

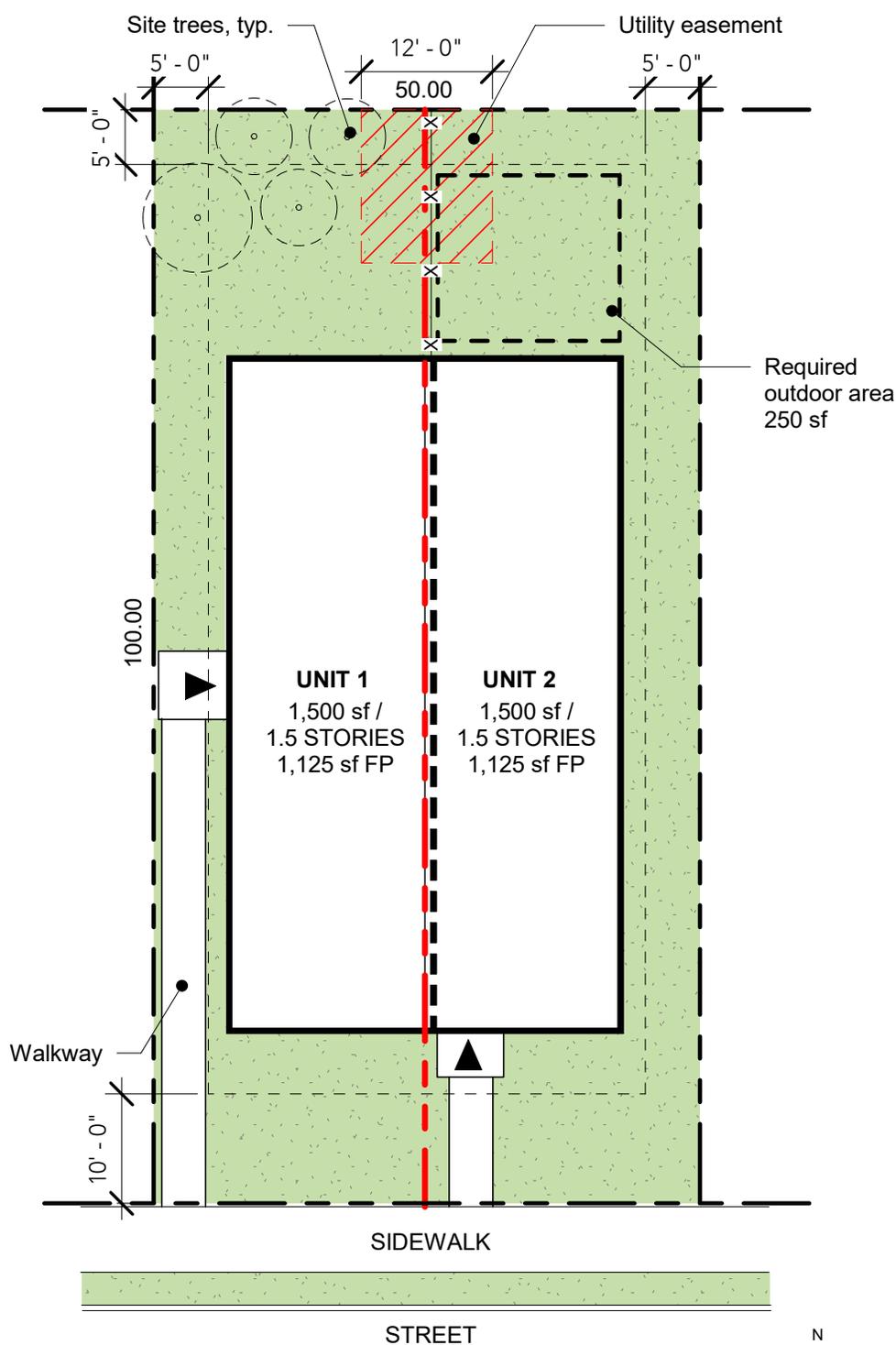
# RESIDENTIAL INFILL PROJECT (RIP) PART 2 MIDDLE HOUSING LAND DIVISION ANALYSIS

## SITE PLAN LEGEND

	LOT LINE, PARENT		EASEMENT
	LOT LINE, MHLD		TRACT
	MINIMUM BUILDING SETBACK		STREET, PRIVATE
	TOWNHOUSE SEPARATION (FIRE RATED)		MAIN ENTRY
	FIRE HOSE STRETCH		DRYWELL
	REQUIRED OUTDOOR AREA		BIKE PARKING
	WATER, DOMESTIC		FIRE HYDRANT
	WATER METER		TREE
	SEWER, SANITARY		
	STORM DRAIN		
	GAS		
	ELECTRICAL (OVERHEAD)		
	ELECTRICAL (UNDERGROUND)		
	FENCE		

## SUMMARY OF DESIGN OPTIONS

- D1 - DUPLEX SIDE-BY-SIDE 50X100 CORNER LOT
- T1 - TRIPLEX FRONT-TO-BACK 50X100 INTERIOR LOT
- F1 - 4PLEX SIDE-BY-SIDE 50X100 CORNER LOT
- F2 - 4PLEX 2-UP 2-BACK 50X100 INTERIOR LOT
- F3 - 4PLEX FRONT-TO-BACK 50X100 INTERIOR LOT
- F4 - 4PLEX SIDE-BY-SIDE 50X100 INTERIOR LOT (COURTYARD)
- S1 - SIXPLEX SIDE-BY-SIDE 50X100 CORNER LOT
- C1 - COTTAGE CLUSTER - 3 UNITS 50X100 INTERIOR LOT
- C2 - COTTAGE CLUSTER - 4 UNITS 50X150 INTERIOR LOT
- C3 - COTTAGE CLUSTER - 12 UNITS, 75X160 INTERIOR LOT
- C4 - COTTAGE CLUSTER - 16 UNITS, 100X200 INTERIOR LOT



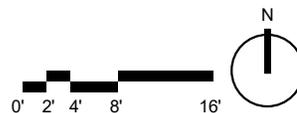
**DEVELOPMENT SUMMARY:**

Site Area:	5,000 sf	
Building Footprint:	2,250 sf / 45%	(max 2,250 sf / 45%)
Building Area:	3,000 sf / 2 units	
Building FAR:	0.6:1	(max FAR 0.6:1)
Building Height:	24 ft	(max height 30 ft)
Bike parking:	0	(none req'd)

**NOTES:**

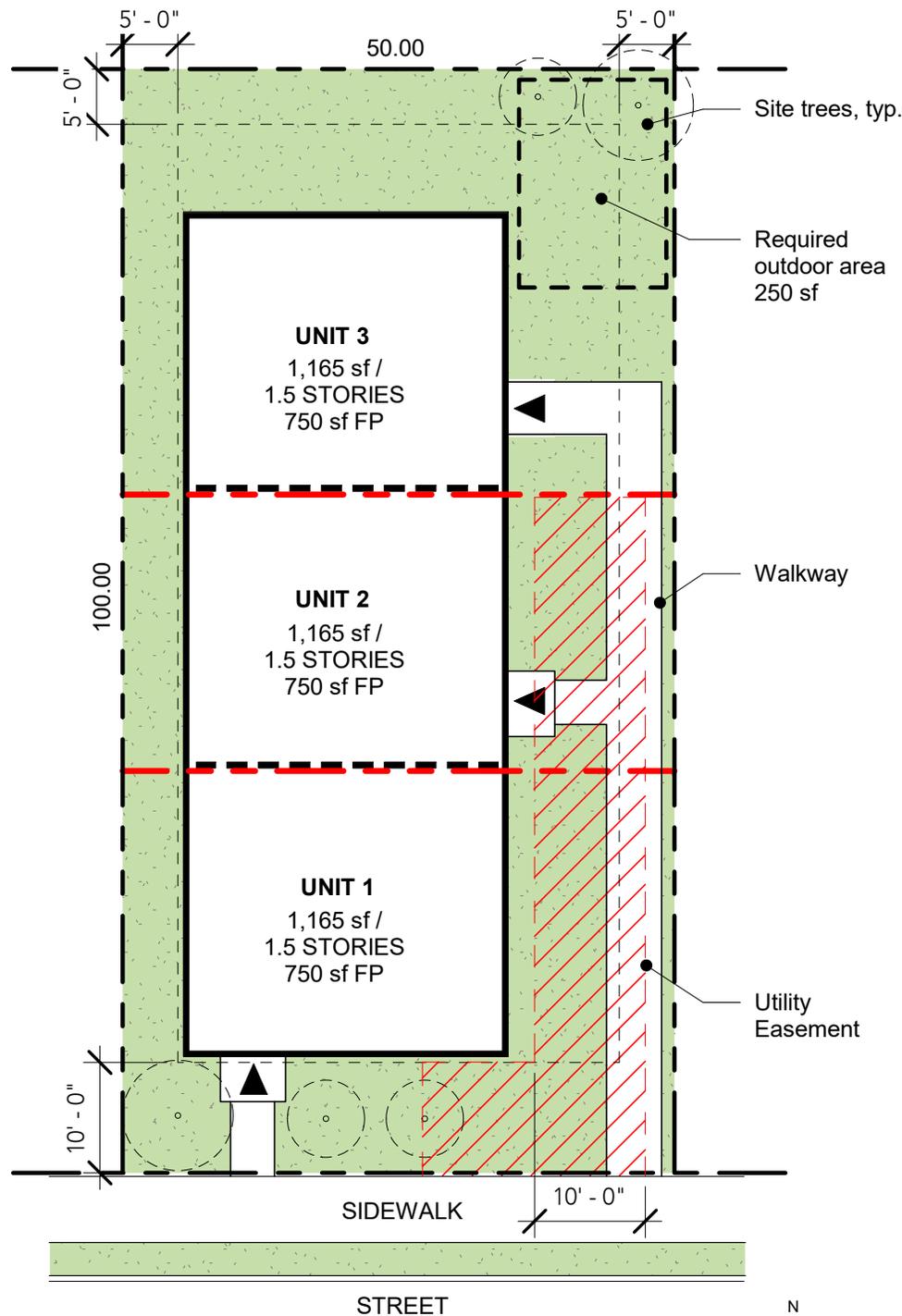
1. Base zoning requires that only one main entry meet entry standards. Is this appropriate for a duplex?
2. Zoning code does not require equitable distribution of trees, outdoor area or other site amenities among middle housing lots. Is this appropriate?

