CITY STANDARD GENERAL NOTES:

THE SUBJECT SITE IS LOCATED ON CITY OF ALEXANDRIA ASSESSMENT MAP NO. 064.04-05-35, LOT 114 AND IS ZONED CD.

ERIC K. OR THERESA OLSON OWNER: 114 NORTH ALFRED STREET APARTMENT A ALEXANDRIA, VIRGINIA 22314 INSTRUMENT #: 200015165

AREA TABULATION:

a. TOTAL SITE AREA = 5612 SF (0.13 AC)b. DISTURBED AREA = 3836 SF (0.09 AC)

c. EXISTING IMPERVIOUS AREA = 5161 SF (0.12 AC) d. PROPOSED IMPERVIOUS AREA = 5050 SF (0.12 AC)

THE NATURAL SOILS AT THE SITE CONSISTS OF "98" URBAN LAND - GRIST MILL ACCORDING TO NATIONAL RESOURCES CONSERVATION SERVICE WEB SOILS MAP.

- THE SITE IS LOCATED IN THE COMBINED SEWER SYSTEM WATERSHED.
- TOPOGRAPHIC INFORMATION FOR THE SUBJECT SITE IS FROM A CURRENT FIELD SURVEY PREPARED BY DOMINION SURVEYORS, INC. DATED 09/2020.
- CONSTRUCTION PERMITS ARE REQUIRED FOR THIS PROJECT. THE APPROVED SITE PLAN MUST BE ATTACHED TO THE PERMIT APPLICATION THAT FULLY DETAILS THE CONSTRUCTION AS WELL AS LAYOUTS AND SCHEMATICS OF THE MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.
- ALL KNOWN PUBLIC AND PRIVATE EASEMENTS, INCLUDING ALL UTILITY, EGRESS, AND CONSERVATION RESTRICTIONS ARE SHOWN. THE APPLICANT SHALL NOT CONSTRUCT ANY PERMANENT STRUCTURES OVER ANY EXISTING OR PROPOSED PUBLIC AND/OR PRIVATE EASEMENTS UNLESS OTHERWISE APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL. IT IS, THEREFORE, THE RESPONSIBILITY OF THE APPLICANT TO IDENTIFY ANY AND ALL UTILITY EASEMENTS ON THE PLAN.
- PLAT SUBJECT TO RESTRICTIONS OF RECORD.
- 0. BUILDING HEIGHT SHALL NOT EXCEED THE ALLOWABLE LIMIT BY CITY OF ALEXANDRIA ZONING ORDINANCE OR AS APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
- ALL NEW CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND TO THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC).
- . FLOOR AREA CALCULATIONS WITH ALLOWABLE LIMITS, AS APPROVED BY PLANNING COMMISSION AND CITY COUNCIL, ARE DEMONSTRATED HEREIN.
- PRIOR TO COMMENCING NEW WORK, THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING ADJACENT AREAS. IF CITY'S EXISTING PUBLIC INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, STREETS, ALLEYWAYS, DRIVEWAY APRONS, SANITARY AND STORM SEWERS, STREET LIGHTING, TRAFFIC AND PEDESTRIAN SIGNALS, SIDEWALKS, CURB AND GUTTER, AND STORM WATER DROP INLET STRUCTURES ARE DAMAGED BY THE CONTRACTOR OR BY ACTIVITIES RELATING TO THE SITE CONSTRUCTION THEN THE APPLICANT SHALL REPAIR THE SAME TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). A PRE-CONSTRUCTION WALK/SURVEY OF THE SITE SHALL OCCUR WITH CONSTRUCTION AND INSPECTION STAFF TO DOCUMENT EXISTING CONDITIONS PRIOR TO ANY LAND DISTURBING ACTIVITY.
- ALL IMPROVEMENTS TO THE CITY'S RIGHT-OF-WAY SUCH AS CURB, GUTTER, SIDEWALK AND DRIVEWAY APRONS, ETC., ARE DESIGNED PER CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.
- ALL STREET CUT AND PATCH WORK LOCATED IN PUBLIC RIGHT-OF-WAYS, REQUIRED FOR ANY UTILITY INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND **ENVIRONMENTAL SERVICES (T&ES).**
- 5. CONTRACTOR MUST ENSURE THAT THERE IS NO DISTURBANCE ON ADJACENT PROPERTIES WITHOUT A RECORDED EASEMENT OR NOTARIZED LETTER OF PERMISSION FROM ADJACENT PROPERTY OWNERS.
- I 7. ALL REQUIRED STATE AND FEDERAL PERMITS, WHICH COULD INCLUDE PERMITS FROM THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (VDCR), VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ), VIRGINIA DEPARTMENT OF HISTORIC RESOURCES (VDHR), UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA), ARMY CORPS OF ENGINEERS AND VIRGINIA MARINE RESOURCES, MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE PLAN. THIS INCLUDES THE STATE REQUIREMENT FOR A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES FOR LAND DISTURBING ACTIVITIES GREATER THAN 2,500. INFORMATION REGARDING THE VSMP GENERAL PERMIT CAN BE FOUND ONLINE AT: http://www.dcr.virginia.gov/soil_and_water/vsmp.shtml.
- PERMITS FROM THE CITY OF ALEXANDRIA OFFICE OF ENVIRONMENTAL QUALITY (OEQ), TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). AND BUILDING AND FIRE CODE ADMINISTRATION SHALL BE OBTAINED BY THE APPLICANT, AS REQUIRED AND DOCUMENTED HEREIN. THE CONTRACTOR CAN CONTACT ALEXANDRIA FIRE AND CODE ADMINISTRATION DEPARTMENT AT (703) 838-4644 OR (703) 746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
- ANY WORK IN THE PUBLIC RIGHT OF WAY SHALL REQUIRE A SEPARATE PERMIT FROM THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE CONTRACTOR CAN CONTACT THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES AT (703) 746-4035 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
- 0. THE PROPERTY ADDRESS MUST BE CLEARLY MARKED IN THE FRONT AND BACK OF THE PROPOSED DEVELOPMENT SITE DURING CONSTRUCTION FOR EMERGENCY RESPONSE PURPOSE IN CONTRASTING COLORS FOR EASY IDENTIFICATION.
- THE APPLICANT SHALL CONTACT THE CRIME PREVENTION UNIT OF THE ALEXANDRIA POLICE DEPARTMENT AT 703-838-4520 REGARDING SECURITY HARDWARE FOR NEW CONSTRUCTION. THIS SHALL BE COMPLETED PRIOR TO ISSUANCE OF BUILDING PERMIT.
- ROOF DRAINAGE SYSTEM, SUMP PUMP DISCHARGE AND FOUNDATION DRAIN SYSTEM MUST BE INSTALLED SO AS NEITHER TO ADVERSELY IMPACT UPON, NOR CAUSE EROSION DAMAGE TO ADJACENT PROPERTIES OR THE PUBLIC RIGHT OF WAY.
- THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE OCCURS ON SITE TO PREVENT PONDING OR DRAINAGE PROBLEMS ON ADJACENT PROPERTIES.
- . IN THE EVENT THE PROPOSED ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON PUBLIC RIGHT OF WAY OR PRIVATE PROPERTIES THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL
- PER THE REQUIREMENTS OF SECTION 8-1-12 OF THE CITY CHARTER AND CODE; WHEN THE BUILDING FOOTING HAS BEEN PLACED AND THE WALLS HAVE BEEN RAISED TO THE FIRST IOIST BEARING OR STORY HEIGHT ABOVE GRADE, A PLOT PLAN SHOWING THE EXACT LOCATION OF THE WALLS SHALL BE PREPARED BY A LICENSED, CERTIFIED PUBLIC LAND SURVEYOR OR PROFESSIONAL ENGINEER AND FILED WITH THE BUILDING OFFICIAL FOR APPROVAL BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.
- 6. A SEPARATE DESIGN IS REQUIRED FOR ALL WALLS 24" AND OVER IN HEIGHT FROM THE GRADE AND SUBJECT TO SEPARATE PERMITS TO BE OBTAINED BY THE OWNERS. GEOTECHNICAL AND STRUCTURAL DESIGN IS TO BE COMPLETED BY OTHERS. THIS FINAL SITE PLAN SHOWS LOCATION, PROPOSED GRADING, AND DESIGN OF ALL THE WALLS.
- 27. THE OWNER SHALL SUBMIT A SURVEY, CONSISTENT WITH THE REQUIREMENTS FOR CERTIFICATE OF OCCUPANCY CHECKLIST. TO THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO REQUESTING AN INSPECTION FOR A CERTIFICATE OF OCCUPANCY.
- 28. ALL SANITARY LATERALS AND/OR SEWERS NOT SHOWN IN THE EASEMENTS SHALL BE PRIVATELY OWNED AND MAINTAINED.
- 29. ALL STORM DRAINS NOT SHOWN WITHIN AN EASEMENT OR IN A PUBLIC RIGHT OF WAY SHALL BE PRIVATELY OWNED AND MAINTAINED.
- ALL WATER FACILITY CONSTRUCTION SHALL CONFORM TO VIRGINIA AMERICAN WATER COMPANY

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- STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL CONTACT VIRGINIA AMERICAN WATER COMPANY AT (703) 549-7080 TO COORDINATE CONSTRUCTION AND INSPECTION OF WATER FACILITIES.
- THE SIDEWALKS SHALL REMAIN OPEN DURING CONSTRUCTION OR PEDESTRIAN ACCESS SHALL BE MAINTAINED TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
- PROPOSED CONTROLS TO TRAFFIC MOVEMENT, LANE CLOSURES, CONSTRUCTION ENTRANCES, HAUL ROUTES, AND STORAGE AND STAGING SHALL BE PROVIDED FOR INFORMATIONAL PURPOSE; HOWEVER AN AMENDED TRAFFIC CONTROL PLAN, IF REQUIRED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES SHALL BE SUBMITTED TO THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES ALONG WITH THE BUILDING PERMIT APPLICATION. THE FINAL SITE PLAN SHALL INCLUDE A STATEMENT "FOR INFORMATION ONLY" ON THE TRAFFIC CONTROL PLAN SHEETS.
- 33. A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF, IN ACCORDANCE WITH VIRGINIA USBC 115.0.
- 34. ALL EMERGENCY VEHICLE EASEMENTS ARE SHOWN ON THE PLAN AND SHALL BE RECORDED WITH ALEXANDRIA LAND RECORDS.
- 35. A SEPARATE PERMIT IS REQUIRED FOR SIGN CONSTRUCTION.
- 36. THE SUBJECT PROPERTY DOES NOT LIE WITHIN THE CITY OF ALEXANDRIA RESOURCE PROTECTION AREA (RPA) AND THERE ARE NO MAPPED RPA'S ON THIS PROPERTY
- 37. THE SITE DOES NOT LIE WITHIN 100-YEAR FLOOD PLAIN WATER SURFACE ELEVATION (WSE) PER THE DEMARCATION OF THE CURRENT FLOOD INSURANCE RATE MAP (FIRM) PUBLISHED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).
- 38. THERE IS NO OBSERVABLE, HISTORICAL OR ARCHAEOLOGICAL EVIDENCE OF CEMETERIES OR BURIAL GROUNDS ON THIS PROPERTY.

GENERAL NOTES:

- 1. THERE ARE NO EXISTING STORMWATER FACILITIES WITHIN THE PROJECT LIMITS.
- 2. THE CURRENT OWNER HAS NO KNOWLEDGE OF ANY SOIL CONTAMINATION OR OTHER SITE ENVIRONMENTAL ISSUES. HOWEVER. NO ENVIRONMENTAL TESTS HAVE BEEN PERFORMED FOR THE SUBMISSION OF THIS PLAN.
- 3. ACCORDING TO THE NATIONAL RESOURCES CONSERVATION SERVICE WEB SOILS MAP. THE SITE DOES NOT CONTAIN MARINE CLAY.
- 4. ALL IMPROVEMENTS DELINEATED HEREON ARE EXISTING UNLESS DENOTED AS PROPOSED.

REQUESTED APPLICATIONS/MODIFICATIONS:

- APPROVAL OF A DEVELOPMENT SITE PLAN FOR AN ADDITION THAT IS MORE THAN A THIRD OF THE EXISTING GROSS SQUARE FOOTAGE IS BEING REQUESTED
- 2. A MODIFICATION TO SECTION 7-902(A) IS BEING REQUESTED. ACCORDING TO SECTION 7-902(A)(3), A BUILDING WHICH HAS ITS COMMERICAL USE LIMITED TO THE FIRST OR A LOWER FLOOR MAY BE APPROVED TO ALLOW THE SIDE AND REAR YARD SETBACK REGULATIONS OF THE ADJACENT RESIDENTIAL ZONE WHICH IS TO BE PROTECTED, TO APPLY TO SUCH COMMERCIAL BUILDING. THIS CIRCUMSTANCE IS PRESENT WITH THIS PROJECT, THEREFORE A MODIFICATION TO THE SIDE AND REAR YARD SETBACK REQUIREMENTS IS BEING REOUESTED.
- A MODIFICATION TO THE STREET TREE PLANTING REQUIREMENT IS BEING REQUESTED. A PAYMENT OF \$2,500 WILL BE MADE IN LIEU OF PLANTING TREES WITHIN THE FRONTAGE OF THE PROPERTY.
- 4. A VARIANCE FROM THE GREEN BUILDING POLICY IS BEING REQUESTED. THIS RESIDENTIAL PROJECT IS AN ADDITION TO AN EXISTING HOME AND ADDITIONS ARE NOT CONSIDERED "NEW CONSTRUCTION" UNDER MOST GREEN BUILDING PROGRAMS, THEREFORE NOT QUALIFYING FOR CERTIFICATION. SEE SHEET 3 FOR HOW THIS PROJECT WILL STILL FOLLOW THE THEME OF THE GREEN BUILDING POLICY.

DEVELOPMENT TEAM:

DEVELOPER IS: WILLIAM CROMLEY

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SIGNING ENGINEER IS: ALAN DALTON

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ARBORIST IS: **ED MILHOUS**

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GREEN ENERGY RATERS IS: KELLY ROSS GILLESPIE KELLY GREEN ENERGY RATES

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EMAIL: KELLY@KELLYGREENRATERS.COM

PROJECT NARRATIVE:

THE EXISTING BUILDING AT 114 NORTH ALFRED STREET IS CURRENTLY USED AS OFFICES AND THE REAR OF THE PARCEL IS ENTIRELY PAVED AS A COMPACTED GRAVEL PARKING LOT. THIS PROJECT PROPOSES THE REMOVAL OF THE REAR DECK / ELEVATED PATIO FROM THE EXISTING BUILDING, AND THE CONSTRUCTION OF A NEW STRUCTURE IN THE AREA OF THE PARKING LOT.

32. PRIOR TO THE RELEASE OF THE FINAL SITE PLAN, A TRAFFIC CONTROL PLAN FOR CONSTRUCTION DETAILING THE NEW STRUCTURE WOULD CONSIST OF A GARAGE ON THE 1ST LEVEL, A COURTYARD AND RESIDENTIAL USES ON THE 2ND LEVEL AND TWO BEDROOMS AND A LOFT ON A 3RD LEVEL. THE 1ST FLOOR AND BASEMENT OF THE EXISTING BUILDING WILL REMAIN AS OFFICE USES WHILE THE 2ND FLOOR OF THE EXISTING BUILDING WILL BE CONVERTED BACK TO RESIDENTIAL. THE RESIDENTIAL USE IS FOR ONE DWELLING UNIT. PRELIMINARY ARCHITECTURAL PLANS ARE INCLUDED WITH THIS PRELIMINARY PLAN SUBMISSION.

SITE / ZONING TABULATIONS:

- PER ASSESSMENT: 5590 S.F. = 0.12833 ACRES
- PER FIELD SURVEY: 5612 S.F. = 0.12883 ACRES
- B. ZONING REQUIREMENTS FOR CD (COMMERCIAL DOWNTOWN) PER ZONING ORDINANCE §4-508, "ONE OR TWO APARTMENT DWELLING UNITS, LOCATED ON A FLOOR OR FLOORS ABOVE RETAIL OR COMMERCIAL USES, SHALL BE PERMITTED AS AN ACCESSORY USE. SUCH APARTMENTS SHALL BE CATEGORIZED AS NONRESIDENTIAL FOR THE PURPOSE OF APPLYING THE AREA AND BULK REGULATIONS OF THIS ZONE, AND EACH SUCH APARTMENT SHALL PROVIDE THE PARKING REQUIRED FOR A MULTIFAMILY UNIT OF EQUIVALENT SIZE."

THE NEW CONSTRUCTION IS BEHIND THE EXISTING STRUCTURE AND ALL RESIDENTIAL USES ARE ON THE 2ND AND 3RD FLOOR, THEREFORE THE ADDITION IS CONSIDERED NONRESIDENTIAL FOR THE PURPOSES OF AREA AND BULK REGULATIONS.

- LOT SIZE: NO LOT SIZE REQUIREMENTS FOR NONRESIDENTIAL USES.
- FRONTAGE: NO FRONTAGE REQUIREMENTS FOR NONRESIDENTIAL USES.

7-1000 WHICH IS NOT APPLICABLE TO THIS SITE).

- YARDS & OPEN SPACE FOR NONRESIDENTIAL USES, THERE ARE NO YARD OR OPEN SPACE REQUIREMENTS (EXCEPT PURSUANT TO
- FLOOR AREA RATIO:
- NONRESIDENTIAL: 1.5
- 35', EXCEPT THE MAXIMUM HEIGHT MAY BE INCREASED TO 45' IF COMPATIBLE WITH ADJACENT BUILDINGS.
- RESIDENTIAL: 1 STANDARD OR COMPACT SPACE PER BEDROOM = 3 - COMMERCIAL: 0.25-6 STANDARD OR COMPACT SPACES PER 1000 SF (PER CITY COMMENT FROM
- CONCEPT 2 SUBMISSION) = 1 TO 18 LOADING SPACE: NOT REQUIRED FOR OFFICE USE - TOTAL REQUIRED = 4 TO 21 STANDARD OR COMPACT SPACES
- C. ZONING COMPLIANCE: LOT SIZE: 5,612 SF
- FRONTAGE: 43.17 FT

REAR YARD: 0.3 FT

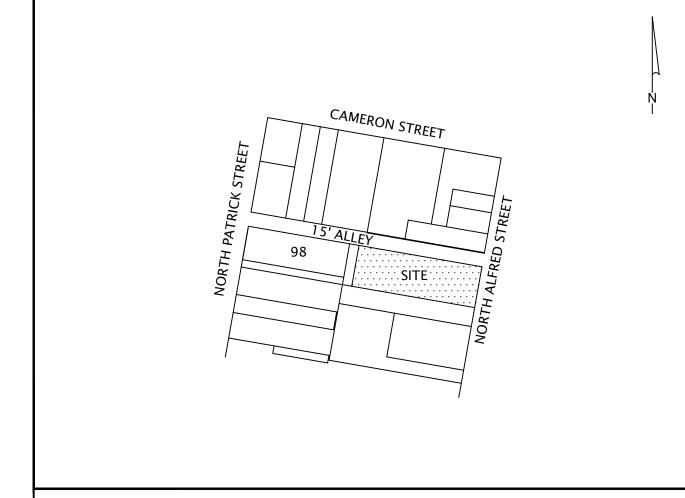
- FRONT YARD: 6.0 FT SIDE YARD: 0.3 FT (SOUTH SIDE YARD) & OFF 0.4 FT (NORTH SIDE YARD)
- FLOOR AREA RATIO:
- NONRESIDENTIAL: 7713/5612 = 1.37 (SEE ARCHITECT'S CALCULATIONS, SHEET 16)
- 34' (SEE ARCHITECT'S CALCULATIONS, SHEETS 20, 24-26)
- PARKING PROVIDED:
- RESIDENTIAL: 6 COMPACT SPACES (ON GRADE) - COMMERCIAL: 4 COMPACT SPACES (ON GRADE)

THE OWNER'S COLLECTION OF CLASSIC CARS.

- LOADING SPACE: NONE PROVIDED - TOTAL PROVIDED: 10 COMPACT SPACES (ON GRADE) *
- * THERE ARE CURRENTLY TEN UNMARKED PARKING SPACES IN THE PARKING LOT AT THE REAR OF THE PROPERTY. THESE PARKING SPACES ARE USED BY THE CURRENT COMMERCIAL TENANTS ON THE 1ST, 2ND & BASEMENT LEVELS OF THE BUILDING. THE PROJECT PROPOSES TO CONVERT THE 2ND FLOOR OF THE BUILDING INTO A RESIDENCE FOR THE OWNERS OF THE BUILDING AND THEIR TWO ADULT CHILDREN. ALTHOUGH THE PROJECT WILL CONTINUE TO PROVIDE TEN PARKING SPACES FOR THE BUILDING, THE USE OF SIX OF THE TEN SPACES WILL CHANGE FROM COMMERCIAL USE TO RESIDENTIAL USE. OF THE SIX SPACES PROPOSED FOR RESIDENTIAL USE, TWO OF THE SPACES WILL BE USED FOR THE DAILY USE OF THE BUILDING OWNER'S TWO COMPACT CARS. THE OTHER FOUR SPACES WILL BE USED FOR THE STORAGE OF

PRINCESS ST. QUEEN ST QUEEN ST CAMERON ST CAMERON ST PRINCE ST. DUKE ST

(1":500') VICINITY MAP



SOIL MAP (1":100')

SOIL INFORMATION FROM NRCS WEB SOILS MAP. SOIL ID HYDROLOGIC DEPTH TO DEPTH TO **SERIES NAME** NUMB. CLASS WATER TABLE RESTRICT. FEAT. URBAN LAND-GRIST MILL 0 TO 25% 24 TO 79 > 80 INCHES C

ED

INCHES

THE ENTIRE BLOCK IS MAPPED AS "98" SOILS

APPROVED SHEET INDEX:

COVERSHEET CITY OF ALEXANDRIA STANDARD NOTES

- MISCELLANEOUS NARRATIVES AND EXHIBITS
- **EXISTING CONDITIONS**
- CONTEXTUAL PLAN

17. MODEL VIEWS

- GRADING PLAN
- GIS DIMENSION PLAN 8. TURNING RADIUS AND GARAGE LAYOUT EXHIBITS 9. STORMWATER MANAGEMENT NARRATIVE
- 10. DRAINAGE MAP 11. OUTFALL MAPS & NARRATIVE 12. VRRM SPREADSHEET
- 13. VRRM SPREADSHEET 14. VRRM SPREADSHEET 15. ARCHITECT COVER SHEET 16. FLOOR AREA RATIO DIAGRAMS
- 18. EXISTING/DEMO ELEVATIONS 19. EXISTING/DEMO PLANS 20. PROPOSED FIRST FLOOR PLAN

21. PROPOSED SECOND FLOOR PLAN

22. PROPOSED THIRD FLOOR PLAN 23. PROPOSED ROOF PLAN 24. PROPOSED FRONT (EAST) AND REAR (WEST) ELEVATIONS

25. PROPOSED ALLEY/RIGHT-SIDE (NORTH) ELEVATION

- 26. PROPOSED LEFT-SIDE (SOUTH) ELEVATION 27. PROPOSED COURTYARD EAST AND COURTYARD WEST ELEVATIONS 28. EXISTING TREE SURVEY
- 30. PLANT SCHEDULE AND LANDSCAPE TABULATIONS 31. LANDSCAPE NOTES 32. PLANTING DETAILS

29. LANDSCAPE PLAN

33. LEED CHECKLIST 34. LEED CHECKLIST 35. LEED CHECKLIST

DEPARTMENT OF PLANNING & ZONING DIRECTOR DATE DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO. DATE DIRECTOR DATE CHAIRMAN. PLANNING COMMISSION DATE RECORDED PAGE NO. INSTRUMENT NO. DEED BOOK NO.

SPECIAL USE PERMIT NO. _

ALAN R. DALTON LIC. NO. 11789 Ilan K Dalto SHEET 1 OF 35

DESIGN GUIDELINES FOR SITE PLAN PREPARATION:

- THE APPLICANT SHALL COMPLY WITH THE CHESAPEAKE BAY PRESERVATION ACT IN ACCORDANCE WITH ARTICLE XIII OF THE CITY'S ZONING ORDINANCE. WHICH INCLUDE THE REQUIREMENTS FOR STORMWATER POLLUTANT LOAD REDUCTIONS, TREATMENT OF WATER QUALITY VOLUME DEFAULT, AND STORMWATER QUANTITY MANAGEMENT ACCORDING TO ALEXANDRIA SUPPLEMENT TO THE NORTHERN VIRGINIA BMP HANDBOOK.
- ALL SANITARY SEWERS SHALL BE CONSTRUCTED TO THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS. MINIMUM DIAMETER OF SANITARY SEWERS SHALL BE 10" IN THE PUBLIC RIGHT-OF-WAY AND SANITARY LATERAL 6" FOR ALL COMMERCIAL AND INSTITUTIONAL DEVELOPMENTS; HOWEVER, A 4" SANITARY LATERAL WILL BE ACCEPTABLE FOR SINGLE FAMILY RESIDENCES. THE ACCEPTABLE PIPE MATERIALS WILL BE POLYVINYL CHLORIDE (PVC) ASTM D-3034-77 SDR 26, ASTM 1785-76 SCHEDULE 40, DUCTILE IRON PIPE AWWA C-151 (ANSI A21.51) CLASS 52, OR REINFORCED CONCRETE PIPE ASTM C-76 CL IV (FOR 12" OR LARGER DIAMETERS). CL III MAY BE ACCEPTABLE ON PRIVATE PROPERTIES. THE ACCEPTABLE MINIMUM AND MAXIMUM VELOCITIES WILL BE 2.5 FPS AND 10 FPS, RESPECTIVELY. LATERALS SHALL BE CONNECTED TO THE SANITARY SEWER THROUGH A MANUFACTURED "Y" OT "T" OR APPROVED SEWER SADDLE. WHERE THE LATERALS ARE BEING CONNECTED TO EXISTING TERRACOTA PIPES, REPLACE THE SECTION OF MAIN AND PROVIDE MANUFACTURED "Y" OR "T", OR ELSE INSTALL A MANHOLE.
- ALL STORM SEWERS SHALL BE CONSTRUCTED TO THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS. MINIMUM DIAMETER OF STORM SEWERS SHALL BE 18" IN THE PUBLIC RIGHT-OF-WAY AND MINIMUM SIZE STORM SEWER CATCH BASIN LEAD IS 15". THE ACCEPTABLE PIPE MATERIALS WILL BE AWWA C-151 (ANSI A21.51) CLASS 52 OR REINFORCED CONCRETE PIPE ASTM C-76 CL IV. FOR ROOF DRAINAGE SYSTEM, POLYVINYL CHLORIDE (PVC) ASTM D-3034-77 SDR 26 AND ASTM 1785-76 SCHEDULE 40 PIPES WILL BE ACCEPTABLE. THE ACCEPTABLE MINIMUM AND MAXIMUM VELOCITIES WILL BE 2.0 FPS AND 15 FPS, RESPECTIVELY.
- LATERAL SEPARATION OF SEWERS AND WATER MAINS: A HORIZONTAL SEPARATION OF 10' (EDGE TO EDGE) SHALL BE PROVIDED BETWEEN A STORM OR SANITARY SEWER AND A WATER LINE; HOWEVER, IF THIS HORIZONTAL SEPARATION CANNOT BE ACHIEVED THEN THE SEWER AND WATER MAIN SHALL BE INSTALLED IN SEPARATE TRENCHES AND THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18" ABOVE OF THE TOP OF THE SANITARY/STORM SEWER. IF BOTH THE HORIZONTAL AND VERTICAL SEPARATIONS CANNOT BE ACHIEVED THEN THE SEWER PIPE MATERIAL SHALL BE DUCTILE IRON PIPE (DIP) AWWA C-151 (ANSI A21.51) CLASS 52 AND PRESSURE TESTED IN PLACE WITHOUT LEAKAGE PRIOR TO INSTALLATION.

CROSSING WATER MAIN OVER AND UNDER A SANITARY OR STORM SEWER: WHEN A WATER MAIN OVER CROSSES OR UNDER CROSSES A SANITARY/STORM SEWER THEN THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF ONE (I.E. SANITARY/STORM SEWER OR WATER MAIN) TO THE TOP OF THE OTHER (WATER MAIN OR SANITARY/STORM SEWER) SHALL BE AT LEAST 18" FOR SANITARY SEWER AND 12" FOR STORM SEWER; HOWEVER, IF THIS CANNOT BE ACHIEVED THEN BOTH THE WATER MAIN AND SANITARY/STORM SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AWWA C-151 (ANSI A21.51) CLASS 52 WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING AND THE PIPES SHALL BE PRESSURE TESTED IN PLACE WITHOUT LEAKAGE PRIOR TO INSTALLATION. SANITARY SEWERS UNDER CREEKS AND STORM SEWER PIPE CROSSINGS WITH LESS THAN 6" CLEARANCE SHALL BE ENCASED IN CONCRETE.

NO WATER MAIN PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF SANITARY/STORM SEWER MANHOLE. MANHOLES SHALL BE PLACED AT LEAST 10 FEET HORIZONTALLY FROM THE WATER MAIN WHENEVER POSSIBLE. WHEN LOCAL CONDITIONS PROHIBIT THIS HORIZONTAL SEPARATION, THE MANHOLE SHALL BE WATERTIGHT CONSTRUCTION AND TESTED IN PLACE.

CROSSING EXISTING OR PROPOSED UTILITIES: UNDERGROUND TELEPHONE, CABLE T.V., GAS, AND ELECTRICAL DUCT BANKS SHALL BE CROSSED MAINTAINING A MINIMUM OF 12" OF SEPARATION OR CLEARANCE WITH WATER MAIN, SANITARY, OR STORM SEWERS. IF THIS SEPARATION CANNOT BE ACHIEVED THEN THE SEWER PIPE MATERIAL SHALL BE DUCTILE IRON PIPE (DIP) AWWA C-151 (ANSI A21.51) CLASS 52 FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING AND PRESSURE TESTED IN PLACE WITHOUT LEAKAGE PRIOR TO INSTALLATION. SANITARY/STORM SEWERS AND WATER MAIN CROSSING OVER THE UTILITIES SHALL HAVE ADEQUATE STRUCTURAL SUPPORT (PIER SUPPORT AND/OR CONCRETE ENCASEMENT) TO PREVENT DAMAGE TO THE UTILITIES.

- DISCHARGE FROM SWIMMING POOLS MUST BE CONNECTED TO THE SANITARY SEWER.
- A SEPARATE GEOTECHNICAL AND HYDROGEOLOGICAL INVESTIGATION REPORT SHALL BE SUBMITTED TO FIRE AND CODE ADMINISTRATION AND TRANSPORTATION AND ENVIRONMENTAL SERVICES INCLUDING RECOMMENDATIONS FROM A GEOTECHNICAL PROFESSIONAL FOR PROPOSED CUT SLOPES AND EMBANKMENTS. IF DEEMED NECESSARY BY THE DEPARTMENT
- PER THE REQUIREMENTS OF TITLE 5: TRANSPORTATION AND ENVIRONMENTAL SERVICES, CHAPTER 3, SECTION 5-3-2 AND SECTION 5-3-3; CUSTOMER UTILITY SERVICES AND TRANSMISSION, DISTRIBUTION AND MAIN LINES, RESPECTIVELY SHALL BE PLACED UNDERGROUND UNLESS OTHERWISE SPECIFICALLY EXEMPTED.
- THE SUBMITTING ENGINEER OR CONTRACTOR SHALL PROVIDE CUT SHEETS TO THE CHIEF, DIVISION OF CONSTRUCTION AND INSPECTION (C&I), DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO CONSTRUCTION.
- IF THESE NOTES AND THE CITY OF ALEXANDRIA DESIGN STANDARDS AND SPECIFICATIONS DO NOT COVER ANY DESIGN ASPECTS OF THE PROJECT THEN THE IMPROVEMENTS WILL BE DESIGNED PER THE STANDARDS AND SPECIFICATIONS OF VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT), VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO). MANUAL OF TRAFFIC CONTROL DEVICES (MUTCD). VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM), RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES (TEN STATE STANDARDS), AND ANY OTHER STANDARDS APPROVED BY THE DIRECTORS OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, PLANNING AND ZONING, FIRE AND CODE ADMINISTRATION, AND RECREATION, PARKS & CULTURAL ACTIVITIES.

ENVIRONMENTAL SITE ASSESSMENT:

- THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, FLOODPLAINS, CONNECTED TIDAL WETLANDS, ISOLATED WETLANDS, HIGHLY ERODIABLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS, OR WETLANDS LOCATED ON THE SITE. FURTHER, THERE ARE NO WETLAND PERMITS 22. THE CALIFORNIA BEARING RATIO (CBR) VALUES OF IN-SITU MATERIALS SHALL BE DETERMINED BY FIELD REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY, THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS OR AREAS OF SOIL OR GROUNDWATER CONTAMINATION ON THE SITE.
- THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, OFFICE OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS, AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, 23. ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
- ALL WELLS TO BE DEMOLISHED IN THIS PROJECT, INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH VIRGINIA STATE WATER CONTROL BOARD (VSWCB) REQUIREMENTS. CONTACT ENVIRONMENTAL HEALTH SPECIALIST AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-838-4400 EXT 267/255.
- ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11. CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
- MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
- SATURDAYS FROM 9 AM TO 6 PM. NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.
- PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:
- MONDAY THROUGH FRIDAY FROM 9 AM TO 6 PM AND
- SATURDAYS FROM 10 AM TO 4 PM.

CONSTRUCTION NOTES:

- THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY ACTION AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUATION OF SERVICE.
- THE CONTRACTOR SHALL DIG TEST PITS AS REQUIRED FOLLOWING NOTIFICATION AND MARKING OF ALL EXISTING UTILITIES TO VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES TEST HOLES TO BE PERFORMED AT LEAST 30 DAYS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE OWNER AND ENGINEER. REDESIGN AND APPROVAL BY REVIEWING AGENCIES SHALL BE OBTAINED, IF REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.
- 4. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR SHALL CLEAR THE SITE OF ALL TREES, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE SPECIFIED, AND SHALL BE RESPONSIBLE FOR ENSURING THAT EXISTING UTILITIES ARE DISCONNECTED.
- THE DEVELOPER SHALL PROVIDE OVER-LOT GRADING TO PROVIDE POSITIVE DRAINAGE AND PRECLUDE PONDING OF WATER.
- ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. THE MINIMUM ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS, SEED MIXTURE TO BE AS RECOMMENDED BY THE CITY AGENT. ALL SLOPES 3:1 AND GREATER SHALL BE SODDED AND PEGGED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY OF ALEXANDRIA.
- EXISTING SEPTIC FIELDS, IF APPLICABLE, SHALL BE ABANDONED IN ACCORDANCE WITH VIRGINIA HEALTH DEPARTMENT STANDARDS AND SPECIFICATIONS.
- ALL ABOVE GROUND UTILITIES SERVING THE SITE SHALL BE RELOCATED AS REQUIRED BY THE OWNING UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS AND COORDINATING ALL WORK REQUIRED FOR THE NECESSARY RELOCATIONS.
- PRIOR TO BEGINNING OF CONSTRUCTION, CONTRACTOR SHALL VERIFY FROM THE ARCHITECTURAL DRAWINGS ALL DIMENSIONS, DETAILS, AND TREATMENTS FOR THE PROPOSED BUILDINGS, WALKWAYS, AND OTHER PROPOSED CONSTRUCTION WHERE INDICATED ON THE PLANS.
- 11. THE CONTRACTOR IS TO VERIFY INVERT, SIZE, AND LOCATION OF BUILDING UTILITY CONNECTIONS WITH THE MECHANICAL PLANS PRIOR TO PLACEMENT OF UNDERGROUND UTILITIES.
- EXISTING BUILDINGS, FENCES AND OTHER EXISTING PHYSICAL FEATURES ARE TO BE REMOVED AS REQUIRED BY THE CONSTRUCTION.
- 13. EXISTING CONSTRUCTION SHALL BE REMOVED TO NEAREST JOINT. NEW CONSTRUCTION SHALL BE PROVIDED AS SHOWN AND ANY DAMAGED AREA SHALL BE REPAIRED TO MATCH CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.
- 14. ALL PRIVATE BUILDING CONNECTIONS ARE TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.
- 15. TOPS OF EXISTING STRUCTURES WHICH REMAIN IN USE ARE TO BE ADJUSTED IN ACCORDANCE WITH THE GRADING PLAN. ALL PROPOSED STRUCTURE TOP ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR WITH THE SITE GRADING PLANS. IN CASE OF CONFLICT, THE GRADING PLAN SHALL SUPERSEDE PROFILE ELEVATIONS. MINOR ADJUSTMENTS TO MEET FINISHED GRADE ELEVATIONS. IF REQUIRED. SHALL BE MADE IN THE FIELD WITH THE APPROVAL OF SITE INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.
- 16. THE DESIGN, CONSTRUCTION, FIELD PRACTICES, AND METHODS SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY THE CITY OF ALEXANDRIA ZONING ORDINANCE AND DESIGN AND CONSTRUCTION STANDARDS MANUAL. FAILURE TO COMPLY WITH THE CODE, APPLICABLE MANUALS, AND PROVISIONS OF THE CONSTRUCTION AND ESCROW AGREEMENTS OR THE PERMITS SHALL BE DEEMED A VIOLATION.
- THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER/DEVELOPER OR HIS AGENT OF ANY LEGAL RESPONSIBILITIES WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE CITY OF ALEXANDRIA.
- 18. CONSTRUCTION STAKEOUT SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA.
- 19. THE CONTRACTOR IS REFERRED TO STRUCTURAL, GEOTECHNICAL, MECHANICAL, AND ARCHITECTURAL PLANS FOR FOUNDATION TREATMENT INCLUDING, BUT NOT LIMITED TO, SHEETING AND SHORING FOR BUILDING EXCAVATION. WATERPROFFING FOR FILL AGAINST BUILDINGS. LOCATION OF MECHANICAL EQUIPMENT, AND CONNECTIONS AT THE FACES OF BUILDINGS.
- 20. SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED ENTRANCE AND/OR CURB & GUTTER TO PRECLUDE THE FORMING OF FALSE GUTTER AND/OR PONDING OF WATER ON THE ROADWAY.
- 21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A SMOOTH TRANSITION TO EXISTING CURB AND SIDEWALKS, IF APPLICABLE.
- AND/OR LABORATORY TESTS FOR ACTUAL DETERMINATION OF REQUIRED THICKNESSES OF SURFACE, BASE, SUB-BASE, AND SUB GRADE MATERIALS. THE PAVEMENT SECTION SHALL BE DESIGNED BY A GEOTECHNICAL / LICENSED PROFESSIONAL ENGINEER TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING. IN THE CASE OF PAVEMENT PATCHES, PAVEMENT SECTION MUST MEET OR EXCEED EXISTING SECTION.
- THE THICKNESSES OF SUB-BASE, BASE, AND WEARING COURSE SHALL BE DESIGNED USING "CALIFORNIA METHOD" AS SET FORTH ON PAGE 3-76 OF THE SECOND EDITION OF A BOOK ENTITLED, "DATA BOOK FOR CIVIL ENGINEERS, VOLUME ONE, DESIGN" WRITTEN BY ELWYN E. SEELYE. AN ALTERNATIVE PAVEMENT SECTION DESIGNED TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING BASED ON CBR AND VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) METHOD (VASWANI METHOD) AND STANDARD MATERIAL SPECIFICATIONS SHALL BE ACCEPTABLE.
- 24. EMERGENCY VEHICLE EASEMENTS (EVE) AND AMERICAN WITH DISABILITY (ADA) ACCESSIBLE PARKING SPACES MUST BE DELINEATED WITH PAVEMENT MARKINGS PER THE CITY OF ALEXANDRIA STANDARD SIGNAGE AND AMERICAN WITH DISABILITIES (ADA) REQUIREMENTS.
- 25. ALL STRIPING SHALL MEET THE REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS (LATEST EDITION) AND SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED.
- 26. ALL EARTHWORK OPERATIONS ARE TO BE PERFORMED UNDER THE FULL TIME, ON-SITE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER WITH GEOTECHNICAL TESTING IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS AND GEOTECHNICAL REPORT REQUIREMENTS.
- 27. THE CONTRACTORS SHALL NOT CAUSE OR PERMIT VEHICLES TO IDLE FOR MORE THAN 10 MINUTES WHEN PARKED.
- 28. UNLESS OTHERWISE APPROVED THE CONTRACTOR SHALL PROVIDE THERMOPLASTIC LADDER STYLE / STANDARD PEDESTRIAN CROSS WALKS AT ALL CROSSINGS AT THE PROPOSED DEVELOPMENT, WHICH MUST BE DESIGNED TO THE SATISFACTION OF THE DIRECTOR. TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE DESIGN OF LADDER STYLE OR STANDARD PEDESTRIAN CROSS WALK SHALL BE EVALUATED ON A CASE BY CASE BASIS AND SHALL COMPLY WITH THE REQUIREMENTS OF POLICY MANUAL SECTION 30.18, PEDESTRIAN CROSSWALKS, JULY 13, 2006. A COPY OF THE POLICY MANUAL CAN BE OBTAINED FROM YON LAMBERT, BICYCLE AND PEDESTRIAN COORDINATOR / TRANSPORTATION PLANNER, TELEPHONE (703) 746-4081.

