUNDCOVER MIX

KEY	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	COMMENTS
CXP	Carex pensylvanica	Sedge	400	#1 cont.	10" O.C., full specimen, healthy, well-rooted
HEU	Heuchera americana	American alumroot	75	#1 cont.	12" O.C., full specimen, healthy, well-rooted
POL	Polystichum acrostichoides	Christmas fern	25	#1 cont.	24" O.C., full specimen, healthy, well-rooted
TIA	Tiarella cordifolia	Foam Flower	25	#1 cont.	24" O.C., full specimen, healthy, well-rooted
PHL	Phlox divaricata	Wild Blue Phlox	75	#1 cont.	12" O.C., full specimen, healthy, well-rooted

NOTE:  
PLANT PERENNIALS/ GROUNDCOVERS IN A RANDOM PATTERN



KEY	BOTANICAL NAME	COMMON NAME	QTY	CAL.	HT.	COMMENTS	CANOPY CREDIT UNIT (SF)	TOTAL (SF)
CF	Cornus florida	Flowering Dogwood	2	1.5"	6'-7"	B&B, full specimen	250	500.00
MV	Magnolia virginiana	Sweetbay Magnolia	2	1.5"	6'-7"	B&B, full specimen, 3-4 trunks	250	500.00
PA	Platanus x acerifolia 'Bloodgood'	Bloodgood London Planetree	2	2"-2.5"	12'-14'	B&B, full specimen, STREET TREES	1250	2500.00
QW	Quercus phellos	Willow Oak	1	2"-2.5"	12'-14'	B&B, full specimen, STREET TREES	1250	1250.00

ONSITE TOTAL = 1,000 SF
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## SHRUBS

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HPW	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea	0	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	*	
ICL	Ilex glabra	Inkberry	10	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	10	100
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IVS	Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	0	15"-18"	15"-18"	#3 cont, full vigorous, well-rooted & established	*	
ILH	Itea virginica 'Little Henry'	Little Henry Sweetspire	0	15"-18"	15"-18"	#3 cont, full vigorous, well-rooted & established	*	
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VBA	Viburnum acerifolium	Mapleleaf Viburnum	10	18"-24"	18"-24"	#3 cont, full vigorous, well-rooted & established	10	100

TOTAL = 380 SF  
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## PERENNIALS/ GROUNDCOVER MIX

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POL	Polystichum acrostichoides	Christmas fern	25	#1 cont.	24" O.C., full specimen, healthy, well-rooted
TIA	Tiarella cordifolia	Foam Flower	25	#1 cont.	24" O.C., full specimen, healthy, well-rooted
PHL	Phlox divaricata	Wild Blue Phlox	75	#1 cont.	12" O.C., full specimen, healthy, well-rooted

NOTE:  
PLANT PERENNIALS/ GROUNDCOVERS IN A RANDOM PATTERN

## LEGEND

KEY	TITLE	SYMBOL
	EXISTING TREELINE	
	LIMITS OF DISTURBANCE	
	PROPOSED TREE	
	PROPOSED SHRUB	
	PROPOSED PERENNIAL/ GROUNDCOVER MIX	

## LANDSCAPE PLAN NOTES

- THERE IS NO RPA, INTERMITTENT STREAM, WETLANDS, ASSOCIATED BUFFER, OR EXISTING STORMWATER FACILITIES LOCATED ONSITE. THE SITE IS LOCATED WITHIN A FLOODPLAIN.
- NO KNOWN MARINE CLAY ONSITE, SEE SHEET P-0201. NO KNOWN CONTAMINATION KNOWN ONSITE. NO PLANTINGS PROPOSED AT THIS TIME.
- THERE ARE NO EXISTING OR PROPOSED TREES ONSITE.
- THERE ARE NO EASEMENTS LOCATED ONSITE
- THERE ARE NO EXISTING CULTURAL RESOURCES.



REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

**NORTHWEST CORNER OF SOUTH  
UNION STREET AND DUKE STREET  
DEVELOPMENT SPECIAL USE PERMIT**  
CITY OF ALEXANDRIA, VIRGINIA

**PRELIMINARY LANDSCAPE AND  
HARDSCAPE PLAN**

APPROVED  
SPECIAL USE PERMIT NO. _____ DSUP 2021-10012  
DEPARTMENT OF PLANNING & ZONING

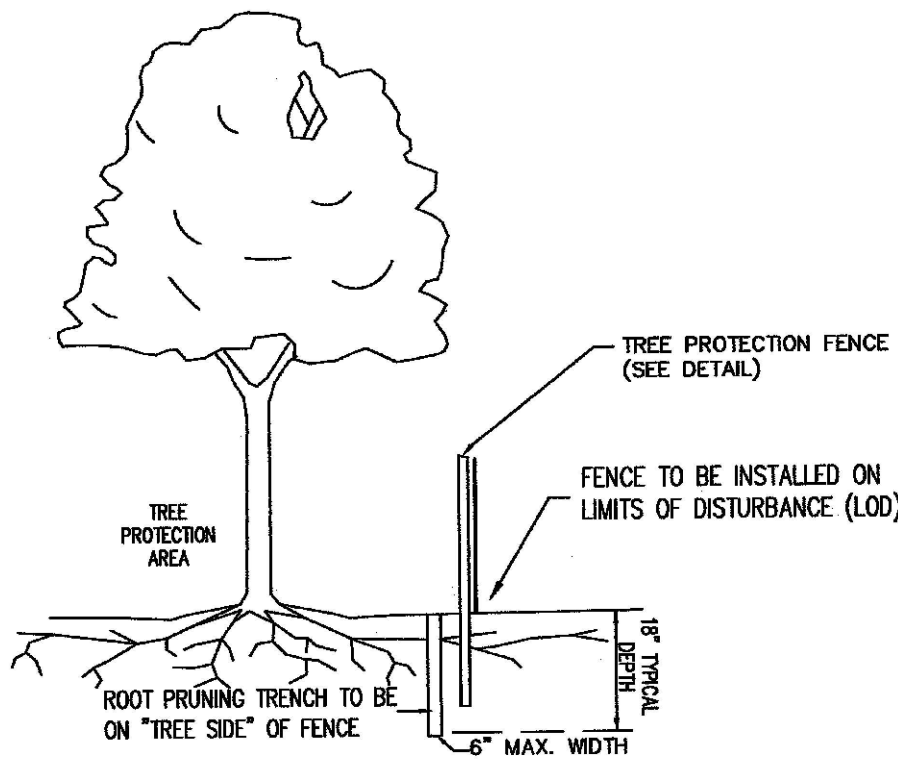
DIRECTOR _____ DATE _____  
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES  
SITE PLAN No. _____

DIRECTOR _____ DATE _____  
CHAIRMAN, PLANNING COMMISSION _____ DATE _____  
DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____



ROOT PRUNING DETAIL (TYPICAL)



NOTE:

TREE PROTECTION AREA WILL BE DETERMINED AS PART OF THE PLAN REVIEW PROCESS. EXACT LOCATION, DEPTH AND METHODS OF ROOT PRUNING TO BE DETERMINED IN THE FILED BY PROJECT FORESTER.

EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING.

TRENCH SHOULD BE BACKFILLED IMMEDIATELY.

ROOTS SHALL BE SEVERED BY TRENCHER, VIBRATORY PLOW OR APPROVED EQUIVALENT. ROOTS OVER 1.0" DIAMETER SHALL BE CLEANLY CUT BY HAND. ROOT PRUNING ADJACENT TO SPECIMEN TREES MAY REQUIRE SOIL REMOVAL BY SUPERSONIC AIR TOOL TO MINIMIZE TREE AND ROOT IMPACTS.

TREE PRESERVATION TECHNIQUES

(Both techniques described below can be combined with the pruning of roots that may occur beyond the area of treatment).

#1 - For Use in Areas Where Equipment Must Operate in Areas That Will Remain at Existing Grades

- In the woodchip and plywood or chainlink fence area shown in figure 1 below, spread 10-15" of wood chips by hand.
- On top of the wood chips, lay 5/8 to 3/4 inch plywood or heavy-gauge chain link fence to provide a path for equipment and workers to operate.

Figure 1

#2 - For Use in Areas Where Fill Soil Will Be Placed Over the Root Zone:

- An aeration system shall be installed in the area shown in figure 2 below prior to grading. The aeration system (see diagram below) shall consist of geotextile fabric laid on top of the undisturbed ground; with not less than six inches of river rock on top of it; and with a second layer of geotextile fabric laid on top of the rock.
- Fill dirt can then be placed on top of the geotextile fabric.

Figure 2

TREE PRESERVATION AREA  
KEEP OUT

NO EQUIPMENT OR MATERIALS ARE TO BE STORED OR DEPOSITED IN THIS AREA

(COMPANY NAMES AND CONTACT NUMBERS)

PENALTY FOR VIOLATIONS STRICTLY ENFORCED

SPECIFICATIONS

- MINIMUM DIMENSION: 11 X 8 INCHES (W X H)
- BACKGROUND COLOR: RED OR YELLOW
- SIGNS MADE OF WEATHERPROOF MATERIAL

TREE PRESERVATION SIGN DETAIL

Landscape Plan Preparation

Recommended Planting Installation Seasons

- A. Recommended seasons are a general guide based on historical climatic data and typical performance of plantings, and which vary dependent on project-specific environmental conditions. Due to construction schedules, recommended planting seasons may/may not coincide with request(s) for certificate of occupancy for projects. Coordination of planting installation and seasons shall be reviewed on an individual project basis.

- Trees
  - Do not install/plant the following trees between September 15 and March 15.
    - Oaks (*Quercus Sp.*, Such as *Q. rubra*, *Q. alba*, *Q. phellos*, *Q. coccinea*).
    - Dogwood (*Cornus Sp.*)
    - Sweetgum (*Liquidambar Sp.*)
    - All Conifers and Evergreens except White Pine (*Pinus strobus Sp.*).
- Deciduous and Evergreen Plants
  - Install/plant between March 15 and June 15 and/or September 15 and November 15.
- Perennials
  - Install/plant between March 15 and June 15 and/or September 15 and November 15.
- Spring Flowering Bulbs
  - Install/plant between September 15 and December 15.
- Seasonal Annuals
  - Install/plant in season per approved schedule.
- Turf Grass
  - Install/plant between March 15 and May 15 and/or September 15 and October 15.
  - Do not install/plant seed or sod turf grass areas when ambient air temperature is below forty (40) degrees Fahrenheit, or is forecast for a twelve (12) hour period after completion of work.
- No Plant Installation
  - Do not install plantings or turf grass between June 15 and September 15, without prior written approval by the City Arborist.

