

# Tab G

# HILLTOP TERRACE II

4645 G STREET SE, WASHINGTON, D.C. 20019

FINAL DESIGN SCHEMATIC SUBMISSION: OCTOBER 1, 2023



## PROJECT TEAM

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3939 BENNING RD NE, WASHINGTON DC 20019

202.396.1200

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PUSH STUDIO LLC

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## DRAWINGS LIST

G000	COVER SHEET
G001	PROJECT DATA

## CIVIL

CIV-100	SITE PLAN

## ARCHITECTURAL

A101	FLOOR PLANS
A102	ELEVATIONS & SECTION

## LANDSCAPE

L001	SCHEMATIC SUMMARY PLAN

## MEP

NAR1	MEP NARRATIVE
NAR2	MEP NARRATIVE

## STRUCTURAL

NAR3	STRUCTURAL NARRATIVE

APPROVALS

ARCHITECT / DESIGN TEAM  
**dp+partners**

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CLIENT NAME  
MARSHALL HEIGHTS COMMUNITY  
DEVELOPMENT ORGANIZATIONS

PROJECT ADDRESS  
4645 G STREET SOUTHEAST  
WASHINGTON, DC 20019

PROJECT NAME  
HILLTOP TERRACE II

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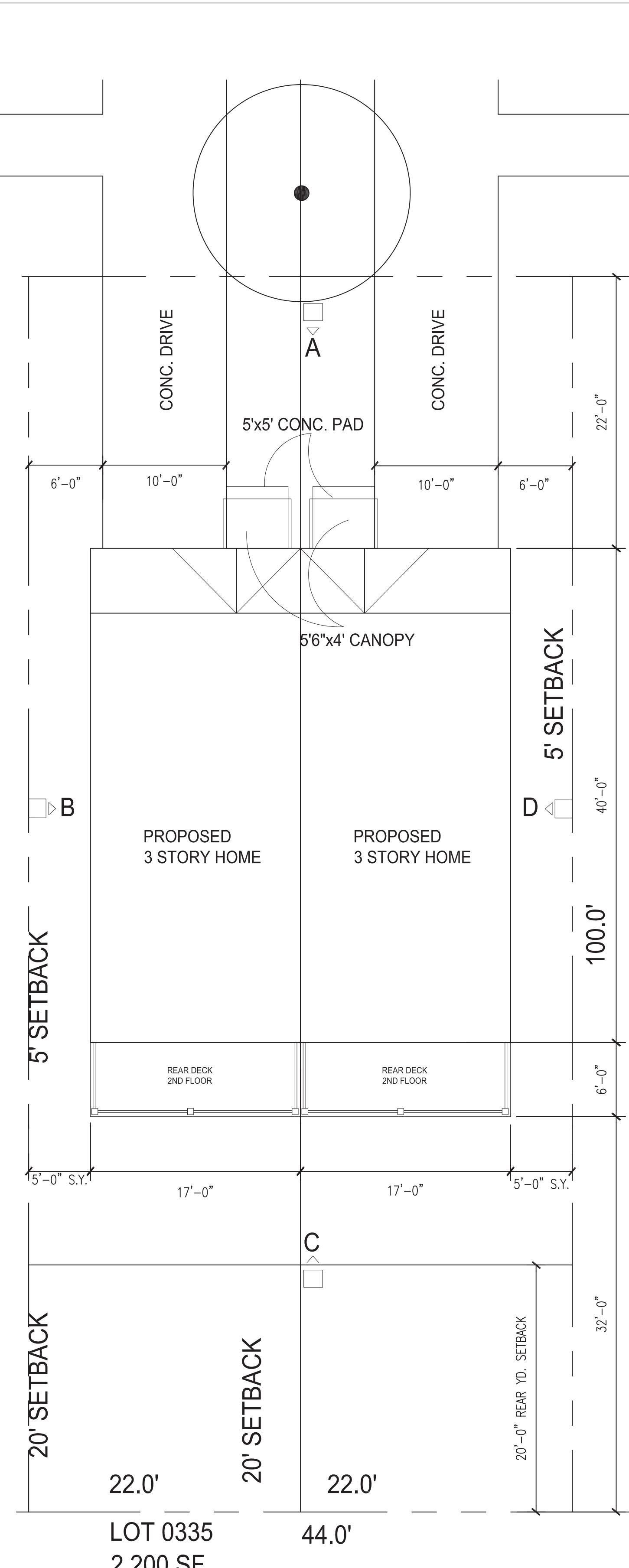
JOB NO.  
SEAL

DRAWING TITLE

**COVER SHEET**

SHEET. NO.