**SITE PLAN**



**OPTION D1**  
**DUPLEX SIDE-BY-SIDE, 50X100 CORNER LOT**





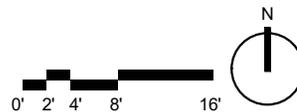
**DEVELOPMENT SUMMARY:**

Site Area:	5,000 sf	
Building Footprint:	2,250 sf / 45%	(max 2,250 sf / 45%)
Building Area:	3,500 sf / 3 units	
Building FAR:	0.7:1	(max FAR 0.7:1)
Building Height:	24 ft	(max height 30 ft)
Bike parking:	0	(none req'd)

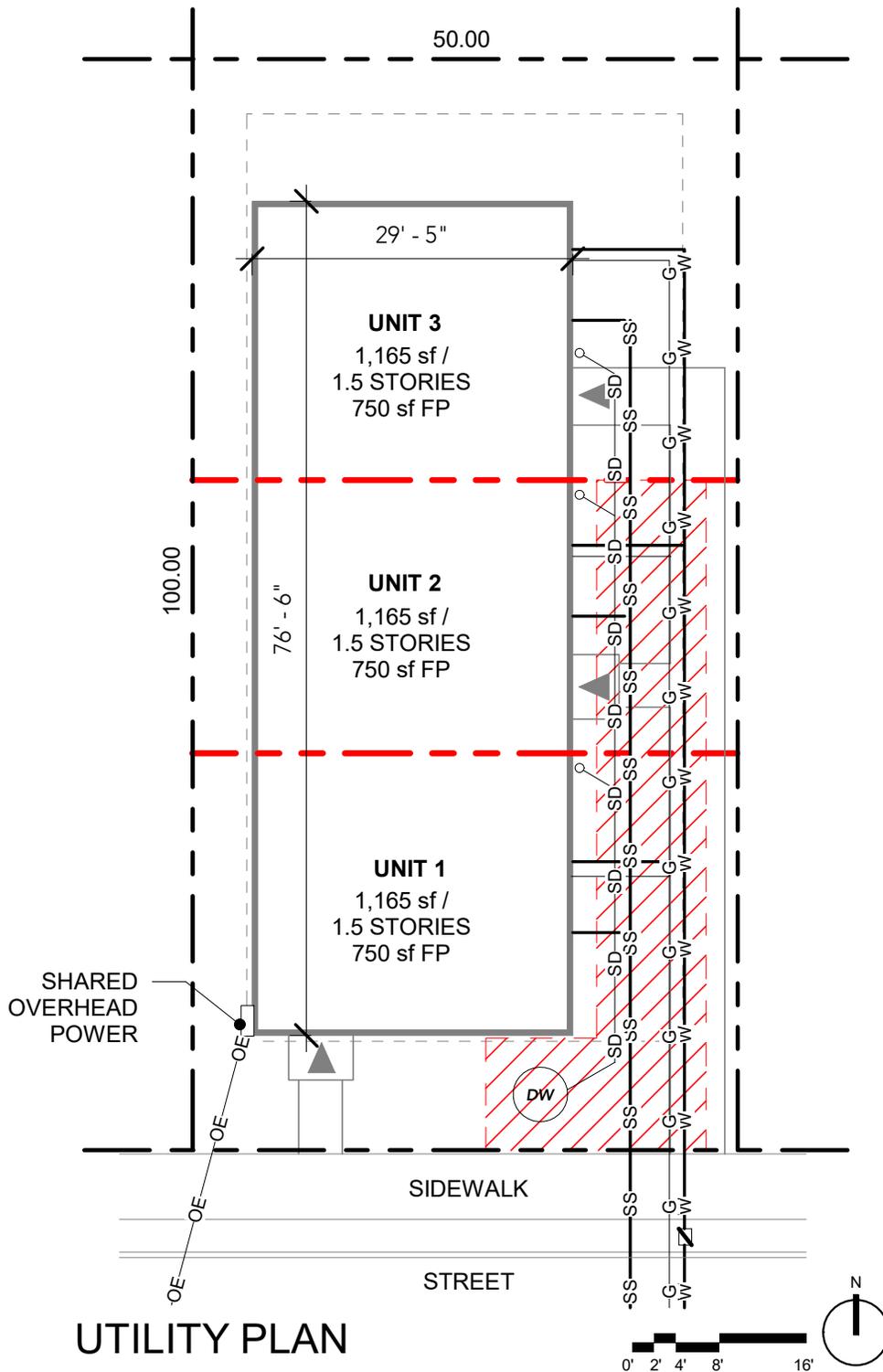
**NOTES:**

1. Base zoning requires that only one main entry meet entry standards. Is this appropriate for a triplex?
2. Zoning code does not require equitable distribution of trees, outdoor area or other site amenities among middle housing lots. Is this appropriate?
3. If an easement is present on site, should zoning code encourage shared outdoor area to be placed in easement?

**SITE PLAN**



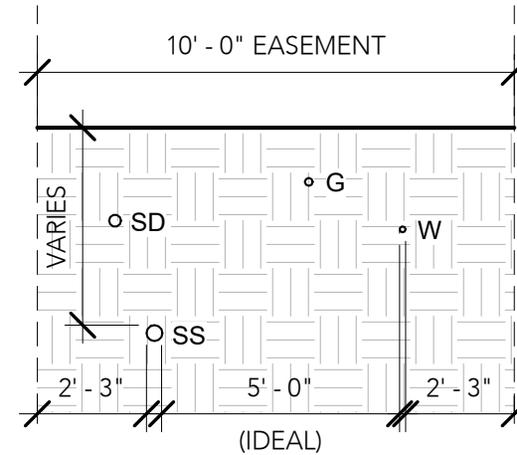
**OPTION T1**  
**TRIPLEX FRONT-TO-BACK, 50X100 INTERIOR LOT**



UTILITY PLAN

NOTES:

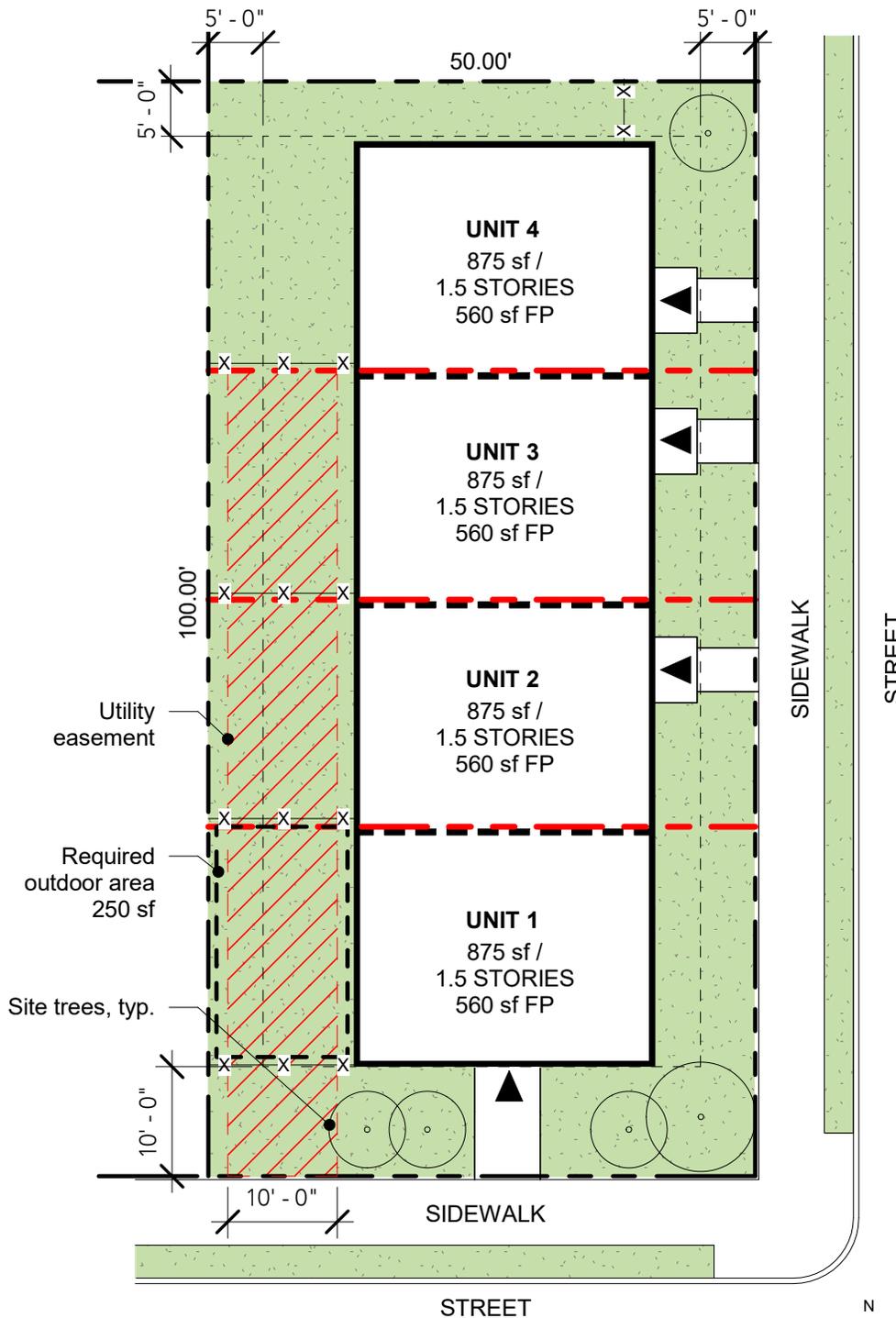
1. Utilities accommodated via a shared utility easement.
2. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.
3. Drywell located in easement for simplicity, but may need alternate method approvals for proximity to property line and structures.