DEMOLITION NOTES:

- A SEPARATE PERMIT IS REQUIRED FOR DEMOLITION; HOWEVER, NO DEMOLITION SHALL BEGIN UNTIL ALL EROSION AND SEDIMENT AND TREE PROTECTION CONTROLS ARE IN PLACE AND ARE APPROVED BY AN EROSION AND SEDIMENT CONTROL INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND **ENVIRONMENTAL SERVICES.**
- ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE MOST CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED, TO ENVIRONMENTAL PROTECTION AGENCY (EPA), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), VIRGINIA OCCUPATIONAL AND SAFETY HEALTH COMPLIANCE PROGRAM (VOSH ENFORCEMENT), VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT, NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS), AND NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK WITH REPRESENTATIVE UTILITY COMPANIES AND FOR THE IMPLEMENTATION OF REQUIRED UTILITY-RELATED WORK.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY HAZARDOUS MATERIALS DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DOCUMENT SAME TO THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
- DISCONNECTION OF SERVICES AND SYSTEMS SUPPLYING UTILITIES TO BE ABANDONED OR DEMOLISHED SHALL BE COMPLETED PRIOR TO OTHER SITE DEMOLITION IN FULL COMPLIANCE WITH APPLICABLE CODES, REGULATIONS, AND THE REQUIREMENTS OF UTILITY PURVEYORS HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE UTILITY PURVEYORS, PAYMENT OF ASSOCIATED FEES AND PROCUREMENT OF ALL NECESSARY PERMITS.
- PRIOR TO REMOVAL OF MATERIALS OVER EXISTING UTILITY SYSTEMS, THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS AND, IF AT VARIANCE WITH CONDITIONS AS REPRESENTED ON THE PLANS, NOTIFY THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTIONS AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
- REQUIREMENTS OF VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT). THE CONTRACTOR SHALL PROTECT AND PREVENT DAMAGE TO EXISTING ON-SITE UTILITY DISTRIBUTION FACILITIES THAT ARE TO REMAIN. ACTIVE UTILITY DISTRIBUTION FACILITIES ENCOUNTERED DURING
- DEMOLITION AND/OR CONSTRUCTION ACTIVITIES SHALL BE SHUT OFF AT THE SERVICE MAIN WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
- DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY EXISTING UTILITIES AND/OR UTILITY SYSTEM STRUCTURES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL DOCUMENT THE SAME AND FORWARD THE INFORMATION TO THE RESIDENT ENGINEER / OWNER'S REPRESENTATIVE, AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
- THE CONTRACTOR OR APPLICANT SHALL WORK WITH THE CITY STAFF TO REUSE THE EXISTING, LEFTOVER, UNUSED AND/OR DISCARDED BUILDING MATERIALS AS PART OF THE DEMOLITION PROCESS OR THE CONSTRUCTION DEBRIS MUST BE REMOVED TO AN APPROVED LANDFILL WITH ADEQUATE FREQUENCY IN ACCORDANCE WITH THE VIRGINIA STATE LITTER CONTROL ACT.

UTILITY WORKS:

- UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING MINIMUM STANDARDS DESCRIBED IN SECTION 4VAC50-30-40 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND ADDITIONAL APPLICABLE PRACTICES FOLLOWED BY THE CITY OF ALEXANDRIA
- A. ALL PRIVATE UTILITIES SHALL BE LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY AND PUBLIC UTILITY EASEMENTS UNLESS THE UTILITY OWNERS HAVE FRANCHISE AGREEMENT WITH THE CITY OF ALEXANDRIA; HOWEVER, NO ELECTRIC TRANSFORMERS AND SWITCH GEARS/CONTROL BOXES SHALL BE PLACED IN THE PUBLIC RIGHT OF WAY.
- B. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN UTILITY SERVICES AT ALL TIMES DURING CONNECTION AND/OR CONSTRUCTION.
- C. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME
- D. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- SHOULD UTILITY CONSTRUCTION BE PERFORMED AFTER COMPLETING EARTHWORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1551) COMPACTION IN ALL TRENCH BACKFILL.
- RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE VIRGINIA REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).
- APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION, AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, CITY OF ALEXANDRIA.
- K. A REMEDIATION PLAN SHALL BE SUBMITTED DETAILING HOW CONTAMINATED SOILS AND/OR GROUNDWATER WILL BE DEALT WITH, INCLUDING PLANS TO REMEDIATE UTILITY CORRIDORS.
- UTILITY CORRIDORS IN CONTAMINATED SOIL SHALL BE OVER EXCAVATED BY 2 FEET AND BACKFILLED WITH "CLEAN" SOIL.
- M. GRADING CAN BE PERFORMED ON INSTALLATION OF UTILITIES.
- N. ALL UTILITIES SUCH AS ELECTRICAL LINES, GAS PIPES, COMMUNICATION CABLES, INCLUDING WATER AND SEWER LATERALS ON PRIVATE PROPERTY IN THE CITY OF ALEXANDRIA SHALL BE PROVIDED WITH MINIMUM 3" WIDE 5 MIL OVERALL THICKNESS DETECTABLE UNDERGROUND WARNING TAPE (DUWT). THE DUWT SHALL BE INSTALLED AT DEPTHS OF 12" TO 18" FOR DUWT WIDTHS OF 3" AND 24" FOR WIDTHS OF 6" SO AS TO MAKE UNDERGROUND INSTALLATIONS EASY TO FIND USING A NON-FERROUS LOCATOR. THE DUWT SHALL BE WITH ALUMINUM BACKING OR SOLID ALUMINUM CORE LAMINATED WITH A PROTECTIVE CLEAR FILM ON BOTH SIDES, SEALING AND PROTECTING THE GRAPHICS FROM UNDERGROUND MOISTURE, ACIDS, ALKALIS, AND OTHER SOIL SUBSTANCES. ALL DUWT TAPES SHALL BE PRINTED IN BLACK INK ON AMERICAN PUBLIC WORKS ASSOCIATION (APWA) APPROVED COLORS TO MEET OR EXCEED INDUSTRY STANDARDS.

COLOR	CODES
RED	CAUTION BURIED ELECTRICAL POWER LINES, CABLES, CONDUITS, AND LIGHTING CABLES
YELLOW	CAUTION GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	CAUTION COMMUNICATIONS, ALARM OR SIGNAL LINES, CABLES, OR CONDUITS
BLUE	CAUTION POTABLE WATER
PURPLE	CAUTION RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN	CAUTION SEWER, DRAIN LINES, AND FORCE MAIN

SOLID WASTE MANAGEMENT NOTES:

SINCE THE APPLICANT IS NOT REQUIRED BY SECTION 5-1-31 OF THE CITY CHARTER AND CODE TITLE TRANSPORTATION AND ENVIRONMENTAL SERVICES TO USE THE CITY OF ALEXANDRIA'S COLLECTION AND DISPOSAL SERVICES; SOLID WASTE COLLECTION AND DISPOSAL SERVICES SHALL BE PROVIDED BY THE APPLICANT PRIVATE COLLECTORS AND SHALL BE PASSED ON TO THE NEW OWNER IN CASE OF A SALE OF THE PROPERTY SUBSEQUENT TO THE DEVELOPMENT.

THE PLAN DEMONSTRATES THAT ADEQUATE SPACE WITHIN EACH UNIT TO ACCOMMODATE A CITY STANDARD SUPER CAN AND RECYCLING CONTAINER HAS BEEN PROVIDED. THE CONTAINERS ARE PLACED INSIDE THE UNITS OR WITHIN AN ENCLOSURE THAT COMPLETELY SCREENS THEM FROM VIEW. THE DEVELOPER SHALL PURCHASE THI STANDARD CONTAINERS FROM THE CITY OR PROVIDE CONTAINERS THAT ARE COMPATIBLE WITH CITY COLLECTION SYSTEM AND APPROVED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

THE PLAN DEMONSTRATES THAT ADEQUATE SPACE FOR SOLID WASTE AND RECYCLING CONTAINERS HAS BEEN PROVIDED AND THE DEVELOPMENT MEETS ALL THE MINIMUM STREET STANDARDS, INCLUDING ALL STANDARD CUL-DE-SAC TURNAROUNDS, IF APPLICABLE. THE TRASH TRUCK TURNING MOVEMENTS DEMONSTRATE THAT THI TRASH TRUCK IS ABLE TO PICK UP SOLID WASTE FROM PRIVATE STREETS WITHOUT BACKING UP. THE CONTAINERS HAVE BEEN PLACED WITHIN AN ENCLOSURE THAT COMPLETELY SCREENS THEM FROM VIEW.

MOSQUITO CONTROL NOTES:

- SINCE STORM WATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICES (BMP) SYSTEMS THAT HOLI WATER FOR MORE THAN 5 DAYS BETWEEN THE MONTHS OF MAY - OCTOBER HAVE THE POTENTIAL TO CAUSI MOSQUITO BREEDING HABITATS; THEREFORE, SUCH BMPs SHALL BE TREATED WITH A REGISTERED MOSQUITO LARVAL CONTROL PRODUCT. ALL LABELS SHOULD BE FOLLOWED FOR APPLICATION RATES AND AMOUNTS THIS REQUIREMENT IS NOT APPLICABLE TO THIS SITE BECAUSE THE PROPOSED BMP DOES NOT HOLD WATER FOR MORE THAN 5 DAYS.
- 2. SINCE EXCESSIVE VEGETATION IN EXISTING BMPs ALSO INCREASES THE POTENTIAL FOR MOSOUITO PROBLEMS THEREFORE, VEGETATION SHALL BE CONTROLLED AND CUT TO REDUCE MOSQUITO BREEDING.
- THE CONTRACTOR SHALL BACKFILL EXCAVATED AREAS WITH APPROVED MATERIALS/CLEAN FILL AS PER THE 3. CONTACT THE CITY OF ALEXANDRIA ENVIRONMENTAL HEALTH VECTOR BORNE ILLNESS PROGRAM (703-838-4400 EXT. 326, 327) FOR QUESTIONS OR TREATMENT ASSISTANCE.

RODENT ABATEMENT NOTE:

PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT OR LAND DISTURBANCE PERMIT, A RODENT ABATEMENT PLAN SHALL BE SUBMITTED TO THE CITY OF ALEXANDRIA BUILDING AND FIRE CODE ADMINISTRATION THAT WIL OUTLINE STEPS THAT WILL BE TAKEN TO PREVENT THE SPREAD OF RODENTS FROM THE CONSTRUCTION SITE TO THE SURROUNDING COMMUNITY AND SEWERS. THE CONTRACTOR CAN CONTACT ALEXANDRIA BUILDING AND FIRE CODE ADMINISTRATION DEPARTMENT AT (703) 838-4644 OR (703) 746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.

ARCHAEOLOGY NOTES:

- 1. ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED PRIOR TO GROUND-DISTURBING ACTIVITIES (SUCH AS CORING, GRADING, FILLING, VEGETATION REMOVAL, UNDERGROUND 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) 838-4399.
- CALL ALEXANDRIA ARCHAEOLOGY (703/838-4399) TWO WEEKS BEFORE STARTING DATE OF ANY GROUND DISTURBANCE SO THAT AN INSPECTION OR MONITORING SCHEDULE FOR CITY ARCHAEOLOGISTS CAN BE ARRANGED
- THE APPLICANT SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-838-4399) 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.
- 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 DELAYS.

ALEXRENEW REQUIRED NOTES:

INSTRUMENT NO.

1. CONTRACTOR SHALL ENSURE ALL DISCHARGES ARE IN ACCORDANCE WITH CITY OF ALEXANDRIA CODE TITLE

DEED BOOK NO.

2. DEWATERING AND OTHER CONSTRUCTION RELATED DISCHARGE LIMITS TO THE SEWER SYSTEM ARE REGULATED BY ALEXRENEW PRETREATMENT. CONTRACTOR IS REQUIRED TO CONTACT ALEXRENEW'S PRETREATMENT COORDINATOR AT 703-721-3500 x2020.

APPROVED SPECIAL USE PERMIT NO. DEPARTMENT OF PLANNING & ZONING DIRECTOR DATE DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO. DIRECTOR DATE CHAIRMAN, PLANNING COMMISSION DATE DATE RECORDED PAGE NO.

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Sec. 8-200 - General parking regulations.

A) Schedule of Requirements

1) Two (2.0) spaces per dwelling unit for single-family detached, two-family, and townhouse dwellings.

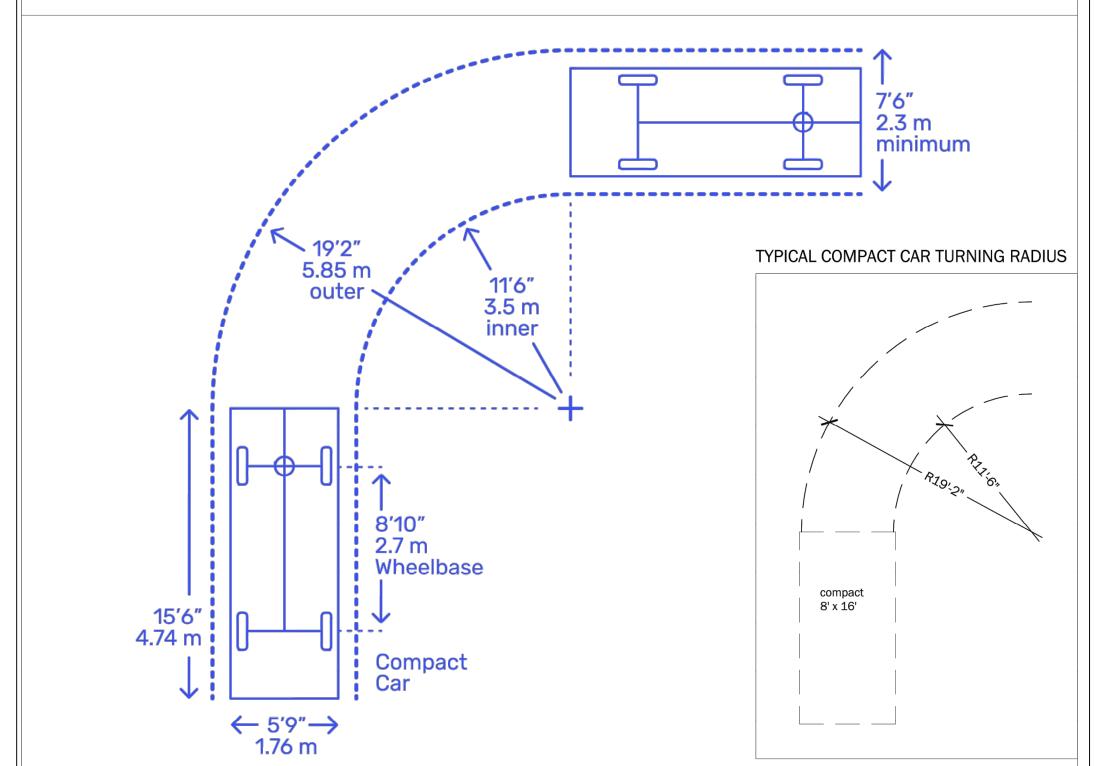
D) Design of parking spaces and facilities.

1) Each required parking space shall be no less than 18.5 feet in length and nine feet in width, except that <u>each required</u> compact car parking space shall be no less than 16 feet in length and eight feet in width for compact car parking spaces, exclusive of driveways and aisles; provided, however, that parking spaces parallel to driveways and aisles shall be not less than 22 feet in length and eight feet in width for standard cars and 18 feet in length and seven feet in width for compact cars.

E) Provision of compact car spaces.

4) For purposes of this section, <u>a compact car shall mean an automotive vehicle having a width of less than six feet and a</u> length of less than 16 feet.

MINIMUM TURNING RADIUS FOR COMPACT CARS



SANITARY SEWER FLOW NARRATIVE AND CALCULATIONS:

THE PROJECT SITE IS LOCATED WITHIN THE COMBINED SEWER SYSTEM (CSS). ACCORDING TO THE MEMORANDUM TO INDUSTRY NO. 07-14, AN ADDITION TO AN EXISTING PROPERTY THAT DOES NOT INCREASE THE AMOUNT OF SANITARY SEWAGE GENERATED IS EXEMPT FROM THE CSS MANAGEMENT POLICY. AS CAN BE SEEN BY THE BELOW CALCULATIONS, THERE IS AN AVERAGE DAILY DECREASE OF 23.4 GPD IN SANITARY SEWAGE GENERATED, THEREFORE THIS PROJECT IS EXEMPT FROM THIS POLICY. FURTHERMORE, THE MEMORANDUM TO INDUSTRY NO. 06-14 REQUIRES SANITARY SEWER IMPROVEMENTS, INFORMATION AND ANALYSES IF THE ADDITIONAL ESTIMATED PEAK WASTEWATER FLOW EXCEEDS 10,000 GPD. AS CAN BE SEEN BELOW, THE PROPOSED WORK DECREASES THE PEAK WASTEWATER FLOW BY 93.6 GPD, THEREFORE THIS PROJECT IS EXEMPT FROM THIS REQUIREMENT.

AVERAGE DESIGN FLOWS:

- MULTI-FAMILY (CONDOMINIUM, APARTMENT) 300 GPD/UNIT
- OFFICE / RETAIL 200 GPD/1000 SF
- * A PEAK FACTOR OF 4 IS APPLIED TO THESE AVERAGE FLOWS TO CALCULATE PEAK FLOWS.

PRE-DEVELOPMENT SANITARY FLOW:

EXISTING BASEMENT, FIRST FLOOR AND SECOND FLOOR ALL USED AS OFFICES.

BASEMENT = 1290 SF OF GROSS AREA FIRST FLOOR = 1689 SF OF GROSS AREA SECOND FLOOR = 1617 SF OF GROSS AREA TOTAL = 4596 SF OF GROSS AREA

AVERAGE FLOW = TOTAL SF OF GROSS AREA x AVERAGE DESIGN FLOW

= 4596 SF x 200 GPD / 1000 SF = 919.2 GPD

EAK FLOW = AVERAGE FLOW x PEAK FACTOR

= 919.2 GPD x 4 = 3676.8 GPD

POST-DEVELOPMENT SANITARY FLOW:

EXISTING BASEMENT AND FIRST FLOOR TO REMAIN AS OFFICES. EXISTING/PROPOSED SECOND FLOOR AND THIRD FLOOR SHALL BE ONE APARTMENT UNIT.

BASEMENT = 1290 SF OF GROSS AREA FIRST FLOOR = 1689 SF OF GROSS AREA (NOT INCLUDING THE PROP. GARAGE)

TOTAL = 2979 SF OF GROSS AREA

AVERAGE FLOW = (TOTAL SF OF GROSS AREA x AVERAGE DESIGN FLOW) + (NUMBER OF UNITS x AVERAGE DESIGN FLOW)

= (2979 SF x 200 GPD / 1000 SF) +(1 UNIT x 300 GPD) = 595.8 GPD + 300 GPD

= 895.8 GPD + 300 GFT

AK FLOW = AVERAGE FLOW x PEAK FACTOR = 895.8 GPD x 4

= 3583.2 GPD

GREEN BUILDING POLICY NARRATIVE:

GENERAL APPROACH

IN ORDER TO MEET THE CITY OF ALEXANDRIA'S GREEN BUILDING POLICY REQUIREMENTS, IT IS OUR INTENT TO FORMALLY REQUEST A VARIANCE FROM THE GREEN BUILDING POLICY SINCE THIS RESIDENTIAL PROJECT IS AN ADDITION TO AN EXISTING HOME. ADDITIONS ARE NOT CONSIDERED "NEW CONSTRUCTION" UNDER MOST GREEN BUILDING PROGRAMS AND THEREFORE DO NOT QUALIFY FOR CERTIFICATION. IN FACT, A REQUEST WAS SENT TO THE LEED FOR HOMES CERTIFICATION TEAM TO INQUIRE AND OUR SUSPICION WAS CONFIRMED. HOWEVER, WE PROPOSE TO APPROACH THE PROJECT BY "CERTIFYING" THE HOME TO MEET A LEED FOR HOMES SILVER - EQUIVALENT VERIFIED BY A HERS RATER (FOR ENERGY-EFFICIENCY MEASURES) AND A LEED FOR HOMES GREEN RATER TO VERIFY THE GREEN CREDITS. ALTHOUGH WE MAY NOT BE ABLE TO CERTIFY THE ADDITION AS LEED, THE ADDITION CAN RECEIVE AN OFFICIAL HERS SCORE AND MAY BE ELIGIBLE FOR AN ENERGY STAR NEW HOMES CERTIFICATION (FOR THE ADDITION ONLY).

2. ENER THE

THE LEED FOR HOMES PROGRAM IS SPECIFICALLY ORIENTED TO RESIDENTIAL BUILDINGS, SUCH AS TOWNHOMES. AS PART OF THE PROGRAM REQUIREMENTS, LEED FOR HOMES REQUIRES THAT PROJECTS MEET THE STRICT GUIDELINES SET FORTH BY THE ENERGY STAR NEW HOMES PROGRAM FOR ENERGY-EFFICIENCY MEASURES. THE ENERGY STAR NEW HOMES PROGRAM REQUIRES DUCT LEAKAGE, AIR INFILTRATION, AND OTHER PERFORMANCE TESTING REQUIREMENTS SIMILAR TO COMMISSIONING REQUIREMENTS FOUND IN TYPICAL COMMERCIAL PROJECTS. IN ADDITION, ENERGY STAR NEW HOMES PAYS PARTICULAR ATTENTION TO BEYOND-CODE AIR BARRIER AND INSULATION REQUIREMENTS. AS A RESULT, ENERGY STAR NEW HOMES ARE AT LEAST 15% MORE ENERGY-EFFICIENT THAN THE STANDARD ENERGY CODE-BUILT HOME AND ON TOP OF THAT, LEED FOR HOMES REQUIRES THAT THE PERFORMANCE OF THE HOME BE 15% MORE ENERGY-EFFICIENT THAN AN ENERGY STAR NEW HOME.

THE ADDITION WILL BE BUILT TO ABOVE-CODE STANDARDS, THIRD-PARTY VERIFIED AIR SEALING AND INSULATION, HIGH-EFFICIENCY, VARIABLE-SPEED HEATING AND COOLING APPLIANCES (SEER 14 AIR CONDITIONERS AND 90+ AFUE GAS FURNACES), HIGH-EFFICIENCY WATER HEATERS, ENERGY STAR-RATED KITCHEN APPLIANCES, AT LEAST 90% LED LIGHTING, ENERGY-STAR-RATED FENESTRATION, AND MECHANICAL VENTILATION FOR FRESH AIR REQUIREMENTS.

2.1. ENERGY MODELING

THE ENERGY STAR NEW HOME AND LEED FOR HOMES PROGRAMS BOTH REQUIRE AN OFFICIAL HOME ENERGY RATING SCORE (HERS) TO BE COMPLETED TO PROVE THE ENERGY-EFFICIENCY OF THE HOME. THIS IS DONE BY COMPLETING AN ENERGY MODEL (HERS SCORE). THIS PROJECT WILL MEET THIS REQUIREMENT BY HAVING AN ENERGY MODEL COMPLETED PRIOR TO CONSTRUCTION BEGINNING (A "PROJECTED" SCORE) AND AN OFFICIAL SCORE AT FINAL ONCE ALL THE INSPECTIONS AND PERFORMANCE TESTS ARE COMPLETED. LEED REQUIRES THAT ALL HOMES HAVE A MAXIMUM HERS SCORE OF 70, WHICH IS 30% MORE ENERGY-EFFICIENT THAN A CODE-BUILT HOME.

HOWEVER, A PROJECTED ENERGY MODEL CANNOT BE PRODUCED UNTIL OFFICIAL CONSTRUCTION PLANS HAVE BEEN APPROVED.

3. WATER REDUCTION

AS FOR MEETING WATER REDUCTION GOALS, THE LEED FOR HOMES PROGRAM REQUIRES A MINIMUM SCORE IN THE WATER EFFICIENCY CHAPTER OF THE PROGRAM. IT IS THE PROJECTS' INTENT TO INSTALL WATERSENSE-CERTIFIED LAVATORY FAUCETS, TOILETS, AND SHOWERHEADS IN ALL OF THE UNITS TO MEET THE LEED FOR HOMES REQUIREMENTS. IN ADDITION, IT WILL BE RECOMMENDED THAT ANY PLANTS INSTALLED ARE NATIVE TO THE REGION AND/OR NON-INVASIVE, DROUGHT TOLERANT.

4. INDOOR AIR QUALITY

LEED FOR HOMES ALSO HAS REQUIREMENTS FOR ALL PROJECTS TO MEET INDOOR AIR QUALITY GOALS, SUCH AS ADVANCED FILTRATION, MECHANICAL VENTILATION (AS DOES ENERGY STAR), CONTAMINATE AND HUMIDITY CONTROL, USE OF LOW-VOC PRODUCTS (E.G. PAINT, SEALANTS, PARTICLEBOARD, ETC.), AND MORE. THIS PROJECT WILL PURSUE SIMILAR MEASURES TO ACHIEVE THE MINIMUM POINT REQUIREMENTS OF THE LEED FOR HOMES PROGRAM.

5. SAMPLE PRELIMINARY LEED FOR HOMES CHECKLIST

A SAMPLE PRELIMINARY LEED FOR HOMES CHECKLIST (SILVER) IS PROVIDED ON SHEETS 33-35 TO DEMONSTRATE THE CREDITS THAT MAY BE PURSUED TO OBTAIN THE SILVER CERTIFICATION OF THE TOWNHOMES. THIS CHECKLIST IS A *DRAFT* AS FINAL DECISIONS ABOUT WHAT CREDITS WILL BE ULTIMATELY PURSUED HAVE NOT YET BEEN DETERMINED.

TRAFFIC COUNT NARRATIVE AND CALCULATIONS:

AS SHOWN IN THE BELOW CALCULATIONS, THE NUMBER OF DAILY AND PEAK HOUR TRIPS WILL NOT INCREASE DUE TO THIS PROJECT. INSTEAD, THERE WILL BE A DECREASE IN TRIPS DUE TO THE CONVERSION OF OFFICE SPACE TO RESIDENTIAL USE. ON AVERAGE, THERE WILL BE A DECREASE OF 8.43 TRIPS PER DAY TO AND FROM THIS SITE. DURING PEAK HOURS, THERE WILL BE A DECREASE OF 1.41 TRIP PER DAY FOR THE MORNING AND A DECREASE OF 1.30 TRIP PER DAY FOR THE AFTERNOON. FOR THIS REASON, THIS PROJECT WILL NOT AGGRAVATE ANY EXISTING TRAFFIC ISSUES WITHIN THE NEIGHBORING AREA.

TRAFFIC RATES, PER I.T.E.:

OFFICE:

AVERAGE DAILY RATE = 9.74 TPD / 1000 SF
TOTAL AM PEAK HOUR = 1.16 TPD / 1000 SF
TOTAL PM PEAK HOUR = 1.15 TPD / 1000 SF

APARTMENT:

AVERAGE DAILY RATE = 7.32 TPD / UNIT
TOTAL AM PEAK HOUR = 0.46 TPD / UNIT
TOTAL PM PEAK HOUR = 0.56 TPD / UNIT

PRE-DEVELOPMENT TRAFFIC COUNT:

EXISTING BASEMENT, FIRST FLOOR AND SECOND FLOOR ALL USED AS OFFICES.

BASEMENT = 1290 SF OF GROSS AREA

FIRST FLOOR = 1689 SF OF GROSS AREA SECOND FLOOR = 1617 SF OF GROSS AREA TOTAL = 4596 SF OF GROSS AREA

AVERAGE TRIPS PER DAY = TOTAL SF OF GROSS AREA x AVERAGE DAILY RATE = 4596 SF x 9.74 TPD / 1000 SF

= 44.77 TPD

TOTAL AM PEAK TRIPS PER DAY = TOTAL SF OF GROSS AREA x TOTAL AM PEAK HOUR RATE

= 4596 SF x 1.16 TPD / 1000 SF = 5.33 TPD

TOTAL PM PEAK TRIPS PER DAY = TOTAL SF OF GROSS AREA \times TOTAL PM PEAK HOUR RATE = 4596 SF \times 1.15 TPD / 1000 SF

= 5.29 TPD

POST-DEVELOPMENT TRAFFIC COUNT:

EXISTING BASEMENT AND FIRST FLOOR TO REMAIN AS OFFICES. EXISTING/PROPOSED SECOND FLOOR AND THIRD FLOOR SHALL BE ONE MULTI-FAMILY APARTMENT UNIT.

BASEMENT = 1290 SF OF GROSS AREA

FIRST FLOOR = 1689 SF OF GROSS AREA (NOT INCLUDING THE PROP. GARAGE) TOTAL = 2979 SF OF GROSS AREA

. = 29/9 SF OF GROSS AREA

AVERAGE TRIPS PER DAY = (TOTAL SF OF GROSS AREA x AVERAGE DAILY RATE) + (NUMBER OF

UNITS x AVERAGE DAILY RATE) = (2979 SF X 9.74 TPD / 1000 SF) + (1 UNIT x 7.32 TPD / UNIT)

 $= (297931 \times 9.7417D) + (100031) + (100011 \times 7.3217D) = 29.02 \text{ TPD} + 7.32 \text{ TPD}$

= 36.34 TPD

TOTAL AM PEAK TRIPS PER DAY = (TOTAL SF OF GROSS AREA X TOTAL AM PEAK HOUR RATE) +

(NUMBER OF UNITS x TOTAL AM PEAK HOUR RATE) = (2979 SF x 1.16 TPD / 1000 SF) + (1 UNIT x 0.46 TPD / UNIT)

= 3.46 TPD + 0.46 TPD = 3.92 TPD

TOTAL PM PEAK TRIPS PER DAY = (TOTAL SF OF GROSS AREA X TOTAL PM PEAK HOUR RATE) +

(NUMBER OF UNITS x TOTAL PM PEAK HOUR RATE) = (2979 SF x 1.15 / 1000 SF) + (1 UNIT x 0.56 TPD / UNIT)

= (2979 SF x 1.15 / 1000 SF) + (1 UNIT x 0.56 T = 3.43 TPD + 0.56 TPD

= 3.43 TPD -= 3.99 TPD

EMERGENCY VEHICLE ACCESS NARRATIVE:

EMERGENCY VEHICLE ACCESS SHALL REMAIN THE SAME AS EXISTING CONDITIONS. NO CHANGES ARE PROPOSED TO THE PUBLIC RIGHT-OF-WAY, THEREFORE EMERGENCY VEHICLES SHALL ACCESS THE SITE EITHER FROM N. ALFRED STREET OR THE 15 FOOT ALLEY.

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CHAIRMAN, PLANNING COMMISSION		DATE
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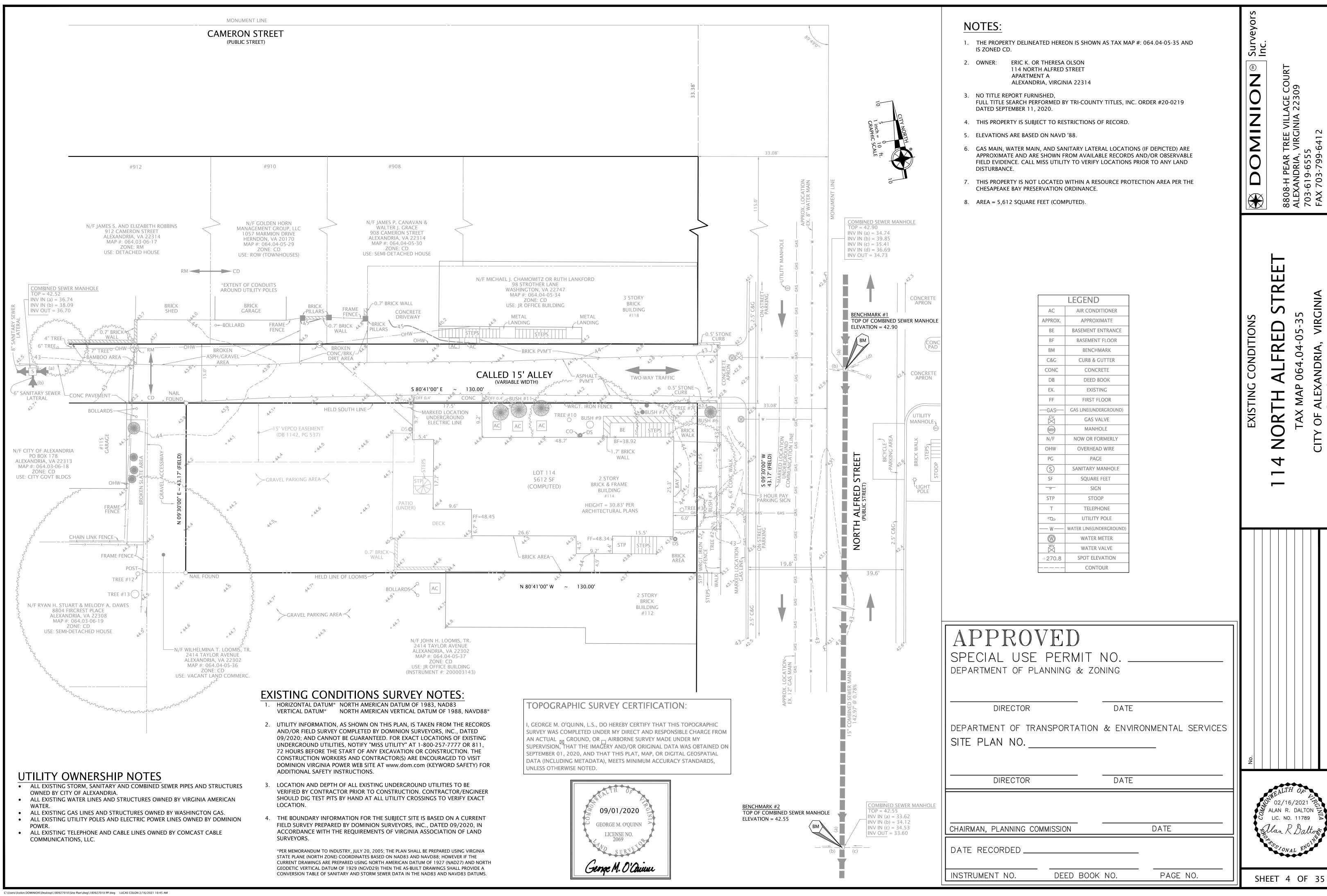
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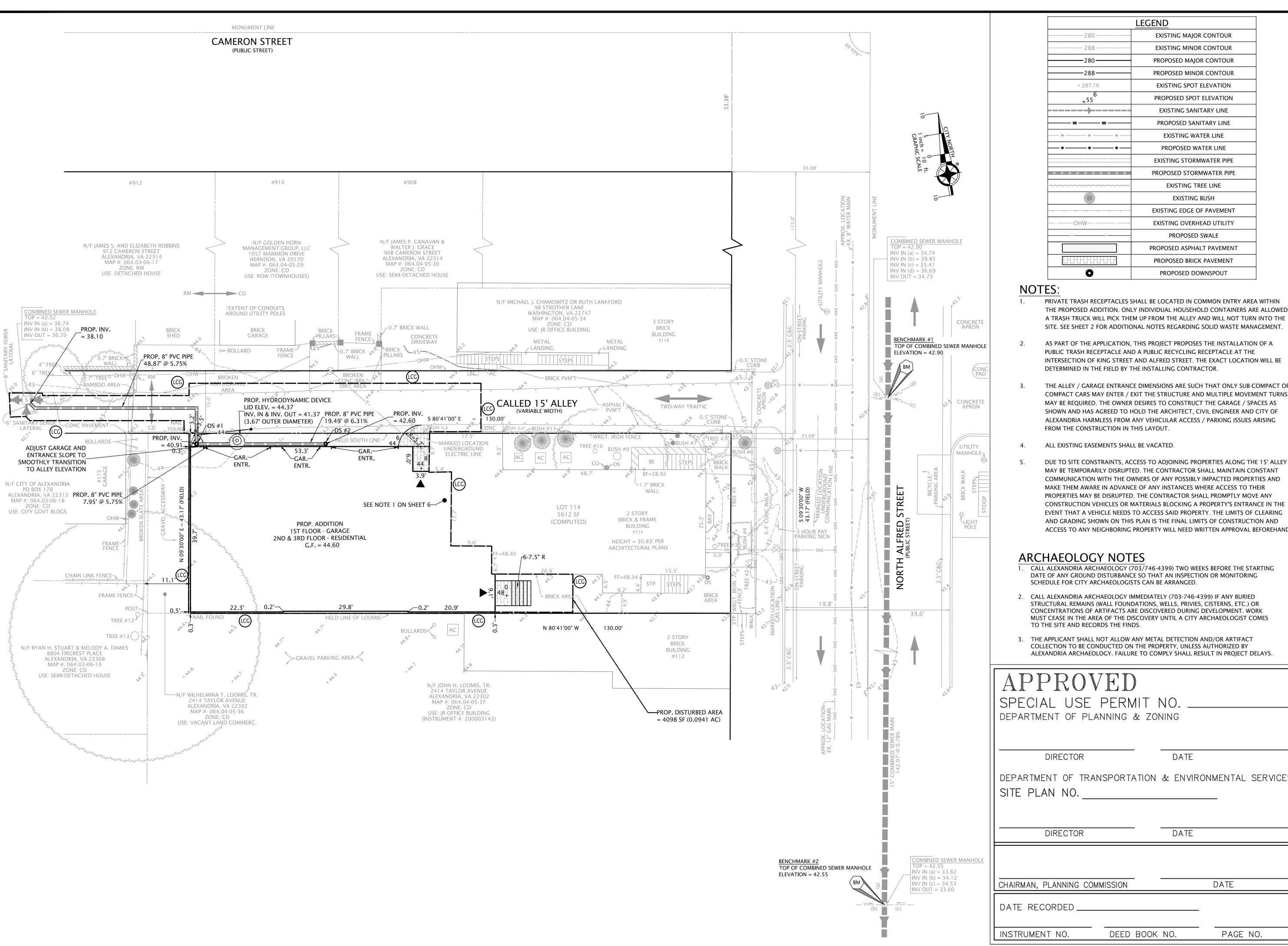
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SHEET 3 OF 35





SHEET 5 OF 35



PRIVATE TRASH RECEPTACLES SHALL BE LOCATED IN COMMON ENTRY AREA WITHIN THE PROPOSED ADDITION. ONLY INDIVIDUAL HOUSEHOLD CONTAINERS ARE ALLOWED. A TRASH TRUCK WILL PICK THEM UP FROM THE ALLEY AND WILL NOT TURN INTO THE SITE. SEE SHEET 2 FOR ADDITIONAL NOTES REGARDING SOLID WASTE MANAGEMENT.