G O O D O

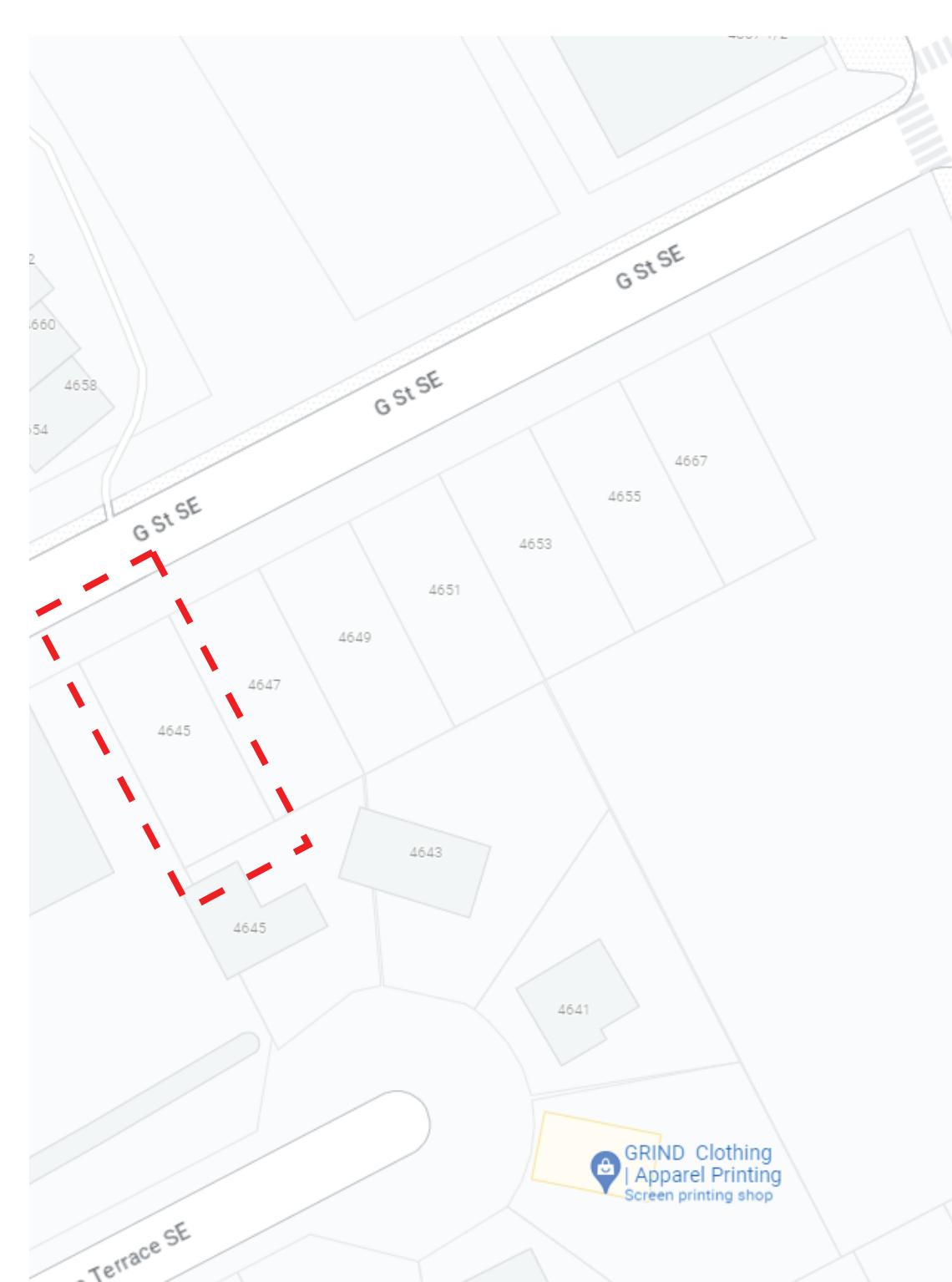


SITE PLAN

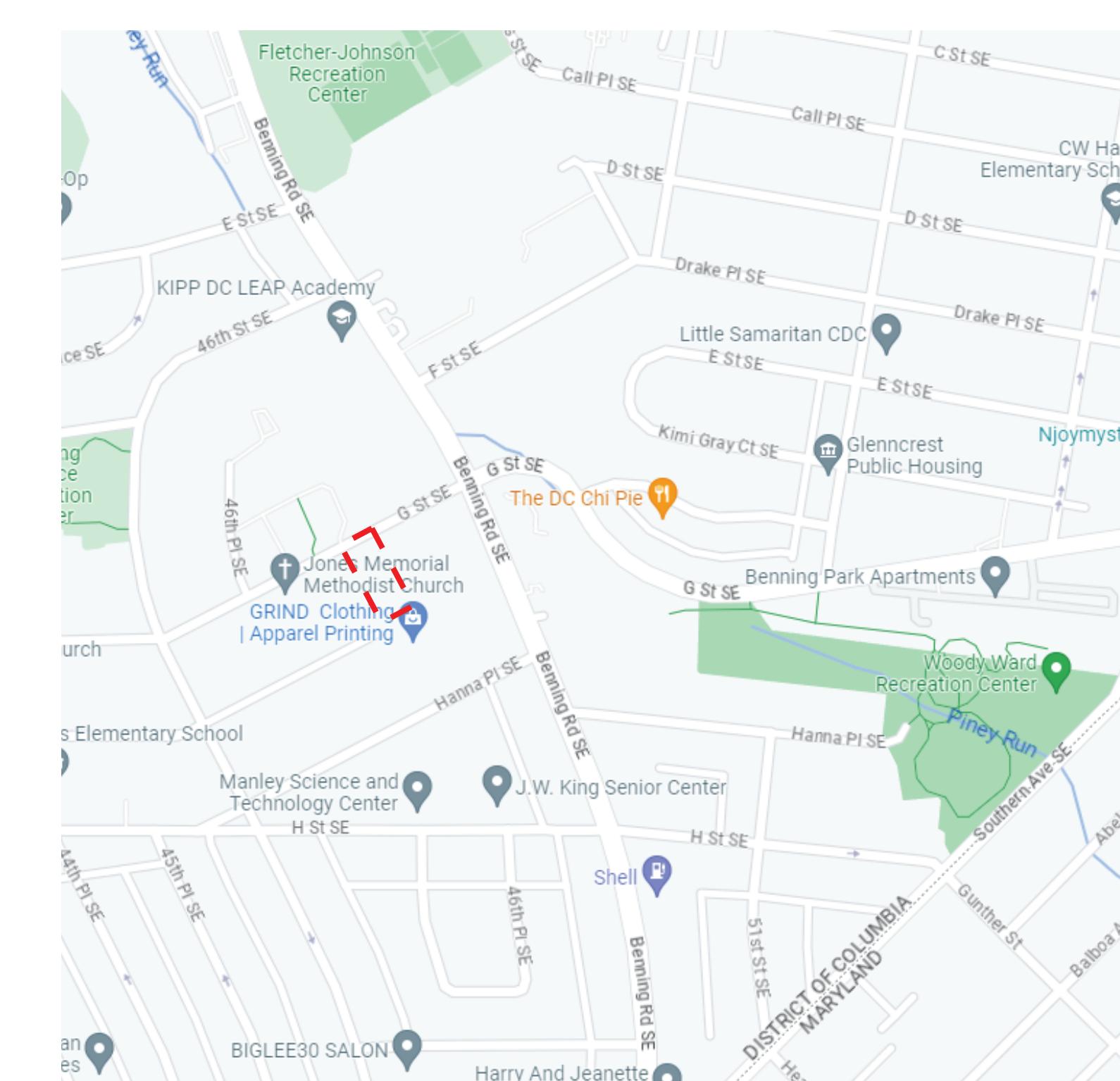


EXISTING SITE PLAN

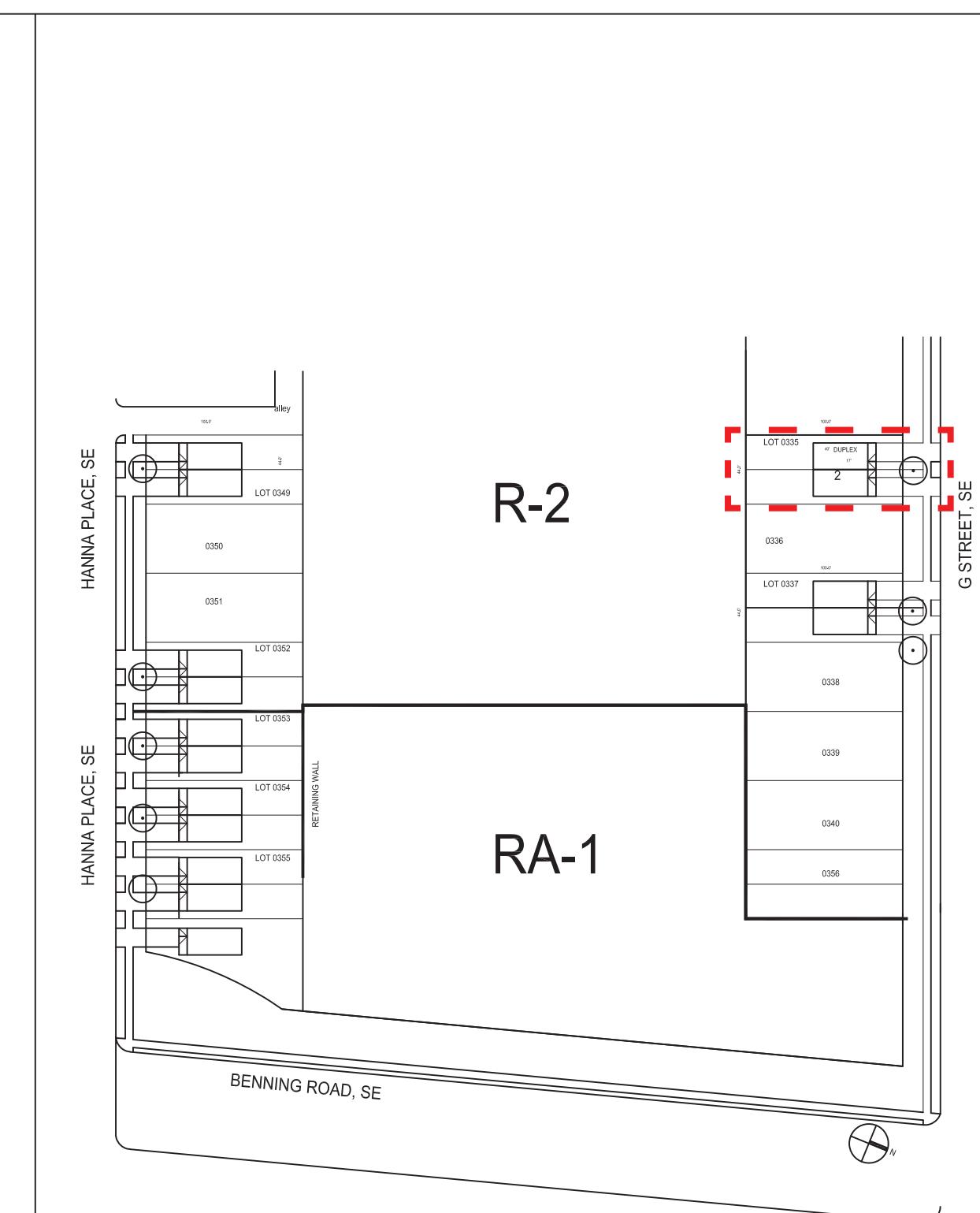
PROJECT DATA			
NAME OF JURISDICTION:	WASHINGTON, DC		
PROJECT NAME:	HILLTOP TERRACE II		
PROPERTY ADDRESS:	4645 G STREET SOUTHEAST WASHINGTON, D.C. 20019		
PROPERTY OWNER:	MARSHALL HEIGHTS COMMUNITY DEVELOPMENT ORGANIZATION		
BUILDING DESCRIPTION:	RESIDENTIAL		
ZONING DATA	R-2	R-3	PROPOSED
SSL NO:	5359		
LOT NO:	0335	0349	
SITE AREA:	4,400 SF		
LOT OCCUPANCY:	40% = 1,760 SF		
MAXIMUM STORIES:	3		
BUILDING HEIGHT:	40' MAX		
REAR YARD:	20' MIN		
SIDE YARD:	8'		
FRONT YARD:	NO LESSER OR GREATER THAN EXISTING SETBACKS ON THE SAME BLOCK		
GREEN AREA RATIO:	N/A	0.30	0.20
BUILDING INFORMATION	ELEVATION NOTES		
GROUND FLOOR: 680 SF	A - FRONT ELEVATION		
SECOND FLOOR: 680 SF	B - SIDE ELEVATION		
THIRD FLOOR: 680 SF	C - REAR ELEVATION		
TOTAL 2,040 SF	D - SIDE ELEVATION		
DECK: 102 SF			

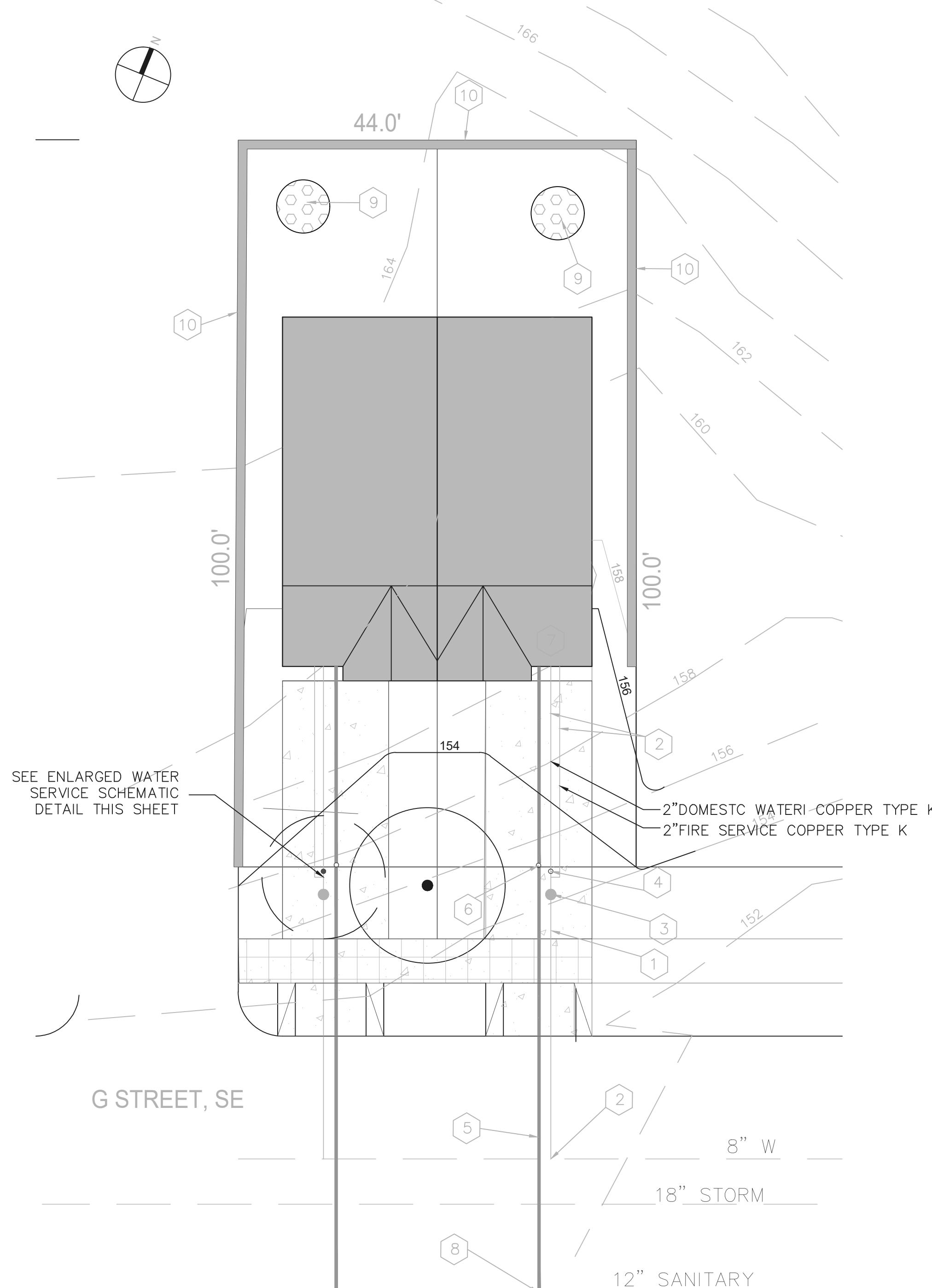


LOCATION MAP



VICINITY MAP





## **TYPICAL SITE UTILITY PLAN (LOT 335)**

SCALE: 1" =

## NARRATIVE

THIS SITE UTILITY PLAN IS FOR LOT 335 BLOCK 5359, AND A LOT AREA OF 4400. A DUPLEX SINGLE FAMILY RESIDENTIAL BUILDING IS PROPOSED OF THE HILL TOP DEVELOPMENT IT INDICATES THE REQUIRED WET UTILITIES (SEWER AND WATER) POSSIBLE STORMWATER MANAGEMENT FACILITY (DRY WELL) AND SIDEWALKS AND DRIVEWAY APRONS. THE SITE HAS A HILLY TERRAIN AND THEREFORE IN ORDER TO PROVIDE ADEQUATE AREA FOR THE PROPOSED DUPLEX UNIT SIGNIFICANT RETAINING WALLS HAVE TO BE PROVIDED. THE HEIGHTS RANGE FROM 4 FEET TO FIFTEEN FEET AND POSSIBLY TALLER FOR OTHER SITES.