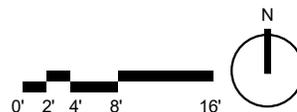
UTILITY SECTION



**OPTION T1**  
TRIPLEX FRONT-TO-BACK, 50X100 INTERIOR LOT



SITE PLAN



**DEVELOPMENT SUMMARY:**

Site Area:	5,000 sf	
Building Footprint:	2,250 sf / 45%	(max 2,250 sf / 45%)
Building Area:	3,500 sf / 4 units	
Building FAR:	0.7:1	(max FAR 0.7:1)
Building Height:	24 ft	(max height 30 ft)
Bike parking:	0	(none req'd)

**NOTES:**

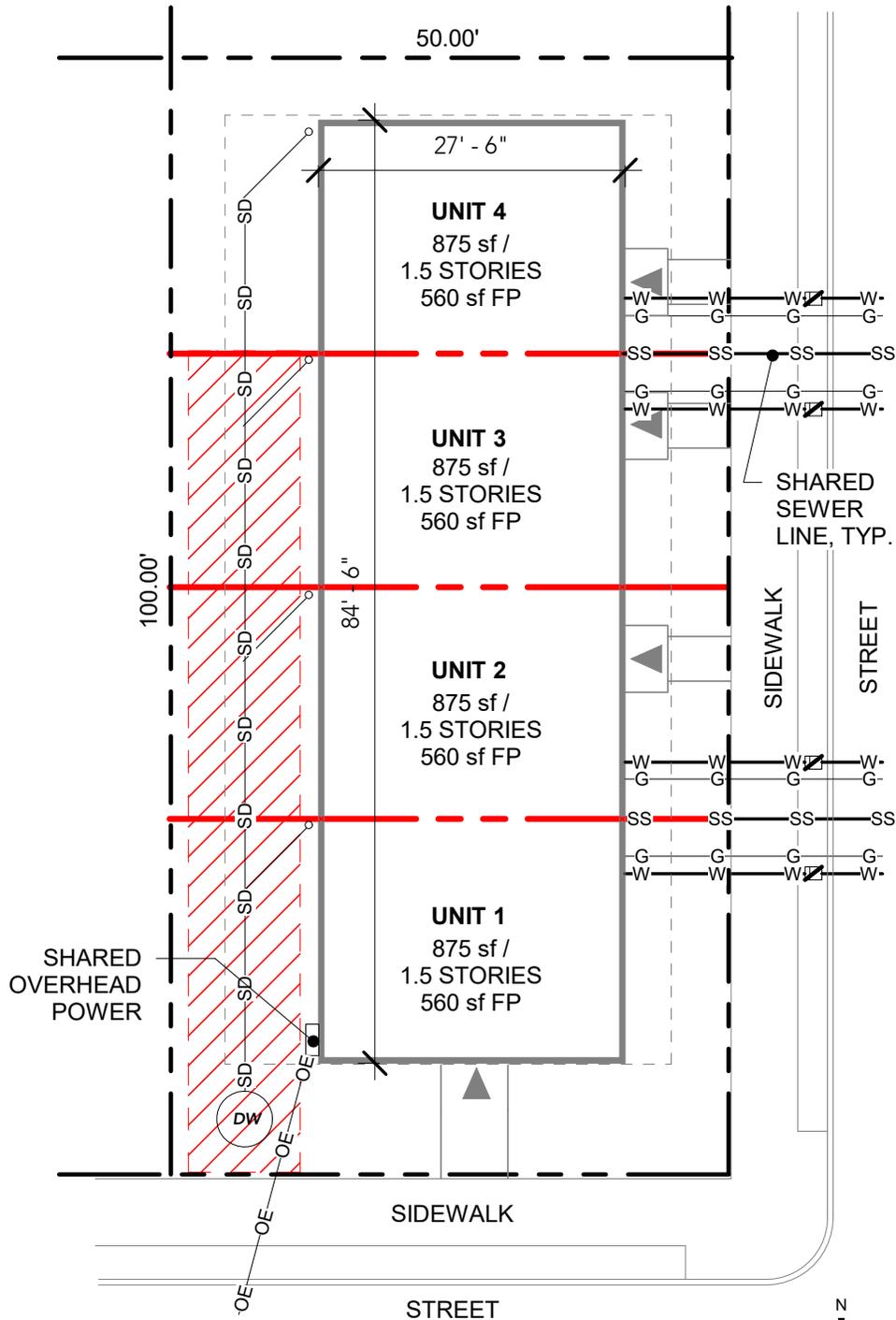
1. 1.5-story units with footprint of 563 sf each may not provide an efficient layout. Visitability standards pose additional challenges
2. Zoning code does not require equitable distribution of trees, outdoor area or other site amenities among middle housing lots. Is this appropriate?