- AS PART OF THE APPLICATION, THIS PROJECT PROPOSES THE INSTALLATION OF A INTERSECTION OF KING STREET AND ALFRED STREET. THE EXACT LOCATION WILL BE
- THE ALLEY / GARAGE ENTRANCE DIMENSIONS ARE SUCH THAT ONLY SUB-COMPACT OR COMPACT CARS MAY ENTER / EXIT THE STRUCTURE AND MULTIPLE MOVEMENT TURNS MAY BE REQUIRED. THE OWNER DESIRES TO CONSTRUCT THE GARAGE / SPACES AS SHOWN AND HAS AGREED TO HOLD THE ARCHITECT, CIVIL ENGINEER AND CITY OF ALEXANDRIA HARMLESS FROM ANY VEHICULAR ACCESS / PARKING ISSUES ARISING
- MAY BE TEMPORARILY DISRUPTED. THE CONTRACTOR SHALL MAINTAIN CONSTANT COMMUNICATION WITH THE OWNERS OF ANY POSSIBLY IMPACTED PROPERTIES AND PROPERTIES MAY BE DISRUPTED. THE CONTRACTOR SHALL PROMPTLY MOVE ANY CONSTRUCTION VEHICLES OR MATERIALS BLOCKING A PROPERTY'S ENTRANCE IN THE EVENT THAT A VEHICLE NEEDS TO ACCESS SAID PROPERTY. THE LIMITS OF CLEARING AND GRADING SHOWN ON THIS PLAN IS THE FINAL LIMITS OF CONSTRUCTION AND ACCESS TO ANY NEIGHBORING PROPERTY WILL NEED WRITTEN APPROVAL BEFOREHAND.

ALEXANDRIA ARCHAEOLOC	Y. FAILURE TO C	OMPLY SHALL RI	ESULT IN PROJECT DELAYS.
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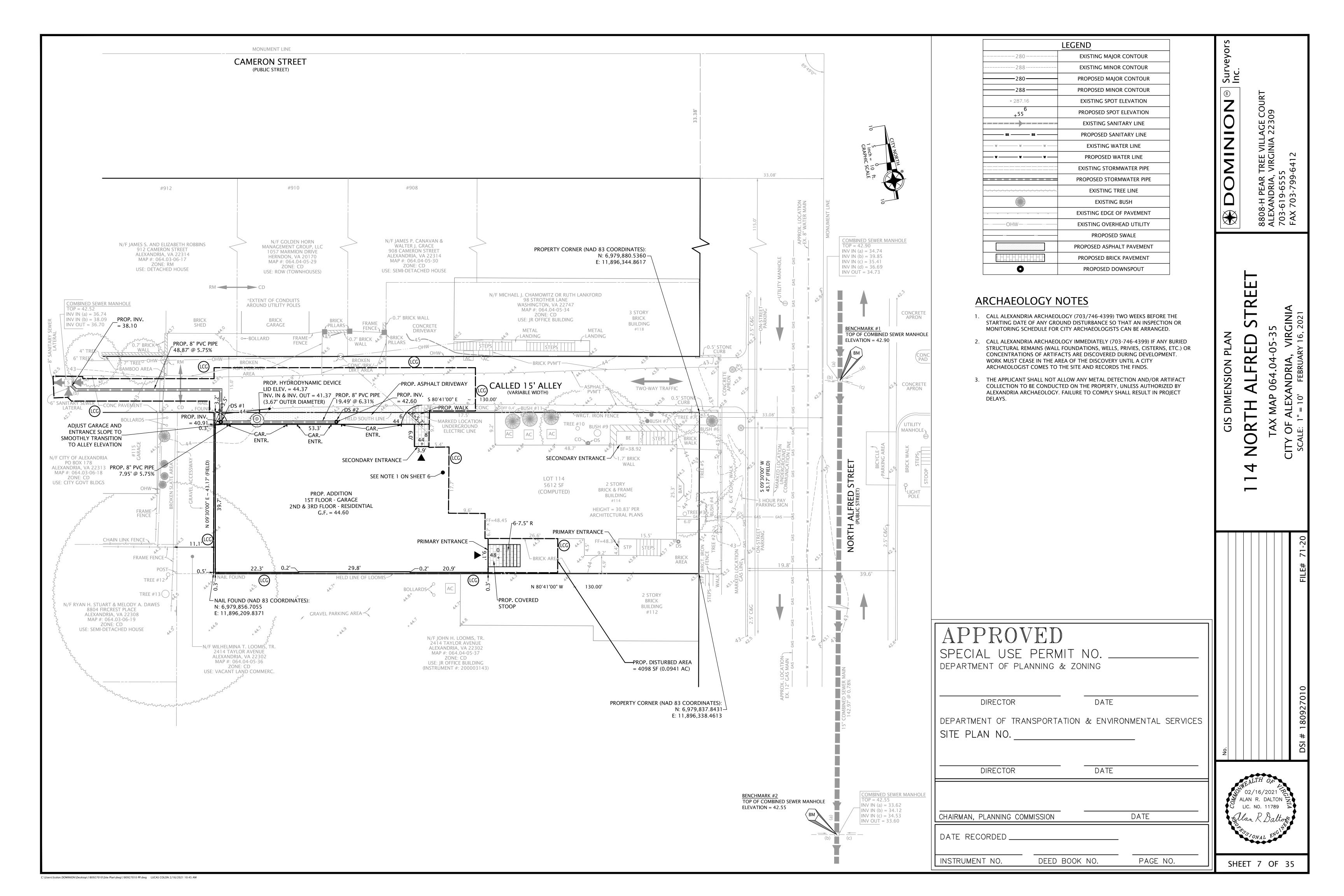
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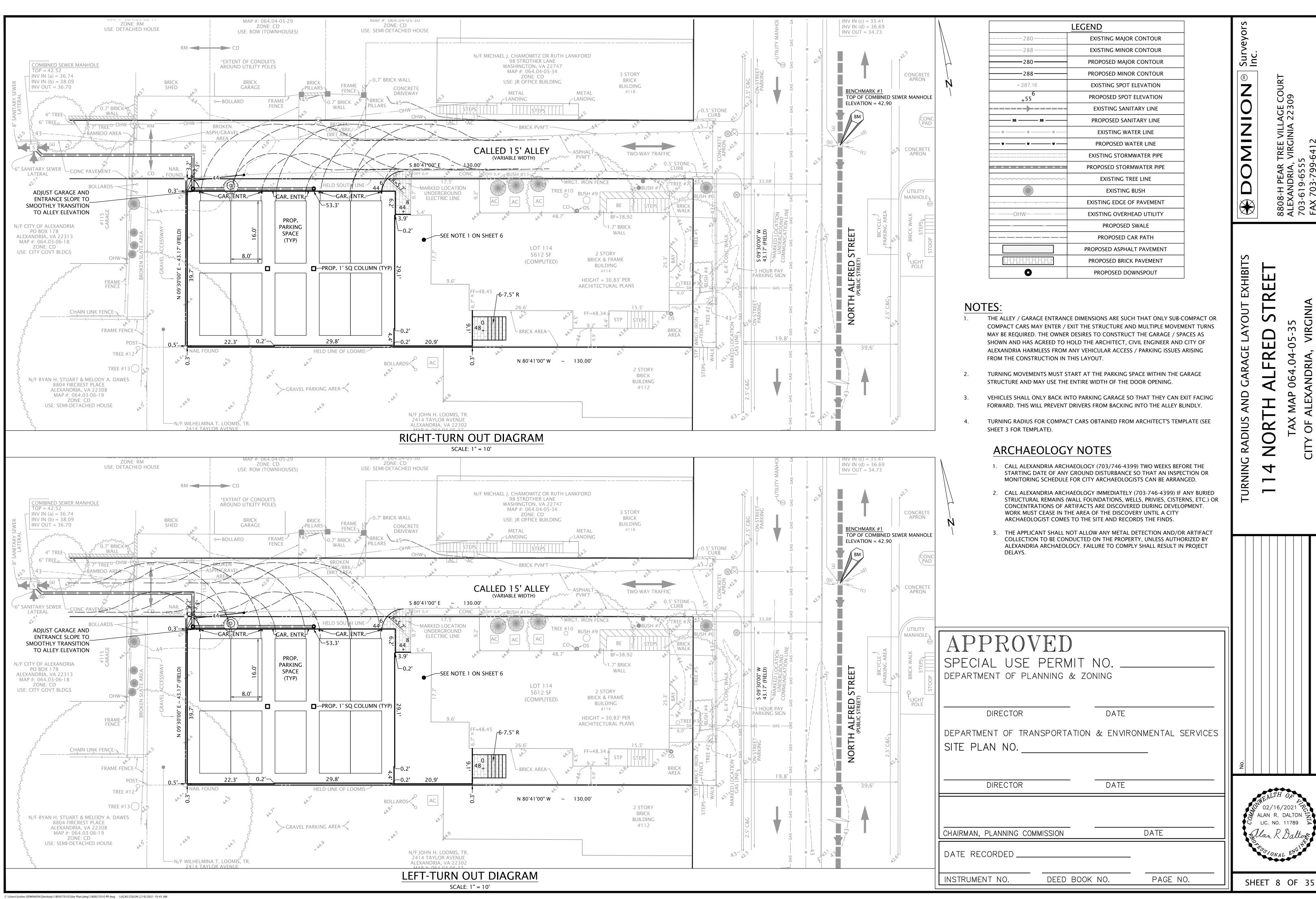
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SHEET 6 OF 35





STORMWATER NARRATIVE:

N THE EXISTING CONDITION, RUNOFF FROM THIS SITE DISCHARGES INTO TWO SUB-SHEDS

- DRAINAGE AREA "A" DISCHARGES TO THE WEST AS SHEET FLOW INTO THE 15' ALLEY AND EVENTUALLY FLOWS INTO NORTH PATRICK STREET.
- DRAINAGE AREA "B" DISCHARGES TO THE EAST AS SHEET FLOW INTO THE 15' ALLEY AND NORTH ALFRED
- THESE SUB-AREAS ARE SHOWN GRAPHICALLY ON THE EXHIBITS ON SHEET 10.

N THE POST-DEVELOPED CONDITION, THERE WILL BE NO INCREASE IN RUNOFF TO ADJACENT PROPERTIES. AN JRBAN BIORETENTION PLANTER BOX AND A MANUFACTURED HYDRODYNAMIC TREATMENT DEVICE ARE PROPOSED N ACCORDANCE WITH THE CITY / VIRGINIA RUNOFF REDUCTION METHOD (VRRM) REQUIREMENTS. THESE WILL ENABLE THE PROJECT TO COMPLY WITH THE CITY / STATE STANDARDS OF PHOSPHORUS REMOVAL

THE VRRM CALCULATIONS USE THE "SITE AREA" AS THE PROJECT LIMITS. FOR CALCULATIONS OF PEAK FLOWS IN THE TWO SUBSHEDS, VRRM CALCULATIONS FOR EACH DRAINAGE AREA ARE USED.

WATER QUALITY:

ACCORDING TO §13-109(E) OF THE CITY OF ALEXANDRIA ZONING ORDINANCE, THE SITE AREA FOR DETERMINING WATER QUALITY REQUIREMENTS MUST BE THE TAX PARCEL IF THE DISTURBED AREA EXCEEDS 50% OF THE TAX PARCEL AREA. THE TAX PARCEL CONSISTS OF 5612 S.F. AND 4098 S.F. IS PROPOSED TO BE DISTURBED, THEREFORE THE TOTAL TAX PARCEL WILL BE USED AS THE "SITE AREA" FOR DETERMINING WATER QUALITY REQUIREMENTS. APPROXIMATELY 7 S.F. OF THE EXISTING BUILDING ENCROACHES ONTO THE ALLEY. THIS AREA WILL BE INCLUDED IN THE SITE AREA AS WELL. ALSO, IN THE V.R.R.M. METHODOLOGY, THERE ARE ONLY THREE CHOICES FOR LAND USE: FORESTED OPEN SPACE, MAINTAINED YARD, AND IMPERVIOUS AREA. $\,$ A COMPACTED GRAVEL PARKING LOT IS CONSIDERED TO BE IMPERVIOUS.

PROJECT AREA = 5616 S.F. SITE + 7 S.F. OFFSITE BUILDING = 5619 S.F. = 0.1290 AC

EXISTING CONDITIONS

- EX. BLDG & COV. PORCH / PATIO 2020 S.F. EX. GRAVEL PARKING AREA 2325 S.F. EX. 112 N. ALFRED ST. BLDG ON LOT OF #114 14 S.F. EX. BRICK WALLS, WALKS, A/C, STOOP, STEPS, ETC.
- EX. TOTAL = 5160 S.F. = 0.1185 AC

ROPOSED CONDITIONS

- 1681 S.F. EX. BRICK WALLS, WALKS, A/C, STOOP, STEPS, ETC. (TO REMAIN) 584 S.F. EX. 112 N. ALFRED ST. BLDG ON LOT OF #114 14 S.F. PROP. BUILDING 2605 S.F. 51 S.F. PROP. STOOP / STEPS 173 S.F. PROP. PAVEMENT / WALK
- PROP. GRAVEL AREA (MOST OF THIS IS THE 0.33 BUILDING SETBACK) PROP. TOTAL = 5160 S.F. = 0.1185 AC

THIS PROJECT PROPOSES THE CONSTRUCTION OF A STORMWATER PLANTER BOX (URBAN BIORETENTION 1) ON THE TERRACE LEVEL. THE PLANTER BOX WILL COLLECT RUNOFF FROM THE THIRD LEVEL ROOF OF THE ACCESSORY APARTMENT (769 S.F.) AND A SMALL PORTION OF THE EXISTING BUILDING (166 S.F.). FURTHERMORE, THE PLANTER BOX ITSELF (110 S.F.) WILL BE TREATED. THIS IS SUPPORTED BY TABLE 1 IN THE 'VIRGINIA RUNOFF REDUCTION METHOD COMPLIANCE SPREADSHEET USER'S GUIDE AND DOCUMENTATION,' VERSION 3.0, DATED APRIL 2016. IT STATES THAT STORMWATER BMPs THAT REPLACE AN OTHERWISE MPERVIOUS SURFACE IS CONSIDERED AS IMPERVIOUS COVER. A TOTAL AREA OF 1048 S.F. OF IMPERVIOUS AREA WILL BE TREATED BY THE PLANTER BOX, SATISFYING THE VRRM WATER QUALITY REQUIREMENTS. THE TRIBUTARY AREAS TO THE PLANTER BOX IS SHOWN ON SHEET 10 AND THE LOCATION / SIZE OF THE STORMWATER FACILITY IS SHOWN ON THIS SHEET.

N ADDITION TO THE VRRM REQUIREMENTS, §13-109(E)(6) OF THE CITY OF ALEXANDRIA'S ZONING ORDINANCE REQUIRES THAT ALL IMPERVIOUS AREA WITHIN THE PROJECT LIMITS MUST BE TREATED BY A B.M.P. DEVICE. A MANUFACTURED HYDRODYNAMIC TREATMENT DEVICE IS BEING PROPOSED TO TREAT THE REMAINDER OF THE PROPOSED ADDITION AND A PORTION OF THE EXISTING BUILDING (1964 S.F.). THIS AREA IS SHOWN ON SHEET 10 and the location / Size of the device is shown on this sheet.

AS PROPOSED, THIS PROJECT WILL TREAT, FOR WATER QUALITY, 3012 S.F. OF THE TOTAL 5160 S.F. OF IMPERVIOUS AREA LOCATED ON SITE. THIS EQUALS TO 58.4% OF THE SITE'S IMPERVIOUS AREA.

§13-110(A)(2) OF THE CITY OF ALEXANDRIA ZONING ORDINANCE ALLOWS FOR MONETARY CONTRIBUTIONS TO THE ALEXANDRIA WATER QUALITY IMPROVEMENT FUND FOR ANY REMAINING IMPERVIOUS AREA ON SITE THAT CANNOT BE TREATED BY A B.M.P. DEVICE. THE REMAINING IMPERVIOUS AREAS THAT CANNOT BE TREATED ARE:

- THE THREE A/C's AND THE BASEMENT ENTRANCE WITH BRICK WALL (111 S.F.) CANNOT BE TREATED WITH A B.M.P. BECAUSE THE RUNOFF CAUSED BY THESE IMPERVIOUS AREAS CANNOT BE COLLECTED INTO A
- THE EXISTING AND PROPOSED BRICK WALKWAYS, PROPOSED ASPHALT DRIVEWAY AND PROPOSED GRAVEL
 THE EXISTING CONDITION FLOWS FROM DRAINAGE AREA "B" ARE: STRIP ALONG THE SIDE OF THE ADDITION (648 S.F.) CANNOT BE TREATED WITH A B.M.P. BECAUSE THE SOILS ARE KNOWN TO NOT SUPPORT INFILTRATION.
- THE PORTION OF THE NEIGHBORING BUILDING AT 112 N. ALFRED STREET THAT IS ON LOT 114 (14 S.F.) CANNOT BE TREATED WITHOUT TREATING A LARGE PORTION OF THE OFFSITE BUILDING. FURTHERMORE, THE CURRENT OWNERS DO NOT OWN THIS BUILDING AND DO NOT HAVE THE RIGHT TO MANIPULATE IT'S
- THE EXISTING SOUTH ENTRANCE WITH STEPS, THE PROPOSED SOUTH ENTRANCE WITH STEPS AND THE EXISTING BAY (111 S.F.) CANNOT BE TREATED BECAUSE THE ROOFS DO NOT HAVE GUTTERS / DOWNSPOUTS AND THE RUNOFF FROM THESE AREAS CANNOT BE COLLECTED INTO A DEVICE.

THE AREAS LISTED ABOVE CONSTITUTES 884 S.F. OF THE TOTAL 5160 S.F. OF IMPERVIOUS AREA ON SITE, OR

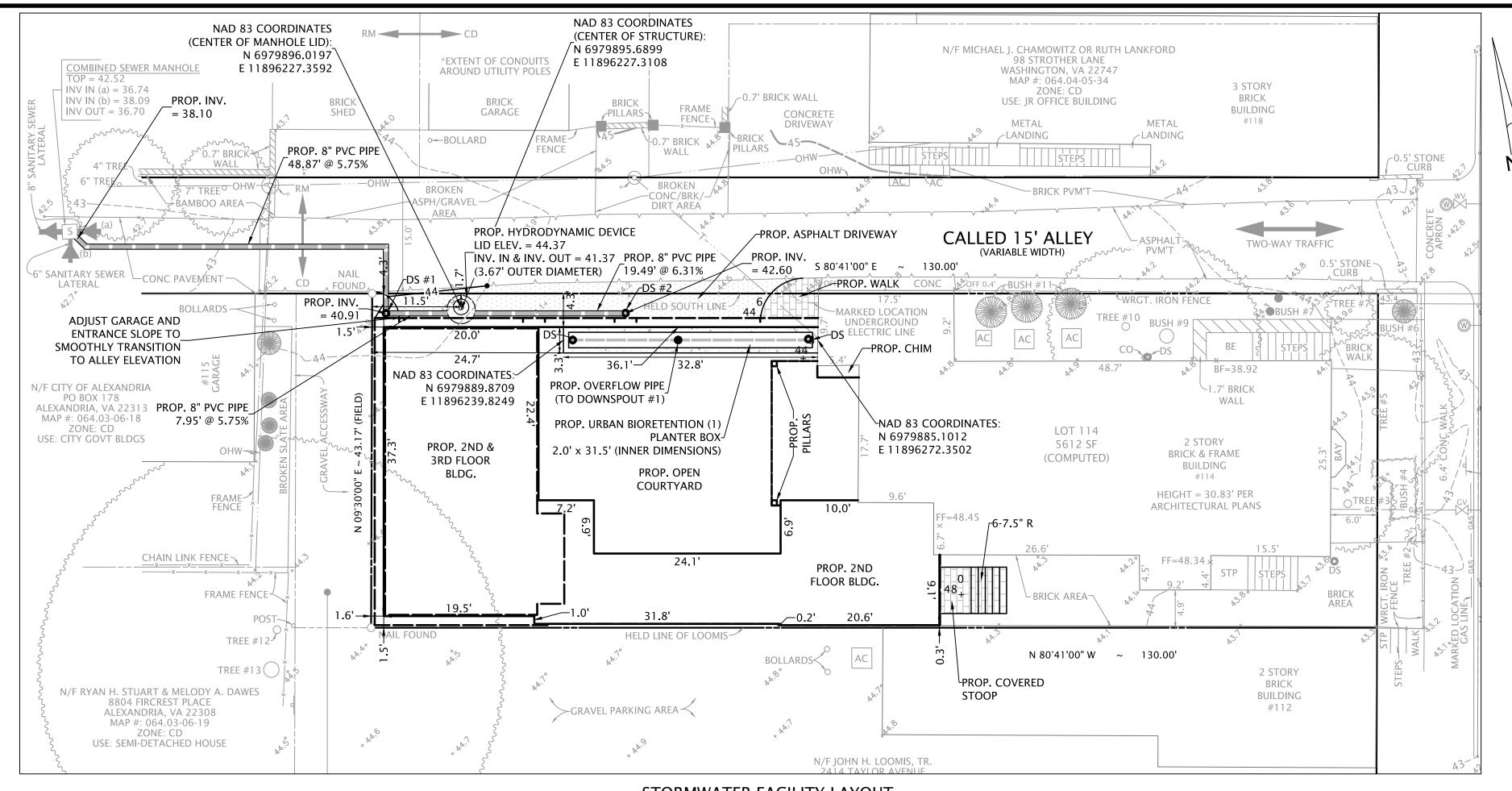
FINALLY, RELIEF FROM HAVING TO TREAT THE REMAINING 1264 S.F. OF THE EXISTING BUILDING IS BEING REQUESTED DUE TO THE HISTORIC NATURE OF THE BUILDING AND THE SCOPE OF THE PROJECT. THIS AREA CONSTITUTES THE FINAL 24.5% OF THE IMPERVIOUS AREA ON SITE.

WITH APPROVAL FROM CITY STAFF, THIS PLAN PROPOSES A MONETARY CONTRIBUTION BE MADE TO THE ALEXANDRIA WATER QUALITY IMPROVEMENT FUND FOR 2148 S.F. OF IMPERVIOUS AREA, OR 41.6% OF THE TOTAL IMPERVIOUS AREA ON SITE.

STORMWATER BEST MANAGEMENT PRACTICES (BMP) NOTES:

THE STORMWATER BEST MANAGEMENT PRACTICES (BMP) REQUIRED FOR THIS PROJECT SHALL BE CONSTRUCTED AND INSTALLED UNDER THE DIRECT SUPERVISION OF THE DESIGN ENGINEER OR HIS DESIGNATED REPRESENTATIVE. THE DESIGN ENGINEER SHALL MAKE A WRITTEN CERTIFICATION TO THE CITY THAT THE BMPs ARE CONSTRUCTED AND INSTALLED AS DESIGNED AND IN ACCORDANCE WITH THE APPROVED SITE PLAN. IN ADDITION, AGGREGATE LAYERS AND COLLECTOR PIPES MAY NOT BE INSTALLED UNLESS THE DESIGN ENGINEER OR HIS REPRESENTATIVE IS PRESENT.

THE CONTRACTOR SHALL FURNISH THE CITY WITH AN OPERATION AND MAINTENANCE MANUAL FOR ALL BMPs ON THE PROJECT. THE MANUAL SHALL INCLUDE AN EXPLANATION OF THE FUNCTIONS AND OPERATIONS OF EACH BMP AND ANY SUPPORTING UTILITIES, CATALOG CUTS ON ANY MECHANICAL OR ELECTRICAL EQUIPMENT AND A SCHEDULE OF ROUTINE MAINTENANCE FOR THE BMPs AND SUPPORTING EQUIPMENT.



STORMWATER FACILITY LAYOUT SCALE: 1'' = 10'

WATER QUANTITY

THE PROJECT DOES NOT INCREASE THE AMOUNT OF RUNOFF LEAVING THE SITE DUE TO THE DISCHARGE OF IMPERVIOUS AREA TO THE PLANTER BOX THAT SERVES TO REDUCE THE "RCN" NUMBER AND RESULTANT RUNOFF THE VRRM SPREADSHEET WAS USED WITH A NRCS "D" SOIL TYPE AND 2.70", 3.20" AND 5.20" FOR THE 1, 2 AND 10 YEAR STORMS, RESPECTIVELY. SEE SHEETS 12 - 14 FOR THE VRRM SPREADSHEET.

THE EXISTING CONDITION FLOWS FROM DRAINAGE AREA "A" ARE:

STORM	ADJUSTED RCN	RUNOFF VOLUME (WATERSHED-INCH)
1-YR EVENT	98	2.47
2-YR EVENT	98	2.97
10-YR EVENT	98	4.96

STORM	ADJUSTED RCN	RUNOFF VOLUME (WATERSHED-INCH)
1-YR EVENT	95	2.16
2-YR EVENT	95	2.64
10-YR EVENT	95	4.62

THE PROPOSED CONDITION FLOWS FROM DRAINAGE AREA "A" ARE:

STORM	ADJUSTED RCN	RUNOFF VOLUME (WATERSHED-INCH)
1-YR EVENT	97	2.35
2-YR EVENT	97	2.84
10-VD EVENT	0.7	1 21

THE PROPOSED CONDITION FLOWS FROM DRAINAGE AREA "B" ARE:

STORM	ADJUSTED RCN	RUNOFF VOLUME (WATERSHED-INCH)	
1-YR EVENT	95	2.16	
2-YR EVENT	95	2.64	
10-VD EVENT	05	4.62	

AS CAN BE SEEN, THE AMOUNT OF RUNOFF LEAVING DRAINAGE AREA "B" WILL REMAIN THE SAME FOR EXISTING AND PROPOSED CONDITIONS. THE "RCN" NUMBER FOR DRAINAGE AREA "A" GETS REDUCED FROM 98 TO 97 DUE TO THE IMPACTS OF THE STORMWATER PLANTER DEVICE. THE RUNOFF VOLUMES SHOW THAT THE QUANTITY OF RUNOFF LEAVING DRAINAGE AREA "A" WILL BE LESS THAN EXISTING CONDITIONS. DUE TO THE DECREASE IN RUNOFF, THE CITY OF ALEXANDRIA'S FLOOD PROTECTION REQUIREMENTS ARE MET BY THIS PROJECT.

100-YEAR OVERLAND RELIEF NARRATIVE:

ACCORDING TO THE ABOVE CALCULATIONS, THERE IS A DECREASE IN RUNOFF FOR THE 1-, 2- AND 10-YEAR STORM CAUSED BY A REDUCTION IN THE "RCN" NUMBER. AS SHOWN BELOW, THE PROPOSED CONDITIONS WILL ALSO HAVE A DECREASE IN RUNOFF CAUSED BY THE 100-YEAR STORM AS COMPARED TO THE EXISTING CONDITIONS. BECAUSE OF THIS, FLOODING ISSUES CAUSED BY A 100-YEAR STORM EVENT WILL NOT BE AGGRAVATED, BUT INSTEAD SLIGHTLY ALLEVIATED BY THE PROPOSED CONSTRUCTION.

THE EXISTING 100-YEAR FLOWS ARE:

	DRAINAGE AREA	ADJ. RCN	RUNOFF VOLUME (WATERSHED-INCH)
	D.A. "A"	98	7.96
	D.A. "B"	95	7.60
THE PROPOSED 100-YEAR F	LOWS ARE:		
	DRAINAGE AREA	ADJ. RCN	RUNOFF VOLUME (WATERSHED-INCH)
	D.A. "A"	97	7.84
	D A "R"	95	7 60

STORMWATER MANAGEMENT PLAN:

THE PLAN DEMONSTRATES THE DRAINAGE DIVIDE AREAS ON SHEET 10 ALONG WITH THE STRUCTURES WHERE EACH SUB-AREA DRAINS.

THERE IS A STORM WATER INLET AVAILABLE WITHIN 100' OF THE DEVELOPMENT SITE. DUE TO THE SIZE AND SCOPE OF THIS PROJECT, CITY OF ALEXANDRIA REVIEW STAFF HAVE AGREED TO ALLOW THE ROOF DRAINAGE OF THE EXISTING BUILDING TO CONTINUE DISCHARGING AT THE SURFACE. IF THE PROPOSED ADDITION BE CONNECTED TO THE COMBINED SEWER SYSTEM. THEREFORE. THE ROOF OF THE PROPOSED ADDITION AND SOME OF THE EXISTING BUILDING WILL BE CONNECTED WITH CONTINUOUS UNDERGROUND PIPE TO A SANITARY MANHOLE IN THE 15' ALLEY, PER THE REQUIREMENTS OF THE CITY OF ALEXANDRIA.

THE PLAN DEMONSTRATES THAT THE SITE HAS BEEN DEVELOPED NOT TO INCREASE THE POST DEVELOPMENT PEAK RUNOFF RATE FROM THE PRE-DEVELOPMENT PEAK RUNOFF RATE FOR A TWO-YEAR AND TEN YEAR STORM CONSIDERED INDIVIDUALLY PER THE REQUIREMENTS OF ARTICLE 13-109(F)(1) OF ALEXANDRIA ZONING ORDINANCE. THEREFORE, NO DETENTION IS PROVIDED.

THIS PROJECT INVOLVES THE CONSTRUCTION OF AN ADDITION TO THE EXISTING BUILDING THAT CONSISTS OF A GARAGE AT GROUND LEVEL AND RESIDENTIAL USES ON THE SECOND AND THIRD LEVEL.

DEVELOPMENT OR REDEVELOPMENT

DRAINAGE AREA	IMPERVIOUS	PERVIOUS	TOTAL
SITE AREA (SF)	5160	459	5619
ON-SITE TREATED (SF)	3012	0	3012
OFFSITE TREATED (SF)	0	0	0
TOTAL TREATED (SF)	3012	0	3012
ANY ON-SITE DISCONNECTED BY A VEGETATED BUFFER (25 FT)	0		
TOTAL ON-SITE TREATED OR DISCONNECTED (SF)			3012

ВМР ТҮРЕ	AREA TREATED BY BMP (ACRES)	IMPERVIOUS AREA TREATED BY BMP (ACRES)	BMP EFFICIENCY	PHOS. REMOVAL (LBS/YR)	LATITUDE LONGITUDE (DECIMAL)
URBAN BIORETENTION	0.0241 (1048 S.F.)	0.0241 (1048 S.F.)	25%	0.03	38.8061 N 77.0495 W
MANUFACTURED TREATMENT DEVICE - HYDRODYNAMIC	0.0451 (1964 S.F.)	0.0451 (1964 S.F.)	20%	0.02	38.8061 N 77.0496 W

MISCELLANEOUS

YES TOTAL WQV TREATED: **DETENTION ON SITE:** YES

PROJECT IS WITHIN WHICH WATERSHED? COMBINED SEWER SYSTEM PROJECT DISCHARGES TO WHICH BODY OF WATER? POTOMAC RIVER

STORMWATER BMP MAINTENANCE AGREEMENT:

THE APPLICANT SHALL SUBMIT TO THE CITY OF ALEXANDRIA A STORMWATER BMP MAINTENANCE AGREEMENT WITH FINAL #2 SUBMISSION. THE MAINTENANCE AGREEMENT SHALL BE REGISTERED WITH ALEXANDRIA LAND RECORDS.

ARCHAEOLOGY NOTES

- 1. CALL ALEXANDRIA ARCHAEOLOGY (703/746-4399) TWO WEEKS BEFORE THE STARTING DATE OF ANY GROUND DISTURBANCE SO THAT AN INSPECTION OR MONITORING SCHEDULE FOR CITY ARCHAEOLOGISTS CAN BE ARRANGED.
- 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.
- 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 DELAYS.

APPROVED SPECIAL USE PERMIT I DEPARTMENT OF PLANNING & ZOI	
DIRECTOR	DATE
DEPARTMENT OF TRANSPORTATION SITE PLAN NO.	
DIRECTOR	DATE
CHAIRMAN, PLANNING COMMISSION	DATE
DATE RECORDED	
INSTRUMENT NO. DEED BOOK	NO. PAGE NO.

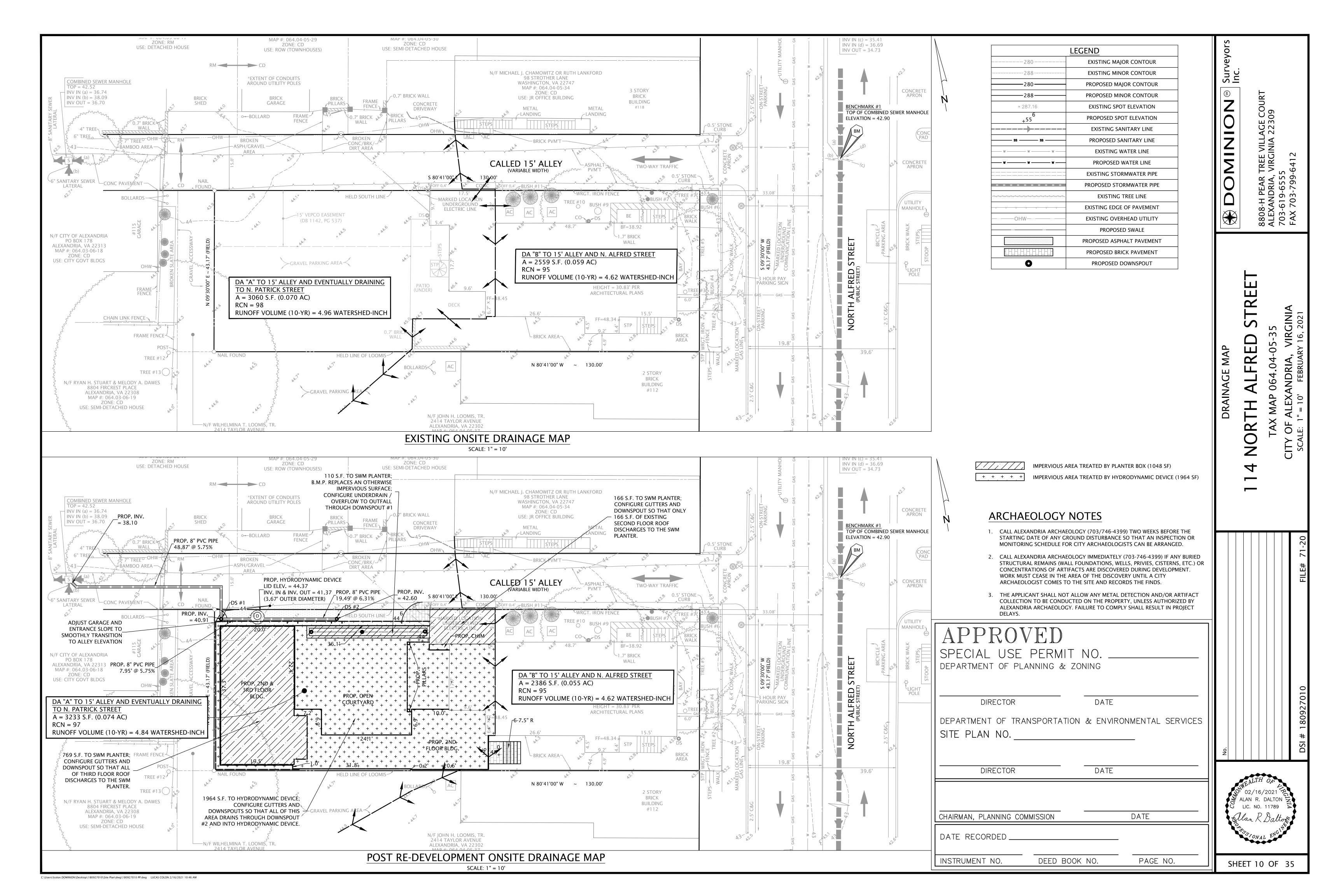
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OUTFALL MAP NARRATIVE

PER CHAPTER XIII OF THE CITY OF ALEXANDRIA'S ENVIRONMENTAL MANAGEMENT ORDINANCE, THE FOLLOWING POINTS HAVE BEEN IDENTIFIED ON THE ABOVE OUTFALL MAPS FOR THE EXISTING AND PROPOSED CONDITIONS.