## SITE UTILITY KEY NOTE

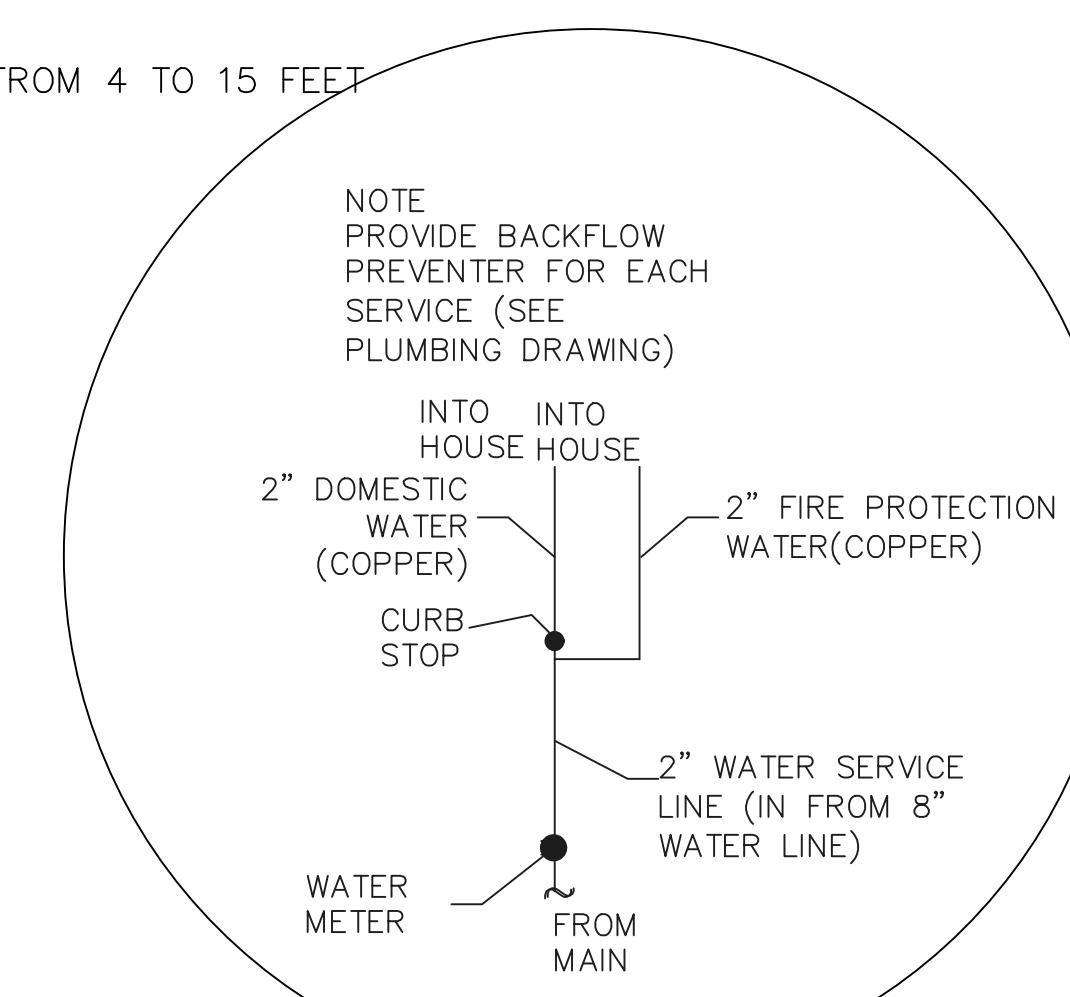


## CONCRETE SIDEWALK



CONCRETE PAVEMENT

- 1 INSTALL NEW 2" TYPE K COPPER COMBINED WATER SERVICE
- 2 INSTALL NEW CORPORATION STOP.(SEE DC WATER STD W80.01)
- 3 INSTALL NEW 2" WATER METER(SEE DC WATER STD W80.01)
- 4 INSTALL NEW CURB STOP (SEE DC WATER STD W80.01)
- 5 INSTALL NEW 6" PVC SCHEDULE 40 SANITARY LINE
- 6 NEW 4" DIA. PVC CLEANOUT (DC WATER STANDARD S 80.2)
- 7 INSTALL ASSE 1015 AND ASSE 1013 BACKFLOW PREVENTER FOR FIRE AND DOMESTIC WATER RESPECTIVELY INSIDE BUILDING
- 8 CONNECT NEW 6" SANITARY TO EX 12" SEWER USING 6'X12" WYE BRANCH
- 9 LOCATION OF DRY-WELL SWM FACILITIES STRAIN SEE DETAIL ON SHEET GAR-3
- 10 RETAINING WA WALL HEIGHT VARIES FROM 4 TO 15 FEET



## NEW DOMESTIC AND FIRE PROTECTION DETAIL

APPROV

# ARCHITECT / DESIGN TEAM

# dp+partners

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## SITE PLAN

SHEET NO.

# CIV-1

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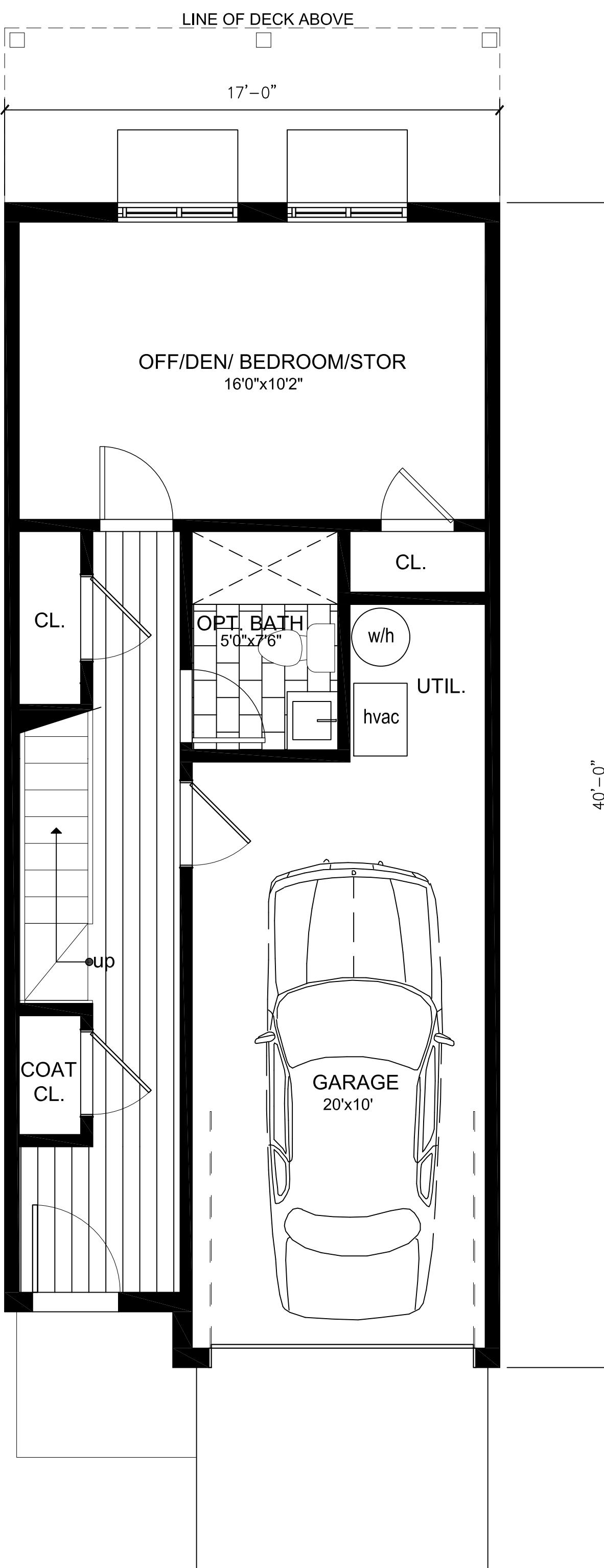
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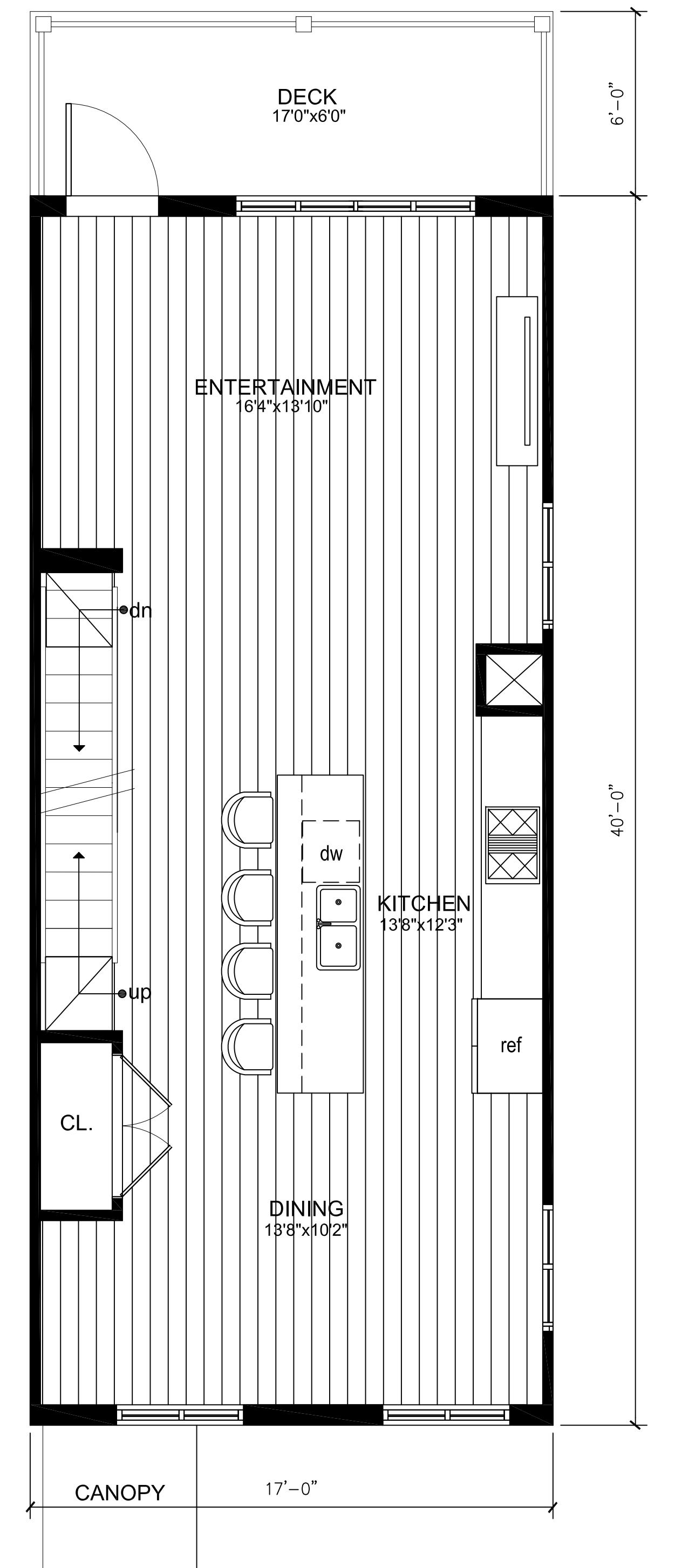
**FLOOR PLAN**

SHEET. NO.