**OPTION F1**

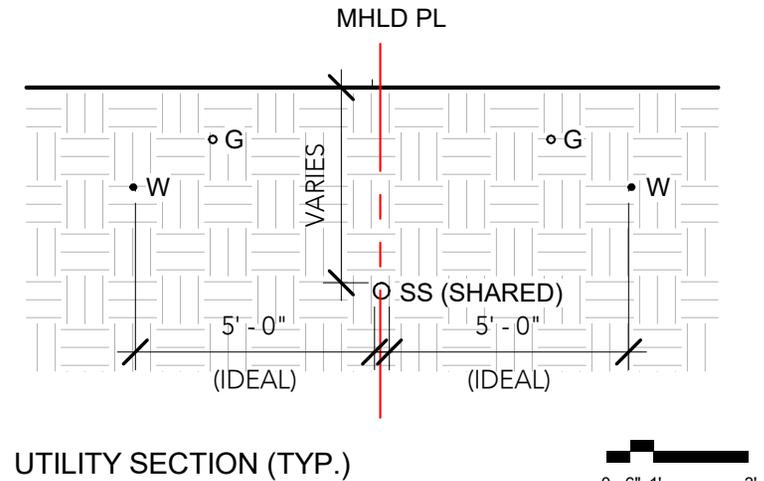
4PLEX SIDE-BY-SIDE, 50X100 CORNER LOT

**NOTES:**

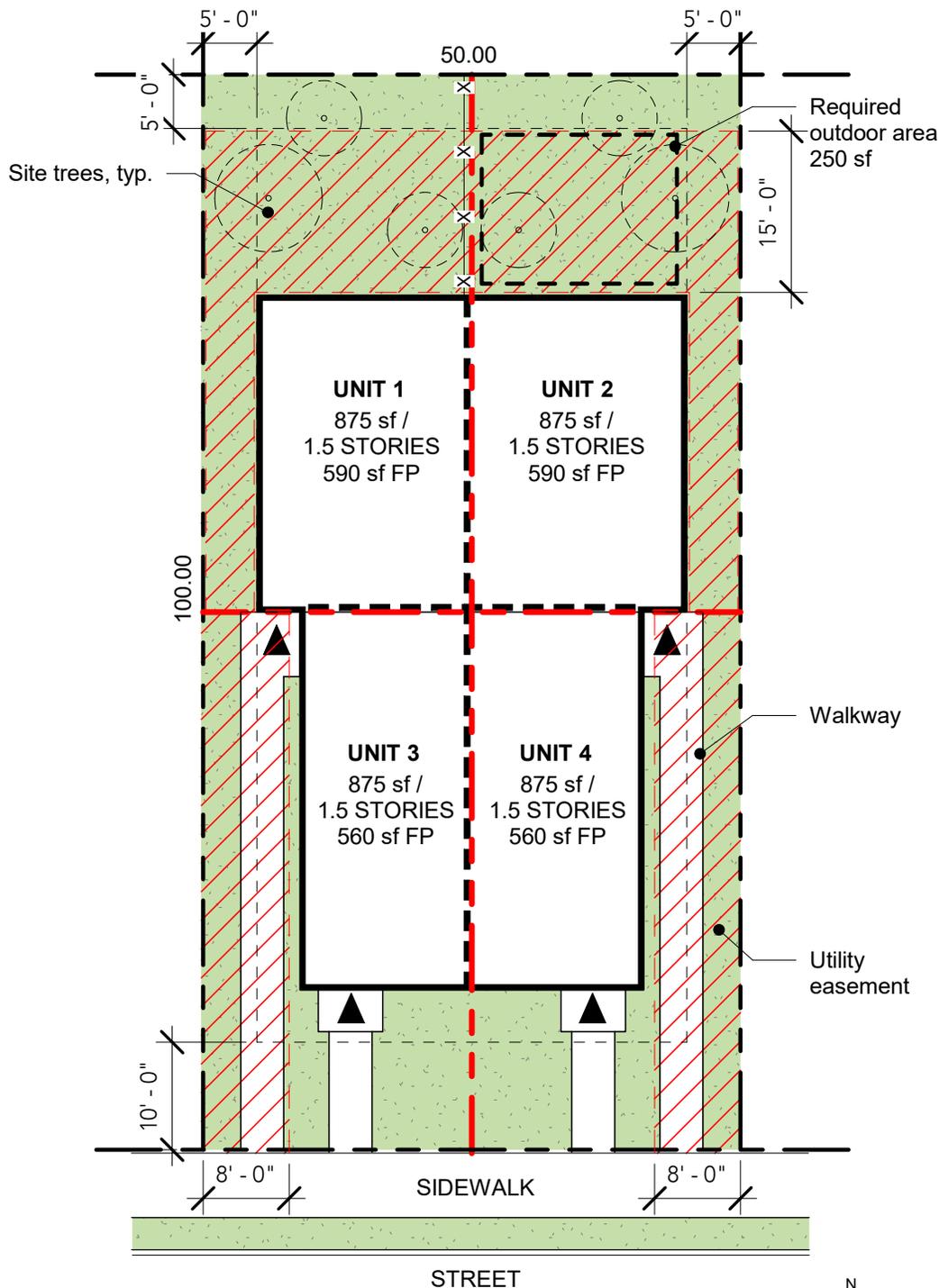
1. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.
2. Consider allowing shared utility laterals to minimize number of taps into public main.



UTILITY PLAN



**OPTION F1**  
4PLEX SIDE-BY-SIDE, 50X100 CORNER LOT



**DEVELOPMENT SUMMARY:**

Site Area:	5,000 sf	
Building Footprint:	2,250 sf / 45%	(max 2,250 sf / 45%)
Building Area:	3,500 sf / 4 units	
Building FAR:	0.7:1	(max FAR 0.7:1)
Building Height:	24 ft	(max height 30 ft)
Bike parking:	0	(none req'd)

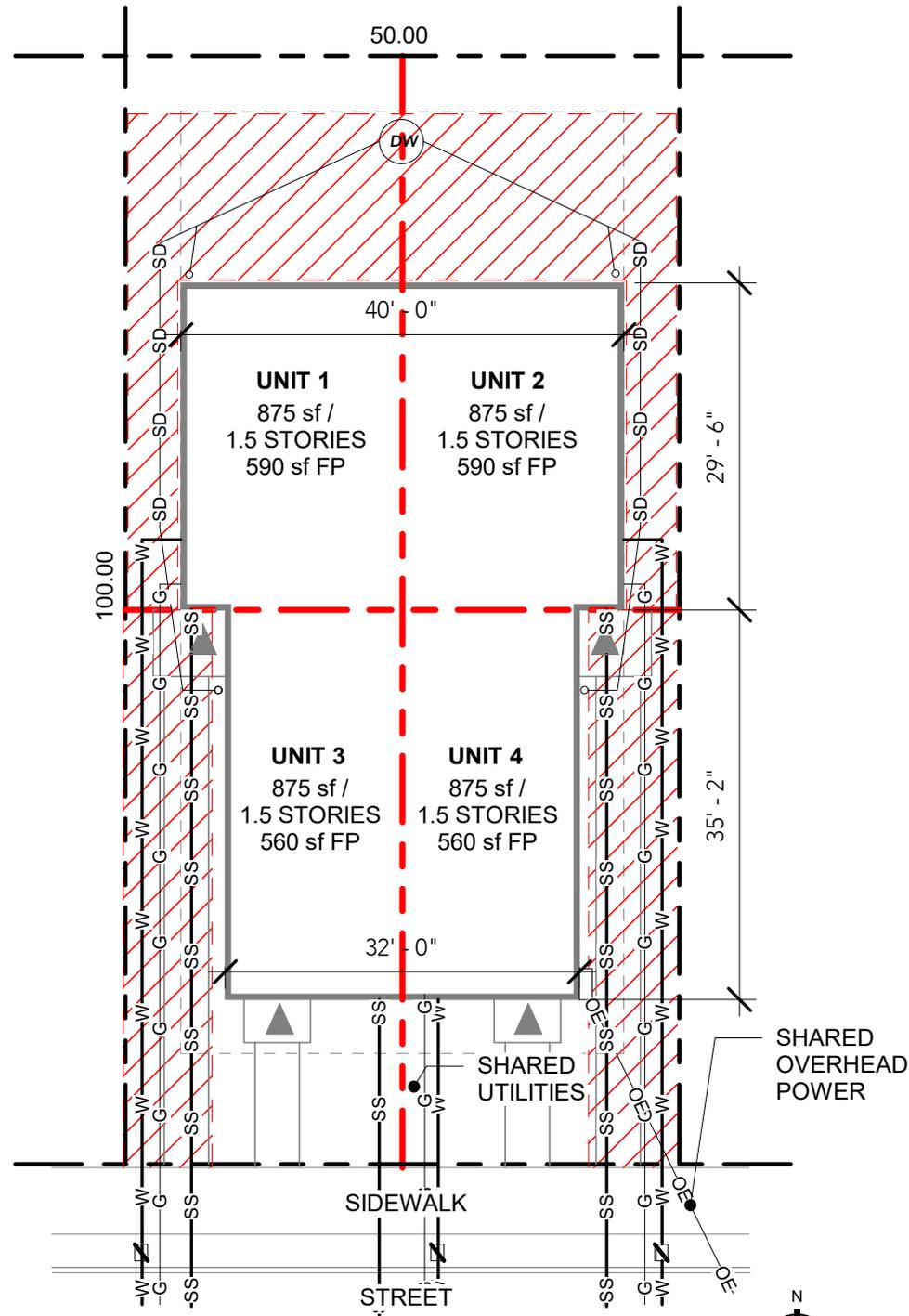
**NOTES:**

1. Developers may desire a flaglot configuration in this scenario
2. Zoning code does not require equitable distribution of trees, outdoor area or other site amenities among middle housing lots. Is this appropriate?

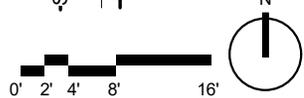
**SITE PLAN**

**OPTION F2**

**4PLEX 2-UP 2-BACK, 50X100 INTERIOR LOT**

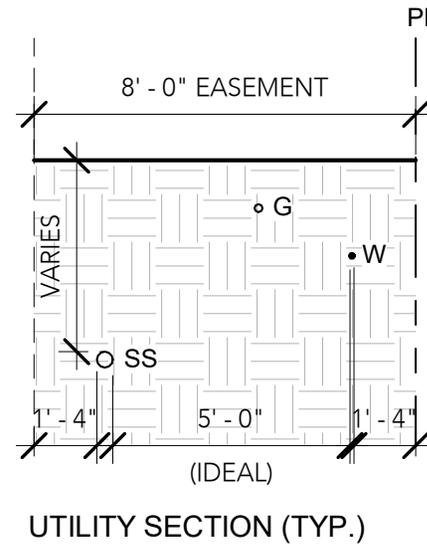


UTILITY PLAN

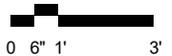


NOTES:

1. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.
2. Consider allowing shared utility laterals to minimize number of taps into public main.