- POINT OF CONFLUENCE: THE FIRST POINT WITHIN THE PUBLIC STORM SEWER SYSTEM WHERE THE ENTIRETY OF THE STORMWATER RUNOFF LEAVING THE SITE CONVERGES.
- POINT OF OUTFALL: A POINT WHERE THE RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER THAT HAS A DRAINAGE AREA THAT IS AT LEAST 90 PERCENT OF THE SIZE OF THE DRAINAGE AREA DIRECTED TO THE POINT OF CONFLUENCE.
- 3. <u>LIMITS OF ANALYSIS</u>: 150' BEYOND POINT OF OUTFALL.

DURING A ZOOM MEETING ON 02/05/2021, WITH CITY REVIEWER, ALEX BOULDEN, IT WAS DETERMINED THAT AN OUTFALL ANALYSIS IS ONLY REQUIRED FOR THE ON-SITE DRAINAGE AREA THAT DRAINS TO NORTH PATRICK STREET ("SITE"). AN OUTFALL ANALYSIS IS NOT REQUIRED FOR THE ON-SITE DRAINAGE AREA THAT DRAINS TO NORTH ALFRED STREET. FURTHERMORE, SINCE THE STORM SEWER SYSTEM IS COMBINED WITH SANITARY SEWAGE, THIS FIRM WAS INSTRUCTED BY MR. BOULDEN TO IGNORE THE SANITARY FLOWS AND ONLY ANALYZE THE STORM SEWER FLOWS.

IN THE EXISTING CONDITIONS, ALL THE RUNOFF FROM THE "SITE" DRAINS INTO THE 15' ALLEY, DRAINS INTO THE GUTTER PAN OF NORTH PATRICK STREET AND OUTFALLS INTO CURB INLET "B" WHICH IS CONSIDERED THE POINT OF CONFLUENCE. THE "SITE" AREA AND THE REMAINING AREA THAT DRAINS TO CURB INLET "B" EQUALS 2.06 ACRES. THE RUNOFF THEN FLOWS THROUGH STRUCTURE "C" AND ENTERS STRUCTURE "E" WHERE AN ADDITIONAL 0.21 ACRES OF AREA JOINS FROM CURB INLET "D". THE RUNOFF THEN REACHES STRUCTURE "G" WHICH IS CONSIDERED THE POINT OF OUTFALL. THE STORMWATER THEN REACHES STRUCTURE "M" WHICH ALSO HAS 0.51 ACRES OF AREA DRAINING INTO IT FROM CURB INLETS "H" AND "I". ALL THE RUNOFF FROM "M" REACHES STRUCTURE "O" WHICH IS 173' FROM THE POINT OF OUTFALL, MAKING IT THE LIMIT OF ANALYSIS.

IN THE PROPOSED CONDITIONS, THE MAJORITY OF THE RUNOFF FROM THE "SITE" (0.07 ACRES) GETS COLLECTED INTO AN 8" PIPE THAT CONNECTS TO THE EXISTING SANITARY STRUCTURE "F" AND OUTFALLS INTO STRUCTURE "G". THE REMAINING RUNOFF FOLLOWS THE SAME PATH AS IN THE EXISTING CONDITIONS, ENTERING STRUCTURE "B" AND PASSING THROUGH STRUCTURES "C" AND "E". THE FIRST POINT WHERE ALL THE RUNOFF FROM THE "SITE" CONVERGES (POINT OF CONFLUENCE) IS STRUCTURE "G". THIS IS ALSO THE POINT OF OUTFALL BECAUSE THE DRAINAGE AREA AT STRUCTURE "G" IS 2.21 ACRES, MUCH LARGER THAN 90% OF THE "SITE" AREA OF 0.07 ACRES. FROM STRUCTURE "G", THE RUNOFF FOLLOWS THE SAME PATH AS IN THE EXISTING CONDITIONS AND ENDS AT STRUCTURE "O", 173' FROM STRUCTURE "G".

CALCULATIONS TO DETERMINE THE COMBINED SEWER'S ADEQUACY WILL BE SHOWN IN FUTURE SUBMISSIONS.

OUTFALL ANALYSIS NARRATIVE

DUE TO THE SIZE OF THE DRAINAGE SHED AND SIMPLICITY OF CALCULATIONS, THE RATIONAL METHOD WILL BE USED TO DETERMINE THE FLOWS TO BE USED IN THE PIPE ANALYSIS. MANNING'S FORMULA WILL BE USED TO DETERMINE THE CAPACITY OF EACH PIPE RUN ANALYZED.

RATIONAL METHOD: Q = C * I * A, WHERE

C = RUNOFF COEFFICIENT (0.90 FOR PAVEMENT, 0.30 FOR LAWNS WITH SLOPES BETWEEN 2.0% AND 5.0% AND 0.35 FOR LAWNS WITH SLOPES GREATER THEN 5.0%)

I = RAINFALL INTENSITY, IN/HR

A = TRIBUTARY AREA, ACRES Q = FLOW, CUBIC FEET PER SECOND (CFS)

MANNING'S FORMULA:

 $Q = 1.49/n * r^{2/3} * S^{1/2} * A, WHERE$

n = COEFFICIENT OF ROUGHNESS r = HYDRAULIC RADIUS (CROSS-SECTIONAL AREA OF FLOW / WETTED PERIMETER), FT

S = SLOPE OF ENERGY GRADIENT, FT/FT

A = TRIBUTARY AREA, SQUARE FEET

RUNOFF FLOWS WILL BE CALCULATED AT SIX (6) LOCATIONS FOR THE EXISTING CONDITIONS AND SEVEN (7) LOCATIONS OF THE PROPOSED CONDITIONS. THIS WILL ACHIEVE AN ANALYSIS OF THE COMBINED SEWER SYSTEM IN ACCORDANCE WITH CITY REQUIREMENTS.

- STRUCTURE "B", A CURB INLET AT THE CORNER OF CAMERON STREET AND N. PATRICK STREET.
- STRUCTURE "C", A STORM SEWER MANHOLE AT THE CORNER OF CAMERON STREET AND N. PATRICK STREET. 3. STRUCTURE "E", A STORM SEWER MANHOLE AT THE CORNER OF CAMERON STREET AND N. PATRICK STREET.
- 4. STRUCTURE "F", A SANITARY SEWER MANHOLE IN THE 15' ALLEY BETWEEN THE PROPERTIES LOCATED AT 912 CAMERON STREET AND 115 PATRICK STREET (THIS STRUCTURE WILL ONLY BE ANALYZED FOR THE PROPOSED CONDITIONS BECAUSE IN THE EXISTING CONDITIONS, NO STORMWATER FLOWS THROUGH THIS STRUCTURE).
- STRUCTURE "G", A COMBINED SEWER MANHOLE IN N. PATRICK STREET TO THE WEST OF THE 15' ALLEY.
- STRUCTURE "M", A COMBINED SEWER MANHOLE IN N. PATRICK STREET TO THE WEST OF THE PROPERTY LOCATED AT 923 KING STREET. 7. STRUCTURE "O", A COMBINED SEWER MANHOLE IN THE SIDEWALK TO THE EAST OF AN ALLEY BETWEEN THE PROPERTIES LOCATED AT 108 N. PATRICK STREET AND 110 N. PATRICK STREET.

THE TRIBUTARY AREAS ARE SHOWN ON THIS SHEET. RUNOFF COEFFICIENTS, TIME OF CONCENTRATIONS, INTENSITIES, AND FLOWS FOR THE LOCATIONS WILL BE INCLUDED IN FUTURE SUBMISSIONS. FURTHERMORE, THE CAPACITY OF EACH PIPE RUN WILL BE SHOWN IN TABULAR FORM IN FUTURE SUBMISSIONS, USING AS-BUILT INFORMATION OBTAINED BY CITY OF ALEXANDRIA GIS DATA. FINALLY, HYDRAULIC GRADE LINE COMPUTATIONS WILL ALSO BE INCLUDED IN FUTURE SUBMISSIONS.

	<u>LEGEND</u>				
42	EXISTING CONTOUR				
	EXISTING SANITARY AND COMBINED SEWER PIPE				
	EXISTING STORMWATER PIPE				
	DRAINAGE DIVIDE				
	PROPOSED LIMITS OF DISTURBANCE				
0	EXISTING STORMWATER MANHOLE				
<u>(S)</u>	EXISTING SANITARY MANHOLE				
©	EXISTING COMBINED SEWER MANHOLE				
A	CURB INLET STRUCTURE LABEL				
(B)	MANHOLE STRUCTURE LABEL				

DIRECTOR	DATE
DEPARTMENT OF TRANSPOR SITE PLAN NO.	RTATION & ENVIRONMENTAL SERVICES
DIRECTOR	DATE
CHAIRMAN, PLANNING COMMISSION	DATE
DATE RECORDED	
INSTRUMENT NO. DEE	ED BOOK NO. PAGE NO.

APPROVED SPECIAL USE PERMIT NO. DEPARTMENT OF PLANNING & ZONING

(NS)

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2011 BMP Standards and Specification		L.	f Reduction Metho	od Re-Development pecifications	Compliance Spr	eadsheet - Ve	ersion 3.0				
Project Name:			. Alfred Street			CLEAR	ALL	data input cells			
Date:			/16/2021 elopment Project?	No				calculation cells			
Site Information								final results			
Post-Development Projec	t (Treatme	ent Volume	and Loads)								
	`			d Area <i>(acres)</i> $ ightarrow$	0.09			Check:	ກະເຄດ ກະເກ ໂດເວີດຕິດຕິດ ຫນັ້ນ ນັ້ນ ນັ້ນ		
			Maximum ı	reduction required:	10%		BMP Design Spe	cifications List: Linear project?	2013 D No	raft Stds & Specs	
			crease in impervio	ous cover (acres) is:	0	La	nd cover areas ent Total disturbed	ered correctly?	√		
	, , , , , , , , , , , , , , , , , , ,	Post-Developme	nt TP Load Reduct	tion for Site (lb/yr):	0.03		rotar aisturbea	area enterea :	√		
Pre-ReDevelopment Land Cover (acr	es) A Soils	B Soils	C Soils	D Soils	Totals	1					
orest/Open Space (acres) undisturbed	A 30ll3	D 30113	C 30113	D 30113	0.00						
lanaged Turf (acres) disturbed, graded for ards or other turf to be mowed/managed				0.01	0.01						
pervious Cover (acres)				0.12	0.12						
					0.13						
ost-Development Land Cover (acres	s) A Soils	B Soils	C Soils	D Soils	Totals	1					
rest/Open Space (acres) undisturbed,	A Julis	D 30lls	C 30lis	D 30llS	0.00	1					
anaged Turf (acres) disturbed, graded for rets or other turf to be mowed/managed				0.01	0.01						
npervious Cover (acres)				0.12	0.12						
Area Check	OK.	OK.	OK.	OK.	0.13						
an shants			Dunoff C. C.	to (D.)							
onstants nnual Rainfall (inches)	43		Runoff Coefficien	A Soils	B Soils	C Soils	D Soils				
orget Rainfall Event (inches) Ortal Phosphorus (TP) EMC (mg/L)	1.00 0.26		Forest/Open Space Managed Turf	0.02 0.15	0.03 0.20	0.04	0.05 0.25				
tal Nitrogen (TN) EMC (mg/L) rget TP Load (lb/acre/yr)	1.86 0.41 0.90		Impervious Cover	0.95	0.95	0.95	0.95				
(unitless correction factor)		LODMENT				LAND COVE	D OLIMA BY D	OCT DEVEL	ODME	NT	
LAND COVER SUMMARY F		LOPMENT				AND COVE	R SUMMARY P		OPME		
Land Cover Summers Pre-ReDevelopment	nary-Pre Listed	Adjusted ¹		Land Cover Summo Post ReDev. & Ne		1	Land Cover Sur Post-ReDeve			Land Cover Summer Post-Development New York	
Forest/Open Space Cover (acres)	0.00	0.00		Forest/Open Space Cover (acres)	0.00		Forest/Open Space	0.00			
Weighted Rv(forest) % Forest	0.00 0%	0.00 0%		Weighted Rv(forest)	0.00 0%		Weighted Rv(forest)	0.00			
Managed Turf Cover (acres)	0.01	0.01		% Forest Managed Turf Cover	0.01	1	% Forest Managed Turf Cover	0.01			
Weighted Rv(turf)	0.25	0.25		(acres) Weighted Rv (turf)	0.25		(acres) Weighted Rv (turf)	0.25			
% Managed Turf	8%	8%		% Managed Turf	8%		% Managed Turf	8%			
Impervious Cover (acres)	0.12	0.12		Impervious Cover	0.12		ReDev. Impervious	0.12		New Impervious Cover	0.00
Rv(impervious)	0.95	0.95		(acres) Rv(impervious)	0.95	-	Cover (acres) Rv(impervious)	0.95		(acres) Rv(impervious)	
% Impervious	92%	92%		% Impervious	92%		% Impervious	92%		riv(iiiipeivious)	
Total Site Area (acres)	0.13	0.13		Final Site Area (acres)	0.13		Total ReDev. Site Area	0.13			
Site Rv	0.89	0.89		Final Post Dev Site Rv	0.89		ReDev Site Rv	0.89			
Treatment Volume an	d Nutrient Lo	oad I				Treat	ment Volume an	d Nutrient Lo	ad		
Pre-ReDevelopment Treatment Volume (acre-ft)	0.0096	0.0096		Final Post- Development Treatment Volume (acre-ft)	0.0096	1	Post-ReDevelopment Treatment Volume (acre-ft)	0.0096		Post-Development Treatment Volume (acre-ft)	
Pre-ReDevelopment Treatment Volume (cubic feet)	418	418		Final Post- Development Treatment Volume (cubic feet)	418		Post-ReDevelopment Treatment Volume (cubic feet)	418		Post-Development Treatment Volume (cubic feet)	
Pre-ReDevelopment TP Load (lb/yr)	0.26	0.26		Final Post- Development TP Load (lb/yr)	0.26		Post-ReDevelopment Load (TP) (lb/yr)*	0.26		Post-Development TP Load (lb/yr)	
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	2.04	2.04		Final Post-Development TP Load per acre (lb/acre/yr)	2.04		Post-ReDevelopment TP Load per acre (lb/acre/yr)	2.04			
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area land proposed for new impervious co		0.05					Max. Reduction Required (Below Pre- ReDevelopment Load)	10%			
Adjusted Land Cover Summary: Tre ReDevelopment land cover minus pervious la nanaged turf) acreage proposed for new imperv		en space or					TP Load Reduction Required for Redeveloped Area (lb/yr)	0.03		TP Load Reduction Required for New Impervious Area (lb/yr)	0
djusted total acreage is consistent with Post-Ref							(10/ 91)				
olumn I shows load reduction requriement for n evelopment load limit, 0.41 lbs/acre/year).	ew impervious cove	er (basea on new									
			Post-Dev	velopment Requ	uirement for	Site Area					
			TP Load	Reduction Required	l (lb/yr)	0.03					
			Nit	trogen Loads (Info	rmational Pur						
	Pre-ReDevelopm	ent TN Load (lb/yr)	1.88			(Post-ReDe	evelopment TN Load evelopment & New	1.88			
						Impe	rvious) (lb/yr)			<u></u>	

DEO Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Ver	sion 3.0

BMP Design Specifications List: 2013 Draft Stds & Specs

ummary

Γitle: 114 N. Alfred Street

Total Rainfall (in):	43
Total Disturbed Acreage:	0.09

nd Cover Summary

Development Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.01	0.01	8
mpervious Cover (acres)	0.00	0.00	0.00	0.12	0.12	92
					0.13	100

eDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.00	0.00	0.01	0.01	8
Impervious Cover (acres)	0.00	0.00	0.00	0.12	0.12	92
					0.13	100

and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post- ReDevelopment	Post- Development (New Impervious)	Adjusted Pre- ReDevelopment
Site Rv	0.89	0.89		0.89
Treatment Volume (ft³)	418	418		418
TP Load (lb/yr)	0.26	0.26		0.26

Pre- ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
2.04	2.04	2.04

Load Reduction Required (lb/yr)

0.03

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre- ReDevelopment
TN Load (lb/yr)	1.88	1.88

Site	Results (Water Qualit	ty Complian	ice)		
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	ОК.
IMPERVIOUS COVER (ac)	0.07	0.04	0.00	0.00	0.00	ОК.
IMPERVIOUS COVER TREATED (ac)	0.07	0.00	0.00	0.00	0.00	ОК.
MANAGED TURF AREA (ac)	0.00	0.01	0.00	0.00	0.00	ОК.
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	ОК.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	
Site Treatment Volume (ft ³)	418					
Sunoff 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)	33	0	0	0	0	33
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.16	0.10	0.00	0.00	0.00	0.26
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.05	0.00	0.00	0.00	0.00	0.05
TP LOAD REMAINING (lb/yr)	0.11	0.10	0.00	0.00	0.00	0.21
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.24	0.00	0.00	0.00	0.00	0.24
Total Phosphorus						
FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	0.26					
TP LOAD REDUCTION REQUIRED (lb/yr)	0.03					
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.05					
TP LOAD REMAINING (lb/yr):	0.21					
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00	**				
** TARGET TP REDUCTION	N EXCEEDED B	Y 0.02 LB/YEAR **				
Total Nitrogen (For Information Purposes)						
POST-DEVELOPMENT LOAD (lb/yr)	1.88					

ge Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres)	0.00	0.01	0.00	0.00	0.00	0.01
Impervious Cover (acres)	0.07	0.04	0.00	0.00	0.00	0.12
Total Area (acres)	0.07	0.05	0.00	0.00	0.00	0.13

ge Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Reduced (lb/yr)	0.05	0.00	0.00	0.00	0.00	0.05
TN Load Reduced (lb/yr)	0.24	0.00	0.00	0.00	0.00	0.24

Compliance Summary

Maximum % Reduction Required Below Pre-ReDevelopment Load

Total Runoff Volume Reduction (ft ³)	33
Total TP Load Reduction Achieved (lb/yr)	0.05
Total TN Load Reduction Achieved (lb/yr)	0.24
Remaining Post Development TP Load (lb/yr)	0.21
Remaining TP Load Reduction (lb/yr)	0.00

** TARGET TP REDUCTION EXCEEDED BY 0.02 LB/YEAR **

APPROVED

SPECIAL USE PERMIT NO. . DEPARTMENT OF PLANNING & ZONING

DIRECTOR

DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO. __

DIRECTOR

DATE

CHAIRMAN, PLANNING COMMISSION

DATE RECORDED.

INSTRUMENT NO.

DEED BOOK NO. PAGE NO.

DATE

SHEET 12 OF 35

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VRRM SPREADSHEE

SHEET 13 OF 35

	Runoff Volume and Curve Number Calculations						
	Enter design	Enter design storm rainfall depths (in):					
	1-year storm	1-year storm 2-year storm 10-year storm					
	2.70	3.20	5.20				
	Use NOAA Atlas 14	Use NOAA Atlas 14 (http://hdsc.nws.noaa.gov/hdsc/pfds/)					
*Notes (see below):							
[1] The curve numbers and runoff volumes computed in th requirements. See VRRM User's Guide and Documentation		are limited in their a	pplicability for deter	mining and demon	strating complian	nce with water qu	antity
[2] Runoff Volume (RV) for pre- and post-development drai inches and shown in the spreadsheet as RV(watershed-inchinch) must be multiplied by the drainage area.							
[3] Adjusted CNs are based on runoff reduction volumes as	calculated in D.A. tabs. An alternative	CN adjustment calc	ulation for Vegetate	d Roofs is included	in BMP specifica	ation No. 5.	

EXISTING CONDITIONS:

	Drainage	Area Curve	Numbers and	l Runoff Depth	ıs*		
Curve numbers (CN, Cl	Nadj) and runo	ff depths (RV _E	_{Developed}) are con	mputed with and	d without reduction	on practices.	
Drainage Area A		A Soils	B Soils	C Soils	D Soils	Total Area (acres):	0.07
Forest/Open Space undisturbed, protected	0.00	0.00	0.00	0.00	Runoff Reduction	0.07	
						Volume (ft ³):	0
		30	55	70	77	volume (it):	U
Managed Turf disturbed, graded for yards or other turf Area (acres) to be mowed/managed CN		0.00 39	0.00 61	0.00 74	0.00 80		
to be mowed/managed			0.00	+	0.07		
Impervious Cover	Area (acres) CN	0.00 98	98	0.00 98	98		
	CIV	38	36	38	CN _(D.A. A)		
					98		
		1-year storm	2-year storm	10-year storm			
RV _{Developed} (watershed-inch) with no Ru	2.47	2.97	4.96				
RV _{Developed} (watershed-inch) with Ru	2.47	2.97	4.96				
	Adjusted CN*	98	98	98			
	ee Notes above						
Drainage Area B		A Soils	B Soils	C Soils	D Soils	Total Area (acres):	0.06
Forest/Open Space undisturbed, protected	Area (acres)	0.00	0.00	0.00	0.00	Runoff Reduction	0.00
forest/open space or reforested land	CN	30	55	70	77	Volume (ft ³):	0
Managed Turf disturbed, graded for yards or other turf	Area (acres)	0.00	0.00	0.00	0.01	voianie (ie).	
to be mowed/managed	CN	39	61	74	80		
	Area (acres)	0.00	0.00	0.00	0.05		
Impervious Cover	CN	98	98	98	98		
					CN _(D.A. B)		
					95		
		1-year storm	2-year storm	10-year storm			
RV _{Developed} (watershed-inch) with no Ru	noff Reduction*	2.16	2.64	4.62			
RV _{Developed} (watershed-inch) with Ru		2.16	2.64	4.62			
	Adjusted CN*	95	95	95			
*5	ee Notes above						

POST-DEVELOPMENT CONDITIONS:

RUNOFF REDUCED BY STORMWATER PLANTER BOX

Curve num	bers (CN. CI	_			Runoff Depths	d without reduction	on practices.	
	()	,,		Developed 7				
Drainage Area A			A Soils	B Soils	C Soils	D Soils	Total Area (acres):	0.07
Forest/Open Space undisturbed, p	0.00	0.00	0.00	0.00	Runoff Reduction			
forest/open space or reforested land CN			30	55	70	77	Volume (ft ³):	33
Managed Turf disturbed, graded for y		Area (acres)	0.00	0.00	0.00	0.00		
turf to be mowed/managed			39	61	74	80		
Impervious Cover		Area (acres)	0.00	0.00	0.00	0.07		
impervious cover		CN	98	98	98	98		
						CN _(D.A. A)		
						98		
			1-year storm	2-year storm	10-year storm			
RV _{Developed} (watershed-incl	h) with no Ru	noff Reduction*	2.47	2.97	7.96			
RV _{Developed} (watershed-	<i>-inch)</i> with Ru	noff Reduction*	2.35	2.84	7.84			
3333,633		Adjusted CN*	97	97	97			
	*	See Notes above						
Drainage Area B			A Soils	B Soils	C Soils	D Soils	Total Area (acres):	0.05
Forest/Open Space undisturbed, p	orotected	Area (acres)	0.00	0.00	0.00	0.00	Runoff Reduction	
forest/open space or reforested		CN	30	55	70	77	Volume (ft ³):	0
Managed Turf disturbed, graded for y	ards or other	Area (acres)	0.00	0.00	0.00	0.01		
turf to be mowed/managed	b	CN	39	61	74	80		
Impervious Cover		Area (acres)	0.00	0.00	0.00	0.04		
Impervious cover		CN	98	98	98	98		
						CN _(D.A.B)		
						95		
			1-year storm	2-year storm	10-year storm			
RV _{Developed} (watershed-incl	h) with no Ru	noff Reduction*	2.16	2.64	7.60			
RV _{Developed} (watershed-			2.16	2.64	7.60			
Developed .		Adjusted CN*	95	95	95			
		Aujusteu Civ	33	93	93	l l		

Runoff Volume and CN Calculations

	1-year storm	2-year storm	10-year storm			
Target Rainfall Event (in)	2.70	3.20	8.20			
Drainage Areas	RV & CN	Drainage Area A	Drainage Area B	Drainage Area C	Drainage Area D	Drainage Area E
CN		98	95	0	0	0
RR (ft ³)		33	0	0	0	0
	RV wo RR (ws-in)	2.47	2.16	0.00	0.00	0.00
1-year return period	RV w RR (ws-in)	2.35	2.16	0.00	0.00	0.00
	CN adjusted	97	95	0	0	0
	RV wo RR (ws-in)	2.97	2.64	0.00	0.00	0.00
2-year return period	RV w RR (ws-in)	2.84	2.64	0.00	0.00	0.00
	CN adjusted	97	95	0	0	0
	RV wo RR (ws-in)	7.96	7.60	0.00	0.00	0.00
10-year return period	RV w RR (ws-in)	7.84	7.60	0.00	0.00	0.00
	CN adjusted	97	95	0	0	0

SPECIAL USE PERMIT NO. ___ DEPARTMENT OF PLANNING & ZONING

DIRECTOR

DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO.

DIRECTOR

DATE

CHAIRMAN, PLANNING COMMISSION

DATE

PAGE NO.

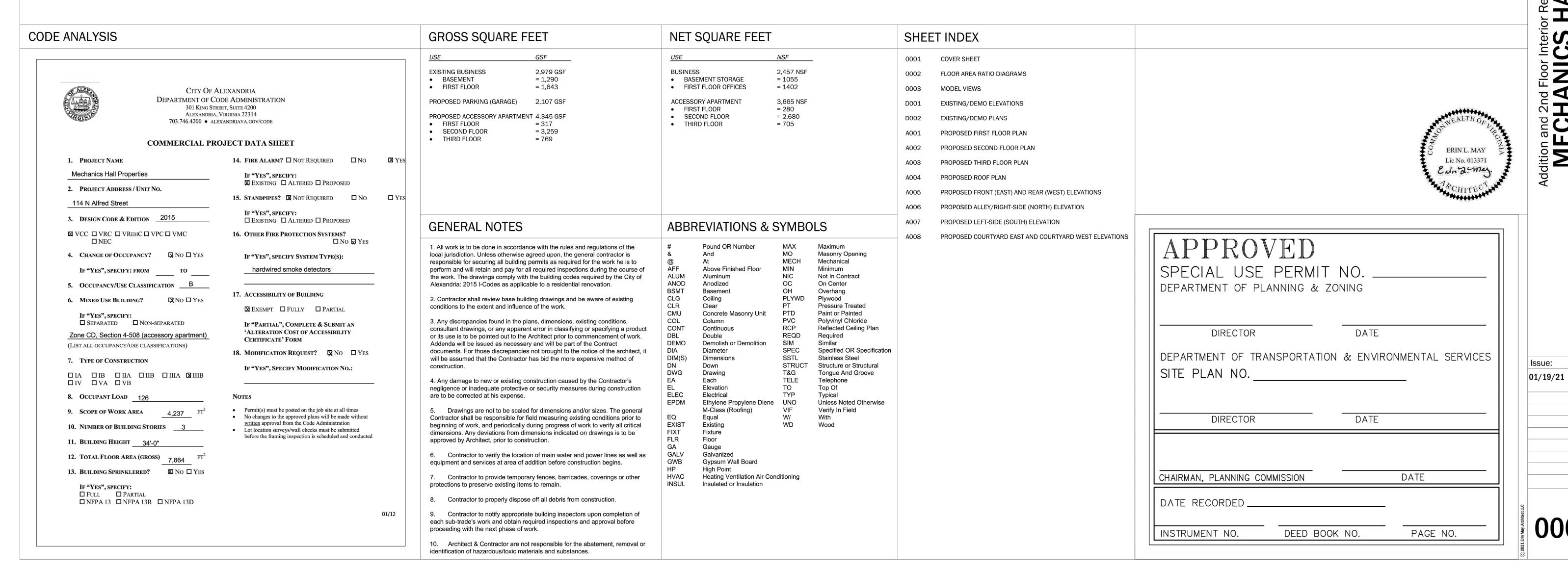
DATE RECORDED_

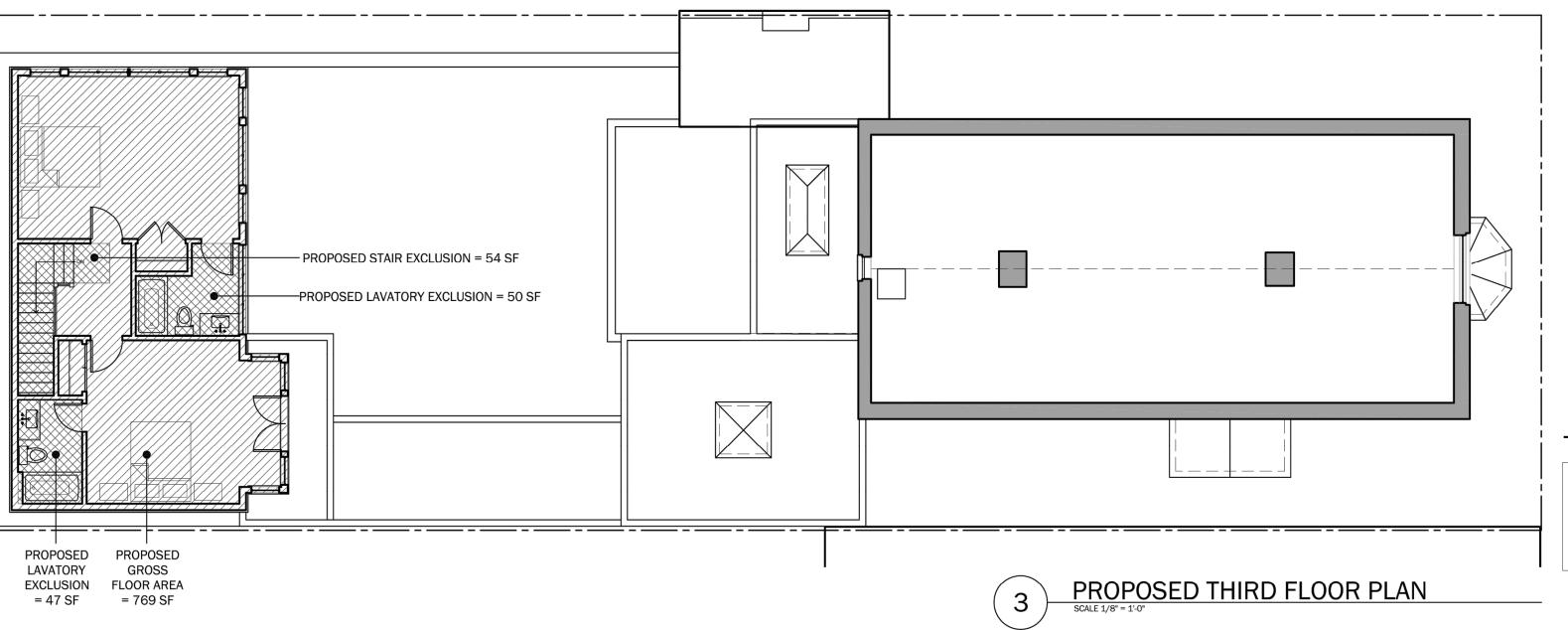
INSTRUMENT NO. DEED BOOK NO. SHEET 14 OF 35

JANUARY 19, 2021

MECHANICS HALL

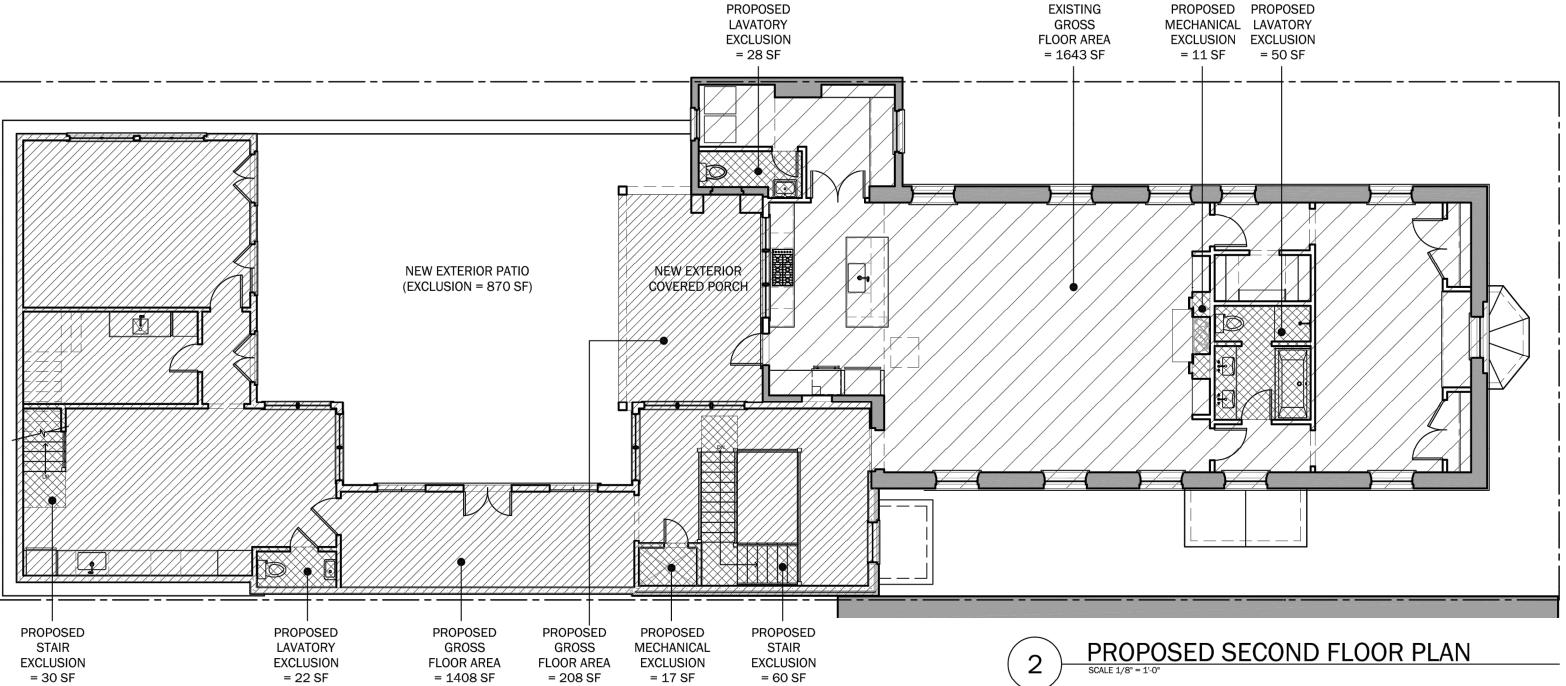
114 North Alfred Street Alexandria, VA 22314 Addition & 2nd Story Renovation







PROPOSED GROS	SS AREA	= 769 SF	
PROPOSED EXCL - STAIR - MECHANICAL - LAVATORY	USIONS = 54 SF = 0 SF = 97 SF	= 151 SF	



SECOND FLOOR AREA RATIO DIAGRAM

	EXISTING GROSS	AREA	= 1643 SF	
	EXISTING EXCLUS - STAIR - MECHANICAL - LAVATORY	IONS = 0 SF = 11 SF = 78 SF	= 89 SF	
*EXISTING	G EXCLUSIONS NOT	SHOWN - DE	ECK TO BE DEMOLISHED	
	PROPOSED GROS	S AREA	= 1616 SF	
	PROPOSED EXCLU - STAIR - MECHANICAL	SIONS = 90 SF = 17 SF	= 129 SF	

*PROPOSED EXCLUSIONS NOT SHOWN - PATIO AND COVERED PORCH

- LAVATORY = 22 SF

Department of Planning & Zoning Floor Area Ratio and Open Space Calculations A. Property Information A1. 114 N Alfred Street R-20 Street Address Zone **A2.** 5,612.00 = 8,418.00 Floor Area Ratio Allowed by Zone Total Lot Area Maximum Allowable Floor Area B. Existing Gross Floor Area **Existing Gross Area** Allowable Exclusions** B1. 5,332.00 1,290.00 Basement** 1,290.00 Basement Existing Gross Floor Area* Stairways** 87.00 1,689.00 First Floor B2. 2,135.00 Mechanical** 48.00 Second Floor 1,643.00 Allowable Floor Exclusions** 0.00 Attic less than 7'** 0.00 Third Floor B3. 3,197.00 Porches** 322.00 0.00 Existing Floor Area Minus Exclusions (subtract B2 from B1) Balcony/Deck** 346.00 Porches 322.00 **Comments for Existing Gross Floor Area** Balcony/Deck 346.00 42.00 Lavatory*** 42.00 0.00 Other** Lavatory*** 0.00 0.00 Other** Other** **B1.** <u>Total Gross</u> 5,332.00 B2. Total Exclusions 2,135.00 C. Proposed Gross Floor Area Proposed Gross Area Allowable Exclusions** C1. 6,059.00 0.00 Basement** 0.00 Basement Proposed Gross Floor Area* Stairways** 256.00 First Floor Second Floor 1,616.00 Mechanical** 45.00 Allowable Floor Exclusions** Attic less than 7'** 0.00 Third Floor 769.00 C3. 4,667.00 Porches** 24.00 0.00 Proposed Floor Area Minus Exclusions (subtract C2 from C1) Balcony/Deck** 870.00 24.00 Balcony/Deck 870.00 Lavatory*** 197.00 0.00 Other** Lavatory*** 0.00 0.00 Other Other** *Gross floor area is the sum of <u>all areas</u> <u>under roof of a lot,</u> measured from the face of exterior walls, including basements, C2. Total Exclusions 1,392.00 C1. Total Gross garages, sheds, gazebos, guest buildings and other accessory buildings. D. Total Floor Area E. Open Space (RA & RB Zones) ** Refer to the Zoning Ordinance (Section 2-145(B)) and consult with Zoning Staff for **D1**. 7,864.00 information regarding allowable exclusions. Total Floor Area (add B3 and C3) Existing Open Space Sections may also be required for some **D2**. 8,418.00 Total Floor Area Allowed Required Open Space ***Lavatories may be excluded up to a by Zone (A2) maximum of 50 square feet, per lavatory. The maximum total of excludable area for

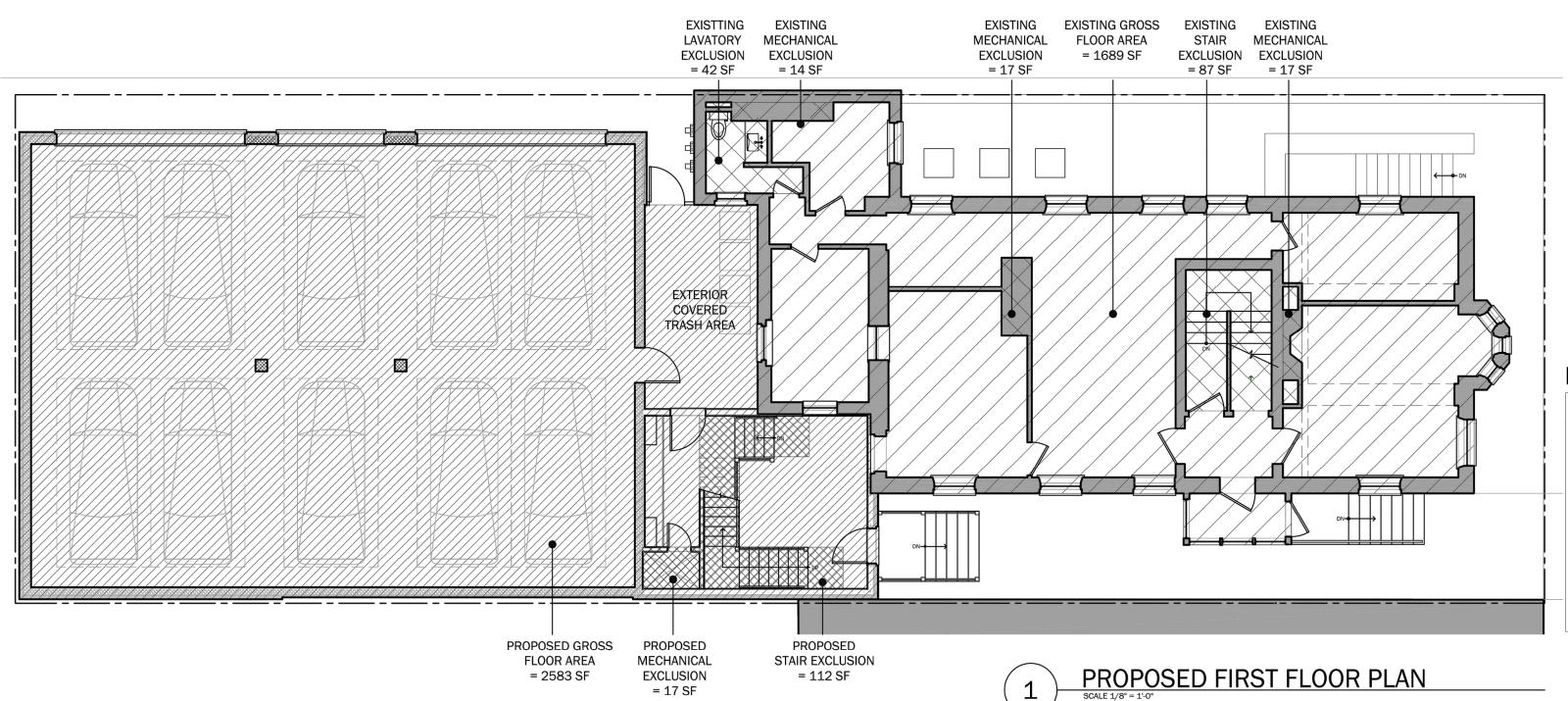
Proposed Open Space

The undersigned hereby certifies and attests that, to the best of his/her knowledge, the above computations are true and correct.