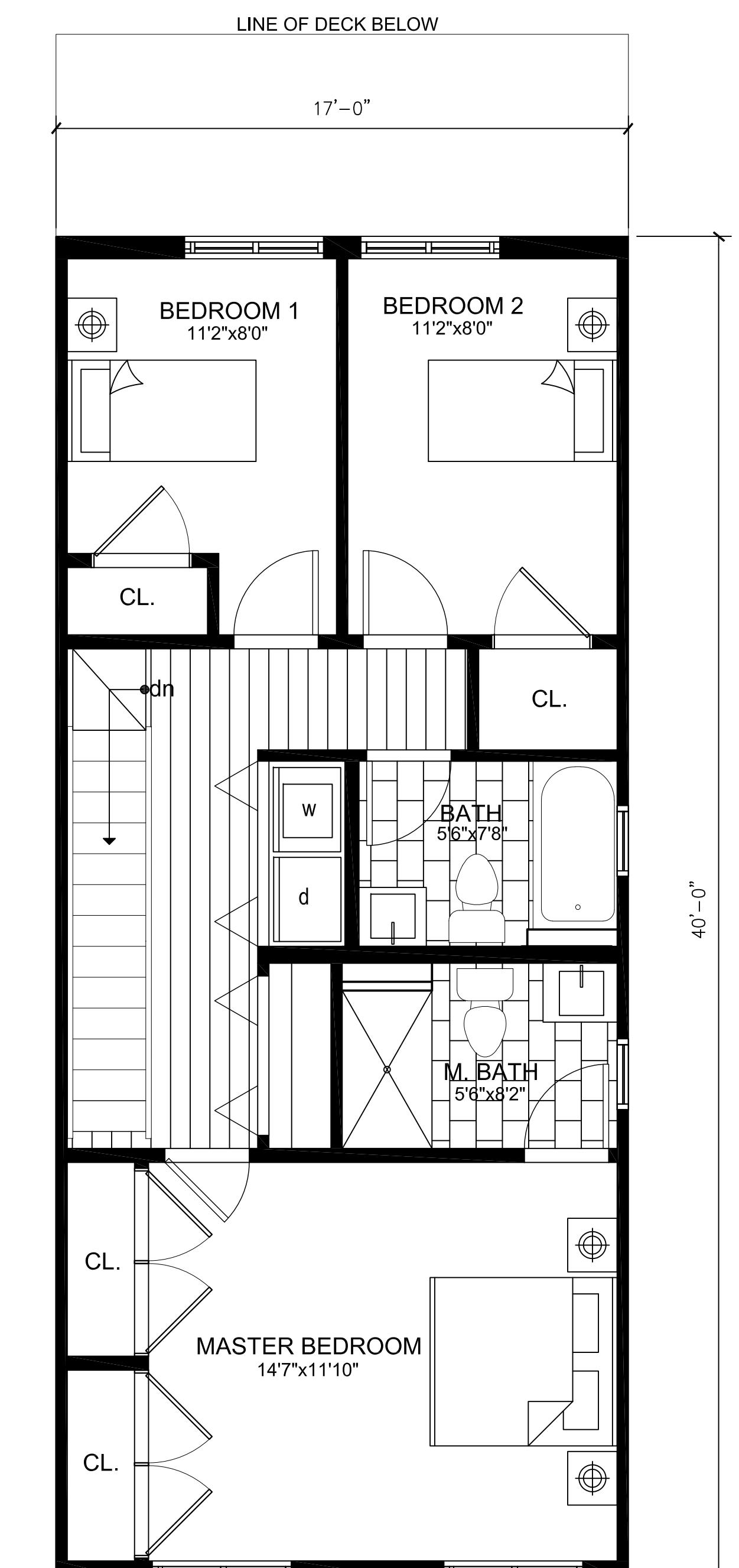
**A 101**



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

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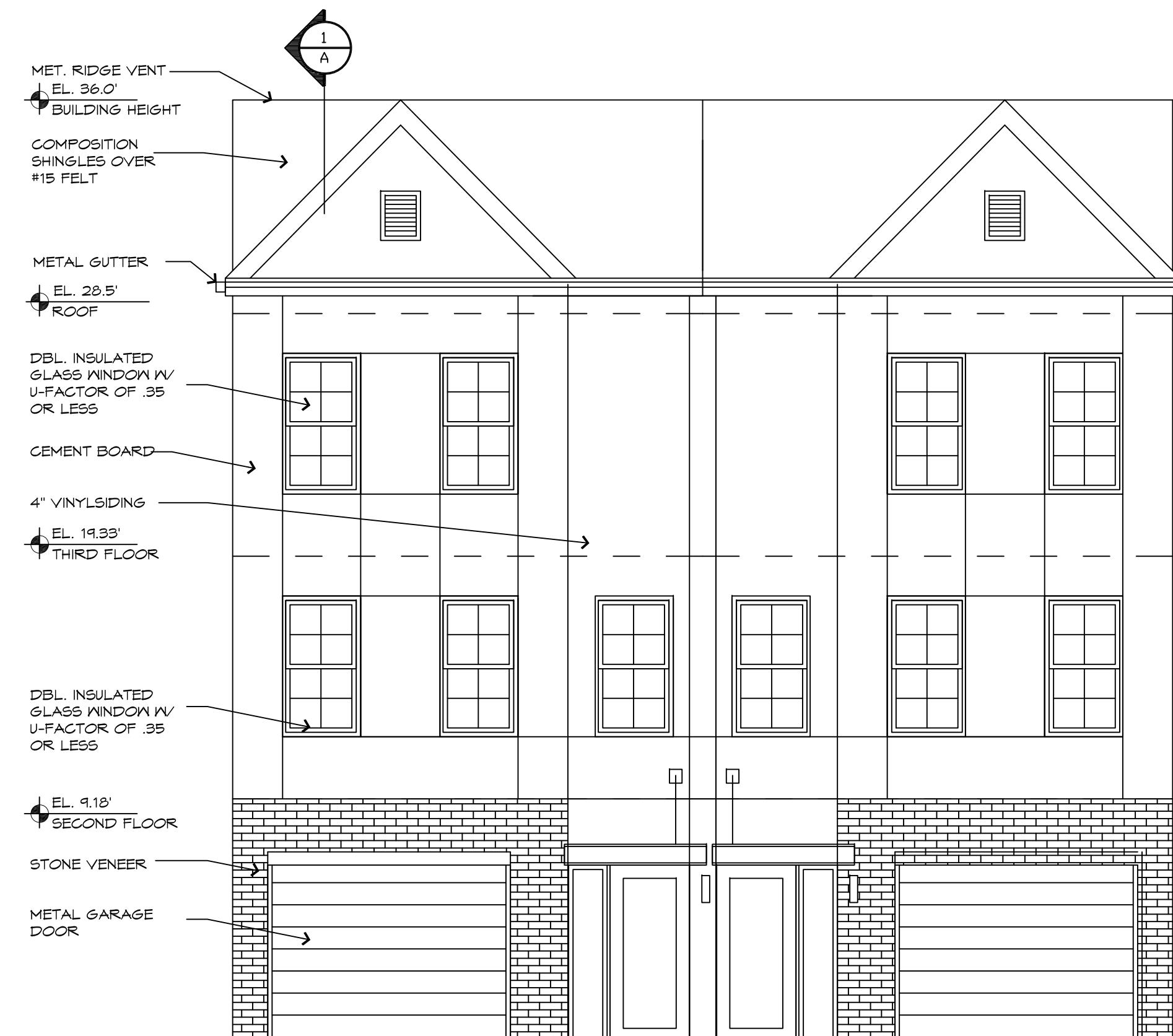
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**ELEVATIONS  
& SECTION**

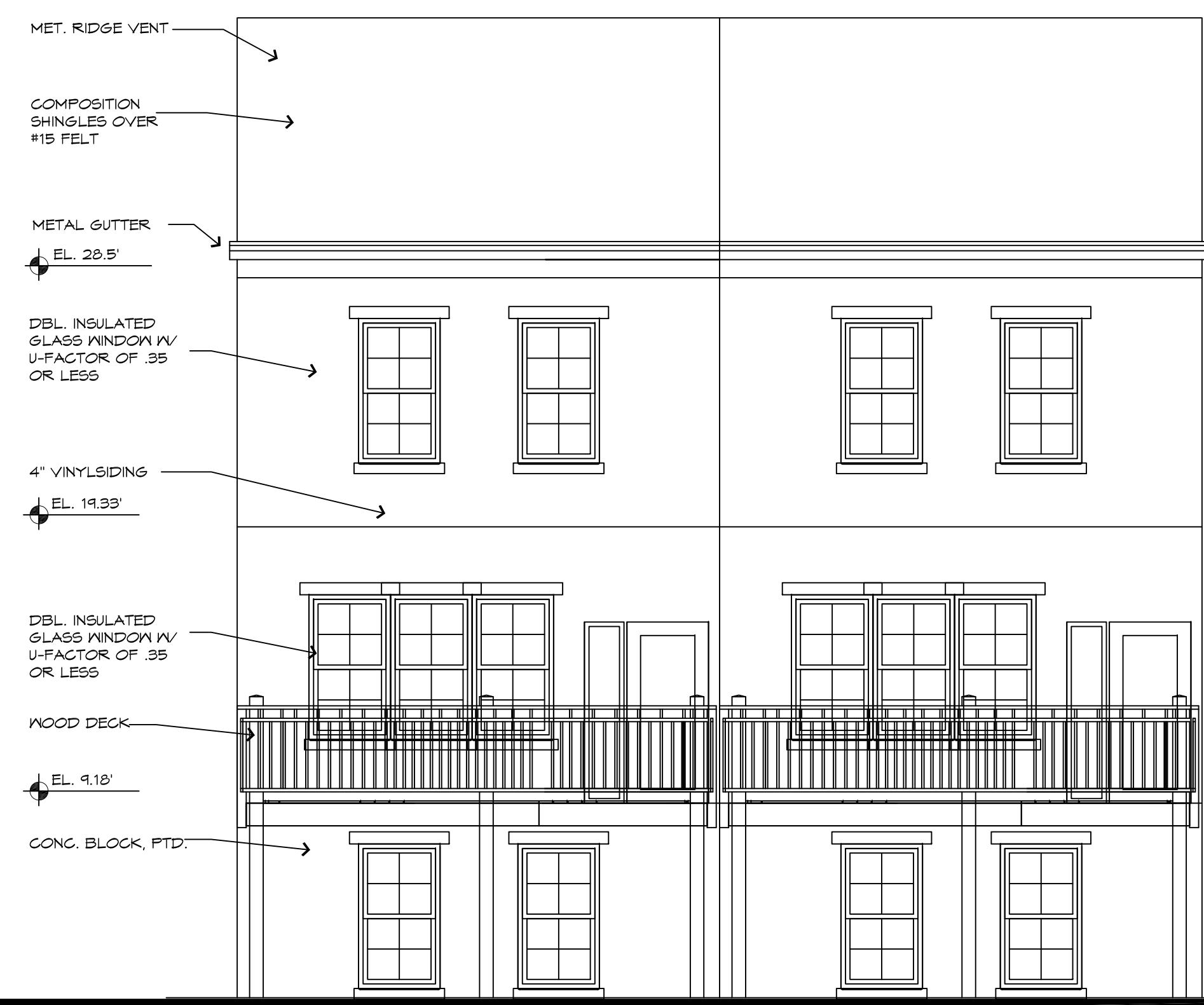
SHEET. NO.