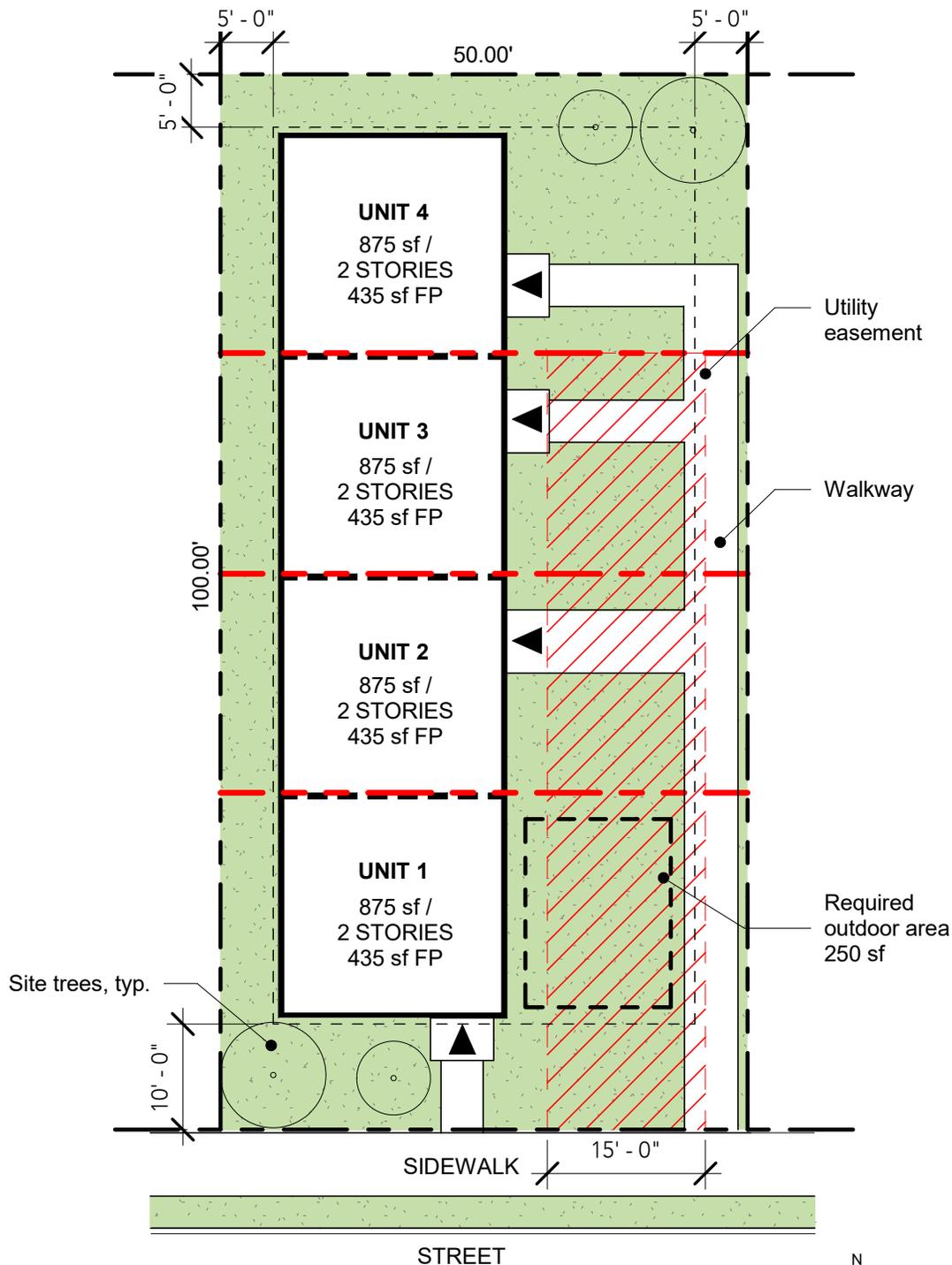


UTILITY SECTION (TYP.)



**OPTION F2**

4PLEX 2-UP 2-BACK, 50X100 INTERIOR LOT



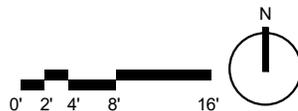
**DEVELOPMENT SUMMARY:**

Site Area:	5,000 sf
Building Footprint:	1,750 sf / 35% (max 2,250 sf / 45%)
Building Area:	3,500 sf / 4 units
Building FAR:	0.7:1 (max FAR 0.7:1)
Building Height:	24 ft (max height 30 ft)
Bike parking:	0 (none req'd)

**NOTES:**

1. 2-story units with small footprint of 438 sf each may not provide an efficient layout. Visitability standards pose additional challenges.
2. Zoning code does not require equitable distribution of trees, outdoor area or other site amenities among middle housing lots. Is this appropriate?

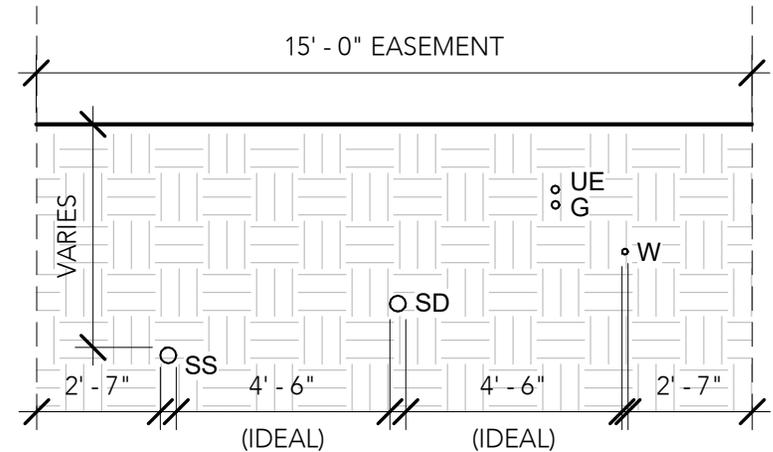
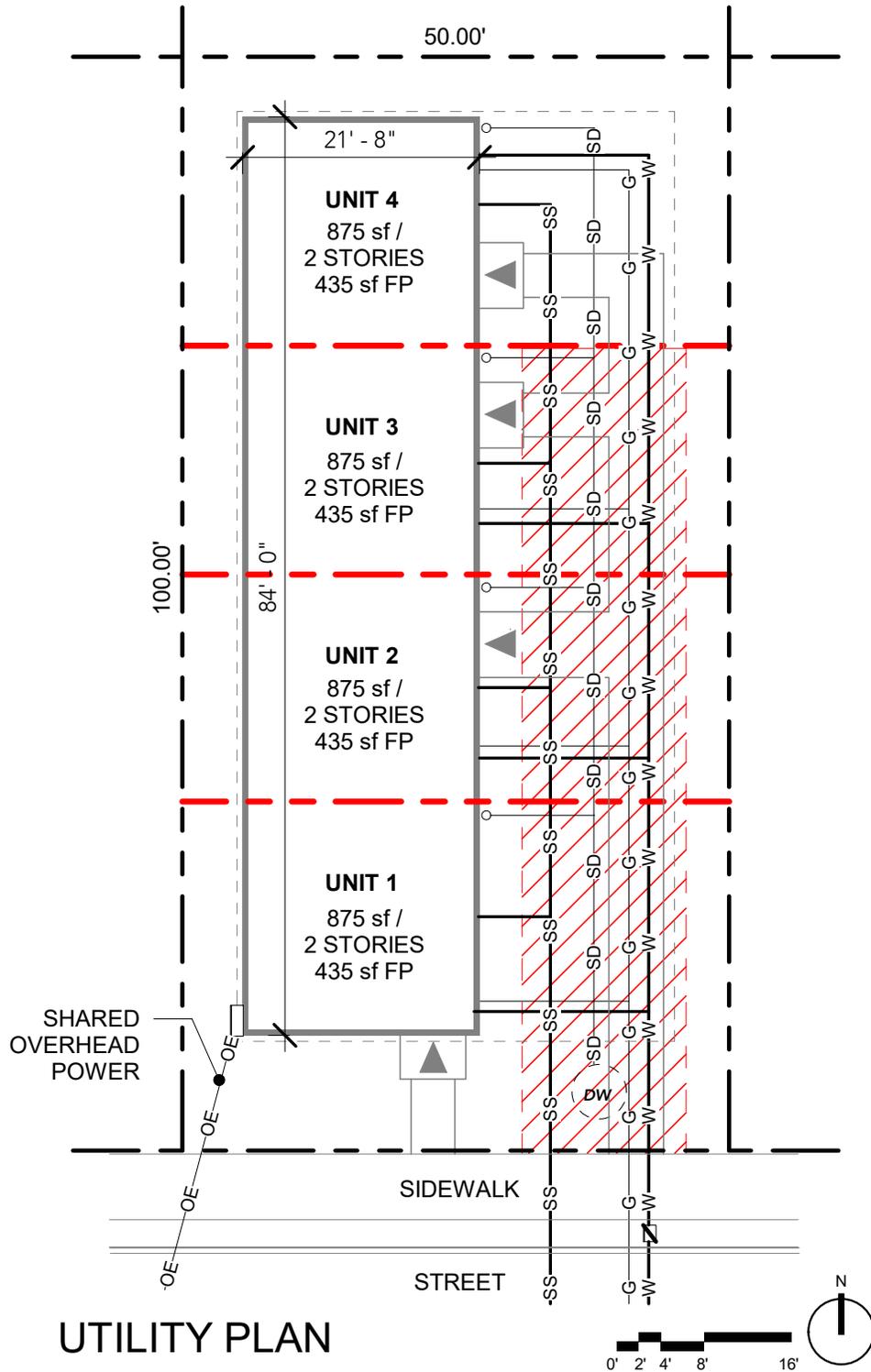
**SITE PLAN**



**OPTION F3**  
**4PLEX FRONT-TO-BACK, 50X100 INTERIOR LOT**

NOTES:

1. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.