ERIN L. MAY Lic No. 013371 Exing may

lavatories shall be no greater than 10% of

gross floor area.



FIRST FLOOR AREA RATIO DIAGRAM

	EXISTING EXCLUS - STAIR	SIONS = 0 SF	= 89 SF	
	- MECHANICAL - LAVATORY			
*EXISTING	G EXCLUSIONS NO	T SHOWN - D	ECK TO BE DEMOLIS	HED
	PROPOSED GROS	SS AREA	= 1616 SF	
	PROPOSED EXCL	USIONS = 90 SF	= 129 SF	

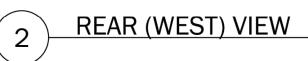
APPROV			
SPECIAL USE			
DEPARTMENT OF PLA	NINING & Z	UNING	
DIRECTOR		DATE	•
DEPARTMENT OF TRANSITE PLAN NO			
DIRECTOR		DATE	
CHAIRMAN, PLANNING COM	MISSION		DATE
DATE RECORDED			_

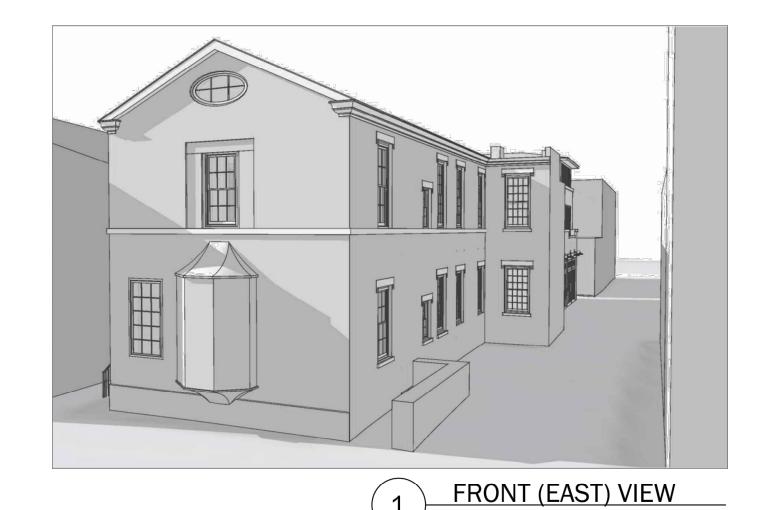
Issue: 01/19/21 0002

Erin L. May

nmavarch.com

703.836.6666

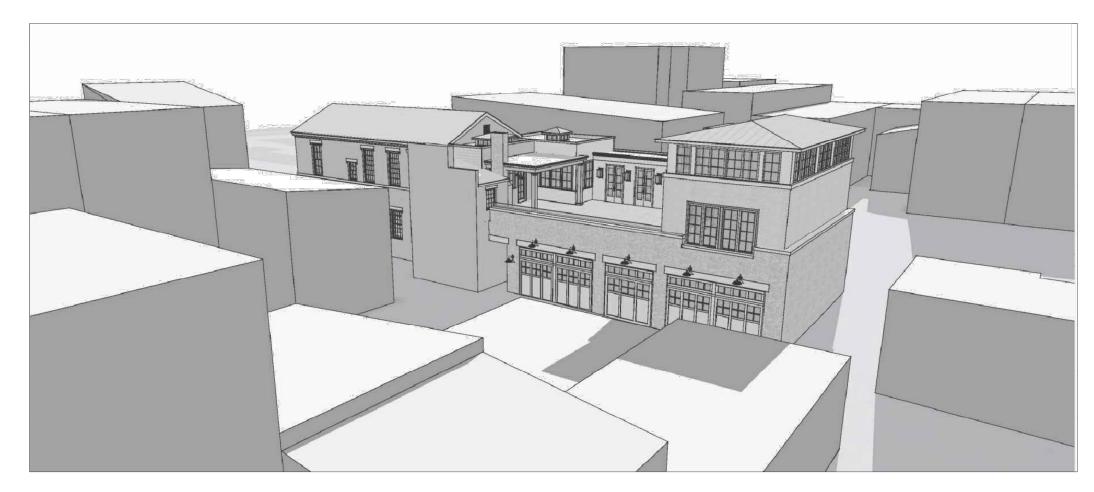




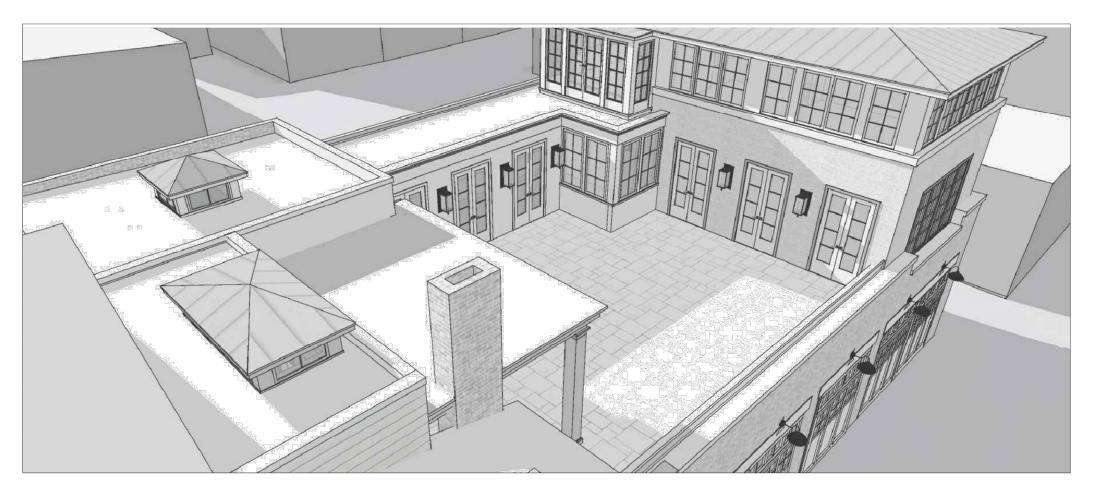












SIDE (NORTH) VIEWS

Addition and 2nd Floor Interior Renovation

MECHANICS HALL

114 North Alfred St., Alexandria, Virginia 22314

01/19/21

0003

William Cromley
Design / Development
426 N. Columbus St.
Alexandria, VA 22314

IECHANICS HALL

Alfred St., Alexandria, Virginia 22314

WALL LEGEND

EXISTING WALLS TO REMAIN

TO BE DEMOLISHED/REMOVED

ERIN L. MAY Lic No. 013371

APPROVED

SPECIAL USE PERMIT NO. ______

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICE

TOTAL PROPERTY OF TRANSPORTATION & ENVIRONMENTAL SERVICE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICE

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DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

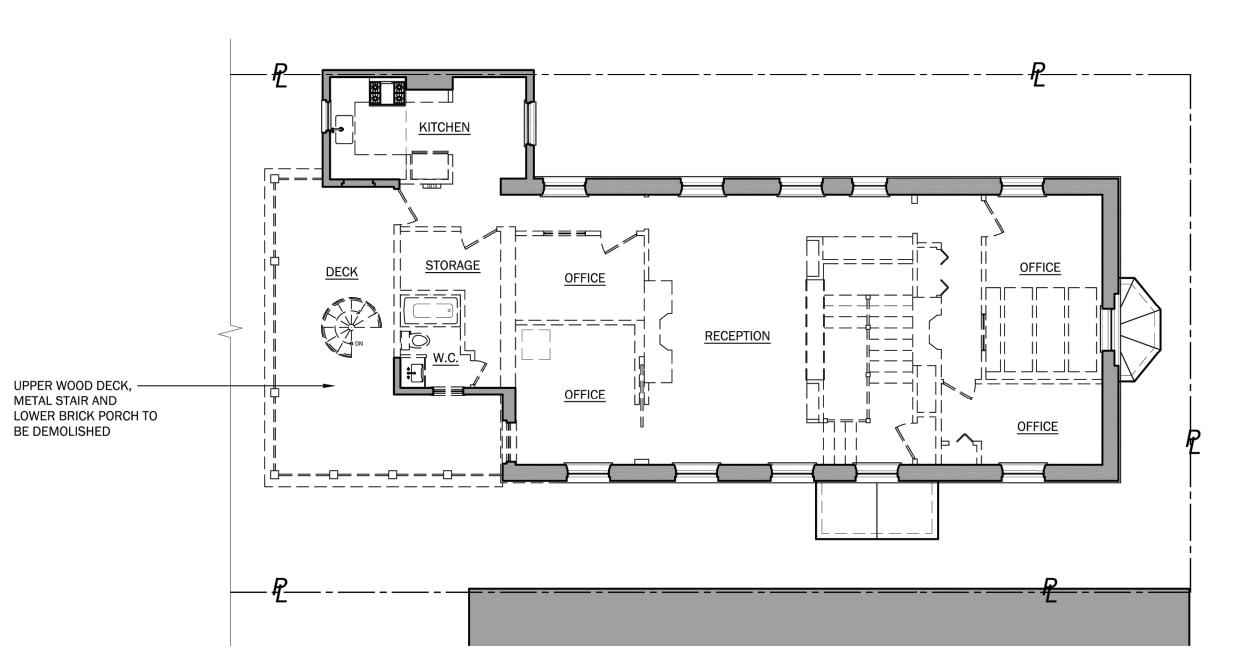
SITE PLAN NO. ______

DIRECTOR DATE

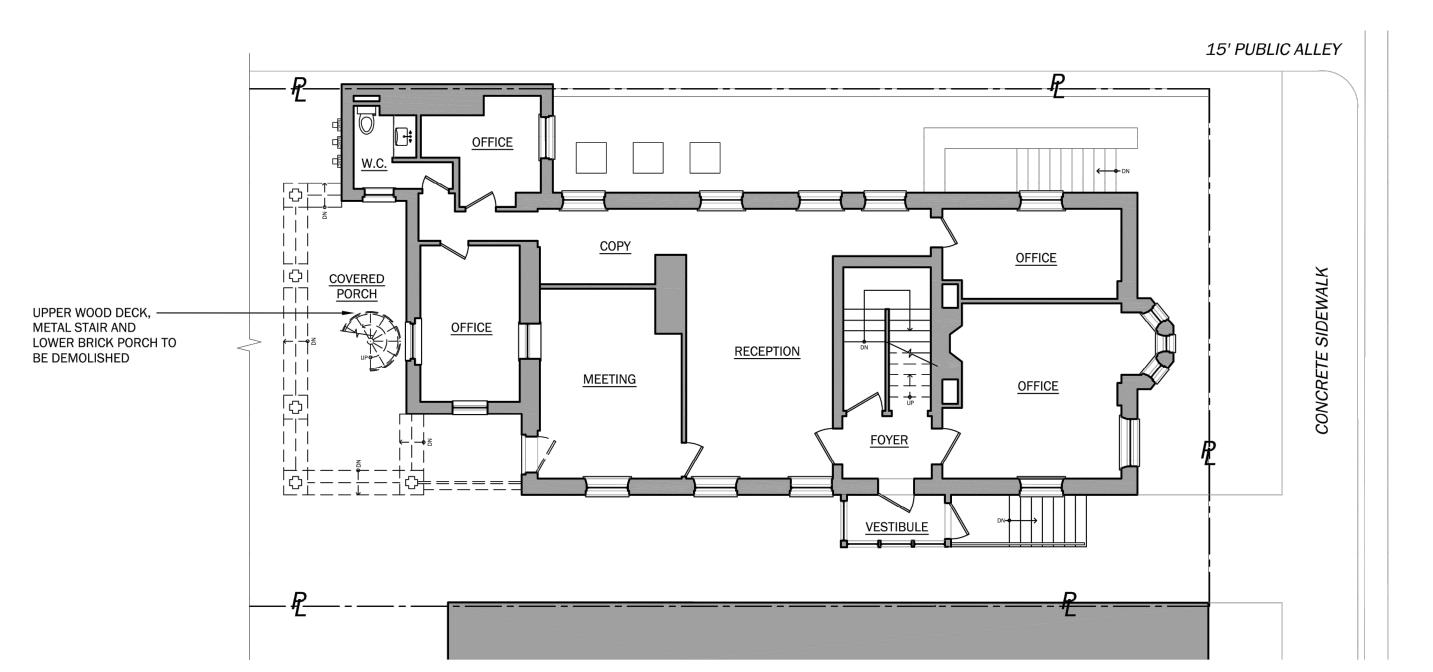
CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED ______

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

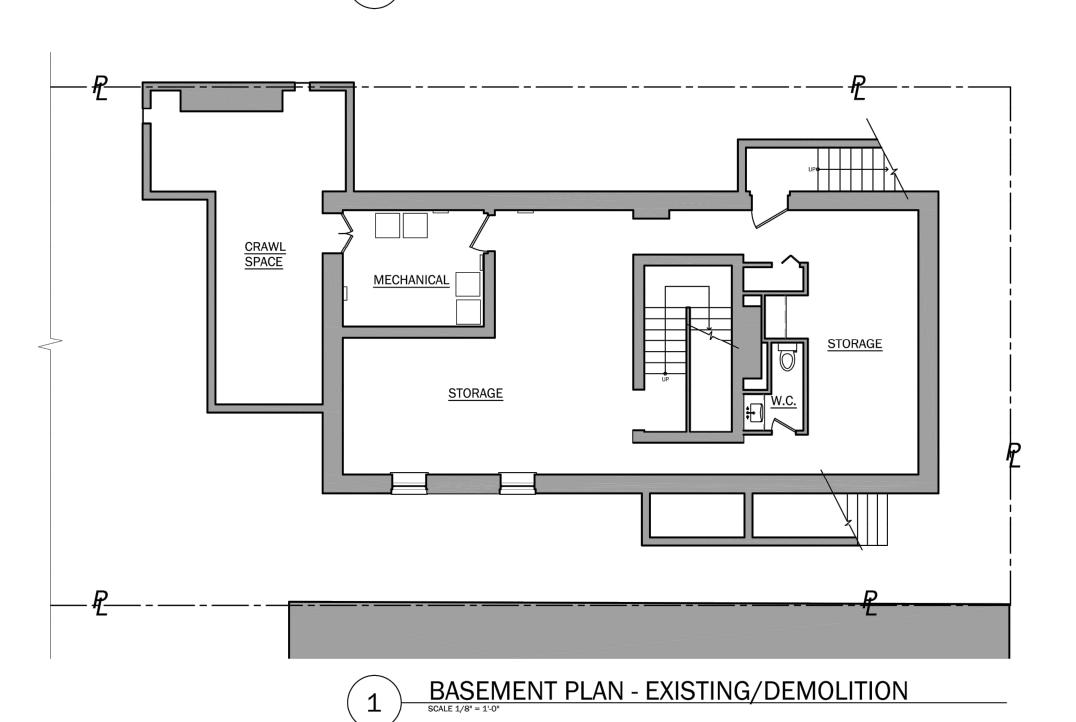


3 SECOND FLOOR PLAN - EXISTING/DEMOLITION
SCALE 1/8" = 1'-0"



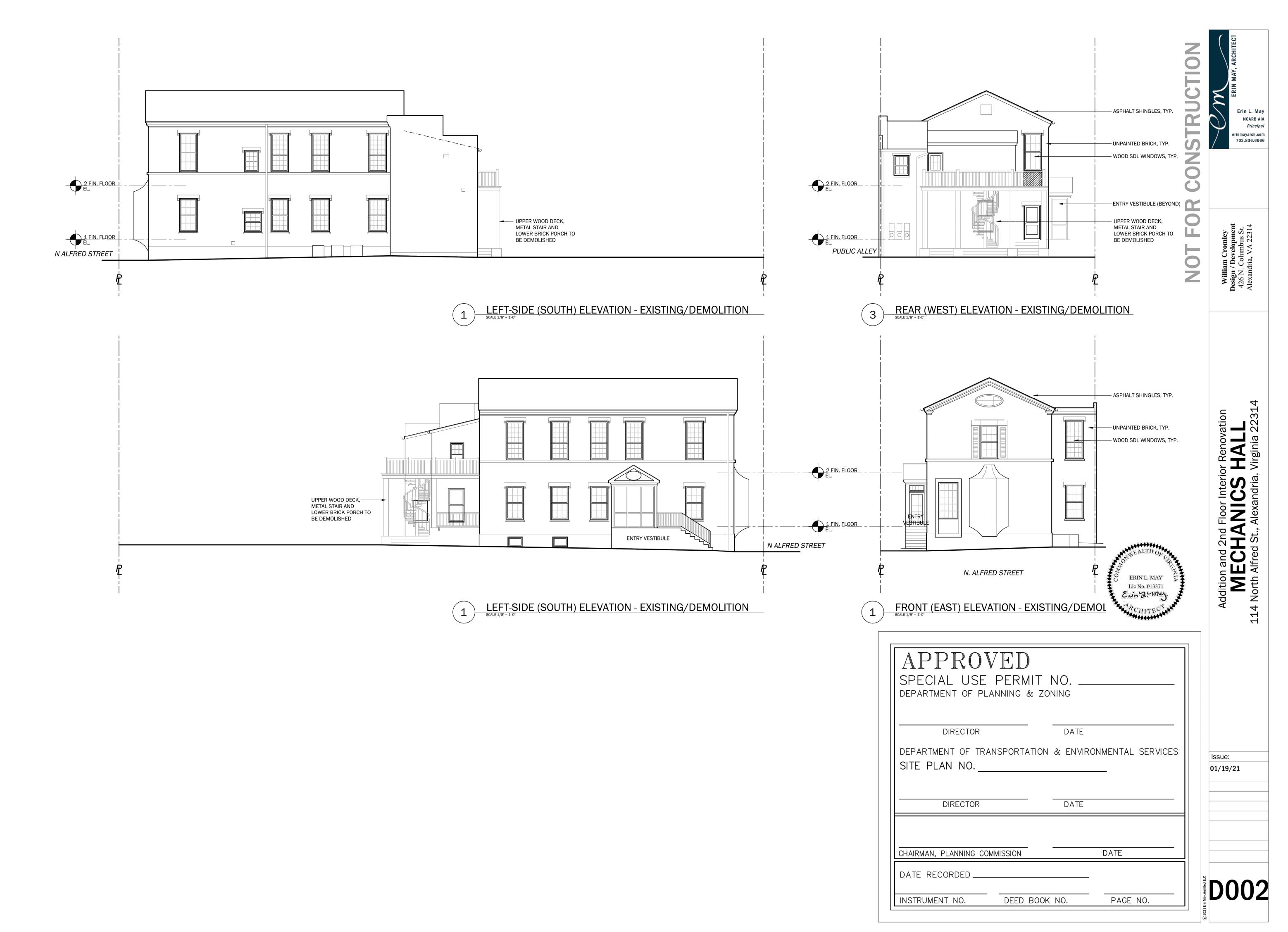
FIRST FLOOR PLAN - EXISTING/DEMOLITION

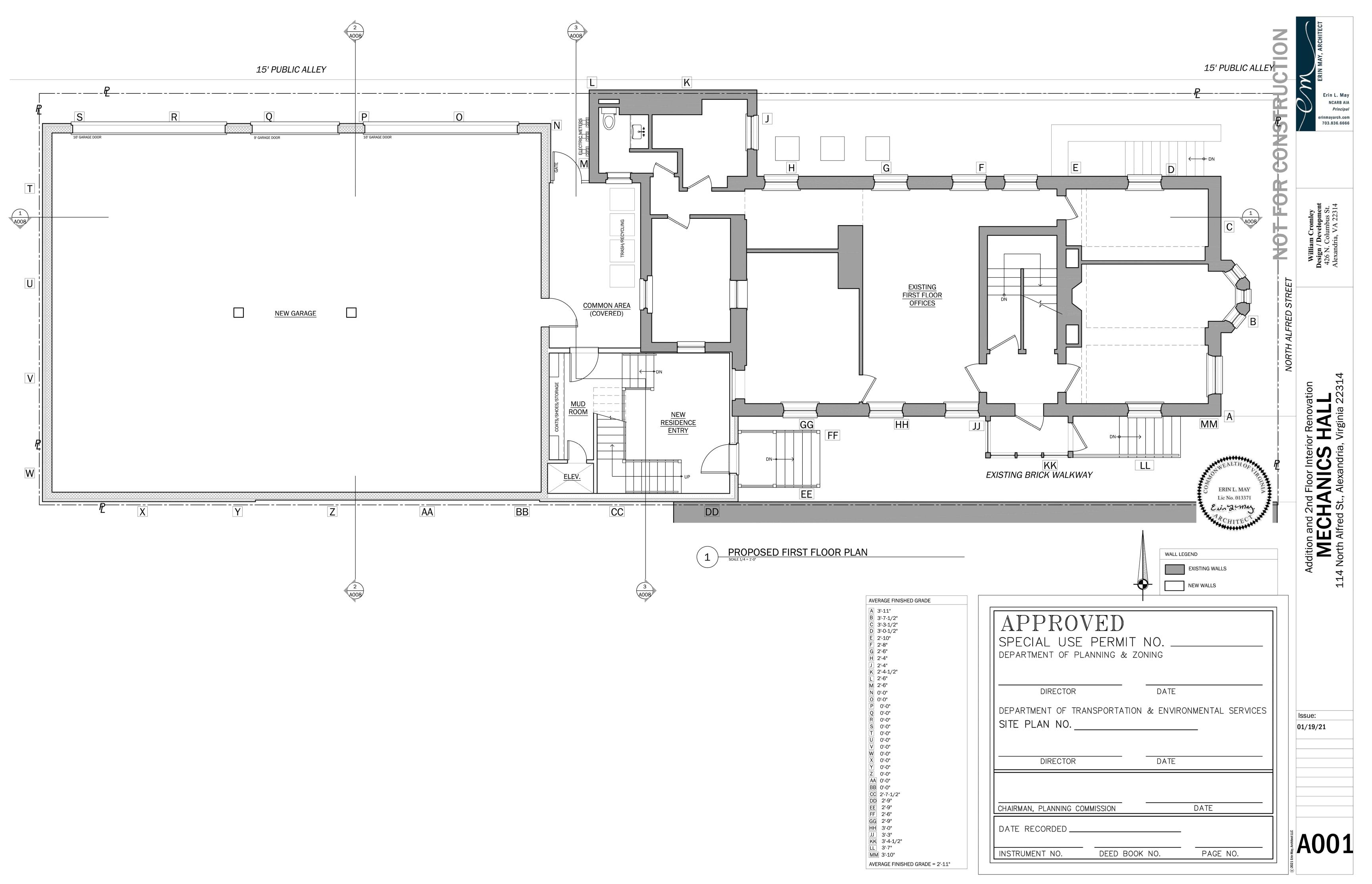
SCALE 1/8" = 1'-0"

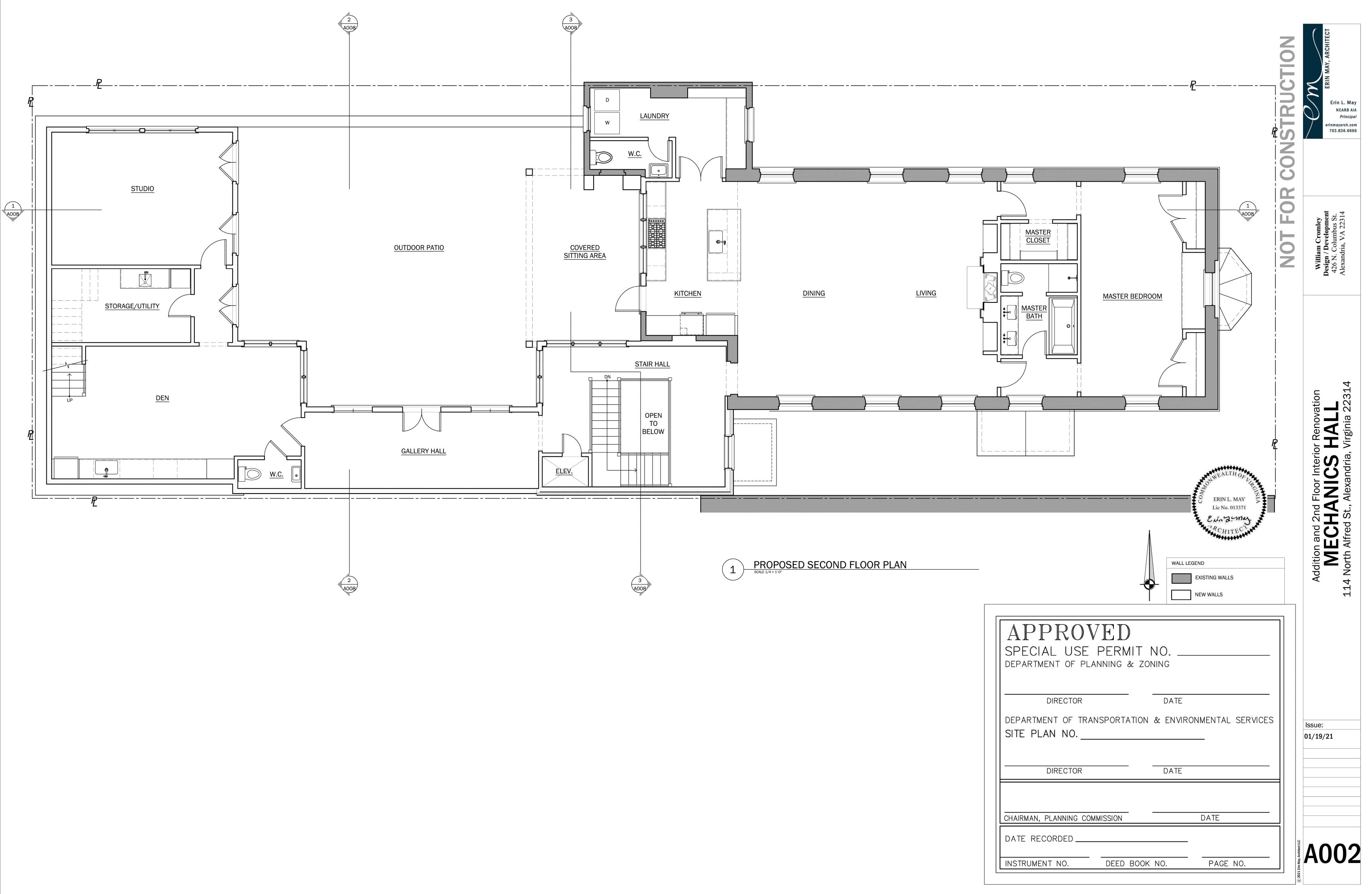


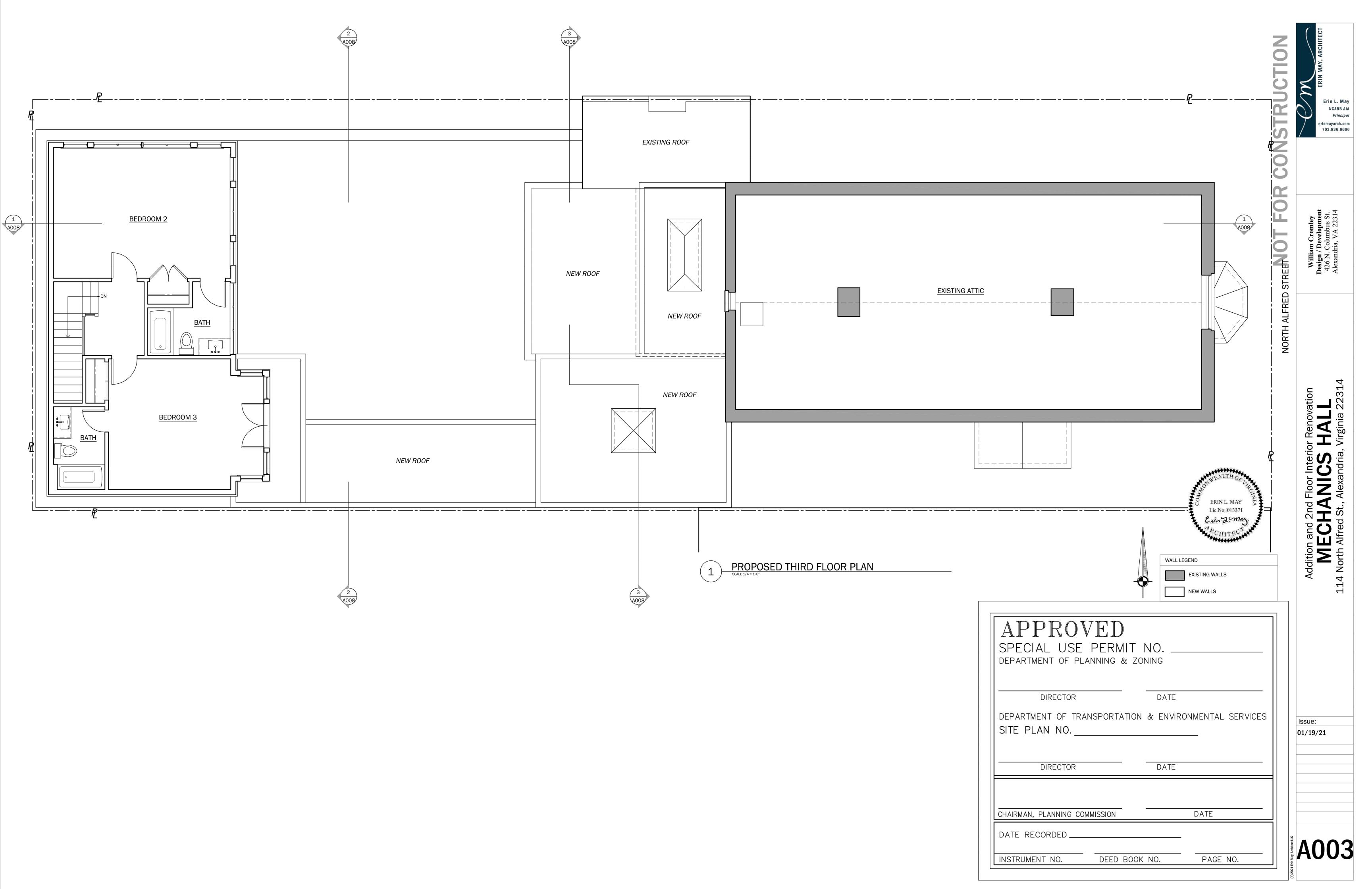
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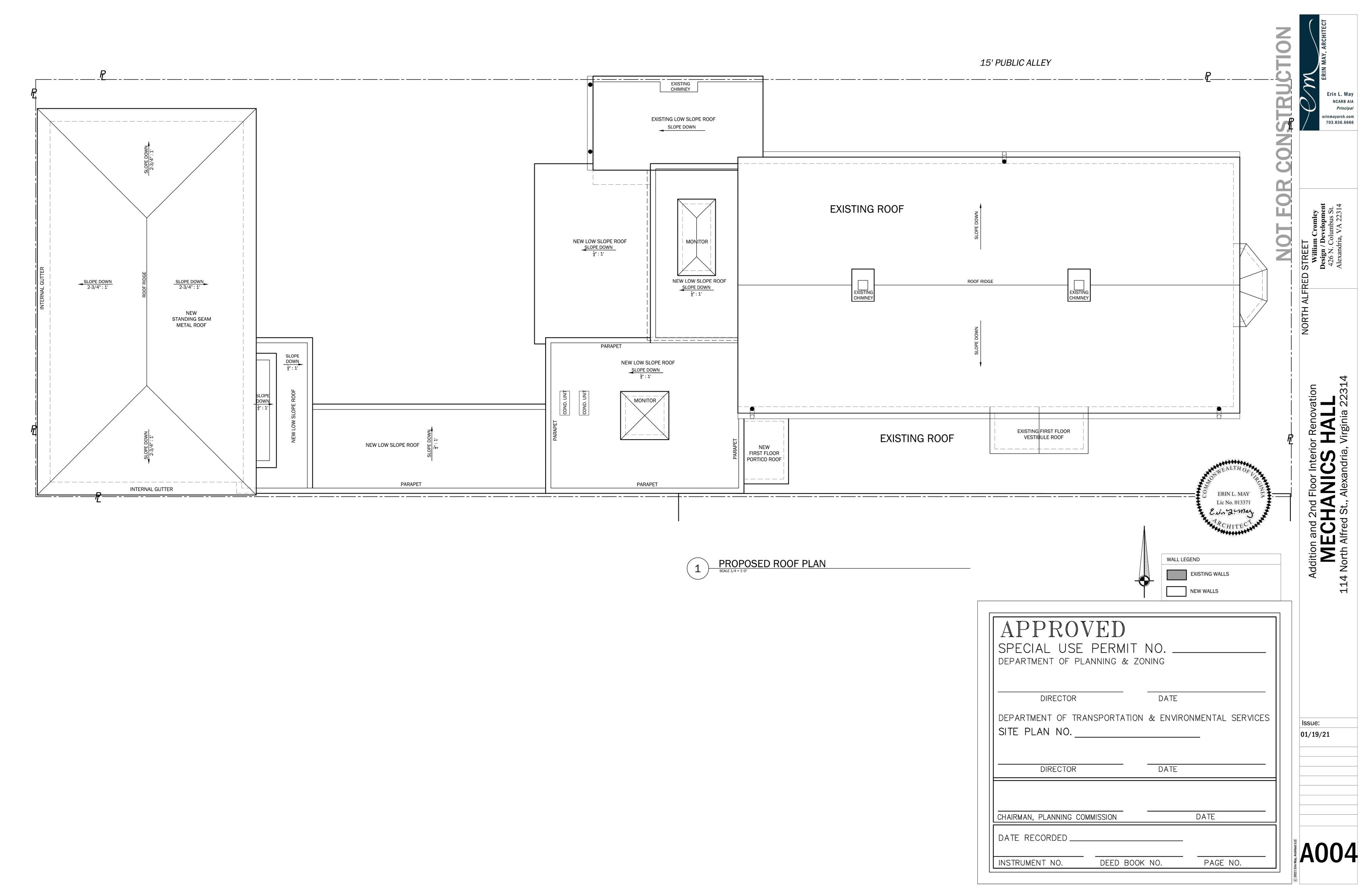
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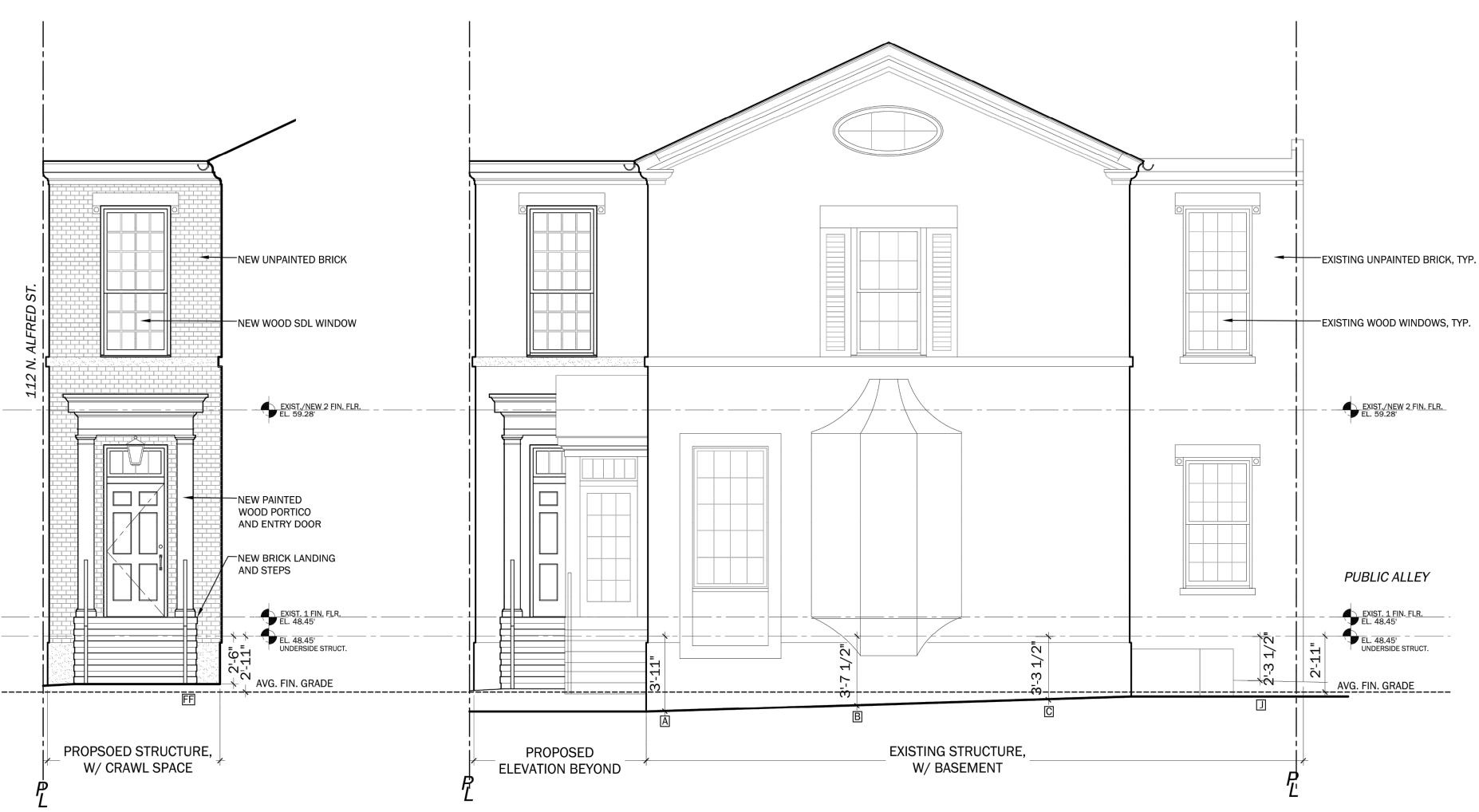


APPROVED SPECIAL USE PERMIT NO. DEPARTMENT OF PLANNING & ZONING DIRECTOR DATE DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO.