Standards and Requirements

Figure 1-A: Required Notes on Drawing Submissions

- All protection and preservation measures for existing vegetation, including maintenance shall be approved by the City Arborist in-field prior to commencement of any site disturbing activity.
- Specification for all plantings shall be in accordance with the current and most up to date edition of ANSI-Z60.1, *The American Standard for Nursery Stock* as produced by the American Association of Nurserymen; Washington, DC.
- The applicant has made suitable arrangements for pre-selection tagging, pre-contract growing, or is undertaking specialized planting stock development with a nursery or grower that is conveniently located to the project site, other procedures that will ensure availability of specified materials. In the event that shortages and/or inability to obtain specified plantings occurs, remedial efforts including species changes, additional plantings and modification to the landscape plan shall be undertaken by the applicant. All remedial efforts shall, with prior approval by the city, be performed to the satisfaction of the Directors of Planning & Zoning, Recreation, Parks & Cultural Activities and Transportation & Environmental Services.
- In lieu of more strenuous specifications, all landscape related work shall be installed and maintained in accordance with the current and most up-to-date edition (at time of construction) of *Landscape Specification Guidelines* as produced by the Landscape Contractors Association of Maryland, District of Columbia and Virginia; Gaithersburg, Maryland.
- Prior to commencement of landscape installation/planting operations, a pre-installation/construction meeting will be scheduled with the City's Arborist and Landscape Architects to review the scope of installation procedures and processes.
- Maintenance for this project shall be performed in perpetuity, in compliance with City of Alexandria Landscape Guidelines and/or as conditioned by project approval.
- A certification letter for tree wells, tree trenches and plantings above structure shall be provided by the project's Landscape Architect. The letter shall certify that all below grade construction is in compliance with approved drawings and specifications. The letter shall be submitted to the City Arborist and approved prior to approval of the last and final Certificate of Occupancy for the project. The letter shall be submitted by the owner/applicant/successor and sealed and dated as approved by the project's Landscape Architect.
- As-built drawings for this landscape and/or irrigation/water management system will be provided in compliance with City of Alexandria Landscape Guidelines. As-built drawings shall include clear identification of all variation(s) and changes from approved drawings including location, quantity and specification of all project elements.