**OPTION F3**

4PLEX FRONT-TO-BACK, 50X100 INTERIOR LOT

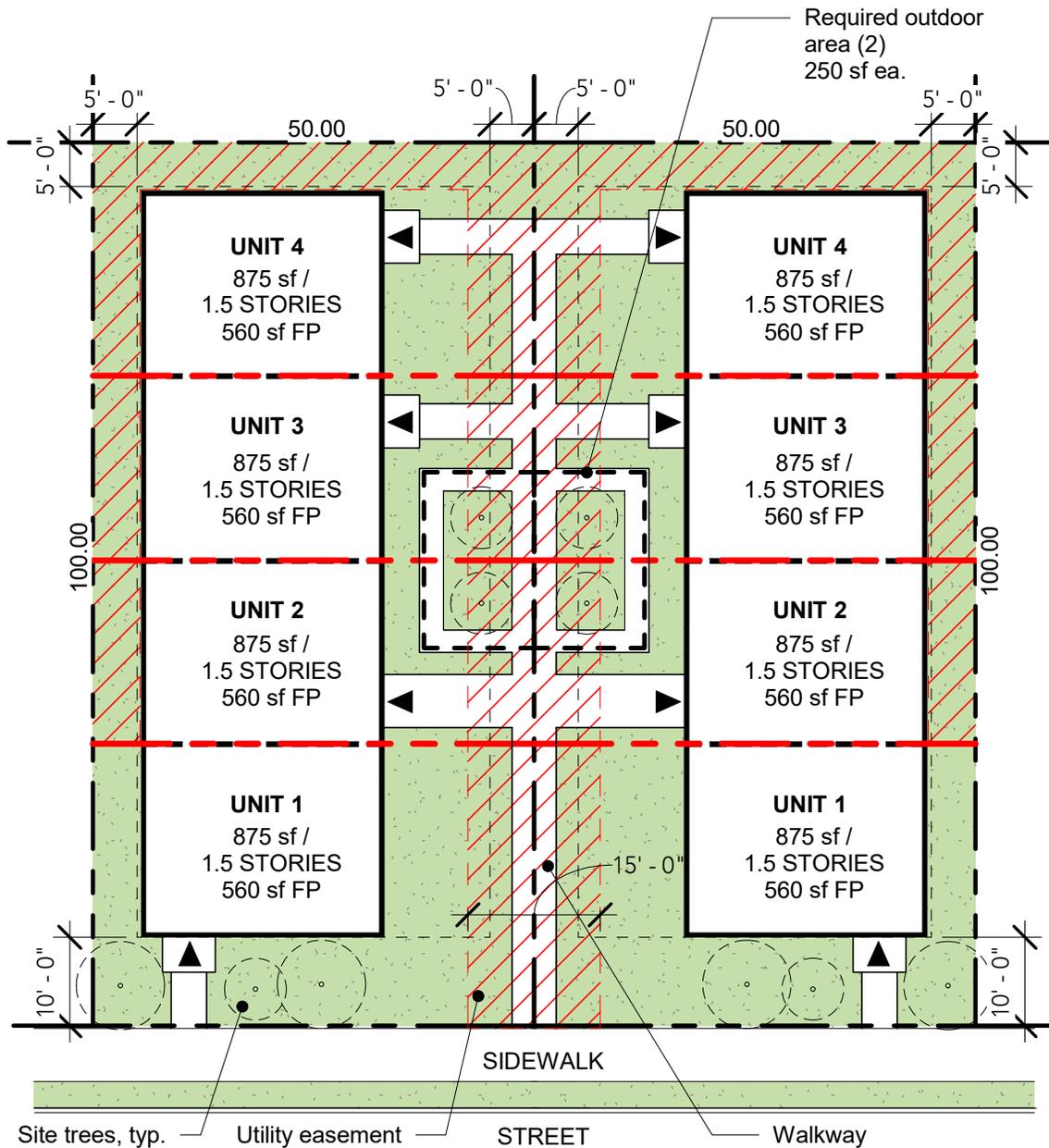
**DEVELOPMENT SUMMARY:**

Site Area:	5,000 sf	
Building Footprint:	2,250 sf / 45%	(max 2,250 sf / 45%)
Building Area:	3,500 sf / 4 units	
Building FAR:	0.7:1	(max FAR 0.7:1)
Building Height:	24 ft	(max height 30 ft)

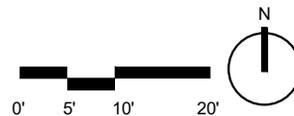
Bike parking: 0 (none req'd)

**NOTES:**

1. Is the shared walkway and required outdoor space on top of the parent property line allowed?
2. Both sites together are greater than 5 units, but are separated by a parent lot line. Will bike parking and trash enclosure be required?



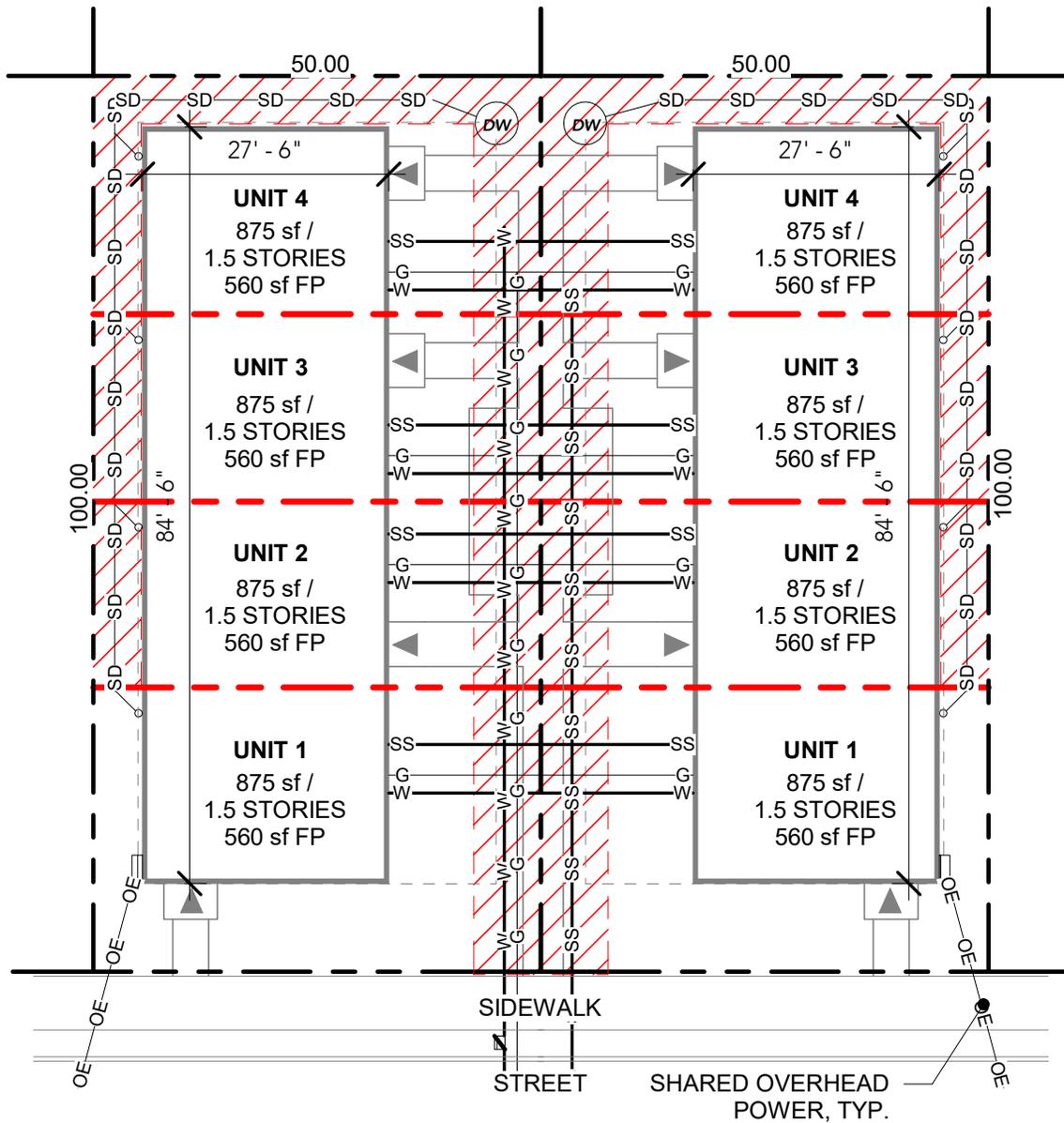
**SITE PLAN**



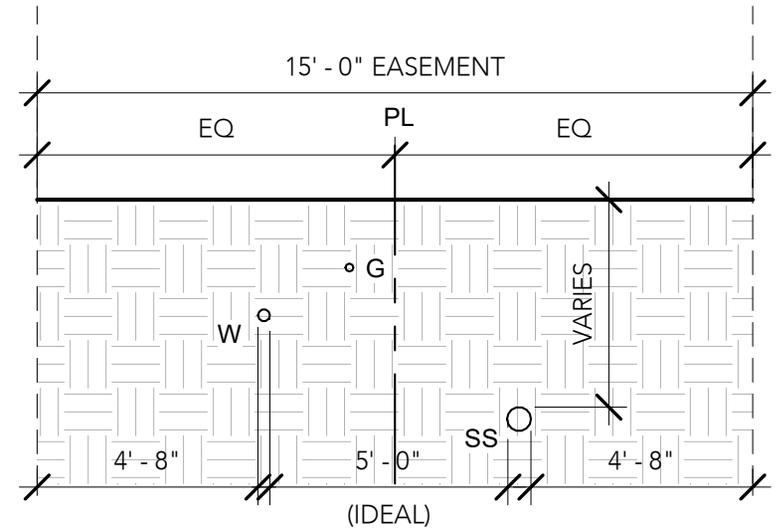
**OPTION F4 (COURTYARD APT.)**  
4PLEX SIDE-BY-SIDE PAIR, 50X100 INTERIOR LOT

**NOTES:**

1. Would a tract or private street be more appropriate in comparison to an easement?
2. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.
3. Consider allowing shared utility laterals to minimize number of taps into public main.