**A 102**



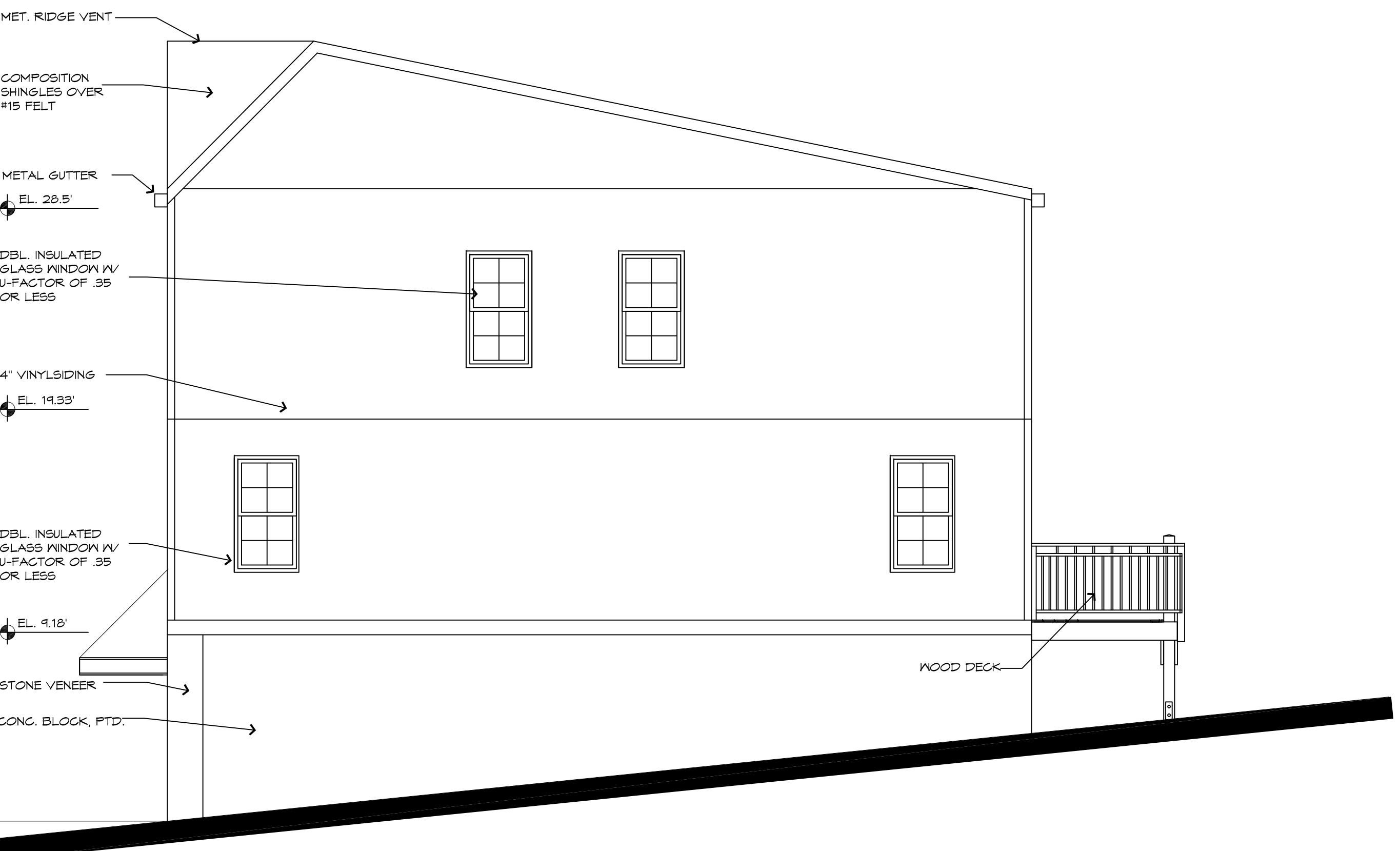
FRONT ELEVATION

A  
▼



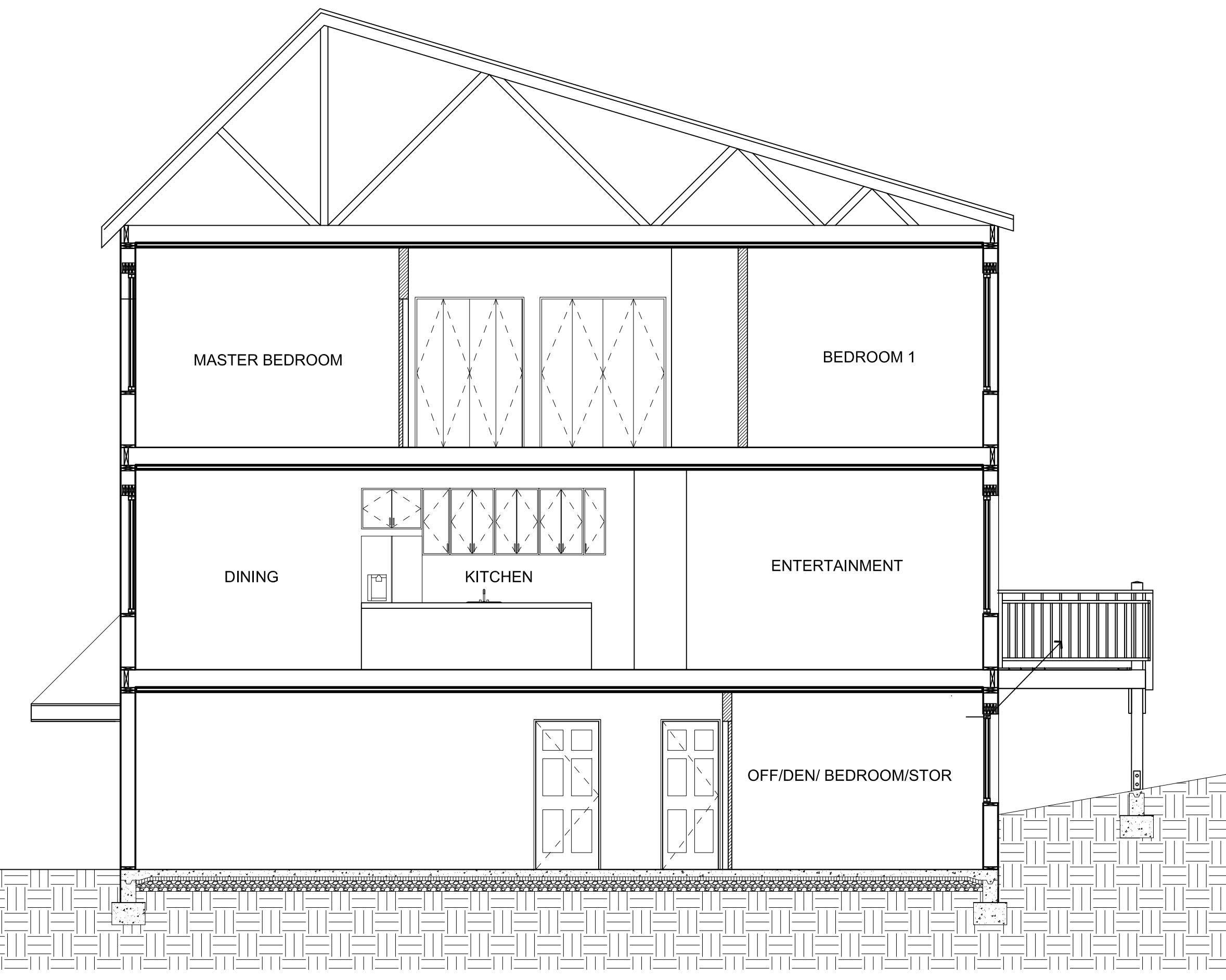
REAR ELEVATION

C  
△

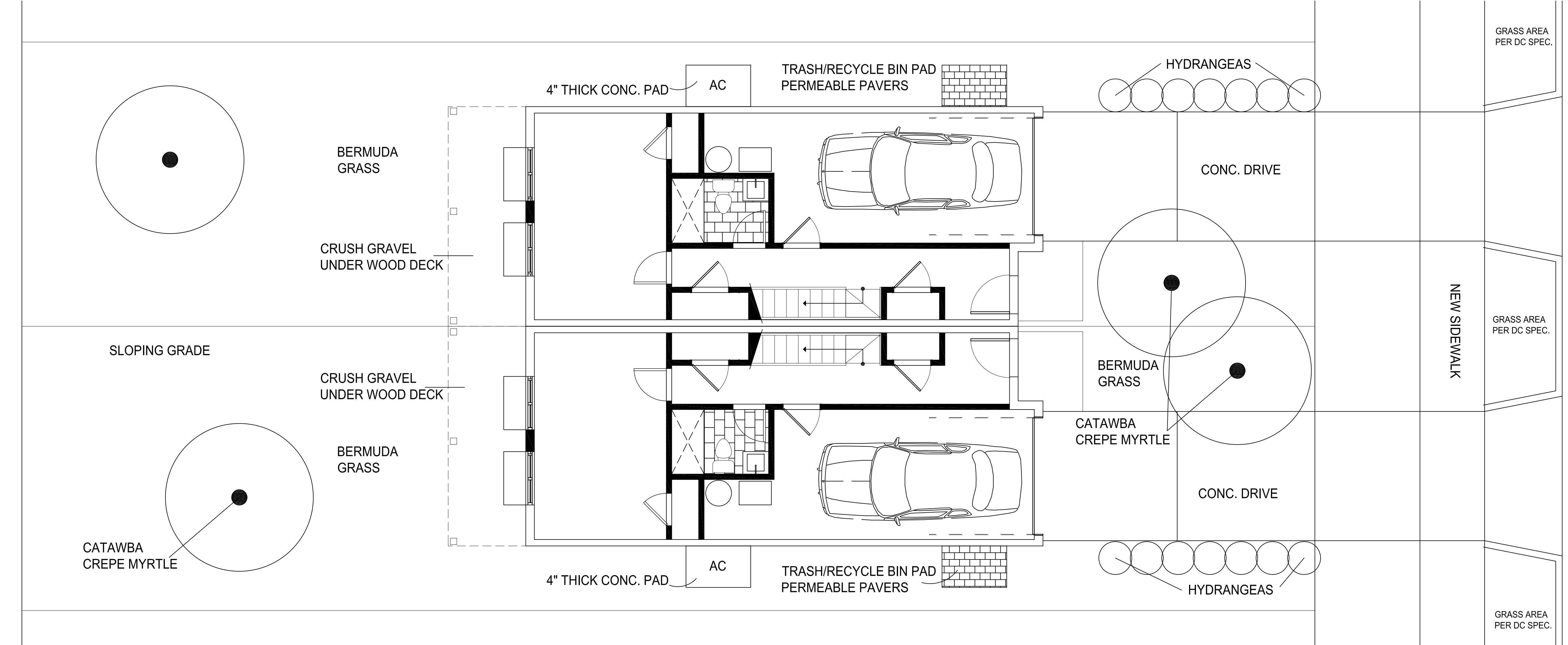


SIDE ELEVATION

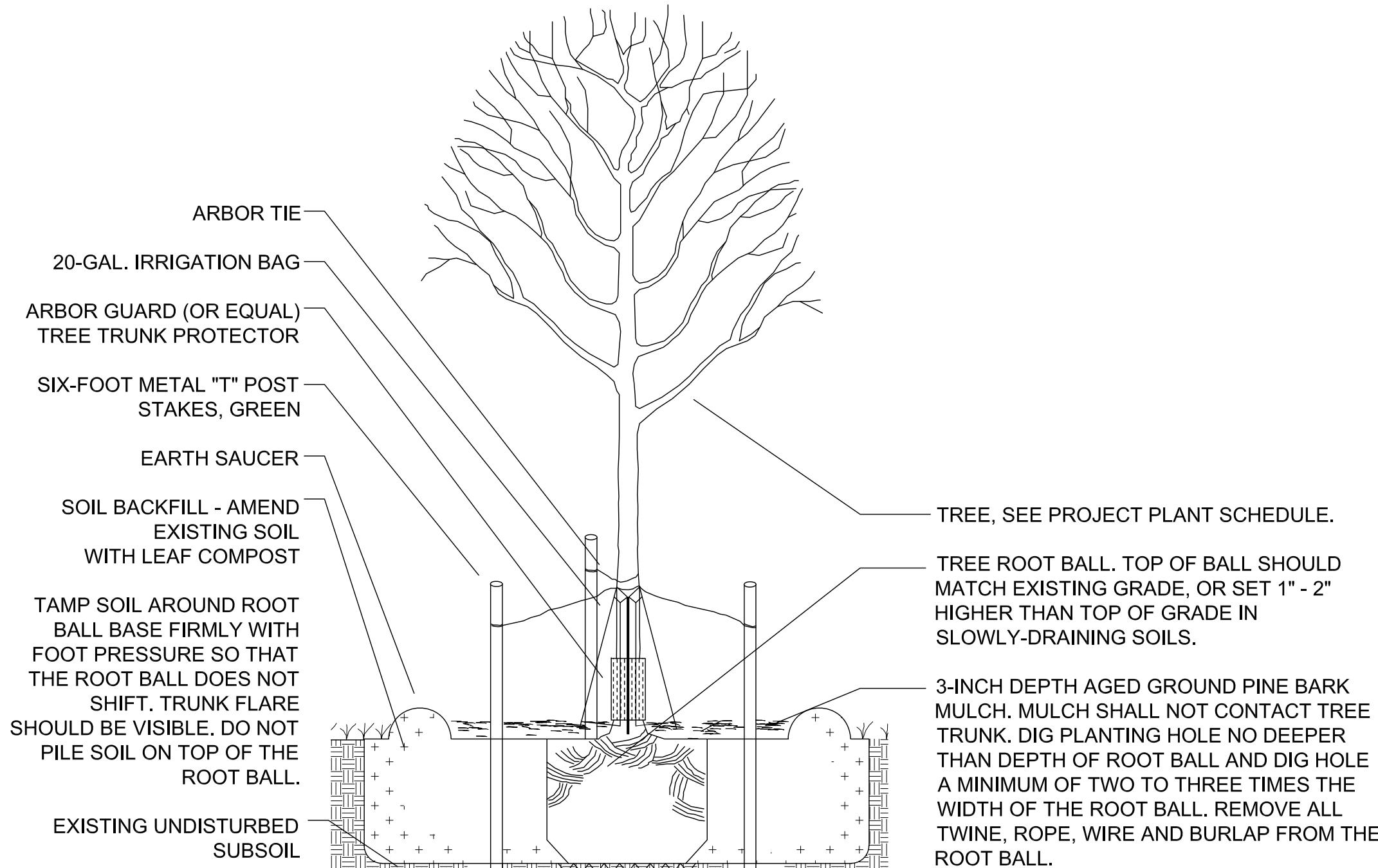
□ ◀ B/D



LONGITUDINAL SECTION



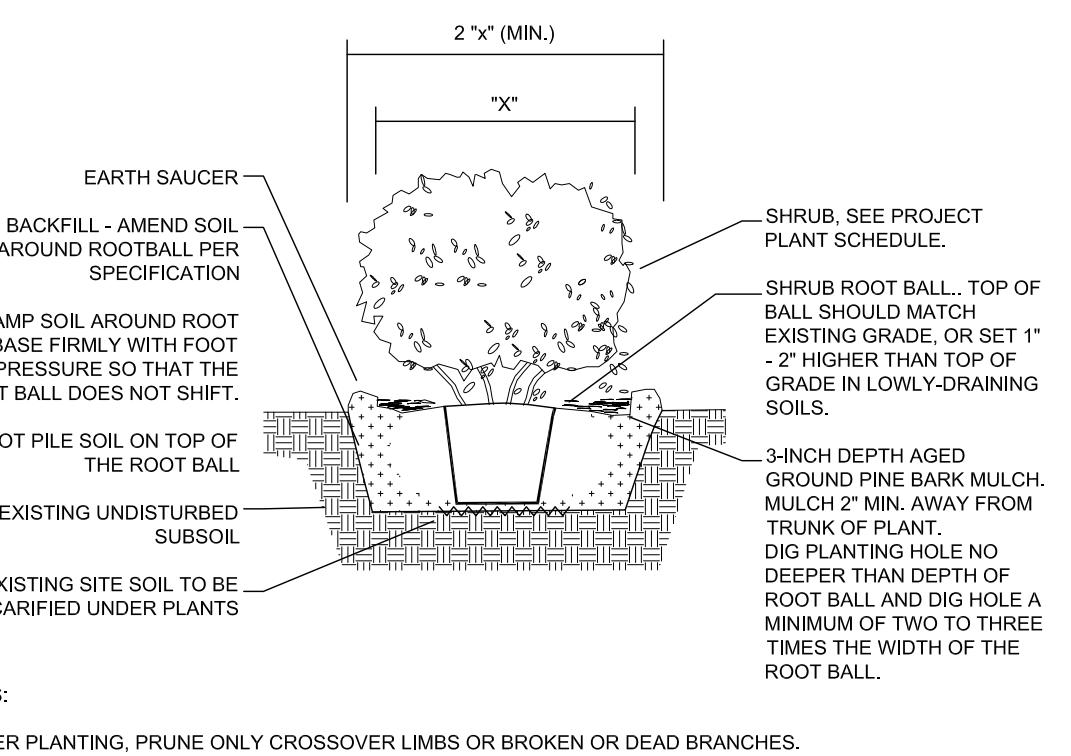
LANDSCAPE PLAN



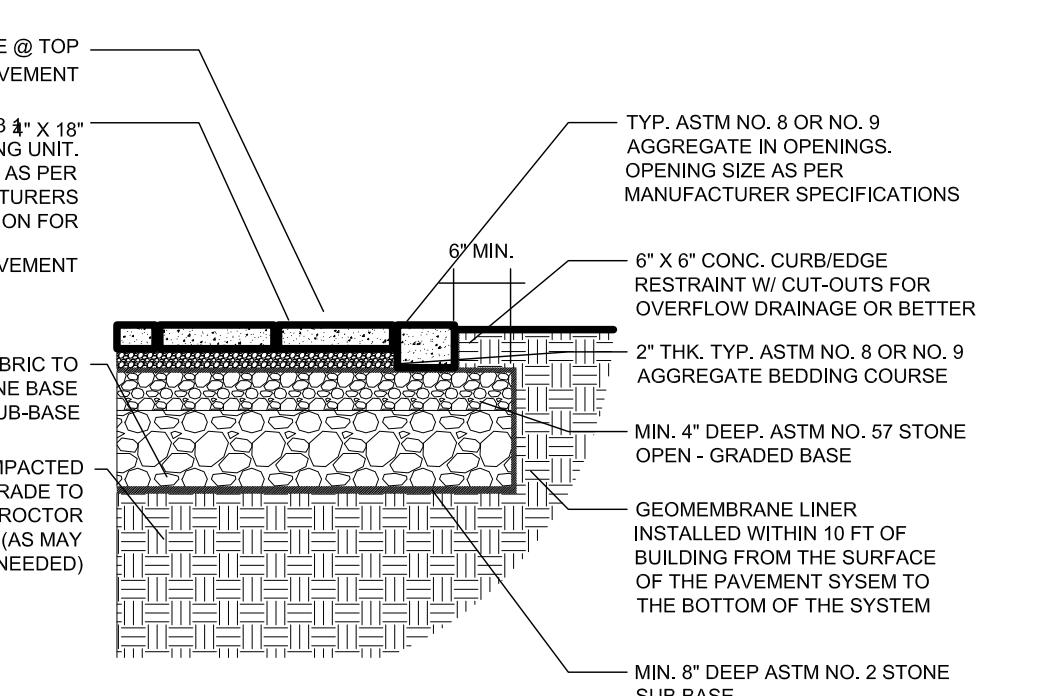
## NOTES:

1. AFTER PLANTING, PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, BROKEN OR DEAD BRANCHES.
2. WATER THOROUGHLY WHILE BACKFILLING TO ELIMINATE AIR POCKETS. RE-WATER AFTER PLANTING.
3. REMOVE ALL STRING, TWINE AND TAGS FROM TRUNK AND BRANCHES.
4. PENETRATE SUBSOIL BUT DO NOT PENETRATE ROOT BALL WITH STAKES.
5. SLOW RELEASE WATERING BAG PER SPECIFICATIONS NOTE

TREE PLANTING DETAIL



SHRUB PLANTING DETAIL

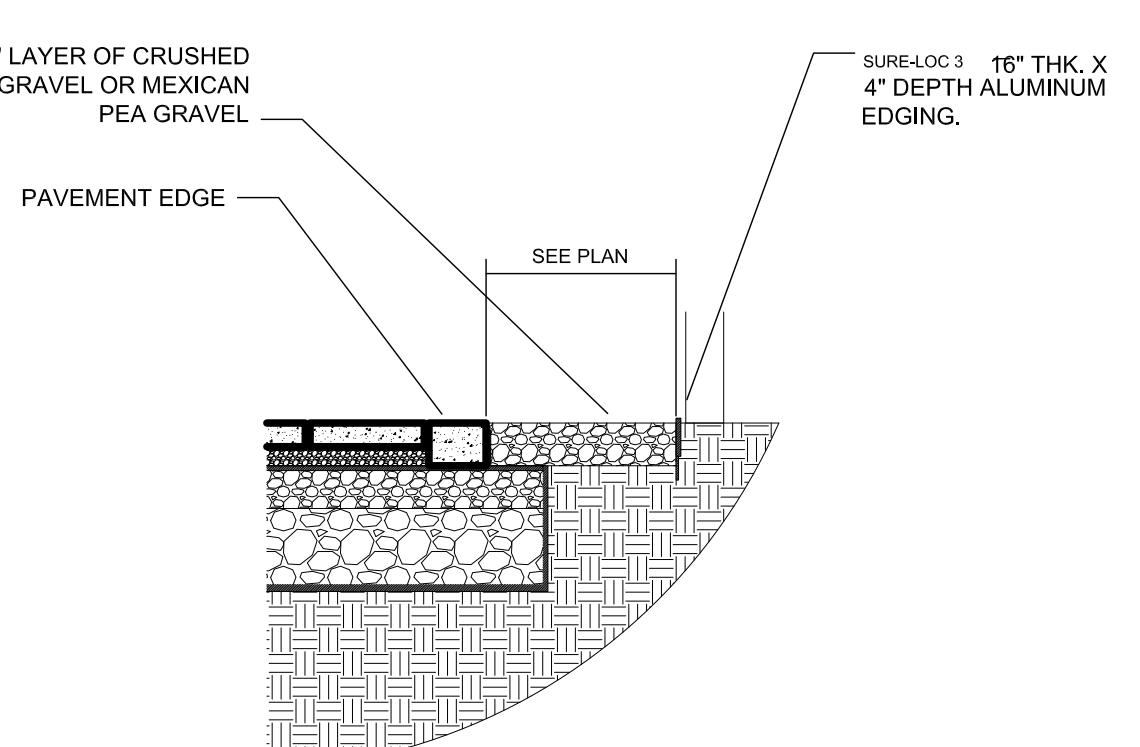


PERMEABLE PAVER DETAIL

## PLANT NOTES:

Plants shall be true to species and variety specified and nursery-grown in accordance with good horticultural practices under climatic conditions similar to those in the locality of the project for at least two years. They shall be freshly dug. All plant names and descriptions shall be as defined in Hortus Third.

All locations for trees shall be flagged by the and approved by Owner's representative prior to excavation. The Contractor shall be responsible for contacting Miss Utility to verify the location of underground utilities prior to location flagging or excavation. As far as is practical, plant materials