Standards and Requirement

Figure 1-B: Tree Protection

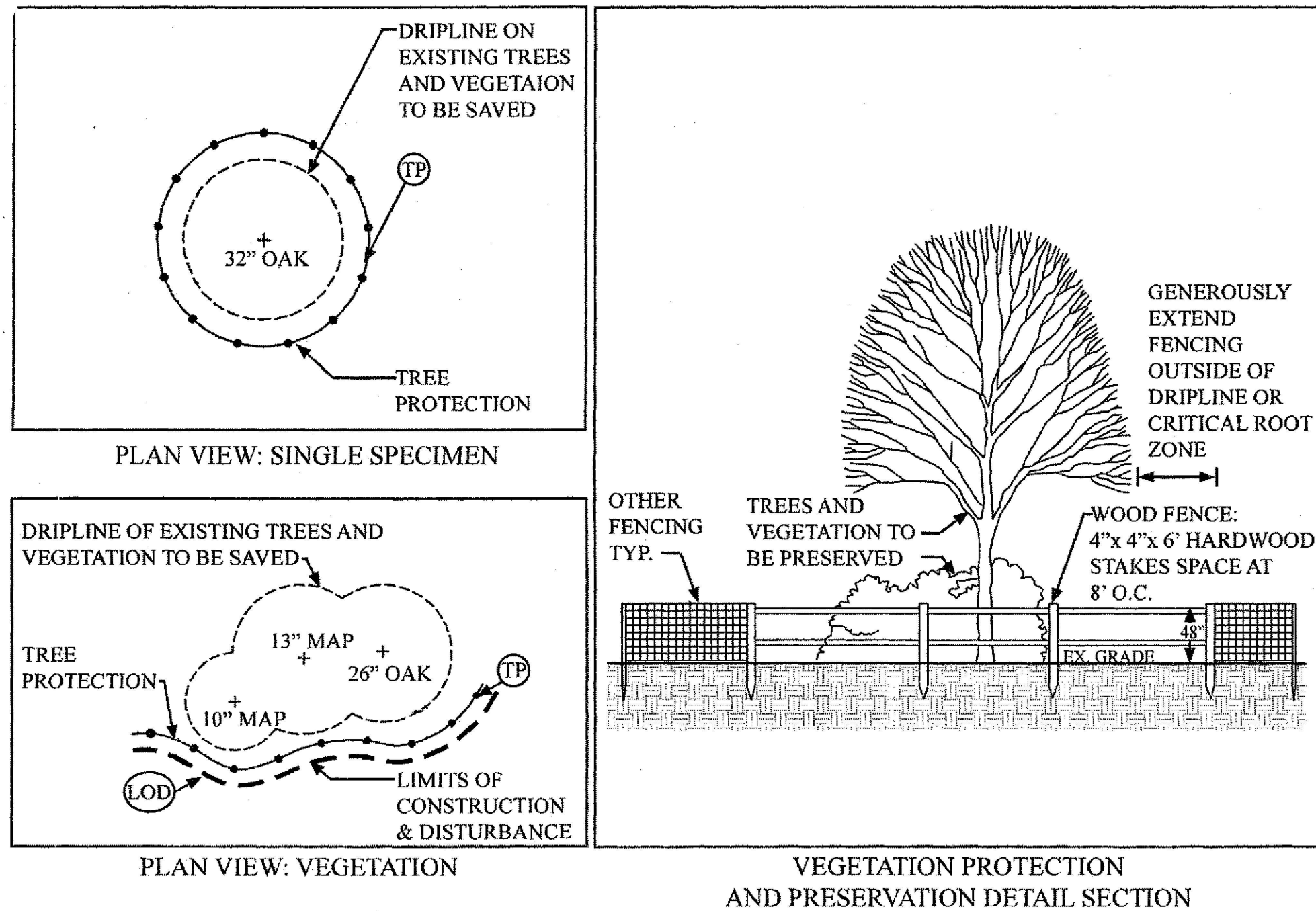


Figure 11-B: Tree Well

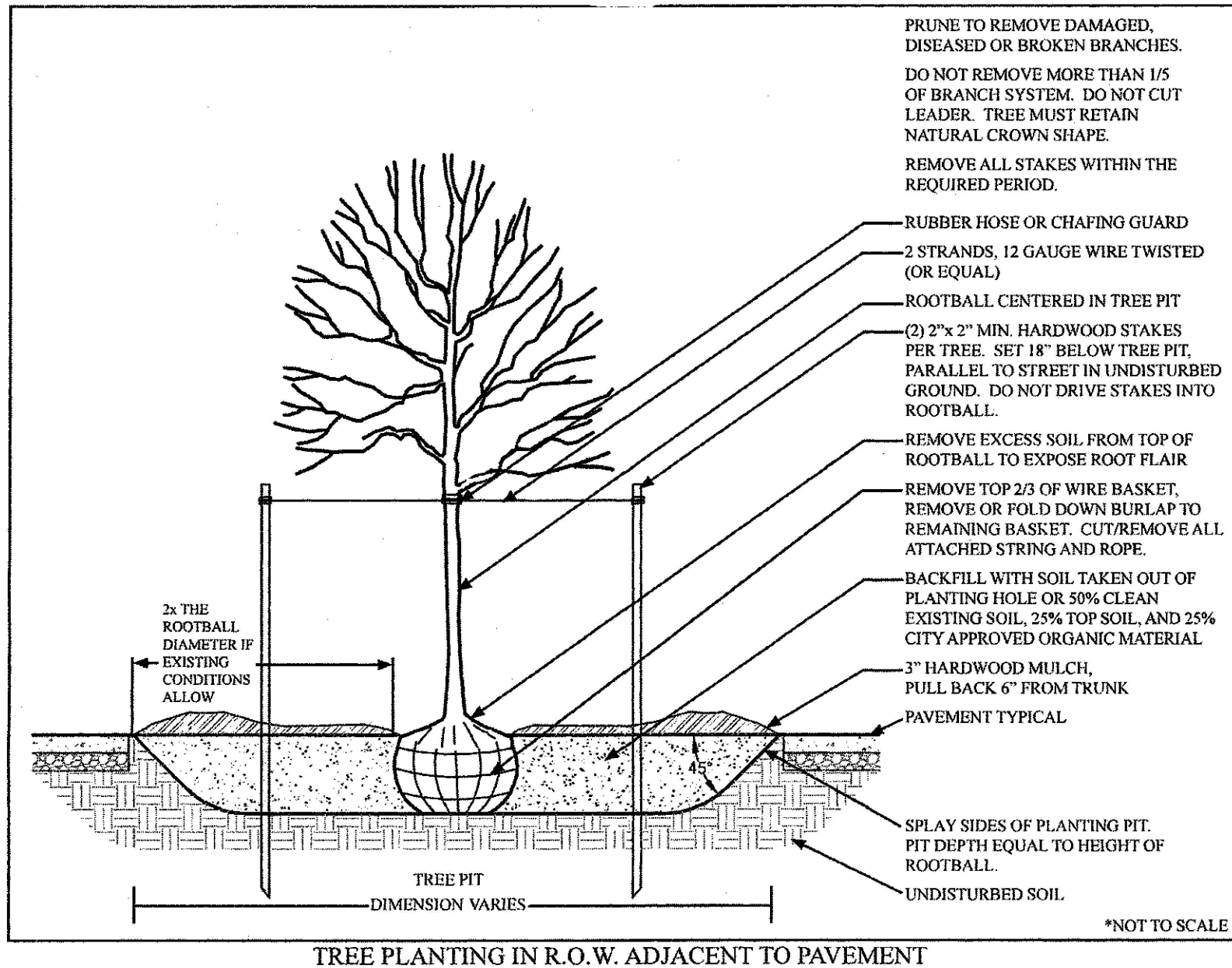
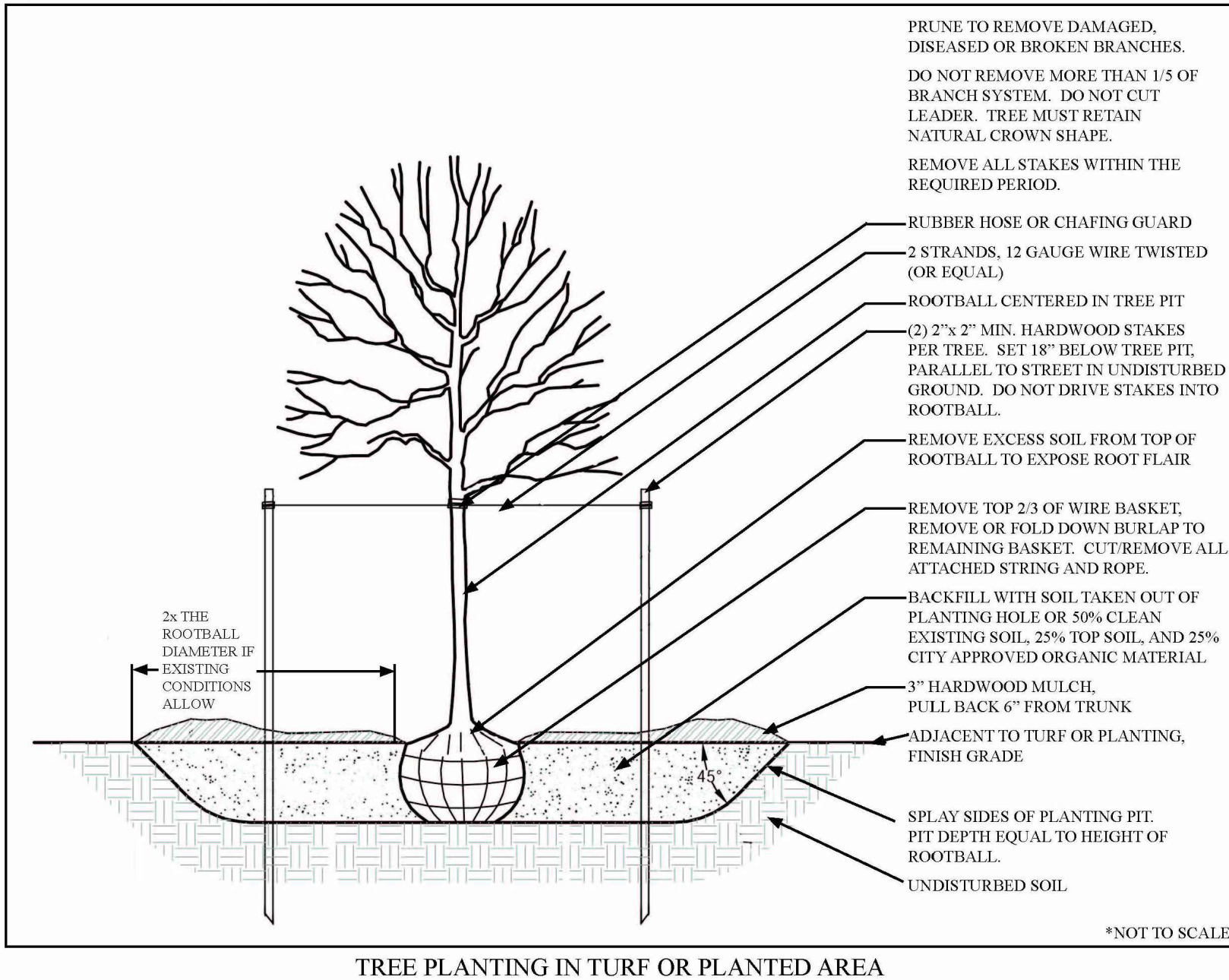


Figure 11-C: Planting Strip



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SCALE: DATE: 10/21/2020 DRAWN: TBV CHECKED: TBV  
PLAN STATUS: 4" = 20'

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02/24/2021	DSUP COMPLETENESS		



REVISION APPROVED BY

NO.

DESCRIPTION

DATE

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DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE  
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CHAIRMAN, PLANNING COMMISSION DATE

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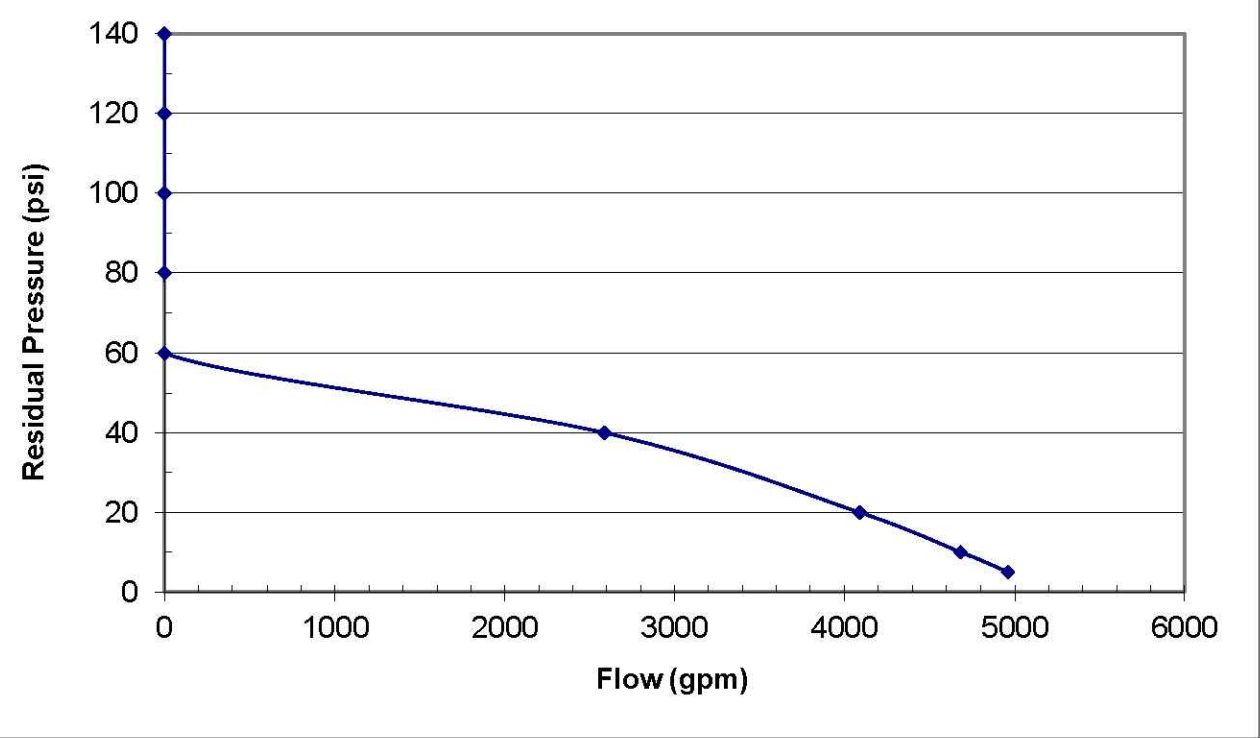


Virginia American Water  
Fire Hydrant Flow Test Summary

Location:	101 Duke St	Main Size	8 inches	Contact Person	Matthew Ganci
Date:	3/11/2021	Flow Hydrant #	8773	Project Engineer	Matthew Ganci
Time:	2:00PM	Residual Hydrant #	1068	Virginia American Water	2225 Duke St.
Total Flow	2190 gpm			Alexandria, VA 22314	Office: 703-706-3862
Static pressure	55 psi			Email: matthew.ganci@amwater.com	
Residual pressure	44 psi				

Calculated Flow gpm	Residual psi
4961	5
4687	10
4492	20
2500	40
#NUM!	60
#NUM!	80
#NUM!	100
#NUM!	120
#NUM!	140

- Notes:
1. Table calculation is for reference only. Virginia American Water will not guarantee the calculated flow.
  2. 3500 gpm is the limit of available fire flow.
  3. Individual (Non-public water supply) fire suppression systems shall be designed by the property owner to meet needed fire flow in excess of 3,500 gpm.
  4. VAW does not provide hydrant elevations.



#### REQUEST FOR FIRE FLOW TEST INFORMATION

Requested by: Travis Brown  
Phone: (703) 532-6153 Fax:   
Email: tbrown@wlpinc.com  
Project Name: 101 Duke St  
Request Reason: Need flow information for hydraulic calculations

District: A P  
Project address: 101 Duke St  
Map sheet #  
Flow Hydrant#: 8773 use 4" nozzle w/diffuser  
Residual Hydrant #: 1068  
Main size: 8 inches

Note: Before running this flow test, check all surroundings to avoid any potential damage to nearby residents landscaping, grounds, etc.