UTILITY PLAN



UTILITY SECTION

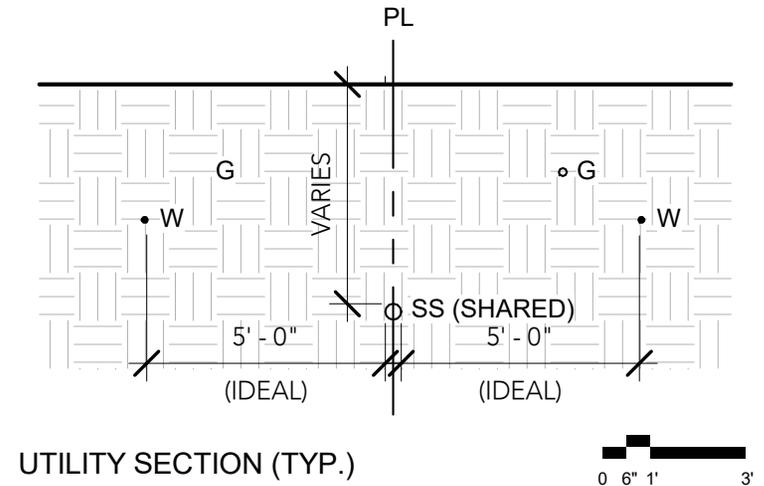
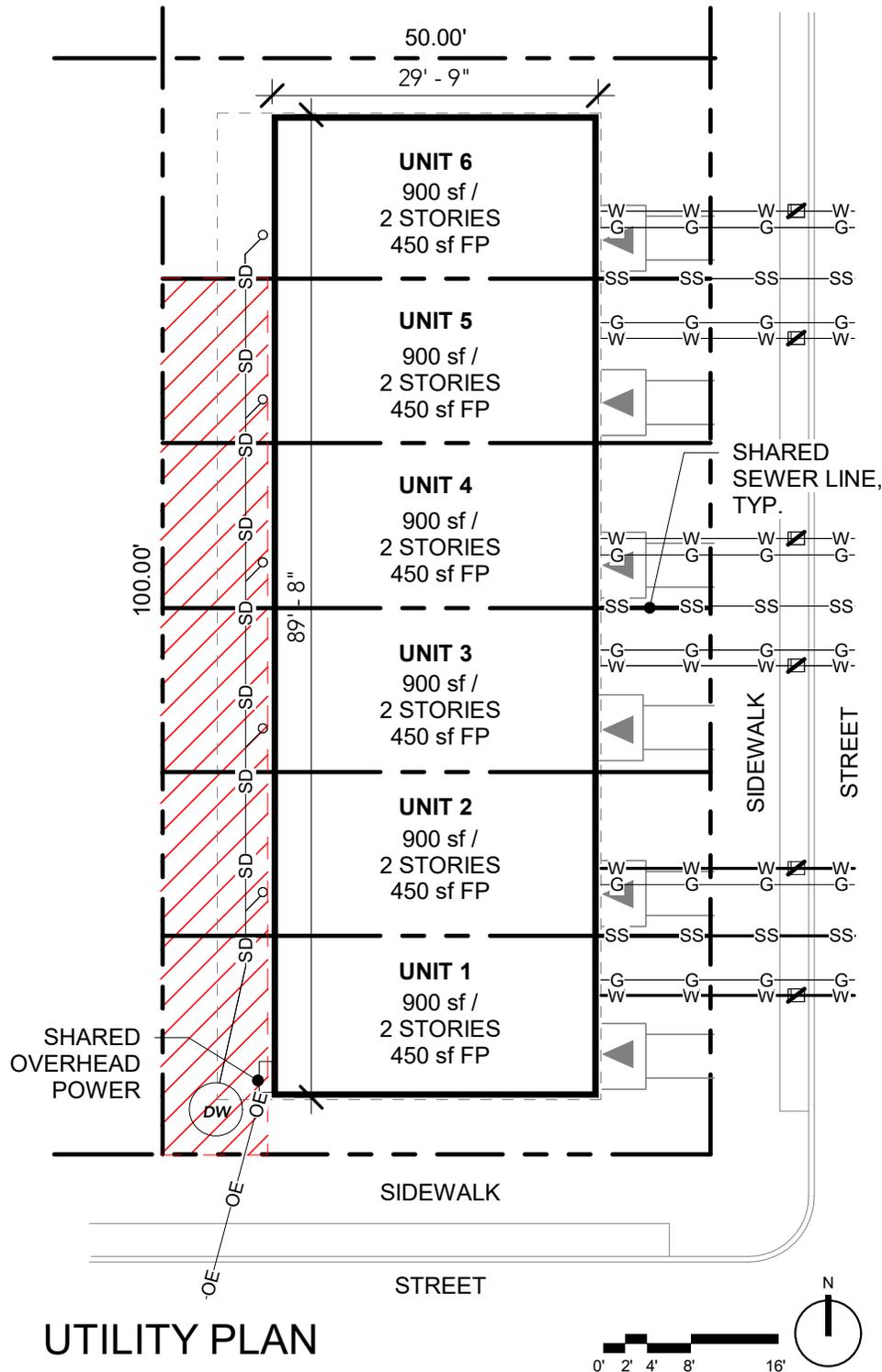
**OPTION F4 (COURTYARD APT.)**

4PLEX SIDE-BY-SIDE PAIR, 50X100 INTERIOR LOT

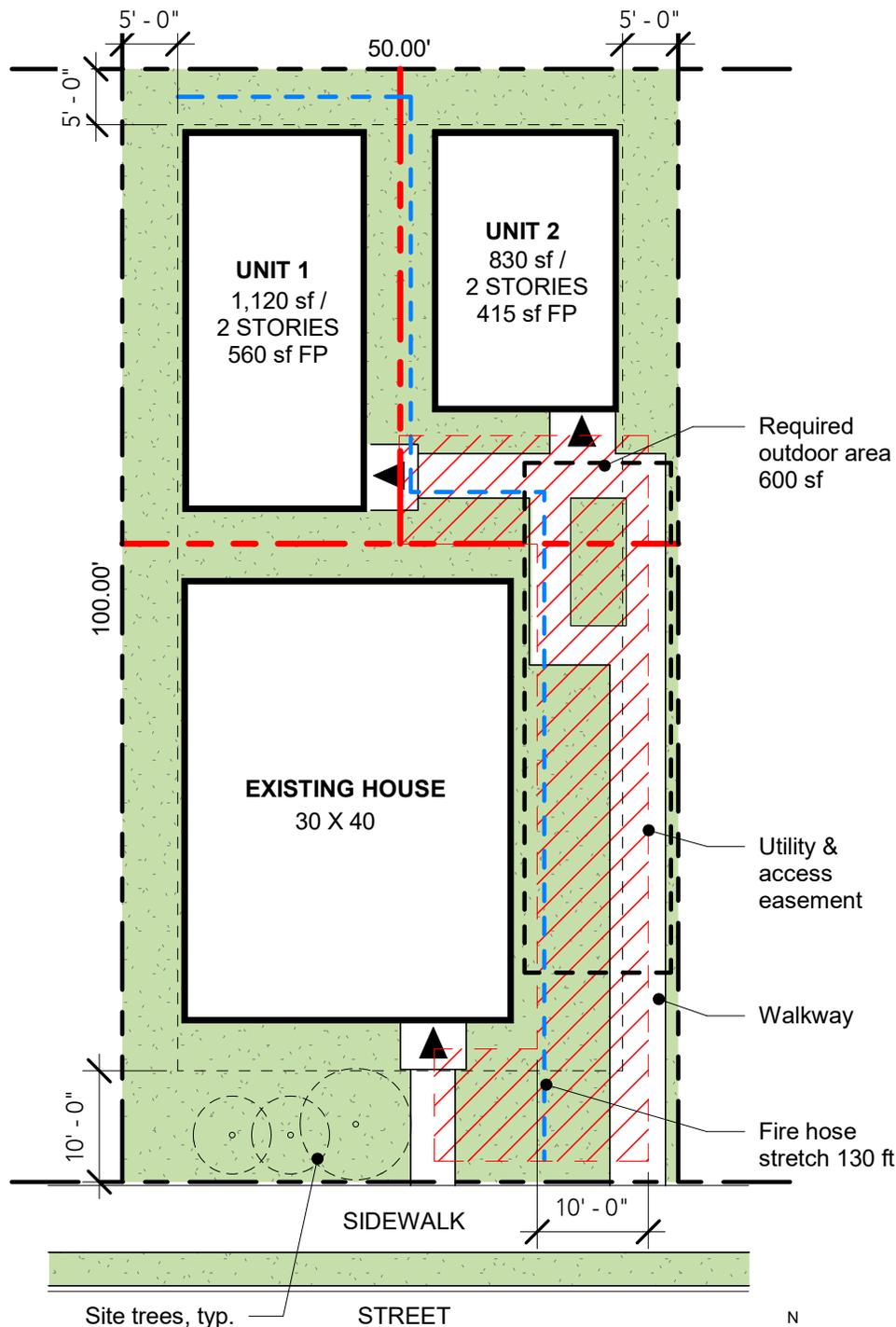


**NOTES:**

1. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.