shall be planted on the day of delivery. In the event this is not possible, the Contractor shall protect that stock not planted from sun or drying winds and shall keep the plants well watered and stored in the shade. Plants shall not remain unplanted for longer than three days after delivery. Plants shall not be bound with wire or rope at any time so as to damage the bark or break branches. All plants shall be lifted and handled from the bottom of the ball only. Plants moved with a ball will not be accepted if the ball is cracked or broken before or during planting operations.



GRAVEL EDGE DETAIL

# MEP

Mechanical, Electrical, Plumbing and Fire Protection systems will be designed in accordance with the following building codes:

- 12 DCMR, DC Construction Codes Supplement (2013)
- 2017 District of Columbia Building Code
- 2013 District of Columbia Property Maintenance Code
- 2013 District of Columbia Green Construction Code
- 2017 District of Columbia Energy Conservation Code
- ASHRAE 90.1-2010 q 2013 District of Columbia Fire Code
- 2013 District of Columbia Mechanical Code
- 2013 District of Columbia Plumbing
- National Electrical Code (NEC) 2011 Edition w/ 2003 amendments.
- 2015 ICC Fuel Gas Code.
- National Fire Protection Association (NFPA).
- Enterprise Green Communities

Heating and air conditioning load computations will be in accordance with the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE), Inc. Trace 700, Version 6.3.4 software program will be utilized.