#### Flow duration 3-5 minutes

Tester: K. Karamy  
Date: 3/11/2021  
Time: 2:00p

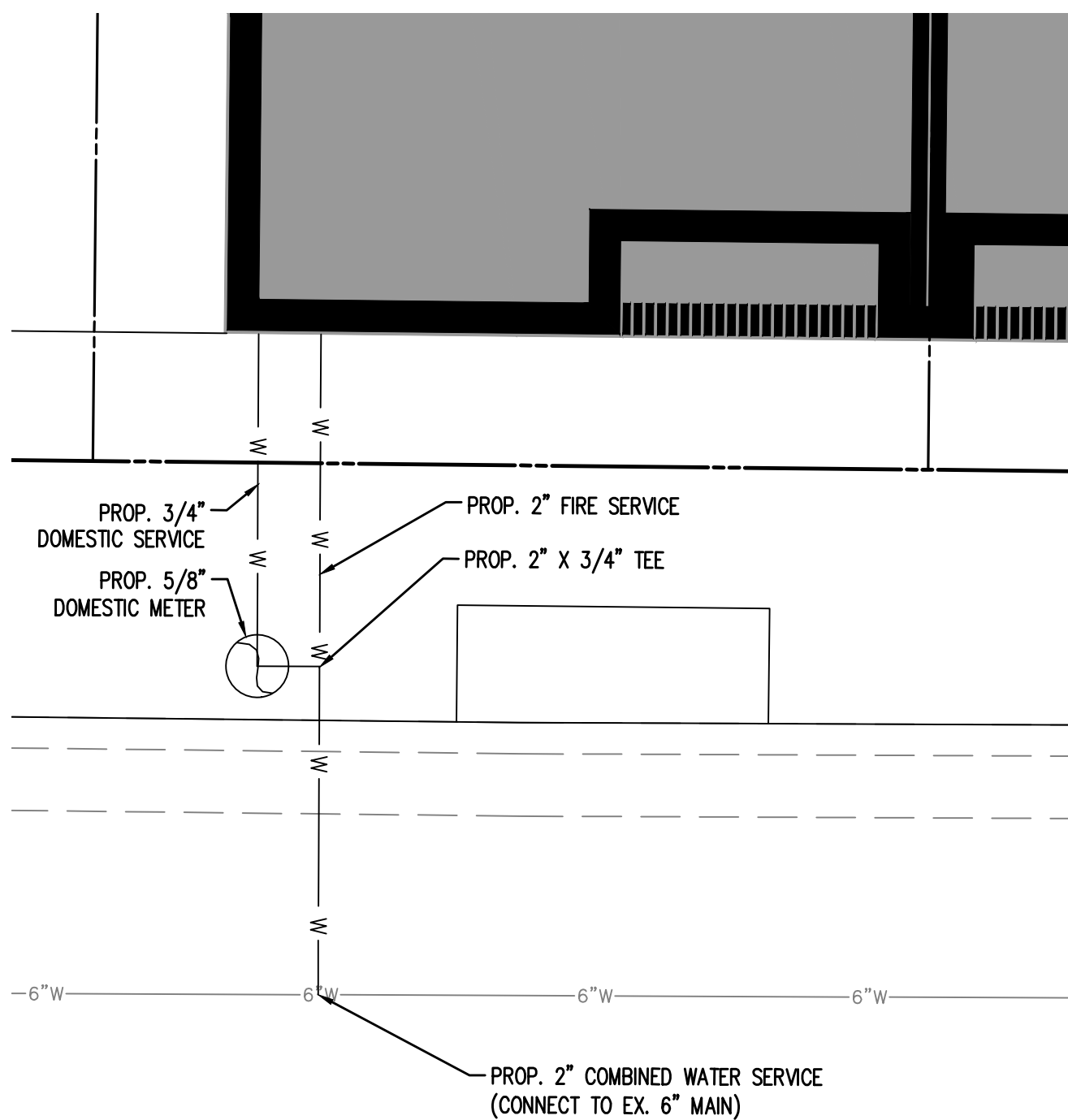
Residual Hyd#: 1068 Make: Mueller  
Residual FH MUST Get at least a 10 lb. drop Static Pressure (PSI): 55  
Residual Pressure (PSI): 44

Flow Hydrants	1	2	3	4
Hydrant#	8773			
Hydrant make	Mueller			
Nozzle Diameter (inch)	4			
Flow reading (PSI)	26			
Static Reading (PSI)	56			

Engineering Department  
Requested by: Matthew Ganci Date: 3/10/2021

#### TYPICAL WATER SERVICE DETAIL

SCALE: 1" = 5'



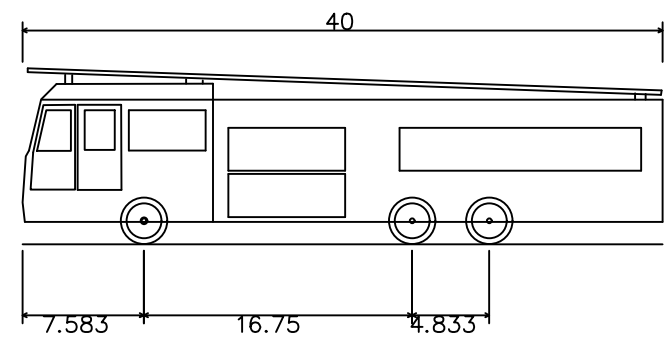
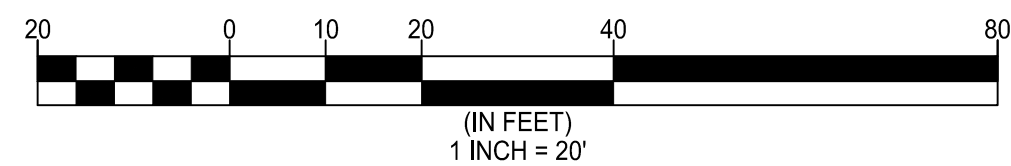
PROPOSED	DESCRIPTION	EXISTING
EP	EDGE OF PAVEMENT	EP
MH	MANHOLE	MH
WV	WATER VALVE	WV
WM	WATER METER	WM
GM	GAS METER	GM
TCB	TRAFFIC CONTROL BOX	TCB
LP	LIGHT POLE	LP
LP/S	LIGHT POLE WITH SIGNALS	LP/S
	CURB & GUTTER	
	CG-2	
	TRANSITION FROM CG-6 TO CG-BR	
	CG-6R	
	CG-6	
S	SANITARY SEWER	S
SL	SANITARY LATERAL	SL
C.O.	CLEAN OUT	C.O.
	STORM SEWER	
W	WATER MAIN	W
F	FIRE HYDRANT	F
P	PLUG	P
	OVERHEAD WIRES	
UE	UNDERGROUND ELECTRIC	UE
T	TELEPHONE	T
G	GAS MAIN	G
E	ELECTRICAL	E
	TRANSFORMER	
	HANDICAP RAMP (CG-12)	
	GUARDRAIL	
	FENCE	
	TRAFFIC FLOW	
	LIGHT	
	DOOR	
	TREES	
TP	TEST PIT	
	LIMITS OF CLEARING AND GRADING	

#### BUILDING CODE ANALYSIS

CODE :  
USE GROUP :  
CONSTRUCTION TYPE :  
ALLOWABLE HEIGHT :  
ALLOWABLE NUMBER OF STORIES :  
ALLOWABLE AREA :  
NFPA :

2015 VIRGINIA CONSTRUCTION CODE  
R-3  
VA  
50'  
4  
UNLIMITED  
13R

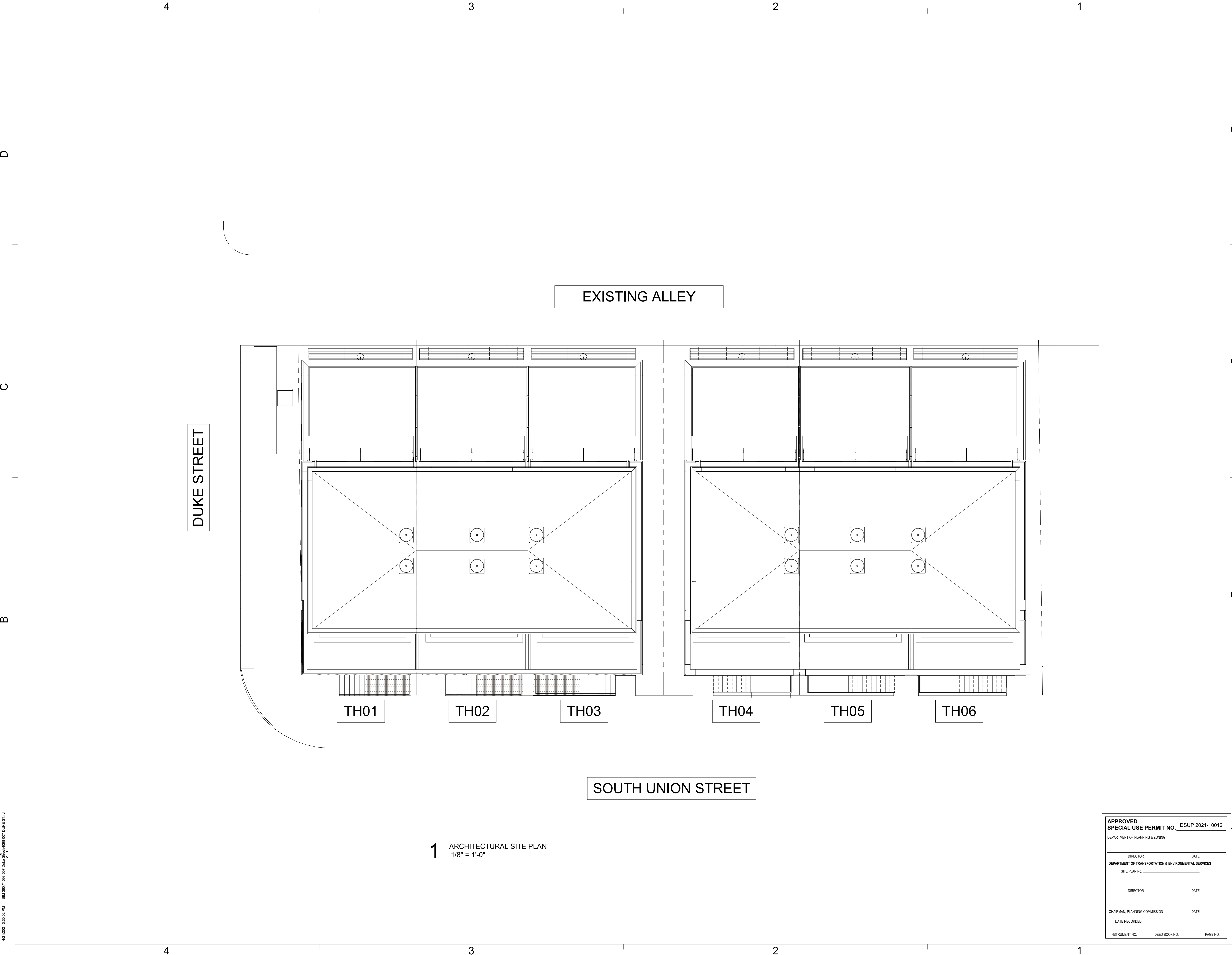
TH01 / TH02 / TH03 / TH04 / TH05 / TH06		
GROUND FLOOR	901	440 Garage
SECOND FLOOR	901	440 Terrace
THIRD FLOOR	901	
FOURTH FLOOR	703	162 Rooftop
TOTAL INTERIOR	3406	