> DATE DIRECTOR

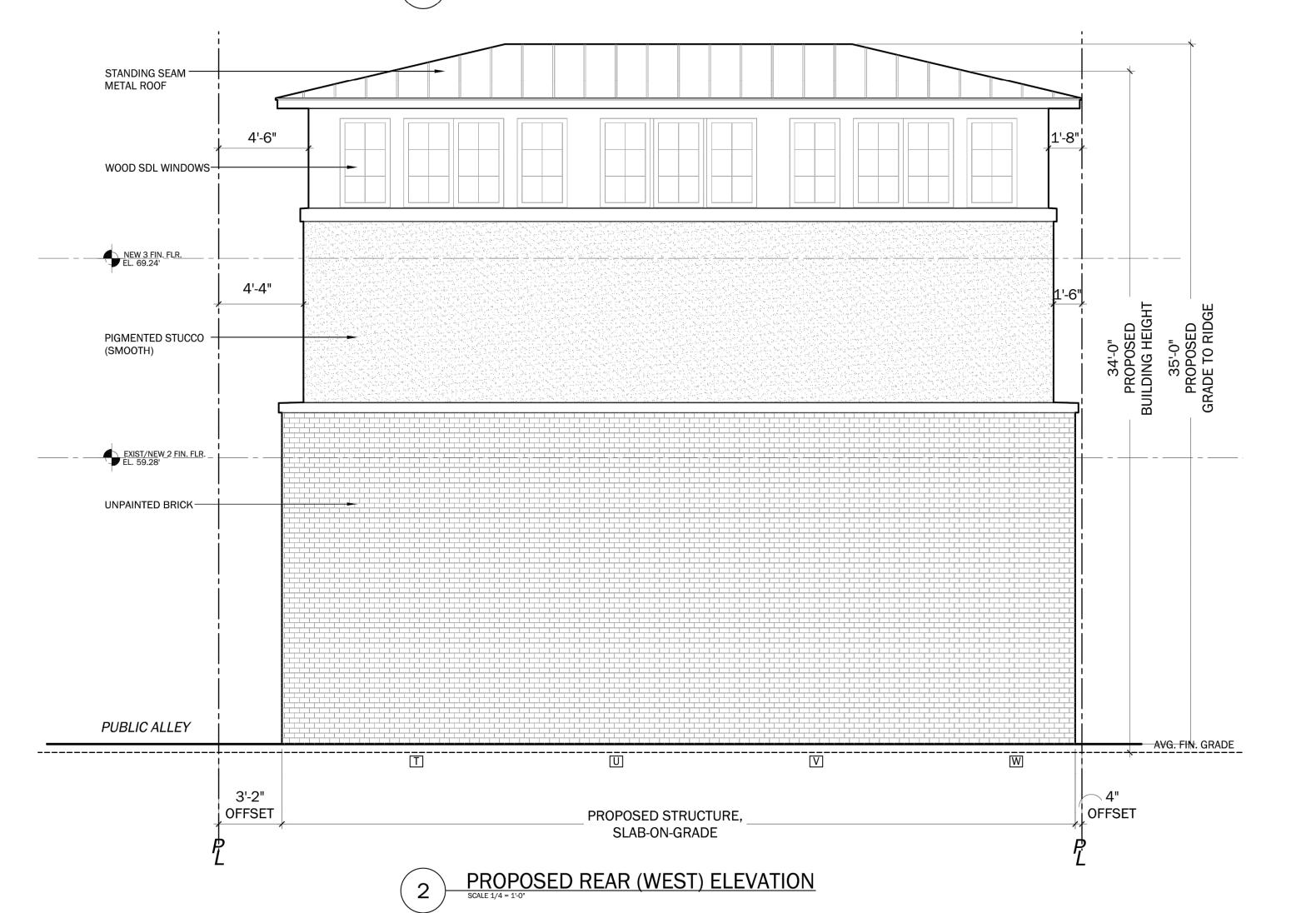
DATE CHAIRMAN, PLANNING COMMISSION

DATE RECORDED PAGE NO. DEED BOOK NO. INSTRUMENT NO.



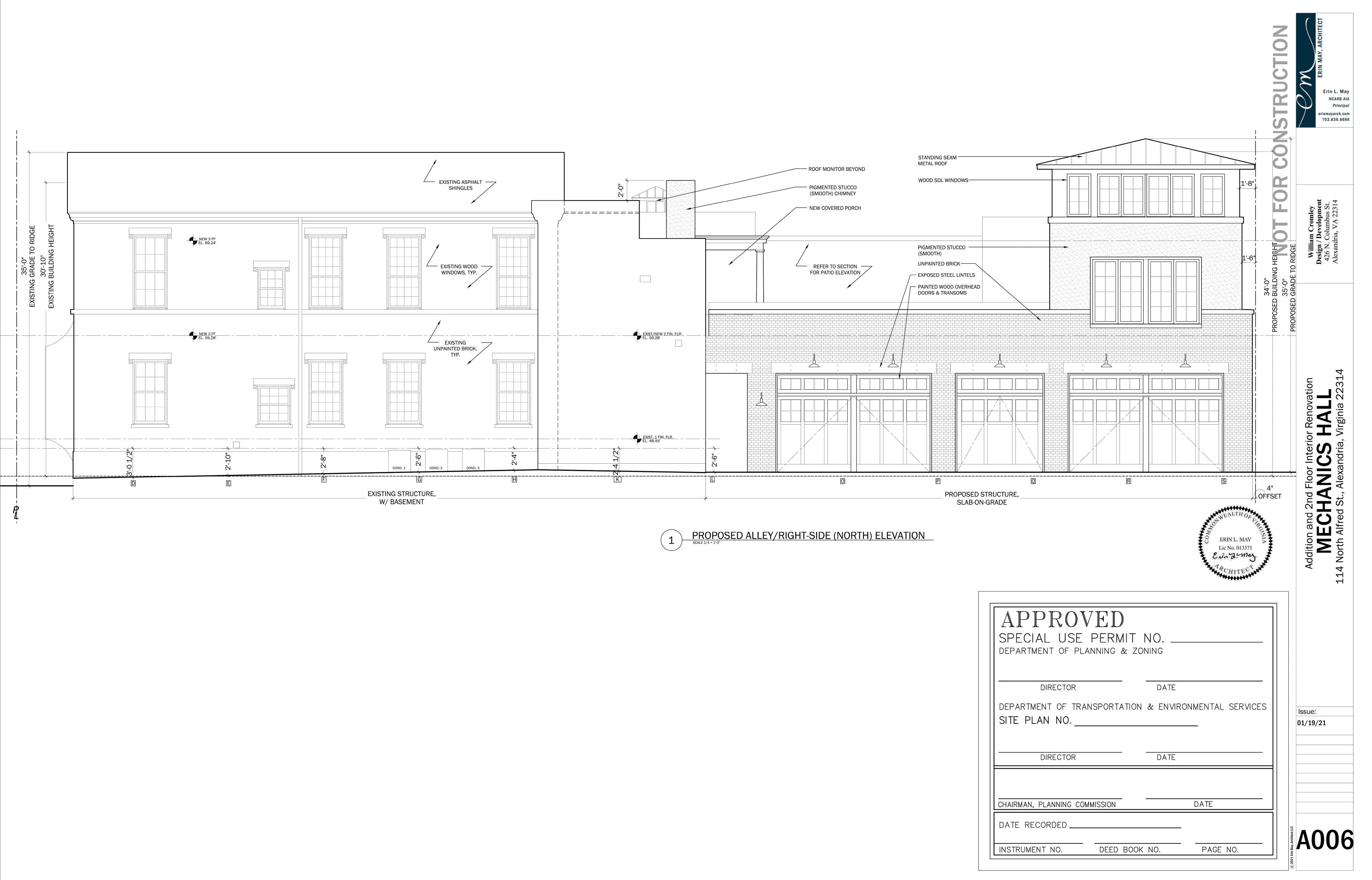
PROPOSED FRONT (EAST) - ADDITION ELEVATION

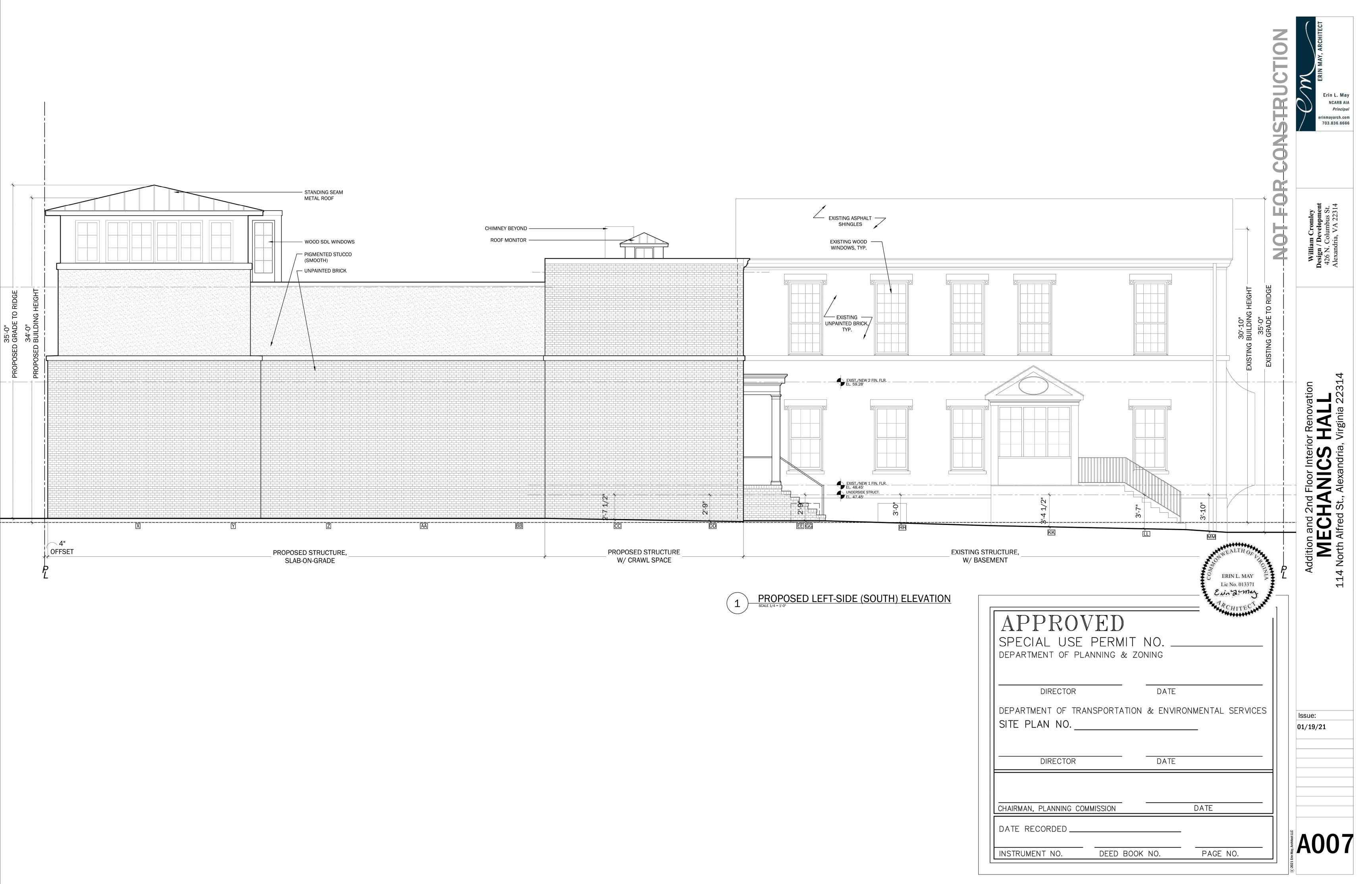
PROPOSED FRONT (EAST) - STREET ELEVATION

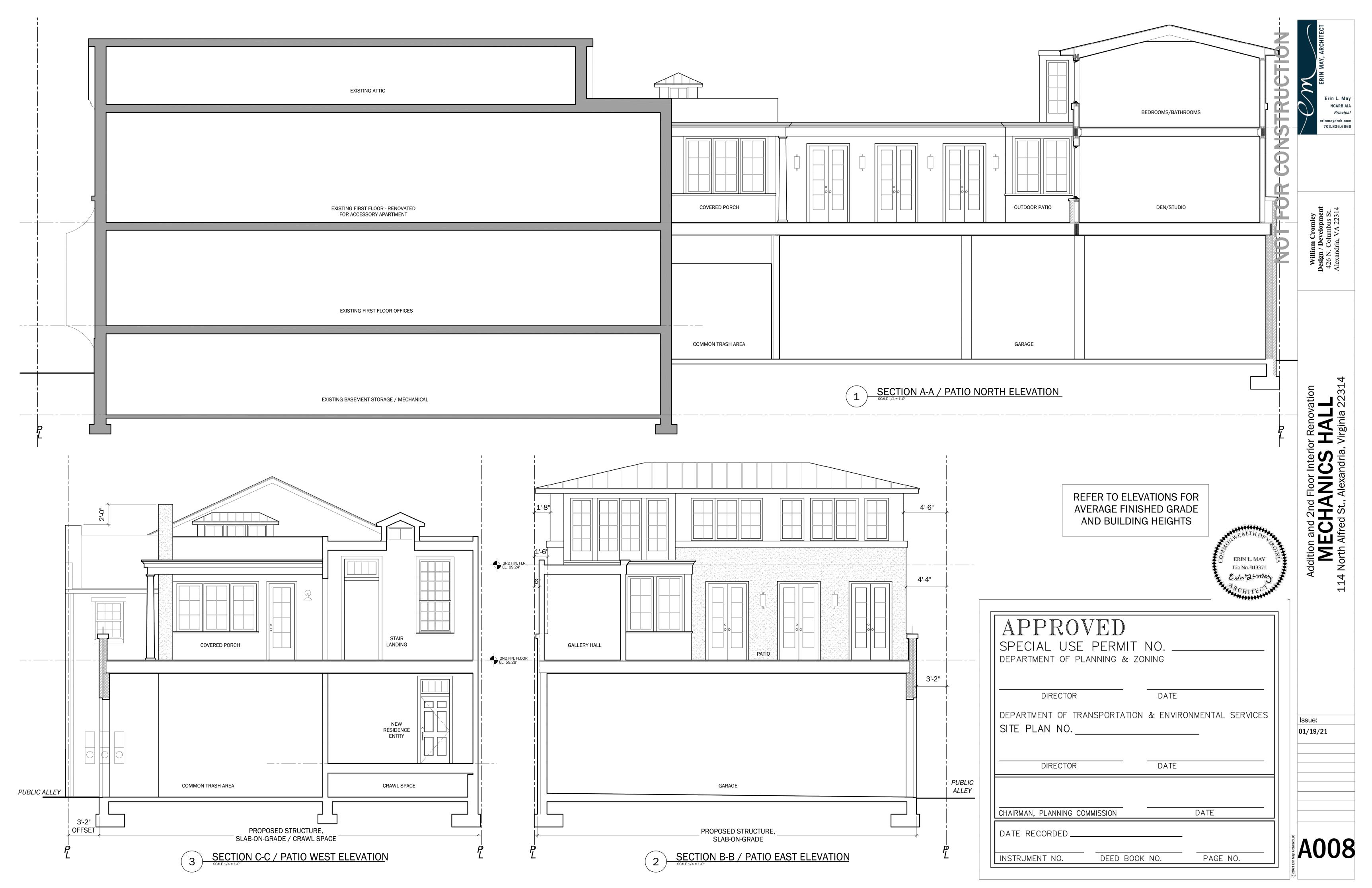


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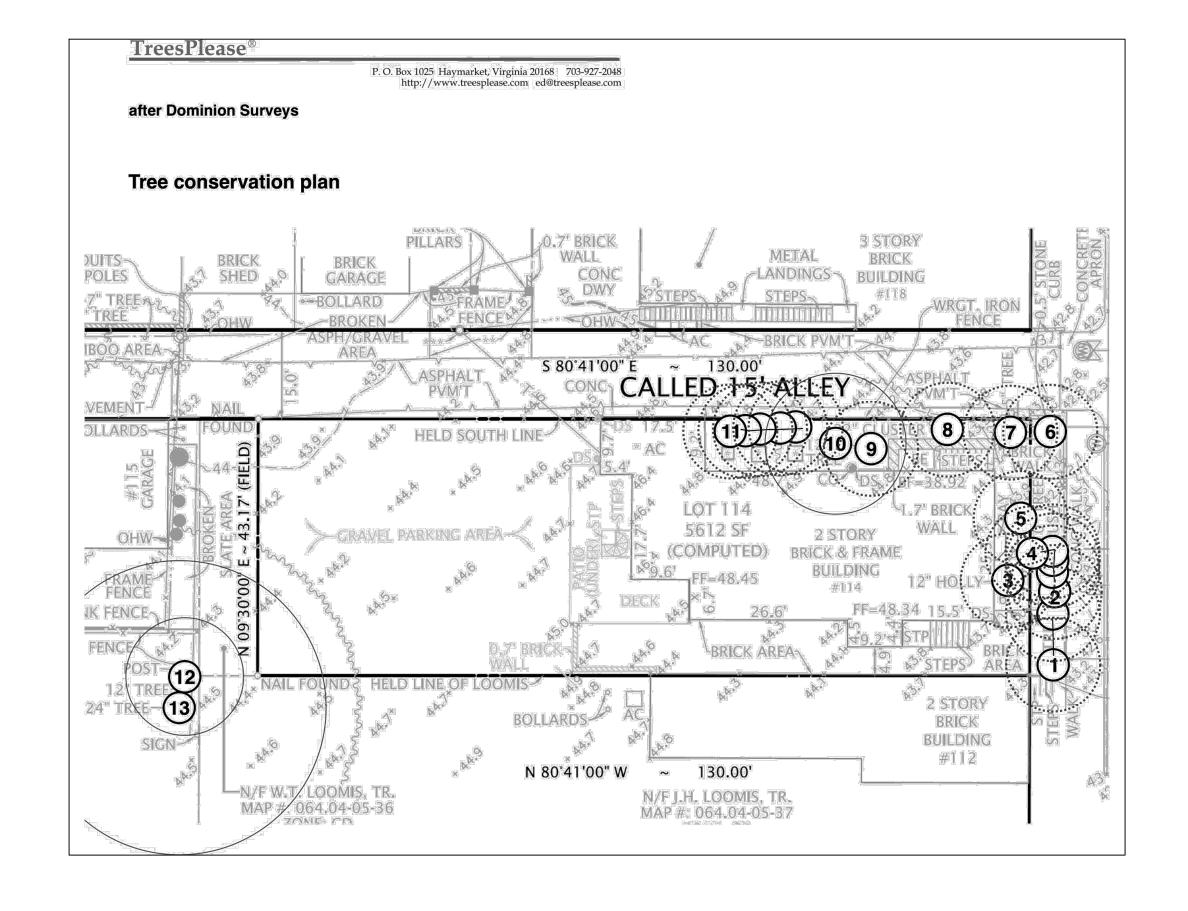


Appendix Development Tree Inventory 114 North Alfred Street City of Alexandria, Virginia October 8, 2020 Prepared by Edward P. Milhous TreesPlease®

ASCA RCA #350 ISA #MA-0004A MD TE #458

•		.8	Shrubbery rather than a tree; size estimated. These trees would be desirable in the new setting. Their chances of surviving planned construction are good. In moveable containers.	These trees are to be saved.
privet Ligustrum spp.	1	.8	Off the site; owned by someone else. Shrubbery rather than a tree; size estimated. Suitability for preservation: poor. Chances of survival to be determined. This species is an invasive exotic.	Do not remove off-site plants without owner consent. Leave plants alone if you don't have permission to cut. Discuss the project plan and this tree with its owners. Do not save this tree remove it when clearing.
holly <i>llex</i> spp.	4/4/2	.8	Suitability for preservation: <i>moderate</i> . Chances of survival to be determined. Sheared into a very formal style.	Preservation status to be determined.
Chamaecyparis spp) <i>.</i>	.8	Off the site; owned by someone else. Suitability for preservation: good. Sheared into a very formal style. Chances of survival to be determined.	Do not remove off-site plants without owner consent. Leave plants alone if you don't have permission to cut. Preservation status to be determined.
		.8	Suitability for preservation: <i>moderate</i> . Chances of survival to be determined. The root system of this tree is confined to a small space.	Preservation status to be determined.
Japanese holly <i>Ilex crenata</i>	1	.8	Off the site; owned by someone else. Shrubbery rather than a tree; size estimated. Suitability for preservation: moderate. Sheared into a very formal style. Chances of survival to be determined. This species can be an invasive exotic.	Do not remove off-site plants without owner consent. Leave plants alone if you don't have permission to cut. Preservation status to be determined.
	Lagerstroemia indicates) Species Rating: privet Ligustrum spp. holly Ilex spp. dwarf Chamaecyparis spp. ts) Species Rating: southern magnolia Magnolia grandiflora Species Rating: Japanese holly	Lagerstroemia indica Its) Species Rating: 80% privet 1 Ligustrum spp. holly 4/4/2 Ilex spp. dwarf Chamaecyparis 1 Chamaecyparis spp. Its) Species Rating: 85% southern magnolia 5 Magnolia grandiflora Species Rating: 80% Japanese holly 1	Lagerstroemia indica Its) Species Rating: 80% privet 1 .8 Ligustrum spp. holly 4/4/2 .8 Ilex spp. dwarf Chamaecyparis 1 .8 Chamaecyparis spp. Its) Species Rating: 85% southern magnolia 5 .8 Magnolia grandiflora Species Rating: 80% Japanese holly 1 .8	Lagerstroemia indica Its) Species Rating: 80% Privet 1 2

ree #				Comment	Recommendation
7	dwarf Alberta spruce Picea glauca 'Conica Species Rating: 7	a'	There	ability for preservation: <i>moderate.</i> e is sparse growth of foliage in this tree. nite damage is evident.	Preservation status to be determined.
8	privet Ligustrum spp.	1 .	Suita Shea Char	bbery rather than a tree; size estimated. ability for preservation: <i>moderate.</i> ared into a very formal style. aces of survival to be determined. species is an invasive exotic.	Preservation status to be determined.
9	viburnums Viburnum spp.	3/3/3	Suita Legg	bbery rather than a tree; size estimated. ability for preservation: <i>moderate.</i> ly. nces of survival to be determined.	Preservation status to be determined.
10	Nellie Stevens holly Ilex x 'Nellie R. Steve Species Rating: 8	ens'	Char	ability for preservation: <i>moderate.</i> nces of survival to be determined. e insects are present.	Preservation status to be determined.
11 (5 plan	Prunus laurocerasus		Marg Char	bbery rather than a tree; size estimated. ginal: might/might not be desirable in the new setting. nces of survival to be determined. e is sparse growth of foliage in these shrubs.	Preservation status to be determined.
12	silver maple Acer saccharinum Species Rating: 4		Suita Its ch This	he site; owned by someone else. ability for preservation: moderate. nance of surviving planned construction is good. tree is suppressed (dominated) by a larger tree. ed through a board fence and DBH estimated.	Do not remove off-site plants without owner consent. Leave plants alone if you don't have permission to cut. This tree is to be saved. The tree's owner should have an arborist inspect the tree.
13	American elm Ulmus americana Species Rating: 3		Suita Its ch View	he site; owned by someone else. ability for preservation: good. nance of surviving planned construction is fair/good. red through a board fence and DBH estimated. h elm disease is a threat to any American elm.	Do not remove off-site plants without owner consent. Leave plants alone if you don't have permission to cut. This tree is to be saved. The tree's owner should have an arborist inspect the tree.
		Average s	pecies r	rating 68	



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

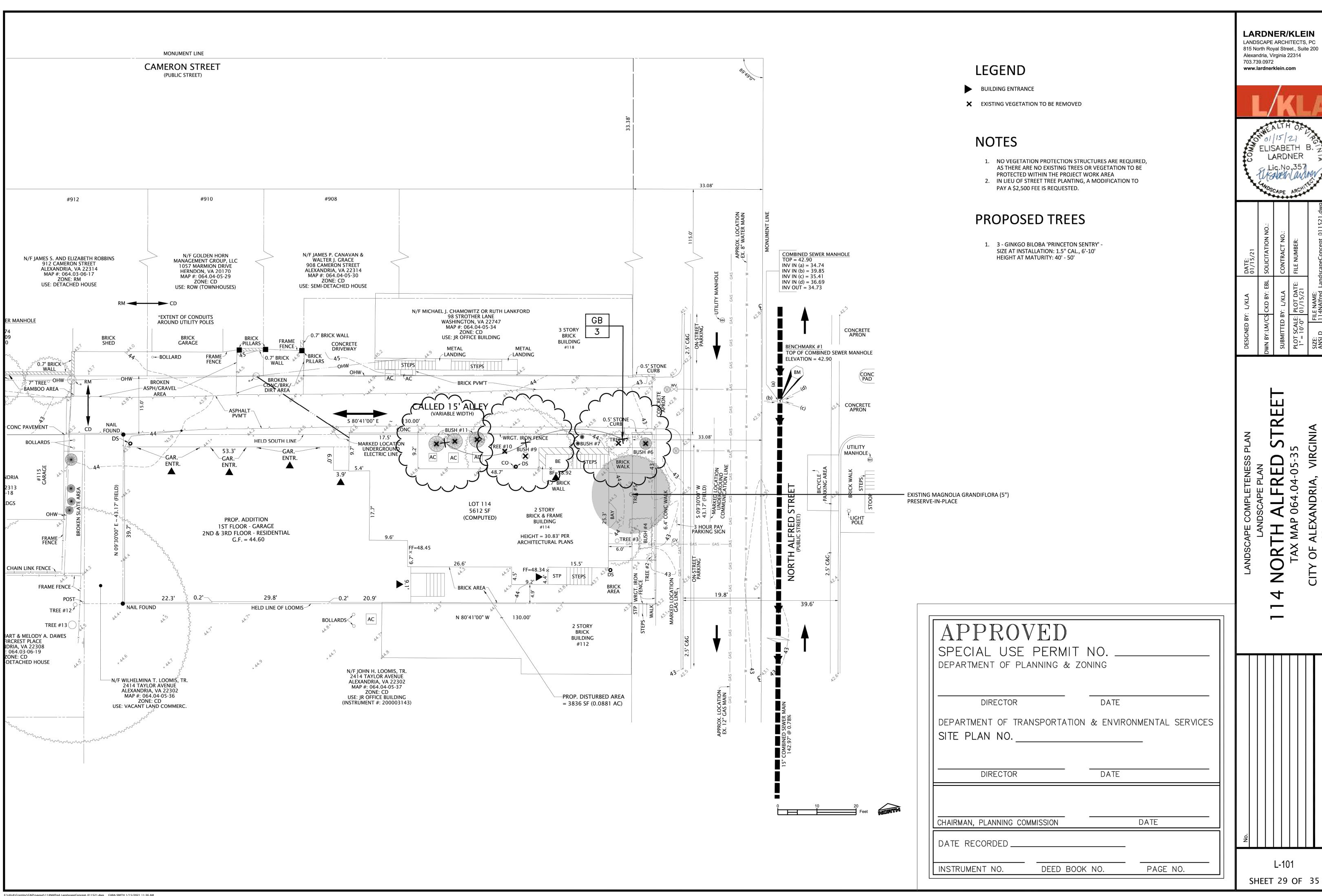
DOMINION Surveyors Inc.

TREE VILLAGE COURT VIRGINIA 22309

TREE SURVEY FRED NORTH

TREE INVENTORY PREPARED BY TREESPLEASE, CERTIFICATION AS PART OF PLAN SET ONLY.

SHEET 28 OF 35



LARDNER/KLEIN LANDSCAPE ARCHITECTS, PC 815 North Royal Street., Suite 200 Alexandria, Virginia 22314

703.739.0972 www.lardnerklein.com



	SOLICITATION NO.:		BER:	FILE NAME:
01/15/21	SOLICITA'	CONTRACT NO.:	FILE NUMBER:	ao Joacos
7 51: L/NEA	1/CS CKD BY: EBL	ED BY: L/KLA	ALE: PLOT DATE: -0" 01/15/21	FILE NAME:
5	1/CS	ED E	\LE: -0"	<u> </u>

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PLANT SCHEDULE AND LANDSCAPE TABULATIONS

PLANT TYPE	DI AN INI	FORMATION			BOTANIC/COMMON NAME		SIZE	NOTES	CROWN COVER ALL	OWANCE (CCA)	NATIVE	PLANTS PRO	VIDED
PLANT TYPE	PLAN INI	PORIVIATION			BOTANIC/COMMON NAME		3122	NOTES	CROWN COVER ALL	DWANCE (CCA)	NATIVE	PLANTS PRO	
	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	CALIPER/HEIGHT		CCA PER TREE (SF)	TOTAL CROWN COVER (SF)	LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
URBAN TREES	GB	3	Ginkgo	biloba	Princeton Sentry'	Maidenhair Tree	1.5" cal./6-10 ft. ht.	B&B symmetrical, single leader	500	1,500	0	0	0
OND/IIV INCES	TOTALS	3							URBAN TREE CCA:	1,500	0	0	0
										**************************************	0.0%	0.0%	0.0%
	PLAN KEY	QUANTITY	GENUS	SPECIES		COMMON NAME	CALIPER/HEIGHT		CCA PER TREE (SF)	TOTAL CROWN COVER (SF)	LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
STANDARD TREES											0	0 0	0
STATES THEES	TOTALS								STANDARD TREE CCA:	0	0	0	0
	101/120										0.0%	0.0%	0.0%
	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	HEIGHT		CCA PER SHRUB (SF)	TOTAL CROWN COVER (SF)	LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
EVERGREEN SHRUBS									EVED CREEN CURIE		0		0
EVENGICELY STINOBS	TOTALS	0							EVERGREEN SHRUB CCA:		0 %		0 %
	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	HEIGHT		CCA PER SHRUB (SF)	TOTAL CROWN COVER (SF)	LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
DECIDUOUS SHRUBS	TOTALS	0							DECIDUOUS SHRUB CCA: TOTAL PROPOSED CCA	0	0 %		0 %
									(SF):	1,500			
	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	SIZE/CONT.				LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
									N/A		0		0
GROUNDCOVERS											0		0
	TOTALS	522									%		%
	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	SIZE/CONT.				LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
PERENNIALS, FERNS,									N/A		0		0
RNAMENTAL GRASSES	TOTALS	0									%		——————————————————————————————————————
	PLAN KEY	QUANTITY	GENUS	SPECIES	VAR./CULTIVAR/HYBRID	COMMON NAME	SIZE/CONT.				LOCAL/ REGIONAL (#)	EASTERN U.S. (#)	TOTAL
VINES									N/A		0		0
	TOTALS	0									0		0
	IOIALS	U									%		%

				NATIVE PLA	NT TABULAT	TIONS						
			MARCH 2, 2019 -	- JANUARY 1, 2	2020	JANUARY 2, 2020 – JANUARY 1, 2024			BEGINNING J	ANUARY	2, 20	24
DI ANT TYPE	PLANT TYPE QUANTITY	NATIVE TYPE	REQUIRED-	PROV	HDED-	REQUIRED	PRO	VIDED	REQUIRED		PROV	IDED
PLANT TYPE		NATIVETIPE	%	QTY.	%	%	QTY.	%	%	Q ⁻	ΓY.	%
Urban Trees	3	Regional/Local	10%			15%	0	0%	20%			
Orban frees 5	3	Total Natives	25%			25%	0	0%	50%			
Standard Trace	Regional/Local	15%			25%	0	0%	40%				
Standard Trees	0	Total Natives	40%			60%	0	0%	80%			
Everances Chrubs	0	Regional/Local	5%			8%	0	0%	10%			
Evergreen Shrubs 0	Total Natives	20%			30%	0	0%	40%				
Deciduous	Deciduous	Regional/Local	10%			15%	0	0%	20%			
Shrubs	U	Total Natives	40%			60%	0	0%	80%			
Groundcovers	0	Regional/Local	5%			10%	0	100%	10%			
Groundcovers	0	Total Natives	10%			20%	0	100%	20%			
Perennials, Ferns,		Regional/Local	10%			15%	0	0%	25% (perennials) 3 (ferns & grasses)	0%		
Ornamental Grasses		Total Natives	25%			40%	0	0%	60% (perennials) 8 (ferns & grasses)	0%		
Vines		Total Natives	80%			100%	0	100%	100%			
				T	OTALS							
TOTAL PLANT	S SPECIFIED	TOTAL SUM	OF REGIONAL/LOCAL N	NATIVE PLANTS			тот	AL SUM OF	NATIVE PLANTS			
			0						0			
3			0.0%			0.0%						

			BIODIVERSITY	TABULATIONS			
TREES (URBAN	AND STANDARD)						
TOTAL NUMBER	OF TREES PROPOS	ED: 2					
GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
Ginkgo	3	100.0%	50%	biloba	3	100.0%	35%
SHRUBS							
TOTAL NUMBER	OF SHRUBS PROPO	OSED:					
GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
	0		33%		0		10%

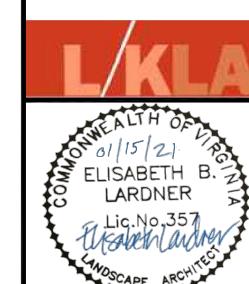
URBAN TREE TABULATIONS											
PLAN KEY	QUANTITY	PLAN LOCATION	PROJECTED 20 YR. CANOPY* (PER TREE)	IMPERVIOUS AREA UNDER CANOPY (PER TREE)	IMPERVIOUS AREA GREATER THAN 50% OF PROJECTED 20 YR. CANOPY? (Y/N)						
GB	3	ADJACENT TO BLDG.	500 SF	326 - 425 SF	Υ						
		TOTA	L URBAN TREES								
			3								

*Refer to Landscape Guidelines Chapter 3 Canopy Coverage

CROWN COVER TABU	LATIONS	
TOTAL SITE AREA (SF)	5,619	
25% CROWN COVER REQUIRED (SF)	1,405	
EXISTING CROWN COVER (SF)	0	
REMOVED CROWN COVER (SF)	0	
PRESERVED CROWN COVER (SF)		
Crown Cover from Preserved Trees	0	
Crown Cover from Preserved Shrubs	0	
PROPOSED CROWN COVER (SF)		
Crown Cover from Proposed Trees	1,500	
Crown Cover from Proposed Shrubs		
TOTAL CROWN COVER PROVIDED (%)	26.7%	
TOTAL CROWN COVER PROVIDED (SF)	1,500	

APPROV SPECIAL USE		NO	
DEPARTMENT OF PLA			
DIRECTOR		DATE	
DEPARTMENT OF TRAISITE PLAN NO	NSPORTATIO	n & Envif	RONMENTAL SERVIC
DIRECTOR		DATE	
DIRECTOR		DATE	
DIRECTOR CHAIRMAN, PLANNING COM	1MISSION	DATE	DATE

LARDNER/KLEIN
LANDSCAPE ARCHITECTS, PC
815 North Royal Street., Suite 200
Alexandria, Virginia 22314
703.739.0972
www.lardnerklein.com



DESIGNED BY: L/KLA

DATE:
01/15/21

DWN BY:LM/CS CKD BY: EBL SOLICITATION NO.:

SUBMITTED BY: L/KLA

CONTRACT NO.:
PLOT SCALE:
01/15/21

SIZE:
ANSI D
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ULE AND LANDSCAPE TABULATIONS

TH ALFRED STREET

X MAP 064 04-05-35

L-102 SHEET 30 OF 35

STANDARD LANDSCAPE PLAN NOTES

- 1. THE PROPERTY OWNER AND/OR APPLICANT, SPECIFIER, CONTRACTOR AND INSTALLER OF PLANT MATERIAL ARE RESPONSIBLE FOR UNDERSTANDING AND ADHERING TO THE STANDARDS SET FORTH IN THE MOST RECENT VERSION OF THE CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND APPLICABLE CONDITIONS OF APPROVAL. ALL QUESTIONS REGARDING APPLICATION OF, OR ADHERENCE TO, THE STANDARDS AND/OR CONDITIONS OF APPROVAL SHALL BE DIRECTED TO THE CITY PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBING ACTIVITY.
- 2. THE CITY-APPROVED CITY-APPROVED LANDSCAPE PLAN SUBMISSION, INCLUDING PLANT SCHEDULE, NOTES AND DETAILS SHALL BE THE DOCUMENT USED FOR INSTALLATION PURPOSES AND ALL PROCEDURES SET FORTH IN THE LANDSCAPE GUIDELINES MUST BE FOLLOWED.
- THE CONTRACTOR CONTRACTOR SHALL NOT INTERFERE WITH ANY TREE PROTECTION MEASURES OR IMPACT ANY EXISTING VEGETATION IDENTIFIED TO BE PRESERVED PER THE APPROVED TREE AND VEGETATION PROTECTION PLAN.
- 4. ANY CHANGES, ALTERATIONS OR MODIFICATIONS TO THE SITE CONDITIONS THAT AFFECT VEGETATION PROTECTION ZONES WILL REQUIRE AN AMENDMENT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND/OR DETAILS.
- INSTALLATION OF PLANT MATERIAL MAY ONLY OCCUR DURING THE PLANTING SEASONS IDENTIFIED IN THE LANDSCAPE GUIDELINES.
- 6. 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.
- 7. SUBSTITUTIONS TO THE APPROVED PLANT MATERIAL SHALL NOT OCCUR UNTIL WRITTEN APPROVAL IS PROVIDED BY THE CITY
- 8. MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED BY THE OWNER, APPLICANT, SUCCESSOR(S) AND/OR ASSIGN(S) IN PERPETUITY AND IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND AS CONDITIONED BY PROJECT APPROVAL, AS APPLICABLE.
- 9. THE APPROVED METHOD(S) OF PROTECTION MUST BE IN PLACE FOR ALL VEGETATION TO BE PRESERVED ON-SITE AND ADJACENT TO THE PROJECT SITE PURSUANT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND DETAILS PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBANCE. THE APPLICANT SHALL NOTIFY THE PLANNING & ZONING (P&Z) PROJECT MANAGER ONCE THE TREE PROTECTION METHODS ARE IN PLACE. NO DEMOLITION, CONSTRUCTION, OR LAND DISTURBANCE MAY OCCUR UNTIL AN INSPECTION IS PERFORMED BY THE CITY AND WRITTEN CONFIRMATION IS PROVIDED BY THE CITY WHICH VERIFIES CORRECT INSTALLATION OF THE TREE PROTECTION MEASURES.
- 10. THE APPLICANT MUST CONTACT THE P&Z PROJECT MANAGER PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATION TO SCHEDULE A PRE-INSTALLATION MEETING. THE MEETING SHOULD BE HELD BETWEEN THE APPLICANT'S GENERAL CONTRACTOR, LANDSCAPE CONTRACTOR, LANDSCAPE ARCHITECT, THE P&Z PROJECT MANAGER AND THE CITY ARBORIST (AS APPLICABLE) TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES DURING AND AFTER INSTALLATION.
- 11. THE FOLLOWING INFORMATION SHALL BE PROVIDED TO THE P&Z PROJECT MANAGER AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO THE LANDSCAPE PRE-INSTALLATION MEETING: 1) A LETTER THAT CERTIFIES THAT THE PROJECT LANDSCAPE ARCHITECT PERFORMED PRE-SELECTION TAGGING FOR ALL TREES PROPOSED WITHIN THE PUBLIC RIGHT OF WAY AND ON PUBLIC LAND PRIOR TO INSTALLATION. THIS LETTER MUST BE SIGNED AND SEALED BY THE PROJECT LANDSCAPE ARCHITECT, AND 2) A COPY OF THE SOIL BULK DENSITY TEST REPORT VERIFYING THAT MAXIMUM COMPRESSION RATES ARE MET.
- 12. ALL CONSTRUCTION WASTE SHALL BE REMOVED PRIOR TO PLANTING.
- 13. AS-BUILT DRAWINGS FOR THIS LANDSCAPE AND/OR IRRIGATION/WATER MANAGEMENT SYSTEM WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES, THE CITY CODE OF ORDINANCES, AND ALL APPLICABLE PLAN PREPARATION CHECKLISTS. 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.
- 14. AREAS OF BARE SOIL WILL NOT BE ACCEPTED. MULCHED AREAS AND PLANTING AREAS SHALL BE WEED FREE UPON ACCEPTANCE OF THE PROJECT BY THE CITY.