Lighting design will in accordance with the Illuminating Engineering Society of North America (IESNA) Lighting Handbook - Tenth Edition

A major goal of the mechanical and electrical systems will be to minimize energy requirements while satisfying the design criteria. Equipment and controls will be selected to minimize energy demand charges and to comply with ANSI/ASHRAE Standard 90.1-2010. Control strategies will be used to de-energize systems and reduce ventilation during unoccupied hours; carbon dioxide sensors will reduce energy consumption during low occupancy periods; night setback and hot water temperature reset schedules will be utilized; all air handling systems will be designed for economizer operation; variable flow air and water systems will be utilized as herein described to align output and energy consumption with demand; high efficiency motors, variable frequency controllers (VFCs), energy efficient LED lighting fixtures and ballasts, and water saving plumbing fixtures will be utilized where appropriate

Mechanical and electrical systems will be designed in accordance with the following criteria:

Description	Cooling Season	Heating
Design Criteria		
Season		
Outdoor Design	94°FDB / 77°FWB	17°FDB
Indoor Design- General	75°FDB / 50%RH	70°FDB +2°F

## Utilities

Domestic Water and Fire (from municipal service water main at approximately 58 psig static)  
Natural Gas (from Washington Gas service): low pressure

Electric (from PEPCO service):  
208Y/120V 3 phase, 4 wire

Specific points on the new DOC system will include:

- Status and alarm of all HVAC systems and equipment
- Start/stop of all HVAC systems and equipment
- Temperature indication of all spaces
- Air flow indication of all air systems and each space air terminal unit
- Temperature, pressure or RH measurement of all critical control points in HVAC systems
- Set point adjustment of all control points
- Equipment lead-lag, system occupied-unoccupied, and damper/valve open-close selection

## Testing, Adjusting, And Balancing

- All air and water systems shall be tested, adjusted and balanced in accordance with AABC or NEBB procedures.
- Pressurized duct leakage testing will also be required for all medium pressure duct systems, to be witnessed by the TAB Contractor.

## Commissioning

- All heating, ventilating, and air conditioning (HVAC) systems will be commissioned.

## Heating & Cooling System

- The Main HVAC System will be Variable Refrigerant Flow (VRF). The VRF system is a heat pump air-condition system configuration where there is one outdoor modular condensing unit and multiple indoor Air Handling units. The VRF system will have heat recovery system that simultaneously cools and heats different zones within a building. The outdoor condensing units locations will be within a screened enclosure on the roof.
- Each residential unit will be equipped with a dedicated dx heating/cooling fan coil unit, located above the ceiling of the bathroom.
- Each common area & corridor will be cooled/ heated with a dedicated dx fan coil unit, located above the ceiling area.

## Exhaust System

- Bathroom exhaust fans, dryers exhaust ducts, kitchen exhaust ducts will be provided & terminate through exterior walls.
- Central Bathroom, dryer & kitchen exhaust fans will be provided & be terminated at the roof.
- Garage exhaust fan will be provided & be terminated at the roof.

## Electrical Distribution

- 208Y/120-volt, 3 phase electric service will be fed underground in conduit from the electric meter service to main PEPCO Transformer/Vault.
- A 208Y/120-Volt, 3ph, 4W, 1200-Ampere main Distribution switchboard will serve building large loads.
- A 208Y/120-Volt, 3ph, 4W 1600-Ampere main circuit breaker with 80-125A, 208Y/120Volt, 1ph, 3W meters will serve residential units loads.

## Lighting

- New LED, stem suspended, surface, direct/indirect lighting fixtures will be provided in the interior spaces. Lighting will be dimmable.
- Lighting design and layouts will be in accordance with recommended practices in the Illumination Engineering Society of North America (IESNA) Lighting Handbook.
- Exterior lighting on residence will be provided.
- Exterior lighting will be controlled through photocell/ motion sensors & time clock.

## Fire Alarm

Audiovisual and Telecommunications Infrastructure

- Two 4 conduits will be routed underground from the electrical to the Verizon & Comcast infrastructure.
- Telecommunications outlets will be provided to accommodate the architectural layout and as recommended by Banneker information technology staff.

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# MEP NARRATIVE

SHEET. NO.

**NAR 1**

# MEP

## Plumbing Fixtures

- New plumbing fixtures will be provided in the bathroom, kitchen room. Fixtures will include flush tank operated water closets & kitchen sinks. Fixtures will be water-conserving & water sense labeled.
- Floor drains will be provided with trap priming connections to prevent trap seal evaporation. Piping will be extended from an automatic trap-priming panel to the new traps.
- Hose bib with integral vacuum breaker, will be provided at front of building.

## Domestic Water

- Domestic potable and fire protection water will be provided from main water service pipes.
- Gas fired water heaters will be provided to serve domestic hot water system. A thermostatic mixing valve will be provided to limit supply water temperature to 110°F as required by ASHRAE 90.1- 2010. expansion tanks will be provided at the water heaters to comply with the plumbing code.
- All domestic water piping will be hard tempered seamless copper water tube with lead-free solder joints or CPVC. All domestic water piping will be provided with pre-molded fiberglass type insulation.

## Sanitary

- Sanitary waste from the home plumbing fixtures will be connected to the sanitary main. Sanitary vents connect to stacks or will be extended up through the home via vent stacks and piped through the roof.
- All sizes for above ground piping will be schedule 40 PVC while all sizes for underground piping will be Schedule 80 PVC service class pipe and fittings with gasketed joints.

## Storm Water

- Roof storm water are piped outside the building, with rain leaders collected by bioretention. Refer to civil narrative

## Fire Protection Systems

- All fire protection systems will be designed in accordance with NFPA 13.

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DRAWING TITLE

**MEP  
NARRATIVE**

SHEET. NO.

**NAR 2**

# STRUCTURAL

## GENERAL NOTES

### I. DESIGN CRITERIA

A. GENERAL BUILDING CODE  
THE CONTRACT DOCUMENTS ARE BASED ON REQUIREMENTS OF IRC 2015 AND LOCAL CODE AMENDMENTS

B. DEAD LOADS  
1. ACTUAL WEIGHT OF PARTITIONS HAS BEEN APPLIED AS A UNIFORMLY-DISTRIBUTED DEAD LOAD.

2. AN ALLOWANCE OF 5 PSF HAS BEEN APPLIED AS A UNIFORMLY-DISTRIBUTED SUPERIMPOSED DEAD LOAD FOR HANGING CEILING AND MECHANICAL LOADS, SUCH AS DUCTWORK, SPRINKLER PIPES, AND MECHANICAL EQUIPMENT LOADS.

3. AT SUPPORT FOR SPRINKLER LINES, THE STRUCTURE HAS BEEN DESIGNED FOR A CONCENTRATED LOAD OF 150 POUNDS, IN ADDITION TO THE FULL WEIGHT OF SPRINKLER PIPING SCHEDULED BELOW.

NORMAL PIPE SIZE	WEIGHT
6 INCH	32 PLF
8 INCH	50 PLF
10 INCH	75 PLF
12 INCH	99 PLF
16 INCH	160 PLF

C. LIVE LOADS  
1. LIVE LOADS PRODUCED BY THE USE OR OCCUPANCY OF THE STRUCTURE HAVE BEEN INCLUDED IN THE DESIGN, BASED ON THE FOLLOWING OCCUPANCIES:

OCCUPANCY OR USE	UNIFORM LOAD (PSF)	CONCENTRATED LOAD (LB)
RESIDENTIAL (HOTELS AND MULTIFAMILY DWELLINGS)		
BASIC FLOOR AREA	40	—
CORRIDORS	100	—
EXTERIOR BALCONIES (<100 S.F.)	60	—
BALCONIES (>100 S.F.)	100	—
STORAGE		
LIGHT STORAGE	125	—
YARDS AND TERRACES (PEDESTRIAN TRAFFIC ONLY)	100	—
SIDEWALKS, VEHICULAR DRIVEWAYS AND YARDS, SUBJECT TO TRUCKING	250	8000
STAIRS AND EXITS	100	SEE BELOW
THE STRUCTURAL DESIGN IS BASED ON THE GREATER OF THE EFFECTS OF THE UNIFORM LOADS NOTED ABOVE OR THE CONCENTRATED LOADS NOTED ABOVE (ASSUMED TO BE DISTRIBUTED OVER AN AREA 2.5 FEET SQUARE SPECIFICALLY NOTED BELOW).		
2. THE MINIMUM CONCENTRATED LOAD ON STAIR TREADS SHALL BE 300 POUNDS ON AN AREA OF 4 SQUARE INCHES.		
3. BALCONY RAILINGS AND GUARDRAILS SHALL BE DESIGNED TO RESIST A LOAD OF 50 POUNDS PER LINEAR FOOT (PLF) APPLIED IN ANY DIRECTION AT THE TOP RAIL AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE.		
4. PARKING BARRIERS SHALL BE DESIGNED TO WITHSTAND A LOAD OF 200 POUNDS APPLIED HORIZONTALLY IN ANY DIRECTION AT THE TOP RAIL, AND HAVE ATTACHMENT DEVICES AND ADHESIVE STRIPES TO TRANSFER THIS LOADING TO APPROPRIATE STRUCTURAL ELEMENTS OF THE BUILDING. THIS LOAD NEED NOT BE ASSUMED CONCURRENT WITH UNIFORM LOADS SPECIFIED ABOVE.		
5. INTERMEDIATE RAILS, PANEL FILLERS, AND THEIR CONNECTIONS SHALL BE DESIGNED TO WITHSTAND A HORIZONTALLY APPLIED NORMAL LOAD OF 50 POUNDS ON AN AREA NOT TO EXCEED A 1-FOOT-SQUARE AREA, INCLUDING OPENINGS AND SPACES BETWEEN RAILS. REACTIONS DUE TO THAT LOADING ARE NOT REQUIRED TO BE SUPERIMPOSED WITH THOSE FROM LOADS APPLIED TO THE TOP RAIL.		
6. VEHICLE BARRIERS SHALL BE DESIGNED TO WITHSTAND A HORIZONTAL FORCE OF 6000 POUNDS APPLIED HORIZONTALLY IN ANY DIRECTION TO THE BARRIER SYSTEM AT A HEIGHT OF 4 FEET FROM THE PARKING SURFACE AND SHALL HAVE ANCHORAGE OR ATTACHMENT CAPABLE OF TRANSFERRING THIS LOAD TO THE STRUCTURE. THE FORCE MAY BE DISTRIBUTED OVER A 1-FOOT-SQUARE AREA.		
7. DESIGN LIVE LOADS HAVE BEEN REDUCED IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTED ABOVE.		
D. ROOF LOADS		
1. A ROOF LOAD ALLOWANCE OF 30 PSF HAS BEEN APPLIED AS A UNIFORMLY-DISTRIBUTED LOAD ON FLAT ROOFS.		
2. FOR EXTENSIVE GREEN ROOF, 30 PSF DEAD LOAD IS USED.		
3. ROOF LOADS HAVE NOT BEEN REDUCED.		
E. SNOW LOADS		
SNOW LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTE ABOVE, USING THE FOLLOWING PARAMETERS:		
GROUND SNOW LOAD (PSF)	30 PSF	
SNOW LOAD COEFFICIENT (PF)	21 PSF	
SNOW EXPOSURE COEFFICIENT (CE)	1.0	
IMPACT FACTOR (I)	1.0	
THEMAL FACTOR (CT)	1.0	
MINIMUM SNOW LOAD FOR DESIGN	30.0 PSF	
SNOW DRIFT IS APPLICABLE AS NEEDED		
F. WIND LOADS		
WIND LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTE ABOVE, USING THE FOLLOWING PARAMETERS:		
BASIC WIND SPEED (V)	115 MPH	
EXPOSURE CATEGORY	B	
IMPORTANCE FACTOR (IW)	1.0	
BUILDING CATEGORY	ENCLOSED	
GUST RESPONSE FACTOR FOR FLEXIBLE BUILDINGS (G)		
EAST-WEST DIRECTION	0.85	
NORTH-SOUTH DIRECTION	0.85	
INTERNAL PRESSURE COEFFICIENT (GCPI)	+/-.18	
G. SEISMIC LOADS		
SEISMIC LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTE ABOVE, USING THE FOLLOWING PARAMETERS:		
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE METHOD	
IMPORTANCE FACTOR (IE)	1.0	
SEISMIC USE GROUP	I	
SPECTRAL RESPONSE ACCELERATION (SS) (%)	0.134	
SITE CLASS	(S1) (%) 0.043	
SPECTRAL RESPONSE COEFFICIENT (SDS) (%)	0.143	
SPECTRAL RESPONSE COEFFICIENT (SD1) (%)	0.069	
SEISMIC DESIGN CATEGORY	B	
RESPONSE MODIFICATION FACTOR (R)		
- WOOD STRUCTURAL PANELS	6.5	
DEFLECTION AMPLIFICATION FACTOR (Cd)	4.0	
- WOOD STRUCTURAL PANELS		
BASIC STRUCTURAL AND SEISMIC RESISTING SYSTEM	EQUIVALENT LATERAL FORCE	
1. ANALYTICAL PROCEDURE:	EQUIVALENT LATERAL FORCE	
H. STRUCTURAL STABILITY OF BUILDING FRAME		
THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT UPON THE FOLLOWING FRAMING COMPONENTS AND SYSTEMS:		
1. MASONRY WALLS		
2. HORIZONTAL DIAPHRAGMS		
3. LIGHT-FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR		
WOOD WALLS		
a. ROOF DECK AND SUBFLOORS ARE DESIGNED AS UNBLOCKED DIAPHRAGMS.		
ROOF SHEATHING SHALL BE 23/32" THICK & 16 EXPOSURE 1 RATED O.S.B. WITH A 32/16 PANEL SPAN INDEX (U.S.) AND BEAR THE TRADEMARK STAMP OF THE AMERICAN PLYWOOD ASSOC. (APA). PANELS SHALL BE NAILED WITH 10d NAILS @ 6" OC AT ALL PANEL EDGES AND 12" OC AT ALL INTERIOR SUPPORTS.		
b. STRUCTURAL PANEL SHEAR WALLS SHALL BE 7/16" THICK EXPOSURE 1 RATED O.S.B. WALL PANEL SPAN INDEX (U.S.) AND WITH A 16" OC BEAR THE TRADEMARK STAMP OF		