E-ONE HP100 Aerial  
Overall Length  
Overall Width  
Overall Body Height  
Min Body Ground Clearance  
Track Width  
Lock-to-lock time  
Max Wheel Angle

40,000ft  
8,333ft  
11,000ft  
1,393ft  
8,333ft  
6,00s  
45.00°

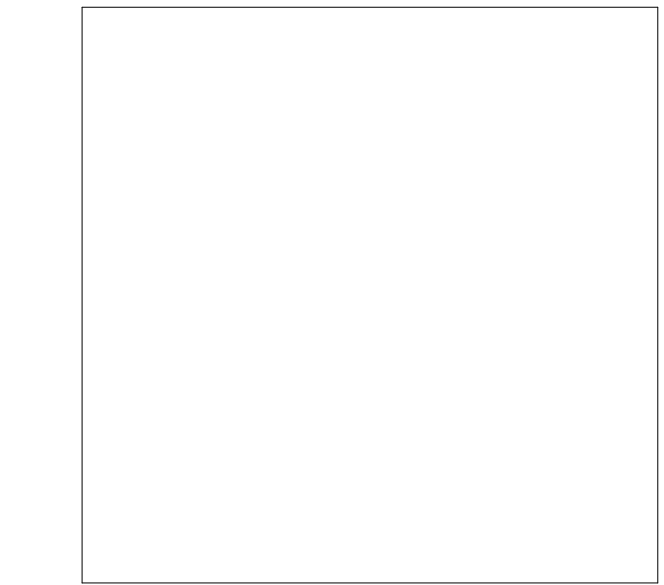




4/21/2021 3:30:02 PM B:\A\A08-007 Draw 4/21/2021 4:08:50 PM D:\A\A08-007 DUK ST.rvt

1 ARCHITECTURAL SITE PLAN  
1/8" = 1'-0"

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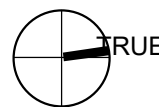


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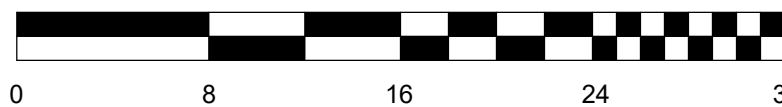
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GRAPHIC SCALE



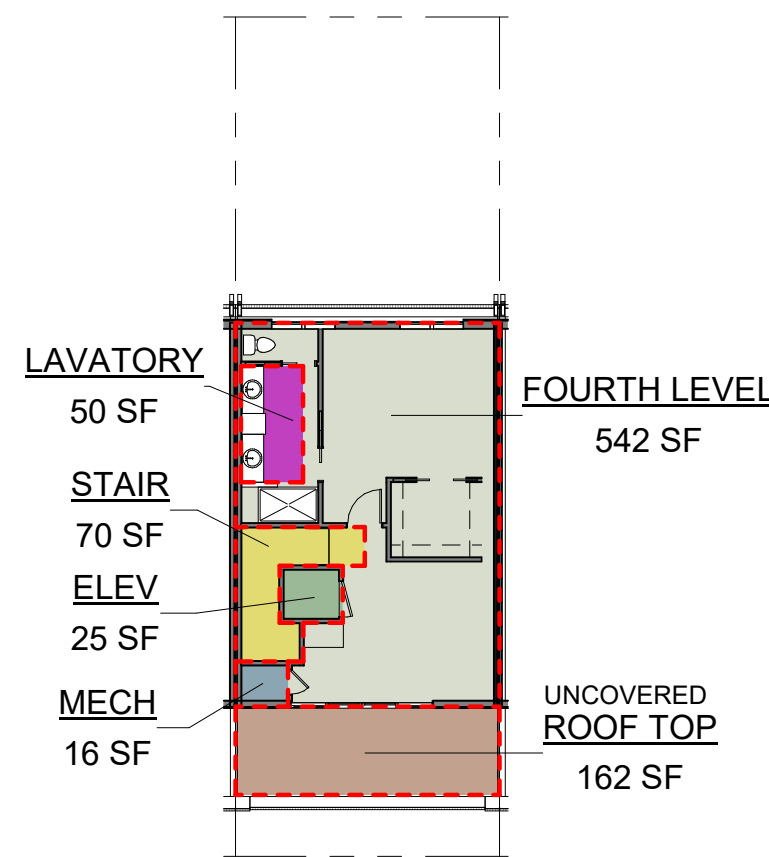
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ARCHITECTURAL  
SITE PLAN

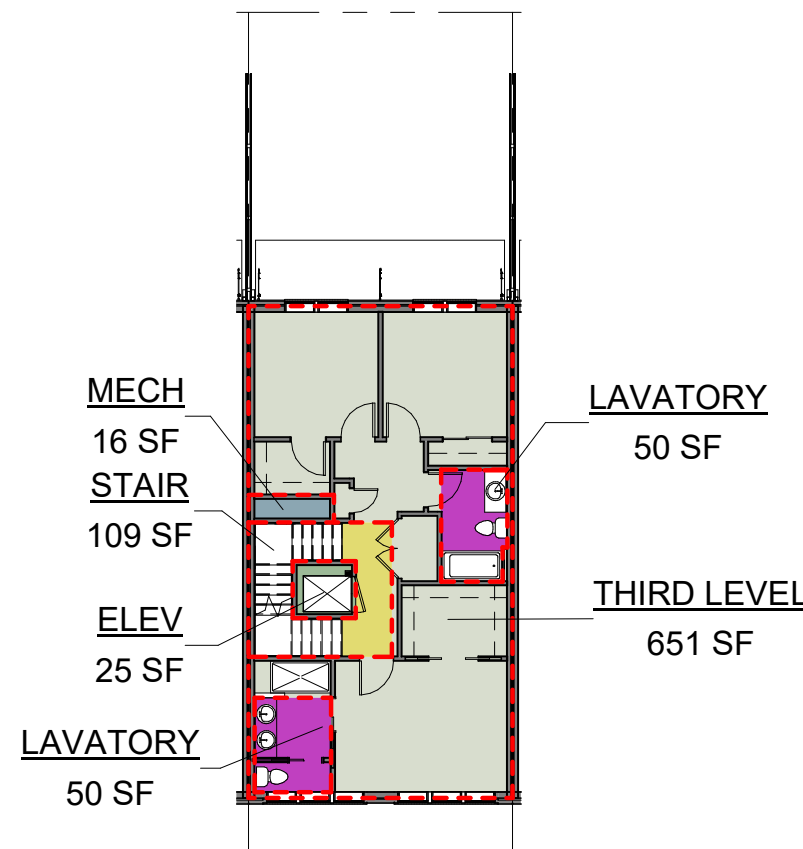
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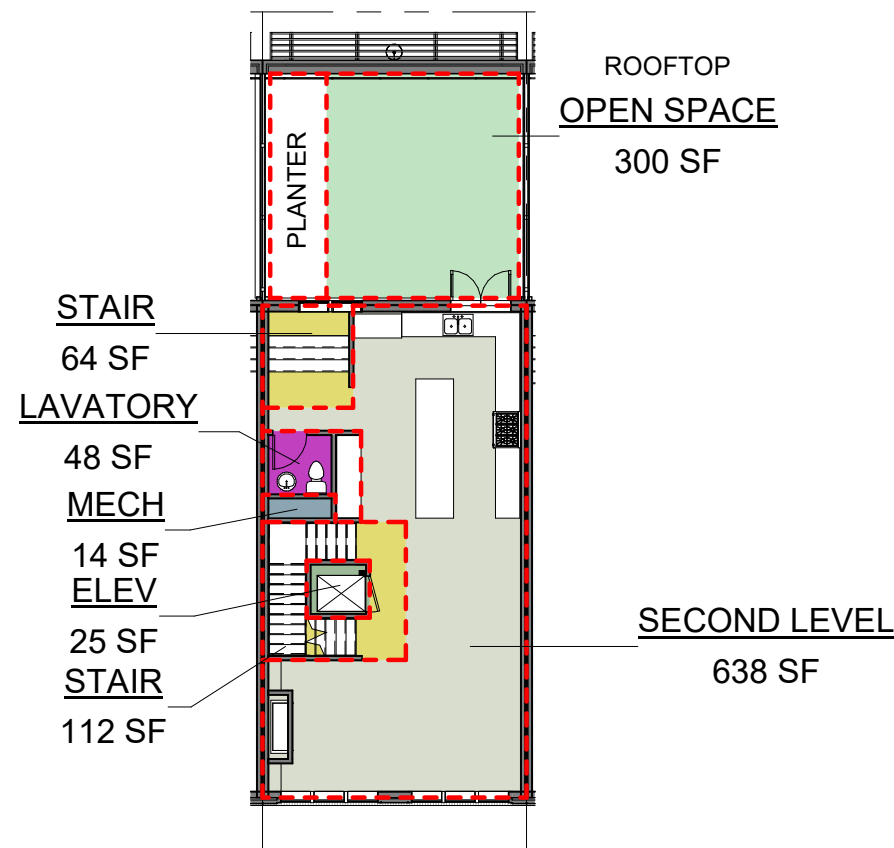




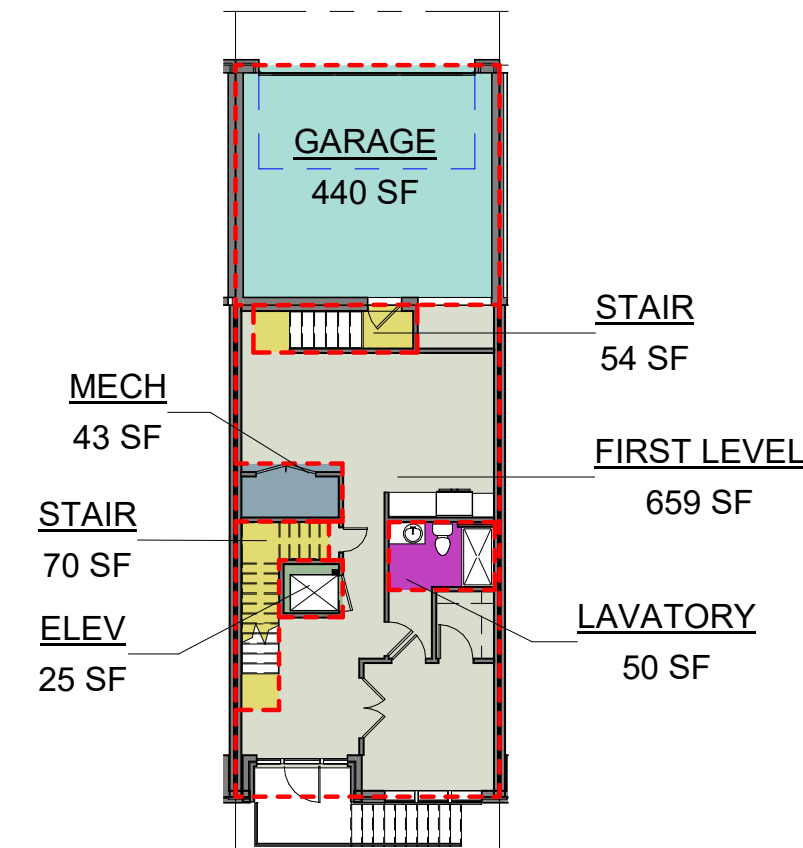
5 TOWNHOME - LEVEL 04 FAR DIAGRAM  
1/16" = 1'-0"