STANDARD TREE PRESERVATION NOTES

- 1. VEGETATION DESIGNATED FOR PROTECTION AND/OR PRESERVATION SHALL CONTINUOUSLY RECEIVE AN ENHANCED LEVEL OF MAINTENANCE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
 - MAINTENANCE SHALL BE PRO-ACTIVE.
 - MAINTENANCE OPERATIONS SHALL AGGRESSIVELY MONITOR THE HEALTH, GROWTH AND VIGOR OF VEGETATION AND PRESCRIBE SELECTIVE PRUNING, REMOVAL OF VOLUNTEER AND/OR INVASIVE SPECIES, WATERING, FERTILIZATION AND INSTALLATION OF MULCH/TOPDRESSING.
 - WHEN PRESERVED VEGETATION IS LOCATED ON CITY PROPERTY, MAINTENANCE SHALL BE PERFORMED TO THE SATISFACTION OF THE CITY.
- 2. AREAS DESIGNATED FOR PROTECTION AND/OR PRESERVATION OF VEGETATION SHALL NOT BE ENTERED OR UTILIZED (APPROVED MAINTENANCE PROCEDURES AND WATERING EXCEPTED) THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. PROHIBITED ITEMS/ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO:
 - MODIFYING SITE TOPOGRAPHY IN A MANNER THAT DIRECTLY OR INDIRECTLY ALTERS
 EXISTING SITE DRAINAGE WITHIN PROTECTION ZONE INCLUDING TRENCHING OR GRADING
 OPERATIONS AND PLACING, STORING OR STOCKPILING SOIL OR CONSTRUCTION RELATED
 SUPPLIES.
 - FELLING AND STORING VEGETATION. III. INCINERATING MATERIALS WITHIN OR IN CLOSE PROXIMITY.
 - OPERATING MACHINERY OR EQUIPMENT, INCLUDING VEHICLE/EQUIPMENT PARKING OR STORAGE.
 - TEMPORARY OR PERMANENT UTILITY CONSTRUCTION, PAVING OR IMPERVIOUS SURFACE INSTALLATION.

 PLOROSAL OF PERPIS OR CHEMICAL & NULL TEMPORARY FACILITIES OR COOLINATION BY MORE AND ADMINISTRACE.
 - DISPOSAL OF DEBRIS OR CHEMICALS. VII. TEMPORARY FACILITIES OR OCCUPATION BY WORK FORCE.
 - STORAGE OF CONSTRUCTION MATERIALS OR WASTE.

LANDSCAPE WARRANTY NOTES

- A. WARRANTY: INSTALLER AGREES TO REPAIR OR REPLACE PLANTINGS AND ACCESSORIES THAT FAIL IN MATERIALS, WORKMANSHIP, OR GROWTH WITHIN SPECIFIED WARRANTY PERIOD.
 - FAILURES INCLUDE. BUT ARE NOT LIMITED TO. THE FOLLOWING:
 - 1. DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM ABUSE, OR INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.
 - 2. STRUCTURAL FAILURES INCLUDING PLANTINGS FALLING OR BLOWING OVER.
 - ii. WARRANTY PERIODS FROM DATE OF FINAL ACCEPTANCE:1. TREES: 36 MONTHS
 - 2. SHRUBS, VINES, GRASSES, ORNAMENTAL GROUND COVERS, BIENNIALS, PERENNIALS, AND OTHER PLANTS: 36 MONTHS
 - ii. INCLUDE THE FOLLOWING REMEDIAL ACTIONS AS A MINIMUM:
 - 1. IMMEDIATELY REMOVE DEAD PLANTS AND REPLACE UNLESS REQUIRED TO PLANT IN THE SUCCEEDING PLANTING SEASON.
 - 2. REPLACE PLANTS THAT ARE MORE THAN 25 PERCENT DEAD OR IN AN UNHEALTHY CONDITION AT END OF WARRANTY PERIOD.
 - 3. A LIMIT OF ONE REPLACEMENT OF EACH PLANT IS REQUIRED EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH REQUIREMENTS.
- B. INITIAL MAINTENANCE SERVICE: PROVIDE MAINTENANCE BY SKILLED EMPLOYEES OF LANDSCAPE INSTALLER.
 MAINTAIN AS REQUIRED IN "PLANT MAINTENANCE" ARTICLE. BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTS
 ARE INSTALLED AND CONTINUE UNTIL PLANTINGS ARE ACCEPTABLY HEALTHY AND WELL ESTABLISHED BUT FOR
 NOT LESS THAN MAINTENANCE PERIOD BELOW.
 - iv. MAINTENANCE PERIOD FOR TREES AND SHRUBS: FROM DATE OF INSTALLATION TO END OF WARRANTY PERIOD.
 - v. MAINTENANCE PERIOD FOR GROUND COVER AND OTHER PLANTS: FROM DATE OF INSTALLATION TO END OF WARRANTY PERIOD.

PERMANENT SEEDING: TURF TYPE TALL FESCUE MIX

1. SEED SHALL BE NEW OF THE YEAR SEED CROPS CONSISTING OF 80 PERCENT FESCUE, 10% KENTUCKY BLUEGRASS, 10% PERENNIAL RYEGRASS SEE; ALL SEED VARIETIES SHALL BE BLUE TAG CERTIFIED SEED, IN SEPARATE PACKAGES, TO BE APPROVED PRIOR TO MIXING. SEED SHALL BE PACKED IN CLEAN, SOUND CONTAINERS OF UNIFORM HEIGHT. SEED SHALL ALSO BE:

MINIMUM PURE SEED PERCENT - 98

MINIMUM GERMINATION PERCENT - 80
MAXIMUM WEED SEED PERCENT - 0.5

- A. SEED VARIETIES SHALL BE LISTED ON THE CURRENT VIRGINIA TURFGRASS VARIETY
 RECOMMENDATIONS FROM THE VIRGINIA COOPERATIVE EXTENSION OR THE MARYLAND
- RECOMMENDED TURFGRASS VARIETIES.

 B. SEEDING SHALL BE DONE DURING REGULAR SEEDING SEASON MARCH 1-MAY 15 AND/OR SEPTEMBER
 15 TO OCTOBER 15 AFTER LAND DISTURBING ACTIVITIES HAVE BEEN COMPLETED. NO SEEDING

SHALL BE DONE ON FROZEN GROUND OR WHEN THE TEMPERATURE IS BELOW FORTY (40) DEGREES

- FAHRENHEIT, OR IS FORECAST FOR A TWELVE (12) HOUR PERIOD AFTER COMPLETION OF WORK.

 C. APPLY SEEDING AT A RATE OF 175-200 LBS. PER ACRE. APPLY SEED UNIFORMLY WITH A BROADCAST SEEDER, DRILL, CULTI-PACKER SEEDER, OR HYDROSEEDER ON A FIRM FRIABLE SEEDBED. SEEDING
- DEPTH SHOULD BE $\frac{1}{4}$ TO $\frac{1}{2}$ INCH.

 D. CONTRACTOR SHALL SUBMIT TOPSOIL SAMPLE FOR ANALYSIS BY AN ACCREDITED SOIL LAB AND PROVIDE LIME AND/OR FERTILIZER AS RECOMMENDED.
- E. STRAW MULCH: CLEAN OAT OR WHEAT STRAW, BRIGHT IN COLOR, FREE OF ROT OR MILDEW. WELL SEASONED PRIOR TO BAILING, FREE OF SEED BEARING STALKS OR ROOTS OF NOXIOUS WEEDS. HAY OR CHIPPED CORN STALKS ARE NOT ACCEPTABLE. APPLY AT A UNIFORM RATE COMPLETELY COVERING THE SEEDED AREA AT A DENSITY OF 50%-75%.
- F. IRRIGATE, REPAIR, REPLACE, AND RESEED AS NECESSARY TO ESTABLISH HEALTHY GRASS. CONTRACTOR TO IRRIGATE AND MAINTAIN FOR A PERIOD OF 90 DAYS OR UNTIL TURF IS ESTABLISHED TO PERMIT MOWING BY A COMMERCIAL RIDER MOWER WITHOUT DAMAGE TO NEWLY ESTABLISHED TURF OR GRADE.

PLANTING PLAN GENERAL NOTES

- 1. THE CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS AND ALL DIMENSIONS PRIOR TO BIDDING/CONSTRUCTION AND CONFIRM ALL POST BUILDING CONSTRUCTION CONDITIONS ASSUMED ON THE PLANS PRIOR TO STAKING OUT TREES, SHRUBS, GROUNDCOVERS AND PLANTING BEDS NOTING ANY CHANGES RESULTING FROM CONSTRUCTION OF BUILDING AND NON-LANDSCAPE SITE IMPROVEMENTS. NOTIFY THE OWNER, OWNER'S AGENT AND/OR LANDSCAPE ARCHITECT AND REQUEST ADJUSTMENTS TO THE DESIGN TO ACCOMMODATE CHANGES TO THE PLANS AS A RESULT OF BUILDING AND NON-LANDSCAPE SITE IMPROVEMENTS.
- 2. MAJOR TREES SHALL NOT BE PLACED UNDER OVERHEAD WIRES AT ANY TIME.
- 3. POSITIVE DRAINAGE ACROSS ALL SURFACES SHALL BE MAINTAINED. ALL TREES, SHRUBS, GROUNDCOVERS AND PLANTING BEDS SHALL BE LOCATED SO AS NOT TO IMPEDE CONCENTRATED SURFACE DRAINAGE SUCH AS SWALES, ROOF DRAIN OUTFALLS, OR OTHER DESIGNED STORMWATER MANAGEMENT FEATURES INTENDED TO DIRECT SURFACE WATER RUNOFF.
- 4. STAKE OUT LOCATION OF TREES AND OUTLINE OF BED AREA. PLACE SHRUBS AND GROUNDCOVERS IN POSITION IN BED AREAS BEFORE CONTAINERS HAVE BEEN REMOVED. OBTAIN OWNER OR OWNERS AGENT APPROVAL. LANDSCAPE ARCHITECT, OWNER, OR OWNER'S AGENT RESERVES RIGHT TO INTERCHANGE OR SHIFT PLANT LOCATIONS PRIOR TO PLANTING.
- 5. PLANTS SHALL BE SET IN THE PLANTING PIT, AT THE PROPER DEPTH, ON TAMPED SOIL MIX. SOIL MIX SHALL THEN BE FILLED AROUND THE ROOTS TO APPROXIMATELY 75% OF THE DEPTH OF THE PIT, TAMPED AND THOROUGHLY WATERED. AFTER SETTLEMENT OF THE SOIL, THE REMAINDER OF THE PIT SHALL BE FILLED WITH SOIL MIX, FERTILIZED, TAMPED, AND AGAIN WATERED, ALL WITHIN THE SAME DAY OF PLANTING. THE SAME PROCEDURE SHALL BE FOLLOWED IN PLANTING REPLACEMENTS.
- 6. SHOULD THE BALL SIZE EXCEED THE MINIMUM SIZE GIVEN, THE PIT SIZE NEED NOT BE INCREASED PROVIDED THAT THERE IS SUFFICIENT SPACE BETWEEN THE BALL AND THE SIDE OF THE PIT TO BACKFILL AND TAMP PROPERLY.
- 7. A REPRESENTATIVE OF THE OWNER SHALL BE GIVEN THE OPPORTUNITY TO INSPECT AND APPROVE ALL PLANT MATERIAL AT ITS SOURCE PRIOR TO DIGGING OR DELIVERY. IF THIS OPPORTUNITY IS WAIVED, A REPRESENTATIVE SAMPLE OF EACH SPECIES MAY BE REQUIRED FOR APPROVAL PRIOR TO SHIPMENT OF THE TOTAL QUANTITY.
- 8. DEFINITION OF PLANT CALLOUTS:

AA	KEY
1	QUANTIT

- 9. MULCH SHALL BE SHREDDED PINE BARK FREE OF STICKS, DIRT, DUST, WEEDS AND OTHER DEBRIS, AS APPROVED.
- 10. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE OR NON-EXISTENCE OF ANY UTILITIES. PRIOR TO ANY CONSTRUCTION, EXCAVATION, OR LANDSCAPING, THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF LOCATING AND VERIFYING ALL UTILITIES, ABOVE AND/OR BELOW GROUND, PUBLIC AND/OR PRIVATE THAT MAY EXIST AND CROSS THROUGH THE AREAS OF CONSTRUCTION.
- 11. THE CONTRACTOR IS REQUIRED TO CALL "MISS UTILITY" AND HAVE UTILITIES LOCATED BEFORE UNDERTAKING ANY EXCAVATION OR SITE WORK. THIS ACTION DOES NOT RELIEVE THE CONTRACTOR OF INDEPENDENT VERIFICATION BY HIS OWN FORCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AT HIS EXPENSE ANY UTILITIES DAMAGED DURING CONSTRUCTION.
- 12. EXISTING TREES MARKED AS "TO REMAIN" SHALL BE PROTECTED AS NECESSARY AS SHOWN ON ENGINEERING DRAWINGS
- 13. ANY SUBSTITUTIONS IN PLANT MATERIALS MUST BE APPROVED IN WRITING BY THE PROJECT LANDSCAPE ARCHITECT

LARDNER/KLEIN
LANDSCAPE ARCHITECTS, PC
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Alexandria, Virginia 22314

815 North Royal Street., Suite 200 Alexandria, Virginia 22314 703.739.0972 www.lardnerklein.com

CHISABETH B. Z. S. LARDNER LIG.No.357

ESIGNED BY: L/KLA
DATE:
01/15/21

N BY:LM/CS CKD BY: EBL SOLICITATION NO.:

UBMITTED BY: L/KLA
CONTRACT NO.:

LOT SCALE: PLOT DATE: FILE NUMBER:
01/15/21

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No.					

L-103 SHEET 31 OF 35

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

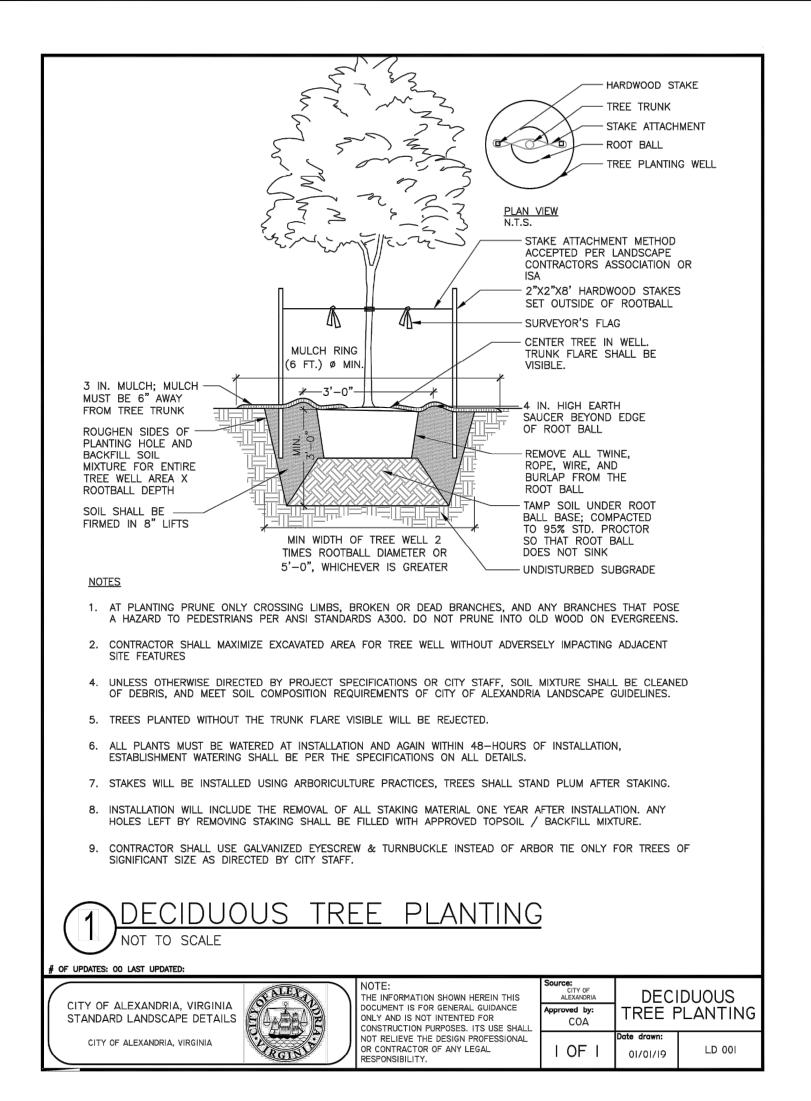
DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED ______
INSTRUMENT NO. DEED BOOK NO. PAGE NO.



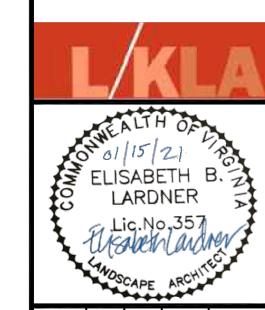
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MULCH SHALL BE SHREDDED PINE BARK FREE OF STICKS, DIRT, DUST, WEEDS AND OTHER DEBRIS, AS APPROVED.

APPROVED SPECIAL USE PERMIT DEPARTMENT OF PLANNING & 3	
DIRECTOR	DATE
DEPARTMENT OF TRANSPORTATION	ON & ENVIRONMENTAL SERVIC
SITE PLAN NO.	
SITE PLAN NO	DATE
	DATE
DIRECTOR	DATE

LARDNER/KLEI	
ANDSCAPE ARCHITECTS,	I

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SUBMITTED BY: L/KLA CONTRACT NO.:

PLOT SCALE: PLOT DATE: FILE NUMBER:
01/15/21

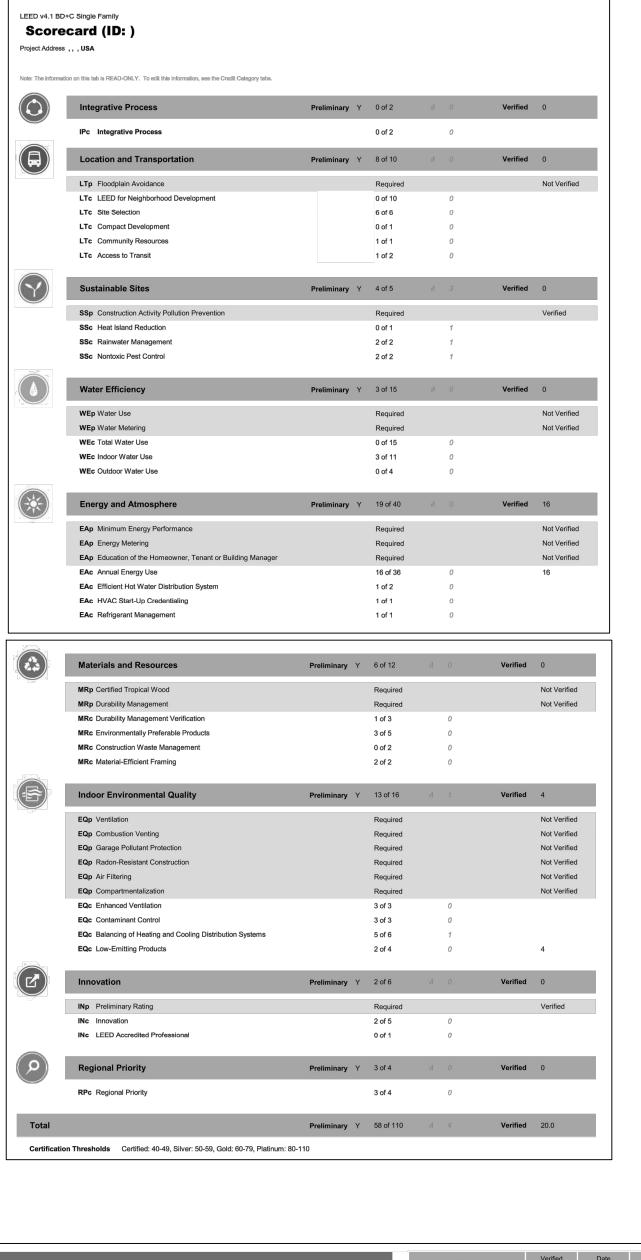
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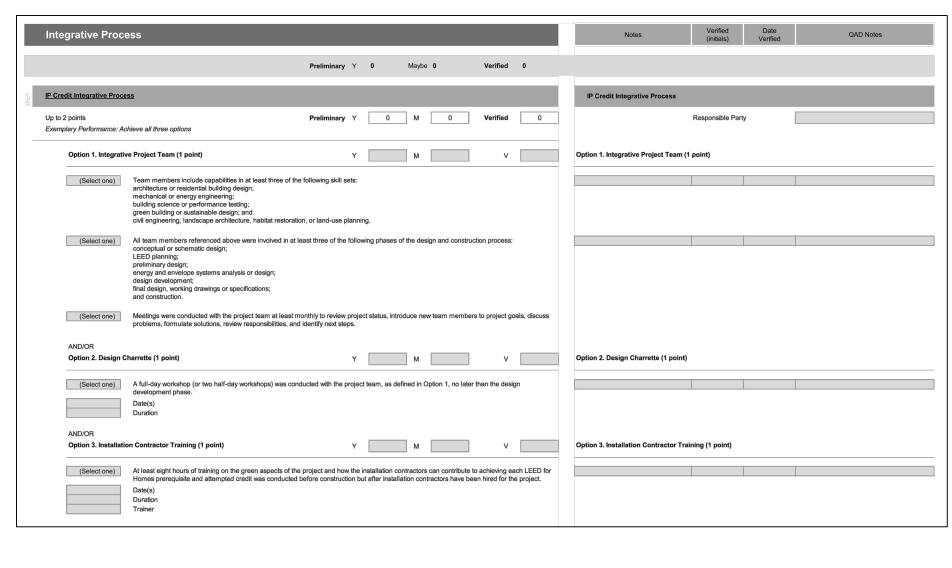
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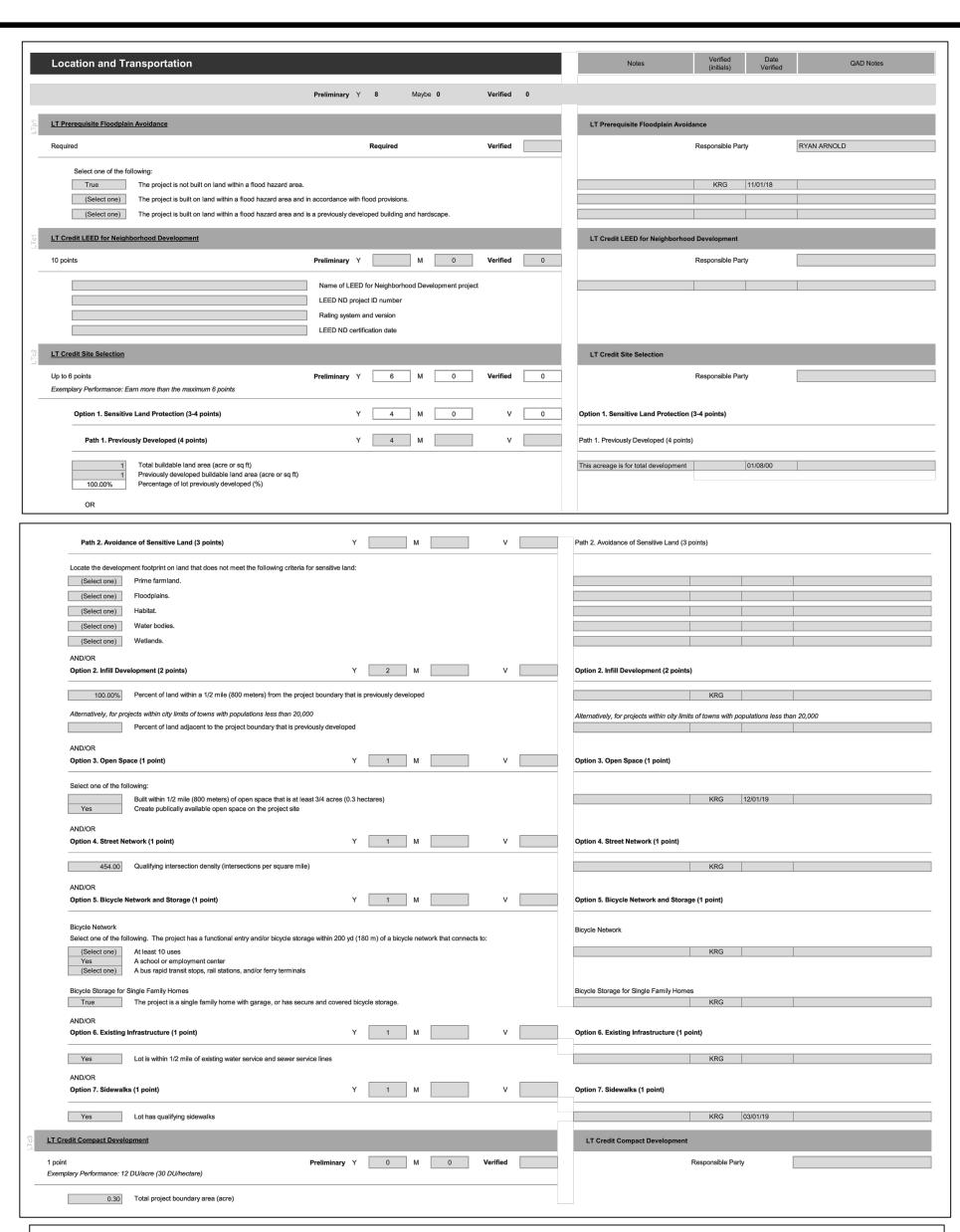
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No.

L-104 SHEET 32 OF 35







0.30 Buildable land area (acre) Number of dwelling units DU/acre of buildable land	KRG 03/01/18
LT Credit Community Resources	LT Credit Community Resources
1 point	Responsible Party
Number of community resources within a 1/2 mile (800 meters) walking distance	KRG
LT Credit Access to Transit	LT Credit Access to Transit
Up to 2 points Preliminary Y 1 M 0 Verified Exemplary Performance: For multiple transit types, 144 weekday trips and 108 weekend trips	Responsible Party
For projects with one or more transit types (bus, streetcar, rail, or ferry) 174 Number of weekday trips Number weekend day trips	For projects with one or more transit types (bus, streetcar, rail, or ferry) KRG

Innovation			Notes		Date QAD Notes (erified
	Preliminary Y 2 Maybe 0	Verified 0			
N Prerequisite Preliminary Rating			IN Prerequisite Preliminary Rat	ting	
Required	Required	V erified Y		Responsible Party	KELLY GILLESPIE
True Preliminary rating and meeting are complete.				KRG	
N Credit Innovation			IN Credit Innovation		
To achieve all five innovation points, a project team must achieve at least one pilot credit Jp to 5 points	at least one innovation credit and no more than two exe Preliminary Y 2 M 0	mplary performance credits. Verified 0		Responsible Party	
Option 1. Innovation (1 point)	Υ Μ	v	Option 1. Innovation (1 point)		
Describe the intent of the proposed innovation credit. AND/OR Option 2. Pilot (1 point)	Y M	v	Option 2. Pilot (1 point)		
	Pilot credit name				
AND/OR Option 3. Additional Strategies (1-3 points) Exemplary Performance: 1-2 points	Y 2 M	V	Option 3. Additional Strategies (1-3	3 points)	
Exemplary Performance DENSITY	Strategy Credit name			KRG	
Exemplary Performance ENERGY-STAR RATED THERMOSTAT	Strategy Credit name			KRG	
	Strategy Credit name				
	Strategy Credit name				
N Credit LEED Accredited Professional			IN Credit LEED Accredited Prof	fessional	

Sustainable Sites		Notes	Verified (initials)	Date Verified	QAD Notes
	Preliminary Y 4 Maybe 3 Verified 0				
SS Prerequisite Construction Activity Pollution Prevention		SS Prerequisite Construction	on Activity Pollution Pre	evention	
Required	Required Verified Y		Responsible Party	y	
Confirm all of the following measures were implemente					
True Stockpiled and protected disturb True Controlled the path and velocity	ed topsoil from erosion. of runoff with silt fencing or comparable measures.		KRG		
	ilets, streams, and lakes with straw bales, silt fencing, silt sacks, rock filters, or comparable measures.		KRG		
True Provided swales to divert surface			KRG		
N/A Used tiers, erosion blankets, cor (6.6:1) or more that was disturbe	mpost blankets, filter socks, berms, or comparable measures to stabilize soils in any area with a slope of 15% ed during construction.		KRG		
OR Select one of the following:		OR			
	plemented an Erosion and Sedimentation Control (ESC) plan that conforms to the requirements of the 2017 U.S. by (EPA) Construction General Permit (CGP).				
True The project team created an imp	Delemented an Erosion and Sedimentation Control (ESC) plan that conforms to local standards and codes, which are 17 U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP).		KRG	01/01/19	
SS Credit Heat Island Reduction		SS Credit Heat Island Reduction	n		
1 point	Preliminary Y 0 M 1 Verified 0		Responsible Party		
Exemplary Performance: Meet a 75% threshold for Option 1.					
Option 1. Nonroof and Roof (1 point)	Y M V	Option 1. Nonroof and Roof (1 point	t)		
Hardscapes					
Total hardscape area (driveways, wa Area of shaded hardscapes (sq ft)					
Area of unshaded paving materials v Area of unshaded vegetation in open	vith an initial SR value of at least 0.33 (sq ft) pavers (sq ft)				
Remaining hardscape area (not earn	ing credit) (eq ft)				
Roof Total roof area (sq ft)					
	Table 1 in the rating system for SRI requirements (sq ft)				
Remaining roof area (not earning cre	edit) (sq ft)				

Credit Heat Island Reduction	SS Credit Heat Island Reduction
Preliminary Y 0 M 1 Verified 0	Responsible Party
mplary Performance: Meet a 75% threshold for Option 1.	
Option 1. Nonroof and Roof (1 point)	Option 1. Nonroof and Roof (1 point)
Hardscapes	
O Total hardscape area (driveways, walkways, patios, etc.) (sq ft) Area of shaded hardscapes (sq ft)	
Area of unshaded paving materials with an initial SR value of at least 0.33 (sq ft)	
Area of unshaded vegetation in open pavers (sq ft) Remaining hardscape area (not earning oredit) (sq ft)	
Roof	
Total roof area (sq ft) Area of qualified roof products, see Table 1 in the rating system for SRI requirements (sq ft)	
Area of vegetated roof (sq ft) Remaining roof area (not earning credit) (sq ft)	
Traintaining foot a call first carring areasy (eq. iv)	
0.0% Percentage of area with shading or nonabsorptive material (%)	
OR Option 2. Tree Planting (1 point) Y M 1 V	Online O. Toro Planting (4 point)
Option 2. Tree Planting (1 point) Y M 1 V	Option 2. Tree Planting (1 point)
(Select one) Install tree with canopy width of 20 feet, or trees with shading area of 315 square feet.	
Credit Rainwater Management	SS Credit Rainwater Management
o 2 points Preliminary Y 2 M 1 Verified 0	Responsible Party
mplary Performance: For Case 1, manage 80% of all stormwater on-site or the total impermeable area is less than or equal to 33% of Reference Home or for Case 2, meet a percentile rainfall event	
	Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points)
Option 1. Rainwater Management (1-2 points)	
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Site Characteristics	
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Site Characteristics 1,259 Total lot area (sq ft) Roof 500 Total roof area (sq ft) Vegetated roof area (sq ft)	
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Site Characteristics 1,259 Total lot area (sq ft)	Case 1. Low Impact Development (1-2 points)
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y 1 Non-roof Site Area	Case 1. Low Impact Development (1-2 points) KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Site Characteristics 1,259 Total lot area (sq ft) Roof 500 Total roof area (sq ft) Yegetated roof area (sq ft) Roof area directed to a qualifying infiltration feature (sq ft) Remaining roof area (not earning credit) (sq ft) Non-roof Site Area 159 Total landscape softscape area (sq ft)	Case 1. Low Impact Development (1-2 points) KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y 1 M 1 V Site Characteristics 1,259 Total roof area (sq ft) Vegetated roof area (sq ft) Vegetated roof area (sq ft) Remaining roof area (not earning credit) (sq ft) Remaining roof area (not earning credit) (sq ft) Non-roof Site Area 159 Total landscape softscape area (qf ft) Permeable paving (sq ft) Permeable paving (sq ft)	Case 1. Low Impact Development (1-2 points) KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Site Characteristics 1,259 Total lot area (sq ft) Yegetated roof area (sq ft) Yegetated roof area (sq ft) Roof area directed to a qualifying infiltration feature (sq ft) Remaining roof area (not earning credit) (sq ft) Non-roof Site Area 159 Total landscape softscape area (sq ft) Qualifying open pavers (sq ft) Qualifying open pavers (sq ft) Qualifying open pavers (sq ft) Hardscapes directed to qualifying infiltration features (sq ft)	Case 1. Low Impact Development (1-2 points) KRG KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y 1 Non-roof Site Area 159 Total Indiscape area (sq ft) Non-roof Site Area 159 Total Indiscape area (driveways, walkways, patios, etc.) (sq ft) Permeable paving (sq ft) Qualifying open pavers (sq ft) Qualifying open pavers (sq ft) Qualifying open pavers (sq ft)	Case 1. Low Impact Development (1-2 points) KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y 1 M 1 V Site Characteristics 1,259 Total lot area (sq ft) Vegetated roof area (sq ft) Soo On Roof area directed to a qualifying infiltration feature (sq ft) Remaining roof area (not earning credit) (sq ft) Non-roof Site Area 159 Total landscape area (driveways, walkways, patios, etc.) (sq ft) Permeable paving (sq ft) Qualifying open pavers (sq ft) Hardscapes directed to qualifying infiltration features (sq ft) Remaining hardscape area (not earning credit) (sq ft) Qualifying area, as a percentage of total lot area	Case 1. Low Impact Development (1-2 points) KRG KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y 1 M 1 V Site Characteristics 1,259 Total lot area (sq ft) Vegetated roof area (sq ft) Vegetated roof area (sq ft) Remaining roof area (not earning credit) (sq ft) Remaining roof area (fireted to qualifying infiltration feature (sq ft) Remaining roof area (fireted to qualifying infiltration feature (sq ft) Remaining roof area (fireted to qualifying infiltration feature (sq ft) Remaining roof area (fireted to qualifying infiltration feature (sq ft) Remaining farth	Case 1. Low Impact Development (1-2 points) KRG KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y 1 M 1 V Site Characteristics 1,259 Total lot area (sq ft) Vegetated roof area (sq ft) Vegetated roof area (sq ft) Remaining roof area (not earning credit) (sq ft) Remaining roof area (not earning credit) (sq ft) Non-roof Site Area 159 Total landscape softscape area (sq ft) Cualifying open pavers (sq ft) Permeable paving (sq ft) Qualifying open pavers (sq ft) Hardscapes directed to qualifying infiltration features (sq ft) Remaining hardscape area (not earning credit) (sq ft) Qualifying area, as a percentage of total lot area 60.3% Qualifying area, as a percentage of total lot area Reduction of total Impermeable area	Case 1. Low Impact Development (1-2 points) KRG KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y	Case 1. Low Impact Development (1-2 points) KRG KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y In M V Site Characteristics 1,259 Total lot area (sq ft) Vegetated roof area (sq ft) Vegetated roof area (sq ft) Remaining roof area (not earning credit) (sq ft) Non-roof Site Area 159 Total landscape softscape area (sq ft) Gualifying open pavers (sq ft) Qualifying open pavers (sq ft) Remaining hardscape area (not earning credit) (sq ft) Qualifying area, as a percentage of total lot area 60.3% Qualifying area, as percentage of total lot area 60.3% Reduction of total impermeable area Total impermeable area Total impermeable area of the project (sq ft)	Case 1. Low Impact Development (1-2 points) KRG KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y	Case 1. Low Impact Development (1-2 points) KRG KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y 1 M 1 V Site Characteristics 1,259 Total lot area (sq ft) Vegetated roof area (sq ft) Vegetated roof area (sq ft) Roof Total aindscape softscape area (not earning credit) (sq ft) Remaining roof area (not earning credit) (sq ft) Non-roof Site Area 159 600 Total hardscape area (driveways, walkways, patios, etc.) (sq ft) Permeable paving (sq ft) Qualifying open pavers (sq ft) Hardscapes directed to qualifying infiltration features (sq ft) Remaining hardscape area (not earning credit) (sq ft) Qualifying area, as a percentage of total lot area 60.3% Qualifying area, as percentage of total lot area Total impermeable area Total impermeable area of the project (sq ft) Reference home size (sq ft) Infiltration features (sq ft) Reference home size (sq ft) Reference home size (sq ft) Infiltration features (sq ft) Reference home size (sq ft) Infiltration features (sq ft) Reference home size (sq ft) Impermeable area as a percentage of reference home size	Case 1. Low Impact Development (1-2 points) KRG KRG KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y	KRG KRG USING: Reduction in Impermeable Area KRG
Option 1. Rainwater Management (1-2 points) Case 1. Low Impact Development (1-2 points) Y	KRG KRG USING: Reduction in Impermeable Area KRG

Meet all of the following requirements for all designed landscape softscapes:

True Do not use turf in areas with a slope of 25% (i.e., 4:1 slope) or greater.