THE AMERICAN PLYWOOD ASSOC. (APA) PANELS SHALL BE NAILED IN ACCORDANCE WITH SHEAR WALL SCHEDULE ON S8-01.

c. REFER TO BRACING PLANS FOR TYPE AND LOCATION OF ALL SHEARWALLS AND HOLD DOWN OF ANCHORS.

d. FRAMING DETAILS INCORPORATE MINIMUM REQUIREMENTS FOR LATERAL LOAD TRANSFER. ANY CHANGE, MODIFICATION OR SUBSTITUTE FOR MATERIALS (INCLUDING GRADE OR SPECIES) OR FASTENERS MUST BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

e. ALL CONNECTOR TYPES REFER TO SIMPSON STRONG-TIE SPECIFICATIONS. ANY CHANGE, MODIFICATION OR SUBSTITUTION MUST BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

I. CONSTRUCTION SCHEDULING  
THE CONTRACTOR SHALL COORDINATE THE SEQUENCE AND SCHEDULE OF CONSTRUCTION WITH THE ENGINEER.

J. PROVISION FOR FUTURE EXPANSION  
NO PROVISIONS HAVE BEEN MADE IN THE STRUCTURAL DESIGN FOR FUTURE EXPANSION.

### II. FOUNDATION

A. ALLOWABLE SOIL BEARING IS ASSUMED TO BE MINIMUM OF 1500 PSF.  
THE PROPOSED WORK IS FRAMED SUCH THAT THE LOAD DISTRIBUTIONS TO THE EXISTING FOOTING IS NOT CHANGED SUBSTANTIALLY.

C. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING FOOTING AND ALIGN THE PROPOSED LOAD BEARING WALLS ACCORDINGLY.

### III. REINFORCED CONCRETE

A. THE DESIGN OF ALL REINFORCED CONCRETE SHALL CONFORM TO ACI 318, IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTED ABOVE.

B. CLASSES OF CONCRETE  
ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN THE TABLE BELOW UNLESS NOTED OTHERWISE ON THESE DRAWINGS.

USAGE	COMPRESSIVE STRENGTH (PSI)	MAXIMUM AGGREGATE SIZE	19/32", 1/2"
SPREAD FOOTINGS	3500	1 INCH	19/32", 1/2"
WALL FOOTINGS	3500	1 INCH	19/32", 1/2"
BASEMENT WALLS	4000	1 INCH	19/32", 1/2"
RETAINING WALLS	4000	1 INCH	19/32", 1/2"
SLAB-ON-GRADE	3500	1 INCH	19/32", 1/2"

1. COMPRESSIVE STRENGTH NOTED ABOVE SHALL BE THE 28-DAY COMPRESSIVE STRENGTH FOR ALL CONCRETE.

2. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE UNLESS NOTED AS (LWT) ABOVE. LWT INDICATES LIGHT CONCRETE WEIGHING 115 PCF MAX.

3. IN ADDITION TO THE MINIMUM COMPRESSIVE STRENGTH REQUIREMENT, CONCRETE MIX DESIGNS FOR FLOORS, COLUMNS, AND WALLS SHALL BE PROPORTIONED FOR A MAXIMUM WATER-CEMENT RATIO OF 0.45.

C. THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN THE PLACEMENT OF CONCRETE UNLESS SHOWN ON THESE DRAWINGS. ANY DEVIATIONS SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT OR ENGINEER IN WRITING.

D. REINFORCING STEEL  
1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE ON THESE DRAWINGS OR IN THE NOTES BELOW.

2. PROVIDE REINFORCING STEEL CONFORMING TO ASTM A706 FOR ALL REINFORCING STEEL REQUIRED TO BE WELDED AND WHERE NOTED ON THESE DRAWINGS.

3. PROVIDE GALVANIZED REINFORCING STEEL IN ACCORDANCE WITH ASTM A76 CLASS II (2.0 OZ ZINC PER SQUARE FOOT), WHERE NOTED ON THESE DRAWINGS.

4. PROVIDE BOX-COATED REINFORCING STEEL CONFORMING TO ASTM A77 WHERE NOTED ON THESE DRAWINGS.

5. PROVIDE DEFORMED BAR ANCHORS CONFORMING TO ASTM A406 (75,000 PSI YIELD STRENGTH) WHERE NOTED ON THESE DRAWINGS. REINFORCING BARS SHALL NOT BE SUBSTITUTED FOR DEFORMED BAR ANCHORS.

6. PROVIDE WELDED DEFORMED WIRE REINFORCEMENT CONFORMING TO ASTM A497 (70,000 PSI YIELD STRENGTH) WHERE NOTED ON THESE DRAWINGS.

F. WHERE WELDED WIRE REINFORCEMENT IS SPECIFIED, IT SHALL BE CONTINUOUS ACROSS THE ENTIRE CONCRETE WITH SPlices SHALL BE LAPPED ONE CROSS WIRE SPACING PLUS 2 INCHES.

G. MINIMUM CONCRETE COVER TO REINFORCING SHALL BE IN ACCORDANCE WITH ACI 318, UNLESS NOTED OTHERWISE ON THESE DRAWINGS.

### IV. SOLID SAWN & LAMINATED LUMBER

A. ALL LUMBER SHALL BE VISUALLY GRADED, SOUTHERN PINE DIMENSION LUMBER, EASONED AND WITH 19% MAX. MOISTURE CONTENT, U.N.O., AND IN ACCORDANCE WITH THE FOLLOWING MINIMUM GRADE REQUIREMENTS.

STUD — STRUCT GRADE NO. 2

JOIST — STRUCT GRADE NO. 2

BEAMS (2"-4" THICK) — STRUCT GRADE NO. 2

POSTS — STRUCT GRADE NO. 2

PLATE STOCK — STRUCT GRADE NO. 2

B. GRADES SHALL BE DETERMINED IN ACCORDANCE WITH SPIB GRADING RULES AGENCY.

C. BRACE STUD WALLS UNTIL ALL PLYWOOD DECKING, ROOF TRUSSES, AND SHEAR PANELS ARE IN PLACE.

D. USE PRESSURE TREATED WOOD WITH ALKALINE COPPER QUAT (ACQ) OR COPPER AZOLE (CBA) FOR ALL EXPOSED LUMBER AND WITH ACO, CBA OR SODIUM BORATES (SBX) FOR SILL PLATES, CONTACT WITH CONCRETE, AND AS FASTERERS. PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED FOR ASTM A163. ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED FOR ASTM A653 AND MADE FROM CLASS G-165 SHEET WITH 1.85 OUNCES MINIMUM OF ZINC COATING PER SQUARE FOOT.

E. ALL SILL PLATES SHALL BE ANCHORED TO MASONRY OR CONCRETE WITH 1/2" ØA307 GRADE BOLTS @48" O.C. MAX. WITH 7" MIN. EMBEDMENT (U.N.O.)

F. HANDRAILS, GUARDRAILS AND STAIRWAYS INCLUDING ALL COMPONENTS AND THEIR CONNECTIONS SHALL BE DESIGNED BY THE SUPPLIER IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

G. INSTALL BEAMS WITH CROWN UP.

H. ALL LVL MEMBERS SHALL BE (MIN.): Fb=2600 psi., Fv=285 psi. & E=1900000 psi.

I. ALL LSL MEMBERS SHALL BE (MIN.): Fb=2900 psi., Fv=290 psi. & E=1800000 psi.

J. THE NUMBER OF WALL STUDS AT BEARING POINTS OF 2X MEMBER BEAMS SHALL MATCH THE NUMBER OF MEMBERS IN THE BEAM (U.N.O.). ALL LVL AND LSL BEAMS SHALL HAVE A (3) STUD MIN. BEARING (U.N.O.). THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS.

V. NAILING

FASTENING SCHEDULE

CONNECTION	FASTENER	NUMBER	SPACING
BALCONY SILL OR TOP PLATE, TOE NAIL	8d COMMON	6" O.C.	
JOIST TO SILL, JOIST, FACE NAIL	16d COMMON	3	
JOIST TO SILL OR GIRDERS, TOE NAIL	8d COMMON	2	
BRIDGING TO JOIST, TOE NAIL EACH END	8d COMMON	2	
LEDGER STRIP	16d COMMON	3 AT EACH JOIST	
1X6 SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	8d COMMON	2	
OVER 1X6 SUBFLOOR TO EACH JOIST, FACE NAIL	8d COMMON	3	

2 INCH SUBFLOOR TO JOIST OR GIRDERS, BLIND AND FACE NAIL  
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL  
TOP OR SOLE PLATE TO STUD, END NAILED  
STUD TO SOLE PLATE, TOE NAIL  
DOUBLED STUDS, FACE NAIL  
DOUBLED TOP PLATES, FACE NAIL  
TOP PLATES, LAP AND INTERSECTIONS FACE NAIL

CONTINUOUS HEADER, TWO PIECES  
CONTINUOUS HEADER, THREE PIECES  
CEILING JOISTS TO PLATE, TOE NAIL  
CONTINUOUS HEADER TO STUD, TOE NAIL  
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL

CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL  
RAFTER TO PLATE, TOE NAIL  
1 INCH BRACE TO EACH STUD AND PLATE, FACE NAIL  
1X8 SHEATHING OR LESS TO EACH BEARING, FACE NAIL