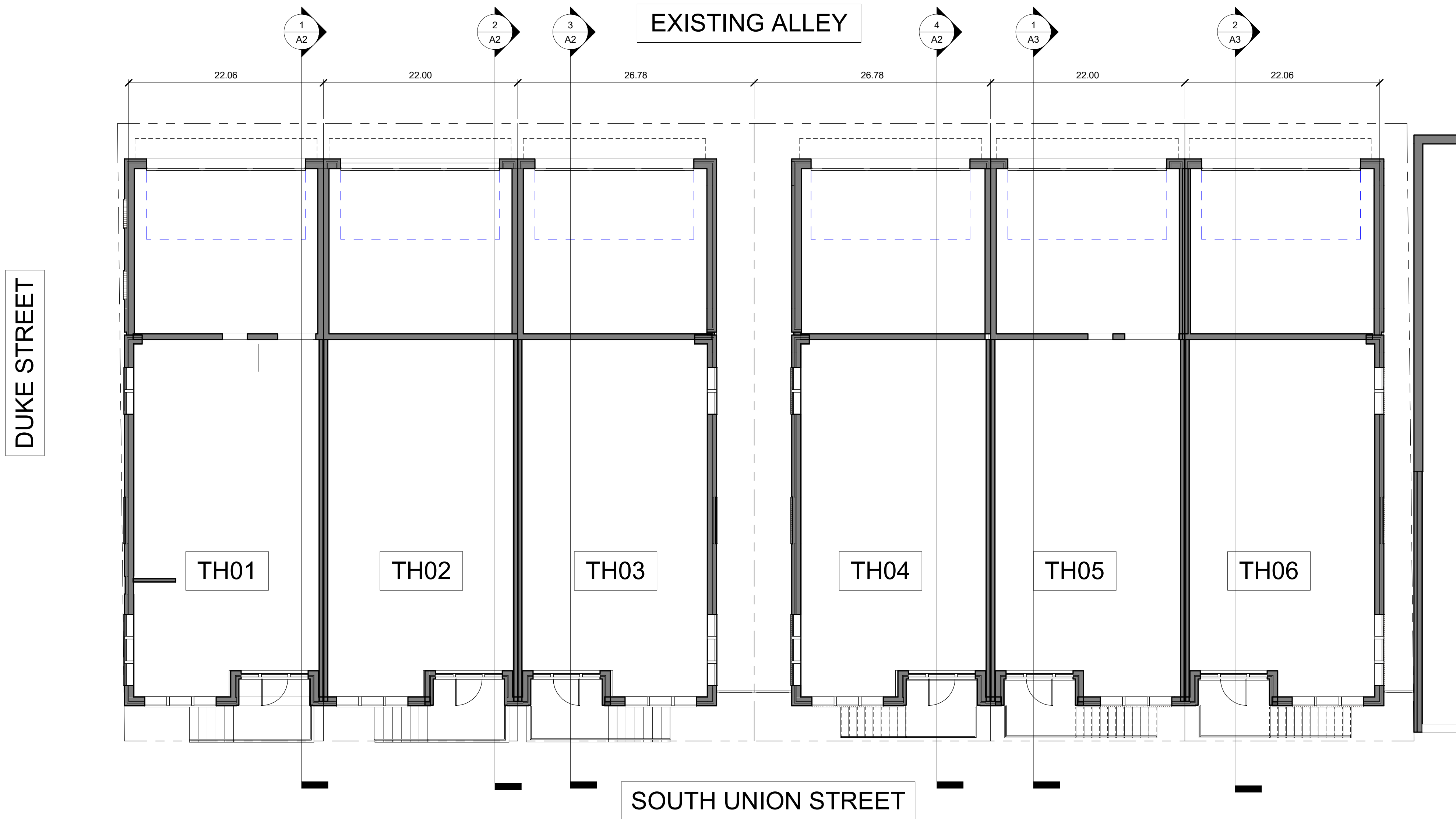
4 TOWNHOME - LEVEL 03 FAR DIAGRAM  
1/16" = 1'-0"



3 TOWNHOME - LEVEL 02 FAR DIAGRAM  
1/16" = 1'-0"



2 TOWNHOME - LEVEL 01 FAR DIAGRAM  
1/16" = 1'-0"



1 GROUND FLOOR PLAN  
1/8" = 1'-0"

### GROSS FLOOR AREA AND FLOOR AREA RATIO PROPOSED

	LOT AREA	GFA		DEDUCTIONS		Lav % of GFA	NFA Total	FAR per LOT
		TH	GARAGE	Mech/St	Lavatory			
TH01	1602	3406	440	-668	-248	6.45%	2930	1.83
TH02	1540	3406	440	-668	-248	6.45%	2930	1.90
TH03	1875	3406	440	-668	-248	6.45%	2930	1.56
TH04	1875	3406	440	-668	-248	6.45%	2930	1.56
TH05	1540	3406	440	-668	-248	6.45%	2930	1.90
TH06	1791	3406	440	-668	-248	6.45%	2930	1.64

SITE AREA	10223
FAR	1.72

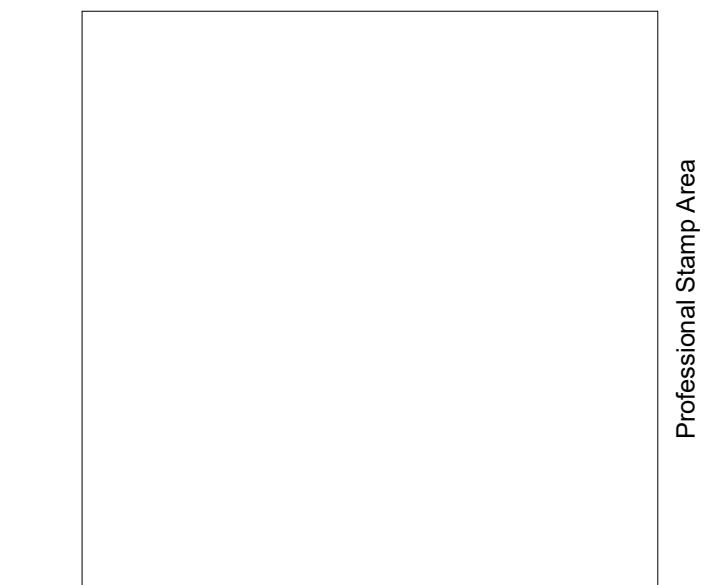
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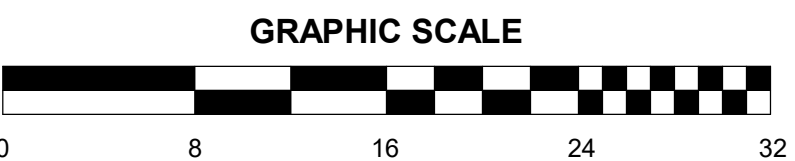


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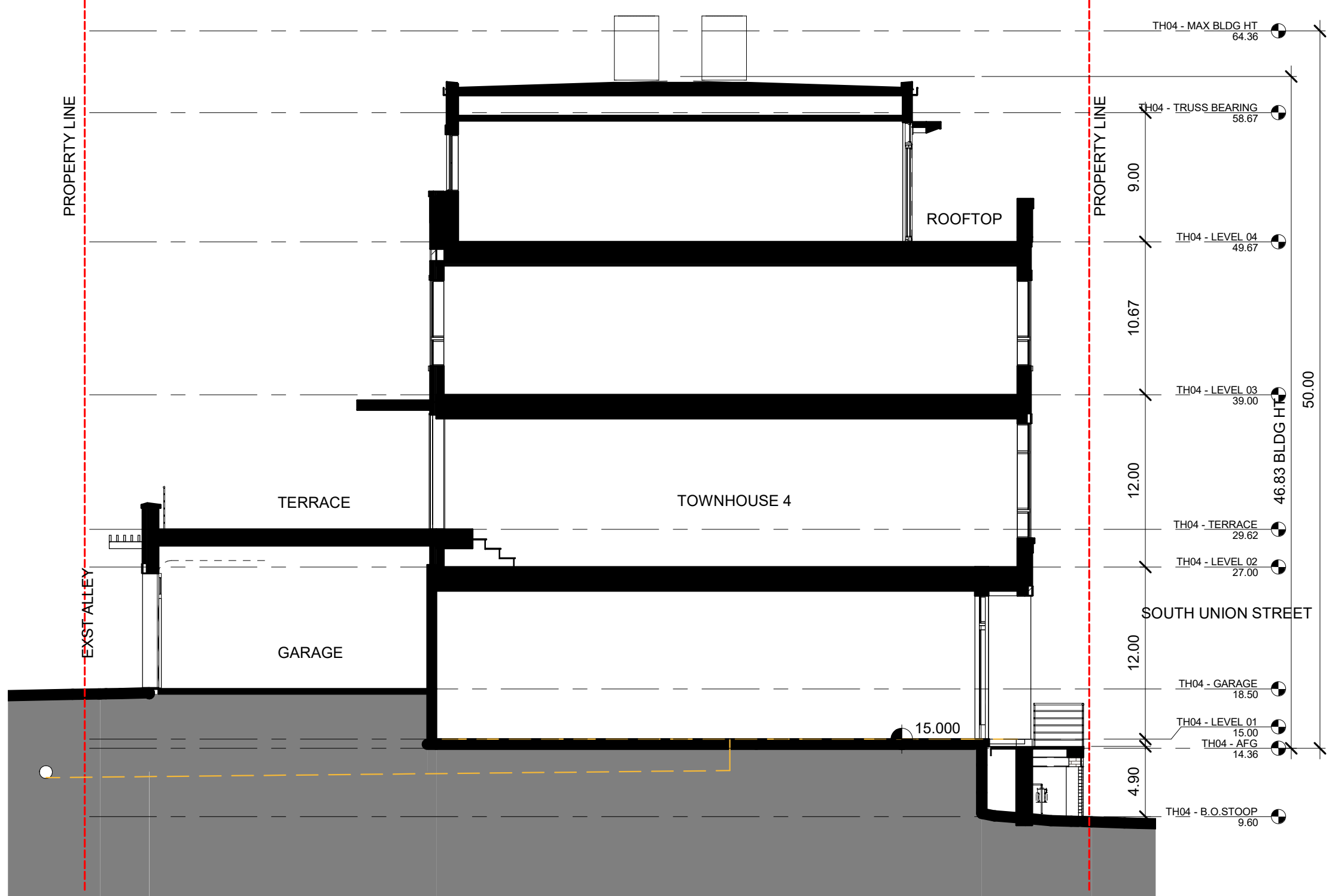
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### FLOOR PLANS