True All compacted soil (e.g., from construction vehicles) must be tilled to at least 6 inches.

True Add mulch or soil amendments as determined by soil testing.

True Do not use turf in densely shaded areas.

V	Option 2. Basic Landscape Design (1 point)				14 NOR	· · · · · · · · · · · · · · · · · · ·
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ALAN R. DALTON Ilan R Dalton LEED CHECKLIST PREPARED BY KELLY GILLESPIE, CERTIFICATION AS PART OF PLAN SET ONLY. SHEET 33 OF 35

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Water Efficiency	Notes Verified Date QAD (initials) Verified	Energy and Atmosphere Preliminary Y 19 Maybe 0 Verified 16	Notes Verified Date (initials) Verified QAD Notes
Preliminary Y 3 Maybe 0 Verified 0		Preliminary Y 19 Maybe 0 Verified 16 EA Prerequisite Minimum Energy Performance	EA Prerequisite Minimum Energy Performance
WE Prerequisite Water Use	WE Prerequisite Water Use	Required Required Verified	Responsible Party
Required Required Verified	Responsible Party	1. ENERGY STAR for Homes version 3 True ENERGY STAR version 3 checklists are complete	1. ENERGY STAR for Homes version 3 KRG
Option 1. Total Water Use Reduce total indoor and outdoor water consumption by at least 20% over standard practices 0.00% Total reduction of indoor and outdoor water consumption as calculated in the <u>Water Reduction Calculator</u> (%)		65 HERS Index Rating 71 ENERGY STAR HERS Index Target (SAF Adjusted)	KRG
OR Option 2. Indoor and Outdoor Water Use		ENERGY STAR Qualified Appliances Select at least one of the following:	2. ENERGY STAR Qualified Appliances KRG
Achieve 3 points in WE credit Indoor Water Use and/or WE credit Outdoor Water Use O Total points in WE credit Indoor Water Use and WE credit Outdoor Water Use	KRG	True ENERGY STAR refrigerator is installed. True ENERGY STAR dishwasher is installed. (Select one) ENERGY STAR clothes washer is installed.	
WE Prerequisite Water Metering	WE Prerequisite Water Metering	3. Duct Runs True All duct runs are fully ducted.	3. Duct Runs KRG
Required Required Verified	Responsible Party	EA Prerequisite Energy Metering	EA Prerequisite Energy Metering
Select one of the following: True (Select one) A whole-house water meter is installed. The house uses only well water and is not connected to a municipal water system.	KRG	Required Required Verified	Responsible Party KRG
(Select one) The house uses only well water and is not connected to a municipal water system. WE Credit Total Water Use	WE Credit Total Water Use	True A whole-house electric meter is installed. True A whole-house gas meter is installed.	KRG KRG
	Responsible Party	EA Prerequisite Education of Homeowner, Tenant, or Building Manager	EA Prerequisite Education of Homeowner, Tenant, or Building Manager
Exemplary Performance: 85% reduction of indoor and outdoor water consumption		Required Required Verified True An operations and maintenance manual, binder, or CD has been/will be provided to all individuals or organizations responsible for the maintenance of the	Responsible Party KRG
0.00% Total reduction of indoor and outdoor water consumption as calculated in the Water Reduction Calculator (%) (Select one) The water pressure has been tested. There are no detectable water leaks. Any installed water softeners are demand initiated.		home. True A minimum one-hour walkthrough of the home with the occupants has been conducted.	KRG
WE Credit Indoor Water Use	WE Credit Indoor Water Use	Up to 36 points Preliminary Y 16 M 0 Verified 16	EA Credit Annual Energy Use Responsible Party
	Responsible Party	Exemplary Performance: For Option 1, 100% reduction; For Option 2, -10 HERS Index Rating. Option 1. LEED Energy Budget (1-36 points) Y 16 M V 0	Option 1. LEED Energy Budget (1-36 points)
True The water pressure has been tested. There are no detectable water leaks. Any installed water softeners are demand initiated.	KRG	LEED Reference Energy Budget (MMBtu/year)	Special Communication of the C
Meet any of the following: Lavatory Faucet (2-3 points)	Lavatory Faucet (2-3 points)	As Designed Energy Budget (MMBtufyear) Percent reduction below LEED Energy Budget (%) Total Points	
True All installed lavatory faucets and/or faucet aerators are WaterSense labeled. Average rated flow volume across all lavatory faucets (gpm) Showerheads (1-3 points)	KRG KRG Showerheads (1-3 points)	OR Option 2. HERS Index (SAF Adjusted) (1-36 points) Y M V 16	Option 2. HERS Index (SAF Adjusted) (1-36 points)
True All installed showerhead fixtures and fittings are WaterSense labeled. 1.75 Total rated flow volume per shower compartment, averaged across all shower compartments (gpm)	Shower neads (1-5 points) KRG KRG	Case 1: New Construction	KRG
Tollets (1-3 points) (Select one) All installed toilet fixtures and fittings are WaterSense labeled.	Toilets (1-3 points)	65 HERS Index Rating 1.00 Size Adjustment Factor (SAF) from the ENERGY STAR for Homes Report 65 HERS Index (SAF Adjusted) 15 Points for achieving HERS Index Rating	
Average rated flush volume across all toilets (gpf) Clothes Washers (2 points)	Clothes Washers (2 points)	71 ENERGY STAR HERS Index Target (SAF Adjusted) 65 HERS index (SAF Adjusted)	
(Select one) All clothes washers are ENERGY STAR qualified or performance equivalent		6 HERS Index points below ENERGY STAR HERS Index Target (SAF Adjusted) 16 Points for HERS points below ENERGY STAR HERS Index Target (SAF Adjusted)	
WE Credit Outdoor Water Use	WE Credit Outdoor Water Use	Case 2: Major Renovation 65 HERS Index Rating Size Adjustment Factor (SAF) from the ENERGY STAR for Homes Report	
Up to 4 points	Responsible Party	0 HERS Index (SAF Adjusted)	
Case 1. Efficient Landscaping (1-4 points) Turf grass area as a percentage of total landscape softscape area (%)	Case 1. Efficient Landscaping (1-4 points)	0 Points for achieving HERS Index Rating EA Credit Efficient Hot Water Distribution System	EA Credit Efficient Hot Water Distribution System
Native or adapted plant area as a percentage of total landscape softscape area (%) OR		Up to 2 points Preliminary Y 1 M 0 Verified 0	Responsible Party
Case 2. Efficient Irrigation (1-2 points) Y M V Design and install a high-efficiency irrigation such that any of the following are met (1 point per measure):	Case 2. Efficient Irrigation (1-2 points)	Option 1. Efficient Hot Water Distribution (1 point) Y 0 M 0 V 0	Option 1. Efficient Hot Water Distribution (1 point)
(Select one) Use of pressure regulation for every zone (valve or sprinkler)		For projects using circulating systems (Select one) Circulating pump does not operate continuously, is on a timer, or is on a water temperature sensor.	For projects using circulating systems
(Select one) Use of check valves on sloped irrigation zones, where needed to prevent low head drainage (Select one) Flow sensing with a master valve and irrigation controller that responds to a high-flow occurrence		(Select one) Circulating pump is demand activated by a momentary contact switch, motion sensor, flow switch, door switch or voice command. After the pump starts, the controls allow the pump to operate until the water temperature in the return pipe rises not more than 10°F (6°C) above the initial temperature of the water in the pipe. Controls limit the water temperature to a maximum of 10°F (40°C). Controls limit pump operation to not more than	
(Select one) Use of smart irrigation control technology (weather based, soil moisture sensors, rain sensors, etc.) (Select one) Create separate zones for each type of bedding area based on watering needs		5 minutes per activation in the event that both means of shutting off the pump have failed. (Select one) Circulating hot water systems have with an automatic or readily accessible manual switch to turn off the hot water circulating pump when not in use.	
(Select one) Use of drip irrigation for at least 50% of planting area			
Materials and Resources	Notes Verified Date QAD Notes (initials) Verified	For projects using heat-traced piping systems (Select one) Piping is insulated.	For projects using heat-fraced piping systems
Preliminary Y 6 Maybe 0 Verified 0		Path 1. Maximum Allowable Pipe Length (1 point) Pipe or tube length installed (ft)	Path 1. Maximum Allowable Pipe Length (1 point)
MR Prerequisite Certified Tropical Wood	MR Prerequisite Certified Tropical Wood	Nominal pipe size (ii) Maximum pipe or tube length allowed for water heaters, boilers with no circulation loop or heat traced pipe or in multifamily buildings a central circulation loop or heat traced pipe (it)	
Required Required Verified True All wood in the building is nontropical, reused or reclaimed, or certified by the Forest Stewardship Council, or USGBC-approved equivalent.	Responsible Party KRG	Maximum pipe or tube length allowed for circulation loop or heat traced pipe serving a single unit or house (ft) OR	
MR Prerequisite Durability Management	MR Prerequisite Durability Management	Path 2. Maximum Allowable Pipe Volume (1 point) Volume of hot or tempered water from source to termination (oz)	Path 2. Maximum Allowable Pipe Volume (1 point)
Required Required Verified	Responsible Party	OR Option 2. Performance Test (1 point) Y 0 M 0 V 0	Option 2. Performance Test (1 point)
True ENERGY STAR for Homes, version 3, water management system builder requirements are met. Confirm all of the following have been implemented on the project:	KRG	For projects using circulating systems	For projects using circulating systems
True Nonpaper-faced backer board, or a product or coating over wallboard that meets standard ASTM D 3273 standard, was installed on the area above bathtub, spa or shower, and in areas behind fiberglass enclosures where wallboard is installed. True Water-resistant filoring was installed in the kitchen, bathroom(s), laundry room, spa area(s). No carpet was installed in these areas.	KRG KRG	(Select one) Circulating pump does not operate continuously, is on a timer, or is on a water temperature sensor. (Select one) Circulating pump is demand activated by a momentary contact switch, motion sensor, flow switch, door switch or voice command.	
True Water-resistant flooring was installed in entryways within 3 feet of exterior door(s). True A drain and drain pan, drain pan and automatic water shut-off or flow restrictors, or floor drain with floor sloped to drain was installed for all tank water	KRG KRG	(Select one) After the pump starts, the controls allow the pump to operate until the water temperature in the return pipe rises not more than 10°F (6°C) above the initial temperature of the water in the pipe. Controls limit the water temperature to a maximum of 10°F (40°C). Controls limit pump operation to not more than 5 minutes per activation in the event that both means of shutting off the pump have failed.	
heaters in or over living space. True A braided washer hose, drain and drain pan, drain pan and automatic water shut-off or flow restrictors, or floor drain with floor sloped to drain was installed for clothes washer in or over living space.	braided steel hoses KRG	(Select one) Circulating hot water systems have with an automatic or readily accessible manual switch to turn off the hot water circulating pump when not in use.	
True Conventional clothes dryers exhaust directly to outdoors. True After completion of construction, test to verify that there are no detectable water leaks.	KRG KRG	For projects using heat-traced piping systems (Select one) Piping is insulated. Note: Projects using heat traces that serve a single unit or house are awarded only half credit.	For projects using heat-traced piping systems
MR Credit Durability Management Verification	MR Credit Durability Management Verification	Case 1. Hot water source is a water heater or boiler with no circulation Y M V loop or heat traced pipe; or in multifamily buildings a central circulation loop or heat traced pipe.	Case 1. Hot water source is a water heater or boiler with no circulation loop or heat traced pipe; or in multifamily buildings a central circulation loop or heat traced pipe.
Up to 3 points Preliminary Y 1 M 0 Verified 0	Responsible Party	(Select one) Meets WaterSense Labeled New Homes requirements	
Option 1: Water Management System (1 point) Y 1 M V True Each measure in the ENERGY STAR for Homes, version 3, water management system builder requirements were verified by the verification team.	KRG	Tested volume of water stored in piping (gal) OR	
AND/OR Option 2. Overhangs (1 point) Y M V	MC	Case 2. Hot water source is a circulation loop or heat traced pipe Y M V serving a single unit or house	Case 2. Hot water source is a circulation loop or heat traced pipe serving a single unit or house
(Select one) Each exterior door is protected by compliant overhang, roof or awning		Tested volume of water stored in piping (gal) For projects using heal-traced piping systems	For projects using heat-traced piping systems
ANDIOR Option 3. Plumbing Condensation Control (1 point) Y M V		(Select one) Piping is insulated. AND/OR	
Select one of the following: (Select one) R-4 insulation install on all domestic cold water piping in unconditioned space OR		Option 3. Pipe Insulation (1 point) Y 1 M V 4.00 Insulation R-value	Option 3. Pipe Insulation (1 point)
(Select one) No cold water piping installed in unconditioned spaces		EA Credit HVAC Start-Up Credentialing	EA Credit HVAC Start-Up Credentialing
MR Credit Environmentally Preferable Products Up to 5 points Preliminary Y 3 M 0 Verified 0	MR Credit Environmentally Preferable Products Responsible Party	1 point Preliminary Y 1 M 0 Verified	Responsible Party
Exemplary Performance: Earn more than the maximum 5 points Option 1. Local Production Preliminary Y 1 M Verified	Option 1. Local Production	Name of technician Company of technician Technician commissioning all heating, cooling, and ventilation systems has the following credential	KRG
Select which the following were extracted, processed, and manufactured within 100 miles (160 km) of the project site:		North American Technician Excellence certification	E& Cradii Defriparant Management
Percentage of locally produced framing (%) (1 point) 50.00 Percentage of locally produced aggregate for concrete and foundation (%) (1 point) Percentage of locally produced drywall and interior sheathing (%) (1 point)	KRG	1 point Preliminary Y 1 M 0 Verified	EA Credit Refrigerant Management Responsible Party
AND/OR Option 2. Environmentally Preferable Products Preliminary Y 2 M Verified	Option 2. Environmentally Preferable Products	Exemplary Performance: Do not use refrigerants, or use only refrigerants that have an ozone depletion potential (ODP) of zero and a global warming potential (GWP) of less than 50.	
Select the criteria met by at least 50% of the component for 1 point. At least 90% for 2 points. Percentage of Component		Option 1. Refrigerant Selection R-410A Refrigerant used	KRG
No Floor Covering Floor Covering		OR Option 2. Calculation Approach	
Insulation At least 25% postconsumer or 50% preconsumer recycled content 100%	KRG	System type Refrigerant Maximum refrigerant charge or weighted average ratio of refrigerant charge	
Sheathing Framing			
Drywall Concrete			
Roofing			
Siding Select criteria for any of the following additional components for at least 90% of the component (1 point per component):			
Doors Cabinets		Regional Priority	Notes Verified Date QAD Notes (initials) Verified
Counters Interior Trim		Preliminary Y 3 Maybe 0 Verified	
Decking/Patio At least 25% postconsumer or 50% preconsumer recycled content 65%	Trex Decking: 100% wood post-c; 95% p KRG	RP Credit Regional Priority	RP Credit Regional Priority
Windows MR Credit Construction Waste Management	MP Cordi Capetrositi-s Wester	RP Credit Regional Priority Up to 4 points Preliminary Y 3 M 0 Verified	RP Credit Regional Priority Responsible Party
MR Credit Construction Waste Management	MR Credit Construction Waste Management	Regional priority credits may be found on www.usgbc.org/rpc . Alternative Regional Priority Credits can be used if justification is provided.	
Up to 2 points Preliminary Y 0 M 0 Verified 0 Exemplary Performance: For renovation projects using Option 2, track and divert at least 50% of demolition waste.	Responsible Party	Regional Priority Credit Name Point Threshold Site Selection 3	KRG
Option 1. Diversion (1-2 points) Y M V Diverted material streams	Option 1. Diversion (1-2 points)	Site Selection 3 Compact Development 1 Community Resources 2	KRG KRG KRG
Diverted material streams Path 1. Divert 50% and three material streams (1 point)	Path 1. Divert 50% and three material streams (1 point)		
Diversion rate of the total construction and demolition material OR	OR		
Path 2. Divert 75% and four material streams (2 points) Diversion rate of the total construction and demolition material	Path 2. Divert 75% and four material streams (2 points)		
OR Option 2. Reduction of total waste material (2 points) Y M V	OR Option 2. Reduction of total waste material (2 points)		
6,720.00 LEED Reference Home Baseline Waste (bs)			
Total Construction Waste (including recycled waste) (lbs) Recycled Waste (lbs) Project Construction Waste (lbs) Percent reduction below baseline (%)			

	s to be submitted for certification as rements for every prerequisite and cr			very home in th	is batch submittal v	vill meet or								
Total number of homes				0										
Total EA points for LEED Ener	gy Budget Option			0										
Total EA points for achieving h	HERS Index Rating			0										
Total EA points for HERS point	its below ENERGY STAR HERS Inde	lex Target (SAF Adjuster	d)	0										
Note: The Consest left	postion must be populated	signat distable in LECS O-	line All appeal info	ation must be -	envided for each h-	me in the batch								
Note: The General Information	section must be consistent with pro	oject details in LEED On	illie. All general informa	auon must be p	rovided for each ho	ille in the batch.								
	General Info	rmation				Option 1: LEED	Energy Budget				Option 2:	HERS Index (SA	F Adjusted)	
	General Info	rmation				Option 1: LEED	Energy Budget				Option 2: Size Adjustment		F Adjusted)	HERS Index
				Number of			Annual	EA .	пере-	ENERGY STAR	Size Adjustment Factor (SAF)		Points for	points below
Project ID	General Info Street Address or Lot Number	rmation Project City	area (see		LEED Reference			EA Points	HERS Index Rating	ENERGY STAR HERS Index Target (SAF	Size Adjustment Factor (SAF) from the		Points for	

LEED CHECKLIST	114 NORTH ALFRED STREET	TAX MAP 064,04-05-35
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CITY OF ALEXANDRIA, VIRGINIA SCALE: AS SHOWN FEBRUARY 16, 2021

DOMINION Surveyors Inc.

8808-H PEAR TREE VILLAGE COURT ALEXANDRIA, VIRGINIA 22309 703-619-6555 FAX 703-799-6412

APPROVED SPECIAL USE PERMIT DEPARTMENT OF PLANNING & Z	
DIRECTOR	DATE
DEPARTMENT OF TRANSPORTATION SITE PLAN NO.	
DIRECTOR	DATE
CHAIRMAN, PLANNING COMMISSION	DATE
DATE RECORDED	

DEED BOOK NO.

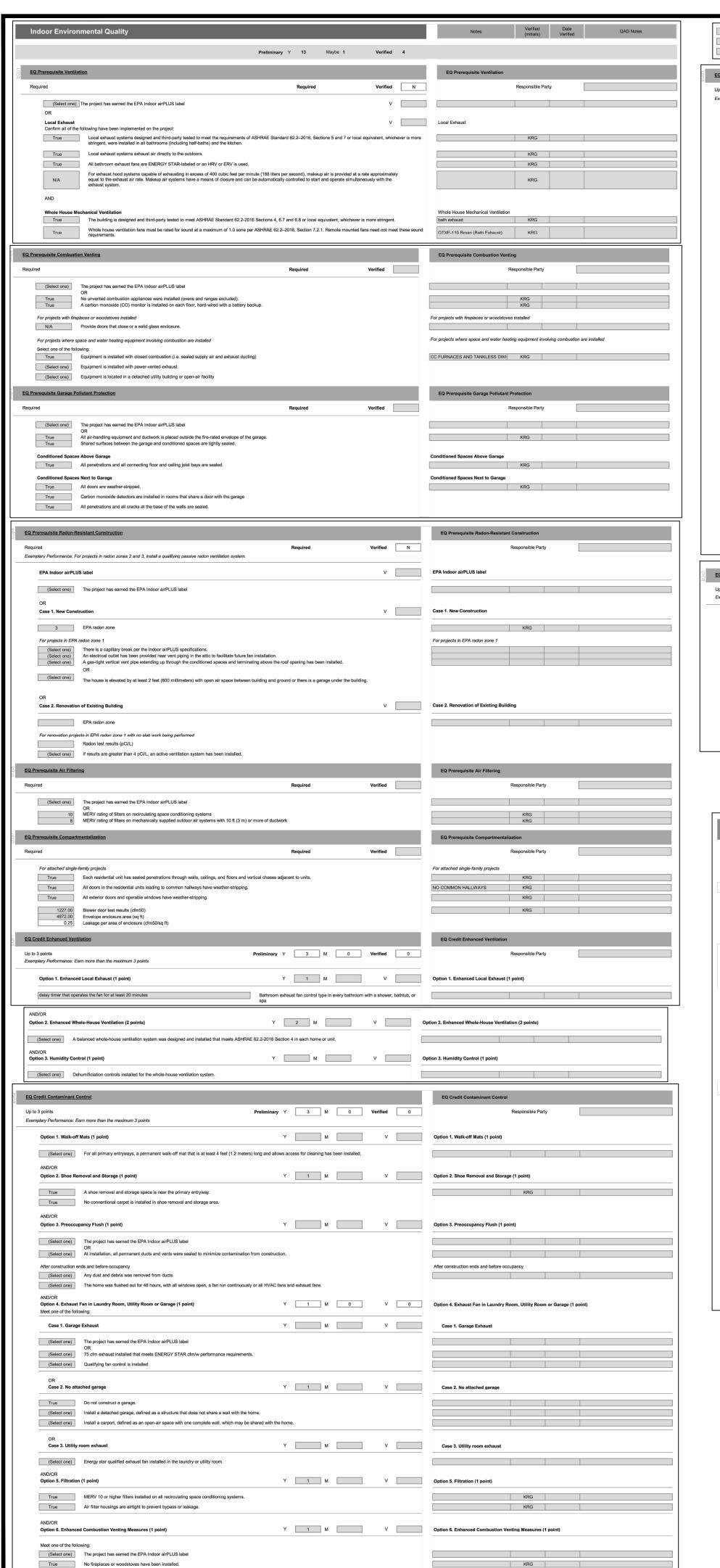
PAGE NO.

INSTRUMENT NO.

EED CHECKLIST PREPARED BY KELLY GILLESPIE, CERTIFICATION AS PART OF PLAN SET ONLY.

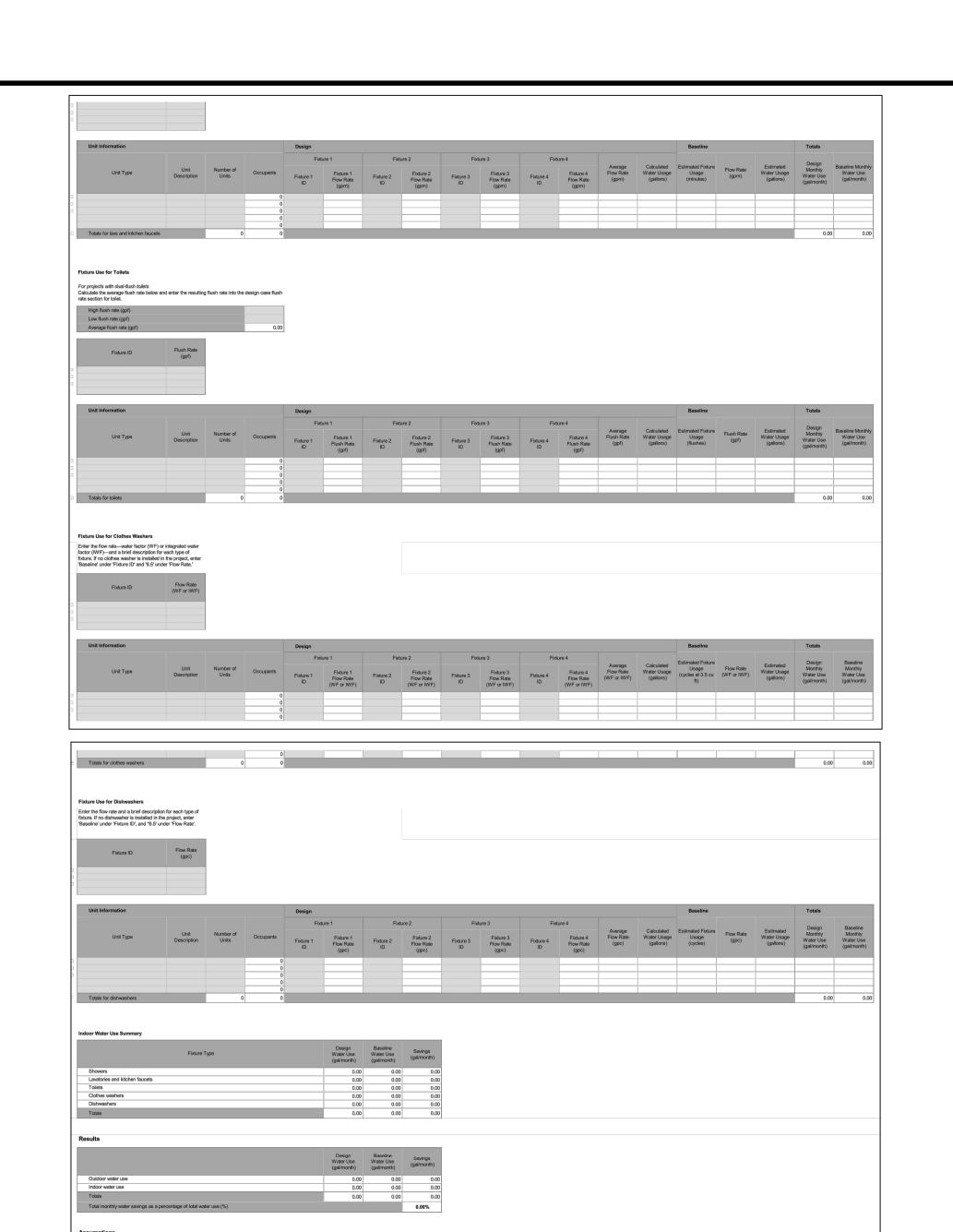
ISQ

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(Select one) EPA qualified wood- or pellet-burning fireplaces with either power or direct venting have been installed.	
(Select one) A natural gas, propane, or alcohol stove approved by a safety testing facility and has power or direct venting has been installed.	
(Select one) A natural gas, propane, or alcohol stove has a permanently fixed glass front or gasketed door and an electronic pilot.	
EQ Credit Balancing of Heating and Cooling Distribution Systems	EQ Credit Balancing of Heating and Cooling Distribution Systems
Up to 6 points Preliminary Y 5 M 1 Verified 0 Exemplary Performance: Earn more than the maximum 6 points	Responsible Party
Option 1. Multiple Zones (1 point)	Option 1. Multiple Zones (1 point)
(Select one) A system with at least two space-conditioning zones with independent thermostatic controls has been installed.	
OR (Select one) The project is a single family home less than 800 sq ft (74 sq m).	
AND/OR	
Option 2. Supply Air-Flow Testing (1 point)	Option 2. Supply Air-Flow Testing (1 point)
Exemplary Performance: Total supply air-flow rates in each room tested using a flow hood with doors closed, or another acceptable method, per RESNET or ACCA Quality Installation Specifications; results within +/- 20% (or +/- 25 cfm or 11 lps) of calculated values from ACCA Manual J.	
Each heating/cooling system meets one of the following:	
(Select one) Rater tested airflow at the air handler; results within the 10% or installer-tested airflow or 15% of design. (Select one) Ductless heating and cooling system	
(Select one) Radiative systems have room-by-room thermostatic controls	
AND/OR Option 3. Pressure Balancing (1 point) Y 1 M V	Option 3. Pressure Balancing (1 point)
True The pressure differential between each bedroom and rest of the house is less than 3 Pa. AND/OR	TRANSFER GRILLES AND DEDICATE KRG
Option 4. Moisture load control (1 point).	Option 4. Moisture load control (1 point).
Dehumidification	Dehumidification
(Select one) Qualifying dehumidification equipment installed	
Option 5. Remote Access Thermostat (1 point) Y 1 M V	Option 5. Remote Access Thermostat (1 point)
Exemplary Performance: Install an ENERGY STAR qualified smart thermostat.	
True Remote access thermostat installed for all space heating and cooling systems.	NEST THERMOSTATS KRG
AND/OR Option 6. Multistage Equipment (2 points) Y 1 M 0 V 0	Option 6. Multistage Equipment (2 points)
Case 1. Two stage equipment. (1 point)	Case 1. Two stage equipment. (1 point)
(Select one) All space heating and cooling systems have at least 2 speeds.	
OR .	
Case 2. Multi-stage equipment (2 points)	Case 2. Multi-stage equipment (2 points)
(Select one) All space heating and cooling systems have more than 2 speeds.	
AND/OR Option 7. Static Pressure Test (1 point) Y 1 M V	Option 7. Static Pressure Test (1 point)
Meet one of the following:	
True External static pressure no greater than 0.1 IWC compared to the design total external static pressure	KRG
(Select one) All heating and cooling systems are ductless and/or radiative systems AND/OR	
Option 8. Quiet Heating and Cooling Systems (1 point)	Option 8. Quiet Heating and Cooling Systems (1 point)
(Select one) Maximum background noise levels from heating and cooling systems are at or below 35 dBA for living areas and 40 dBA for kitchens and baths.	
EQ Credit Low-Emitting Products	EQ Credit Low-Emitting Products
Up to 4 points Preliminary Y 2 M 0 Verified 4	Responsible Party
Exemplary Performance: Earn more than the maximum 4 points	
Select all that apply. At least 50% of a component must meet the requirements to earn 1 point, or 90% for 2 points. Use materials on the building interior (everything within the waterproofing membrane) that meet the low-emitting criteria below.	
90% - 2 point Paints and Coatings Meet both of the following:	
True Paints and coatings meet the VOC emissions evaluation. True Paints and coatings meet the VOC content evaluation.	LOW-VOC KRG KRG
(Select one) Adhesives and Sealants Meet both of the following:	
(Select one) Adhesives and sealants meet the VOC emissions evaluation . (Select one) Adhesives and sealants meet the VOC content evaluation .	
(Select one) Flooring Meet both of the following:	
(Select one) Flooring meets the VOC emissions evaluation OR inherently nonemitting sources criteria , OR salvaged and reused materials criteria . (Select one) Includes all types of hard and soft surface flooring (carpet, ceramic, vinyl, rubber, engineered, solid wood, laminates), wall base, underlayments, and other floor	
90% - 2 point Insulation Meet both of the following:	
True Insulation meets the VOC emissions evaluation. True Includes all thermal and acoustic boards, batts, rolls, blankets, sound attenuation, fire blankets, foamed-in place, loose-fill, blown, and sprayed insulation.	KRG KRG

	ne if your building uses less w																	
Note: This calculator is a rela values/rates from the product malfunctioning products.	tive measure of water use bas specifications. Measurement	sed on how the pro is from field testing	ducts are designed a should NOT be use	ind not how they ac d in this calculator,	ctually perform in the but may be used t	e field. Therefore o identify improper	, please use ly installed or											
Outdoor Water Use																		
Provide the following values Allowance. The landscape w	from the WaterSense Water	Budget Calculato	r. Note that you sho	ould enter the 'Bas	seline' water use,	not the Landscape	Water											
Baseline for the site (gal		on 70% of the base	eline water use.					Ī										
Landscape water require	ment for site (gal/peak month)																	
Rainwater or graywater (gal/peak month)																	
Unit Information																		
List the number of each type double check your entries for '1' by the number of bedrooms	each fixture type. For single f	formation is used to amily homes, put																
Unit Type	Number of	Occupants																
Efficiency	Units	Occupants																
1 Bedroom			á															
2 Bedrooms 3 Bedrooms																		
4 Bedrooms 5 Bedrooms																		
6 Bedrooms		(5															
Totals		0 (
Enter the flow rate and a brief fixture. Fixture ID	Flow Rate (gpm)	TSV?	Adjusted Flow Rate (gpm)															
Complete one row for each ur calculate the average water us throughout the building, select Fixture 1.	se of the occupant of each uni	t type. If the fixture	is the same															
				Design										Baseline			Totals	
Unit Information																	Design	
Unit Information				Fixtu	ure 1	Fixt	ure 2	Fixt	ure 3	Fixt	ure 4	Average	Calculated	Estimated Fixture		Estimated	Design	
Unit Information Unit Type	Unit Description	Number of Units	Occupants		Fixture 1 Flow Rate (gpm)	Fixture 2	Fixture 2 Flow Rate (gpm)	Fixture 3	Fixture 3 Flow Rate (gpm)	Fixture 4	Fixture 4 Flow Rate (gpm)	Average Flow Rate (gpm)	Calculated Water Usage (gallons)	Estimated Fixture Usage (minutes)	Flow Rate (gpm)	Estimated Water Usage (gallons)	Monthly Water Use (gal/month)	Wa
	Unit Description	Number of Units	0	Fixture 1	Fixture 1 Flow Rate	Fixture 2	Fixture 2 Flow Rate	Fixture 3	Fixture 3 Flow Rate	Fixture 4	Fixture 4 Flow Rate		Water Usage	Usage	Flow Rate (gpm)	Water Usage	Monthly Water Use	Wa
	Unit Description	Number of Units	0 0	Fixture 1	Fixture 1 Flow Rate	Fixture 2	Fixture 2 Flow Rate	Fixture 3	Fixture 3 Flow Rate	Fixture 4	Fixture 4 Flow Rate		Water Usage	Usage	Flow Rate (gpm)	Water Usage	Monthly Water Use	Wa
	Unit Description	Number of Units	0 0 0	Fixture 1	Fixture 1 Flow Rate	Fixture 2	Fixture 2 Flow Rate	Fixture 3	Fixture 3 Flow Rate	Fixture 4	Fixture 4 Flow Rate		Water Usage	Usage	Flow Rate (gpm)	Water Usage	Monthly Water Use	Baselir Wa (gal
Unit Type	Unit Description	Units	0 0 0	Fixture 1	Fixture 1 Flow Rate	Fixture 2	Fixture 2 Flow Rate	Fixture 3	Fixture 3 Flow Rate	Fixture 4	Fixture 4 Flow Rate		Water Usage	Usage	Flow Rate (gpm)	Water Usage	Monthly Water Use (gal/month)	Wa (gal
Unit Type	Unit Description	Units	0 0 0	Fixture 1	Fixture 1 Flow Rate	Fixture 2	Fixture 2 Flow Rate	Fixture 3	Fixture 3 Flow Rate	Fixture 4	Fixture 4 Flow Rate		Water Usage	Usage	Flow Rate (gpm)	Water Usage	Monthly Water Use (gal/month)	Wa (ga
Unit Type	Description	Units	0 0 0	Fixture 1	Fixture 1 Flow Rate	Fixture 2	Fixture 2 Flow Rate	Fixture 3	Fixture 3 Flow Rate	Fixture 4	Fixture 4 Flow Rate		Water Usage	Usage	Flow Rate (gpm)	Water Usage	Monthly Water Use (gal/month)	Wa (ga
Unit Type Totals for showers	Description	Units	0 0 0	Fixture 1	Fixture 1 Flow Rate	Fixture 2	Fixture 2 Flow Rate	Fixture 3	Fixture 3 Flow Rate	Fixture 4	Fixture 4 Flow Rate		Water Usage	Usage	Flow Rate (gpm)	Water Usage	Monthly Water Use (gal/month)	Wa (gal



Lavatory or kitchen faucet
Toilet

APPROVED SPECIAL USE PERMIT N DEPARTMENT OF PLANNING & ZON	
DIRECTOR	DATE
DEPARTMENT OF TRANSPORTATION SITE PLAN NO.	& ENVIRONMENTAL SERVICES
DIRECTOR	DATE
CHAIRMAN, PLANNING COMMISSION	DATE
DATE RECORDED	
INSTRUMENT NO. DEED BOOK	NO. PAGE NO.

D STREET

8808-H PEAR TREE VILLAGE COURT
ALEXANDRIA, VIRGINIA 22309
703-619-6555
FAX 703-799-6412

114 NORTH ALFRED ST

010276081 # ISQ 02/16/2021 # ISQ 02/16/2021 # ILC. NO. 11789

LEED CHECKLIST PREPARED BY KELLY GILLESPIE, CERTIFICATION AS PART OF PLAN SET ONLY.