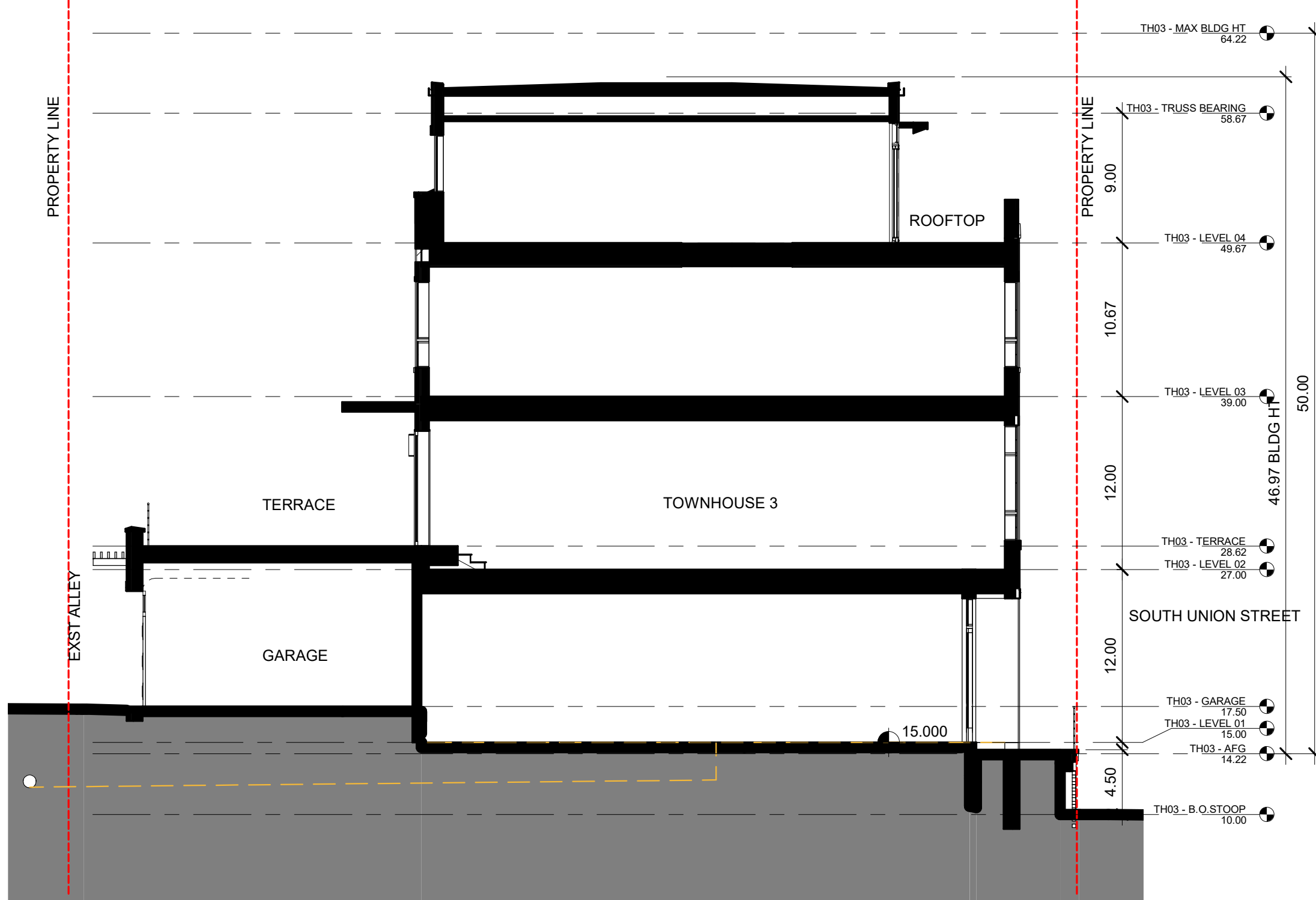
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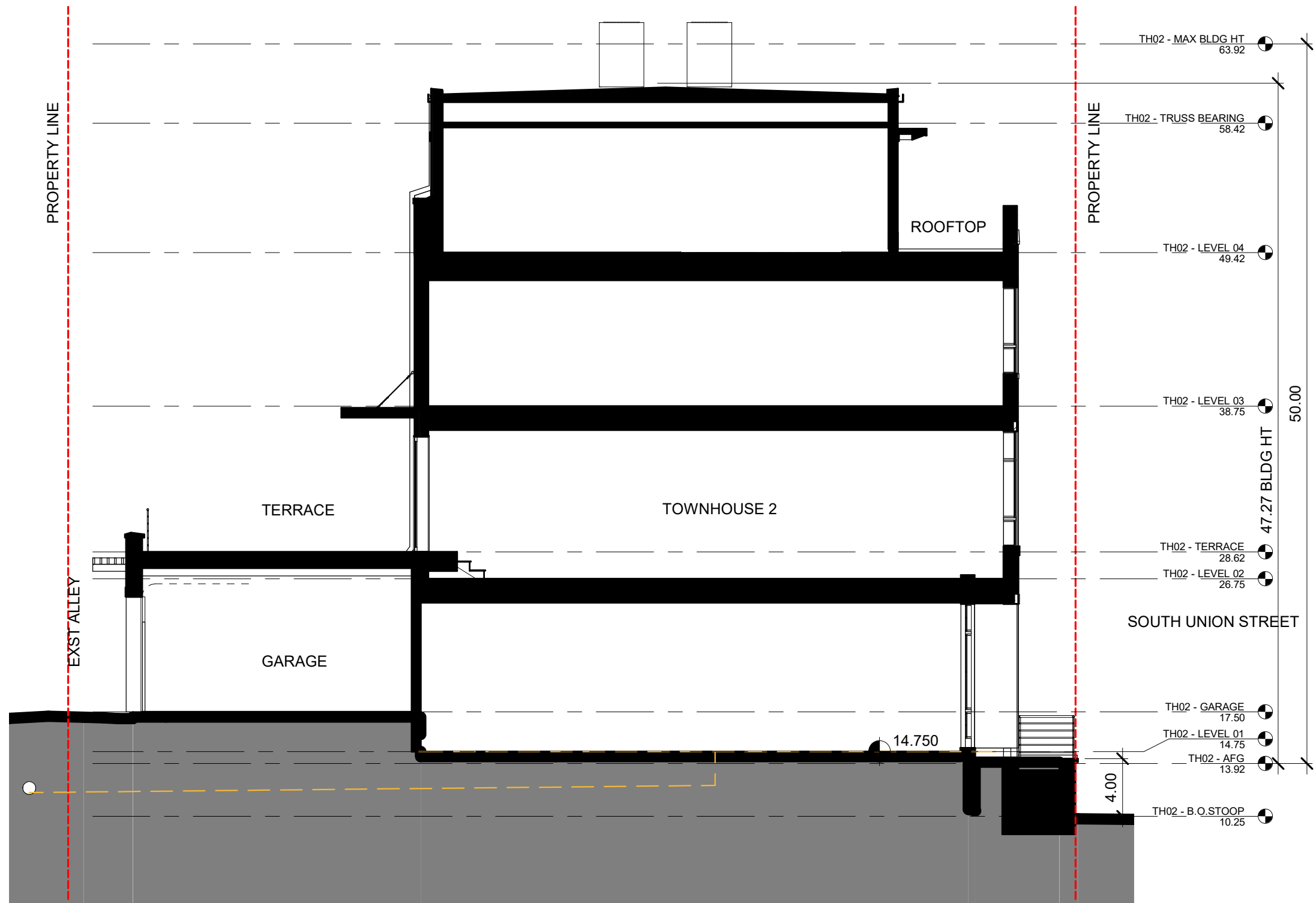




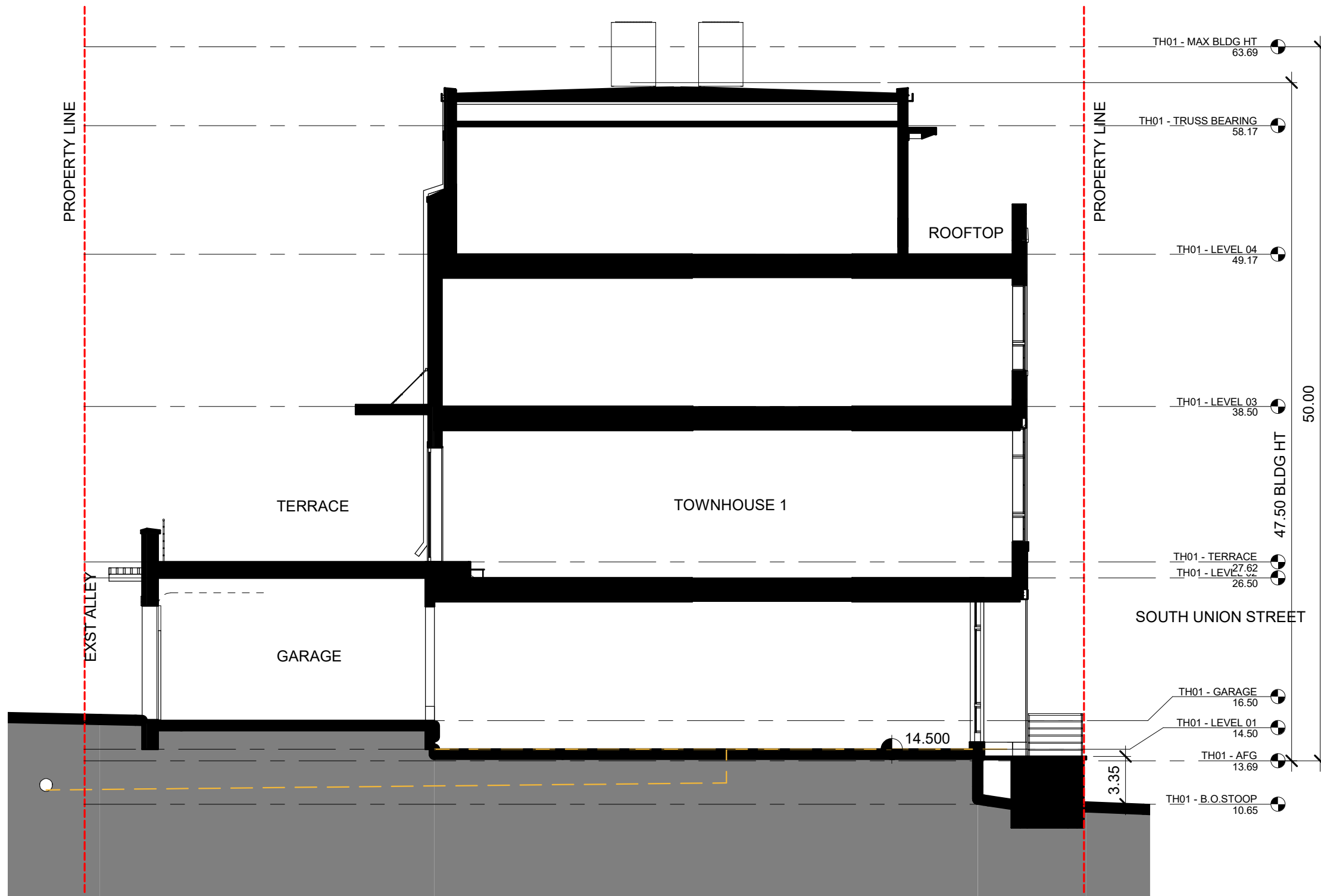
4 TH04 GRADING SECTION.  
1/8" = 1'-0"



3 TH03 GRADING SECTION.  
1/8" = 1'-0"



2 TH02 GRADING SECTION.  
1/8" = 1'-0"



1 TH01 GRADING SECTION.  
1/8" = 1'-0"

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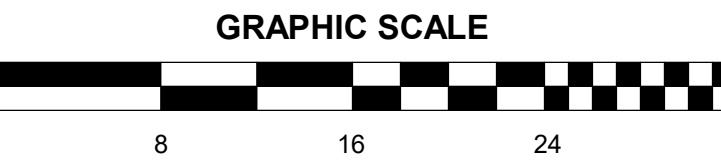
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## BUILDING SECTIONS

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A2



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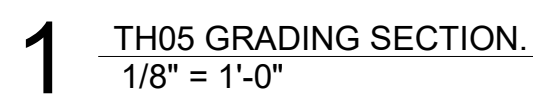
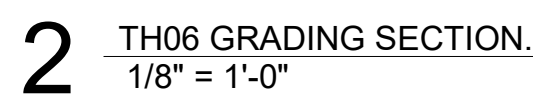
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## SHEET IDENTIFIER

# A3



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4 NORTH ELEVATION  
1/8" = 1'-0"

TH06



2 ALLEY ELEVATION  
1/8" = 1'-0"

TH06

TH05

TH04

TH03

TH02

TH01



3 DUKE STREET ELEVATION  
1/8" = 1'-0"

TH01



1 UNION STREET ELEVATION  
1/8" = 1'-0"

TH01

TH02

TH03

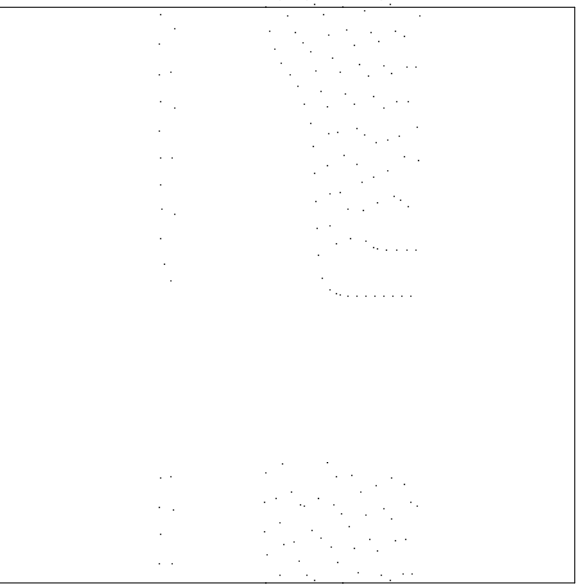
TH04

TH05

TH06

ALUMINUM CLAD WOOD  
WINDOWS  
ALUMINUM CLAD WOOD DOOR  
EXTERIOR LIGHTING FIXTURE  
EXTERIOR LIGHTING FIXTURE  
BRICK HEAD  
METAL AWNING

PREFINISHED METAL COPING  
FIBER CEMENT SIDING  
CORNICE  
CAST STONE HEAD  
CAST STONE HEAD  
ALUMINUM CLAD WOOD  
WINDOWS  
BRICK VENEER  
ALUMINUM CLAD WOOD DOOR  
METAL RAILING



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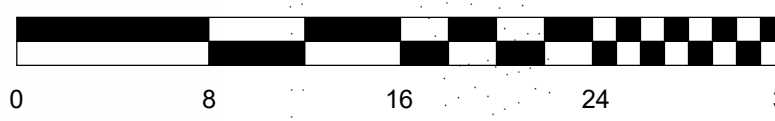
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GRAPHIC SCALE



SHEET TITLE

ELEVATIONS

SHEET IDENTIFIER

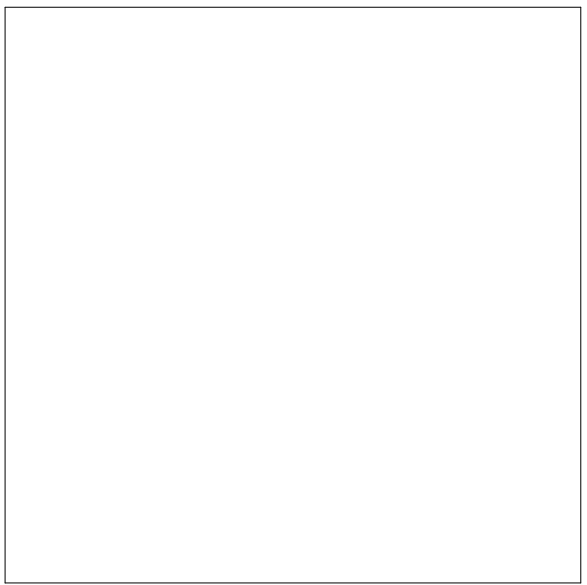
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SOUTH UNION STREET LOOKING NORTH



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SHEET TITLE

PHOTO MONTAGE

SHEET IDENTIFIER

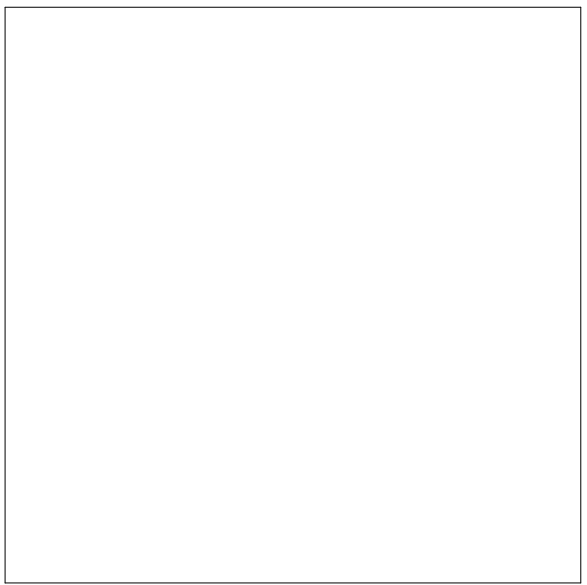
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APPROVED		SPECIAL USE PERMIT NO. DSUP 2021-10012	
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DIRECTOR		DATE	
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SOUTH UNION STREET LOOKING SOUTH



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PHOTO MONTAGE

SHEET IDENTIFIER

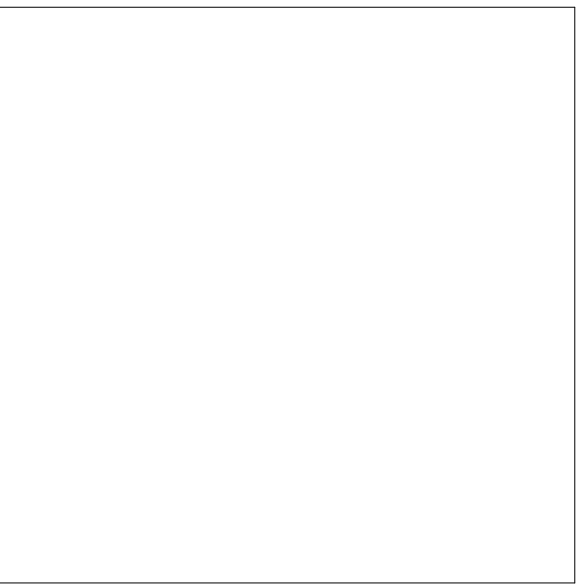
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APPROVED SPECIAL USE PERMIT NO. DSUP 2021-10012	
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DUKE STREET LOOKING EAST



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PHOTO MONTAGE

SHEET IDENTIFIER

A7

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