**OPTION S1**  
**SIXPLEX SIDE-BY-SIDE, 50X100 CORNER LOT**



SITE PLAN

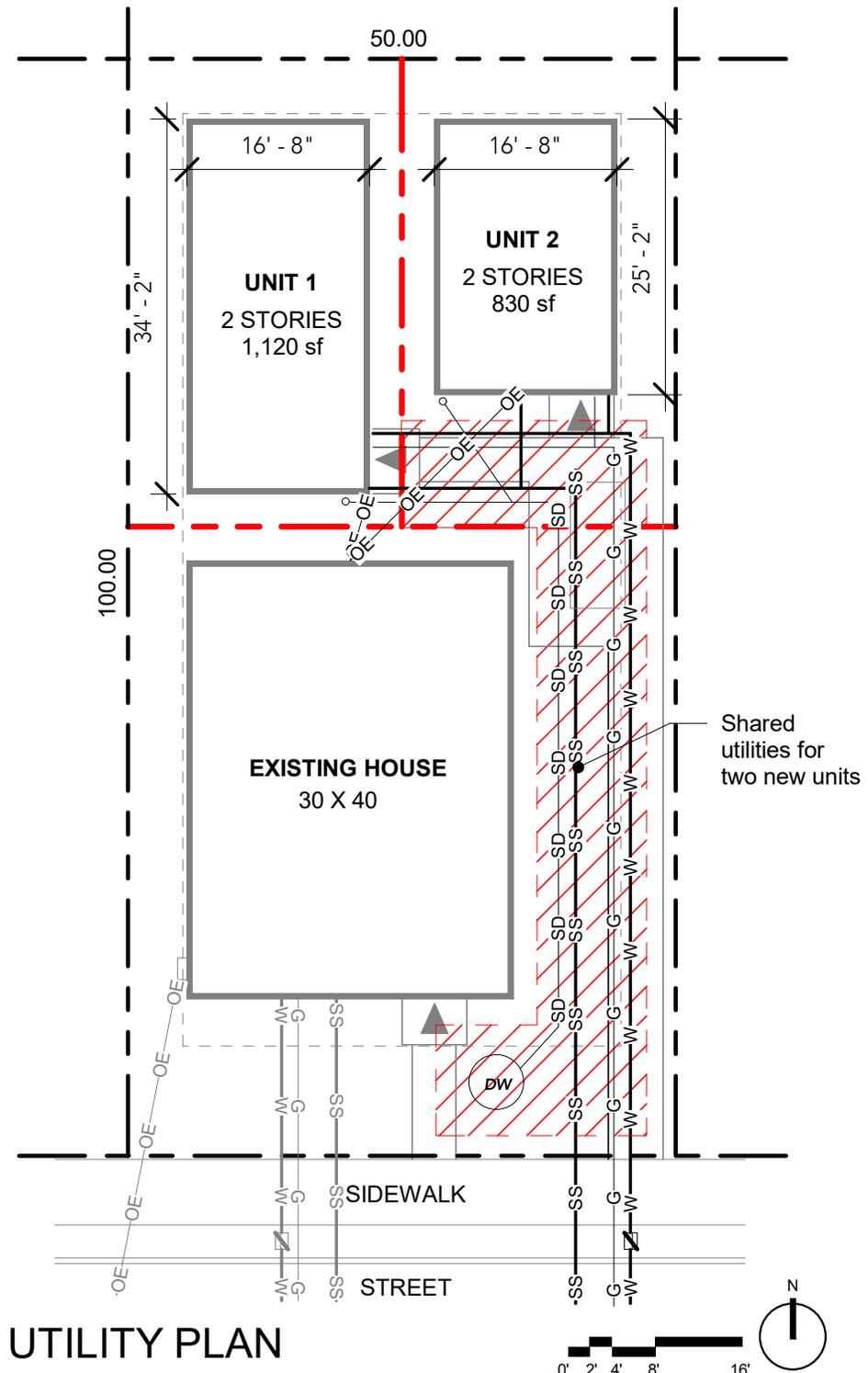
**DEVELOPMENT SUMMARY:**

Site Zoning:	R5	
Site Area:	5,000 sf	
Existing house footprint:	1,200 sf	(no max)
Existing house area:	2,400 sf	(no max)
Total bldg footprint:	2,175 sf / 44%	
Total bldg area:	4,350 sf / 0.87:1 FAR	
Bldg height:	24 ft / 2 stories	(max 25 ft)
Average area per unit:	975 sf per unit (excluding existing)	
Bike parking:	0	(none req'd)

**NOTES:**

1. Based on DRAFT cottage cluster zoning code standards currently in development.
2. Placing cottages in the backyard of an existing house could be a common scenario.
3. More likely to see attempts to retain houses on smaller lots than larger lots.
4. Very little on-site space remains for placing trees without conflicting with utilities.

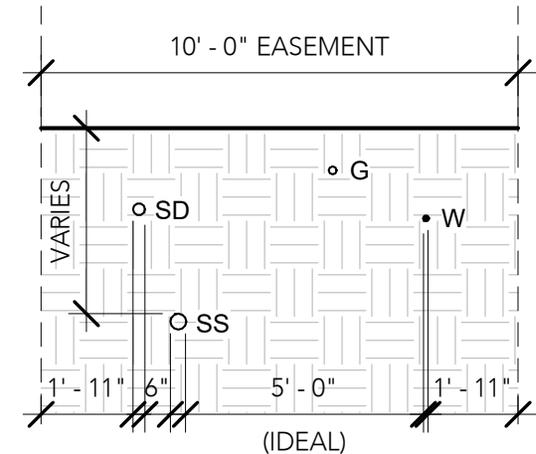
**OPTION C1**  
**3 UNITS, 50X100 INTERIOR LOT**



UTILITY PLAN

NOTES:

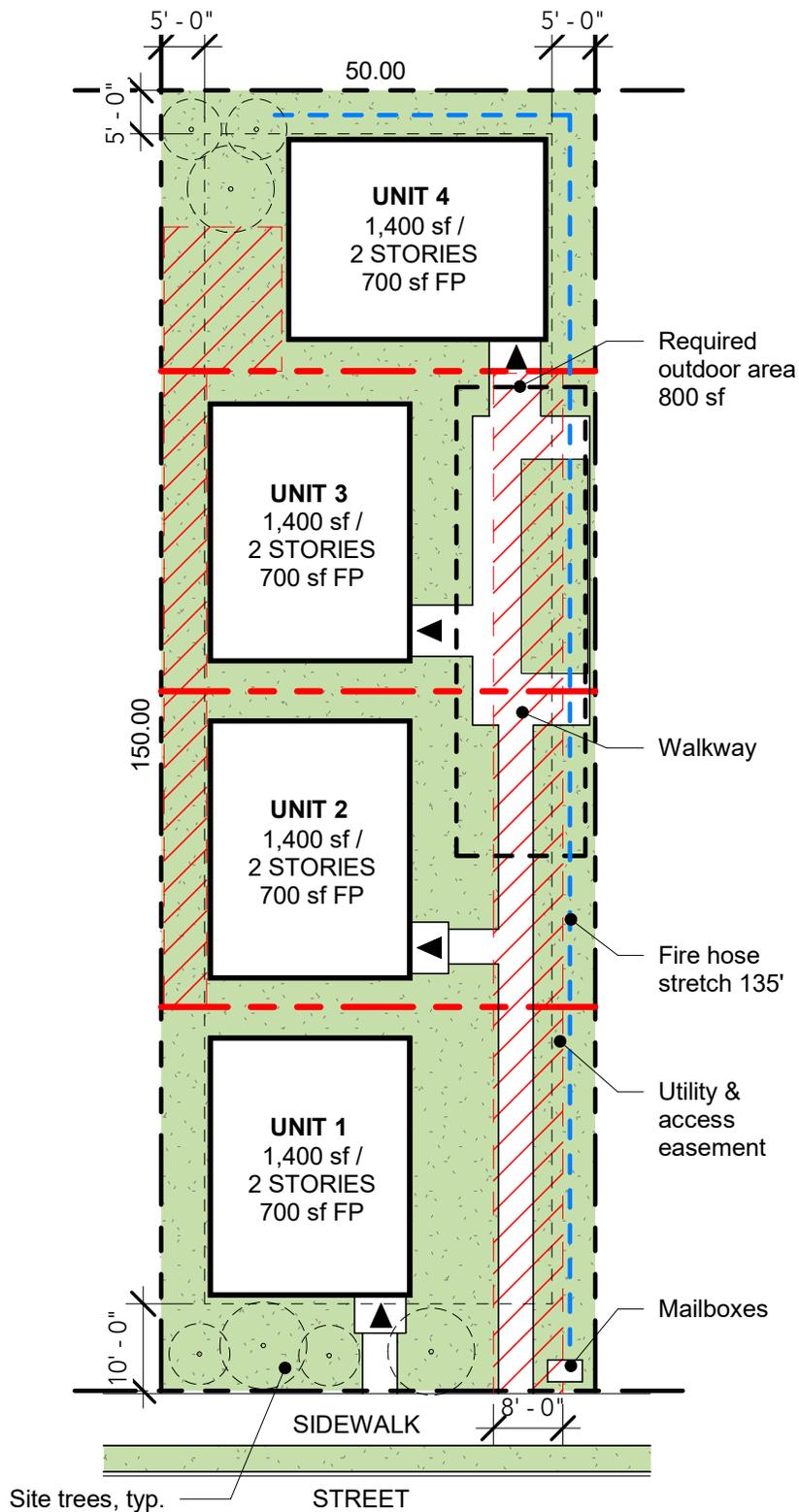
1. Utilities accommodated via a shared utility easement.
2. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.
3. Can electrical for new units be fed from existing house service?



UTILITY SECTION



**OPTION C1**  
3 UNITS, 50X100 INTERIOR LOT



**DEVELOPMENT SUMMARY:**

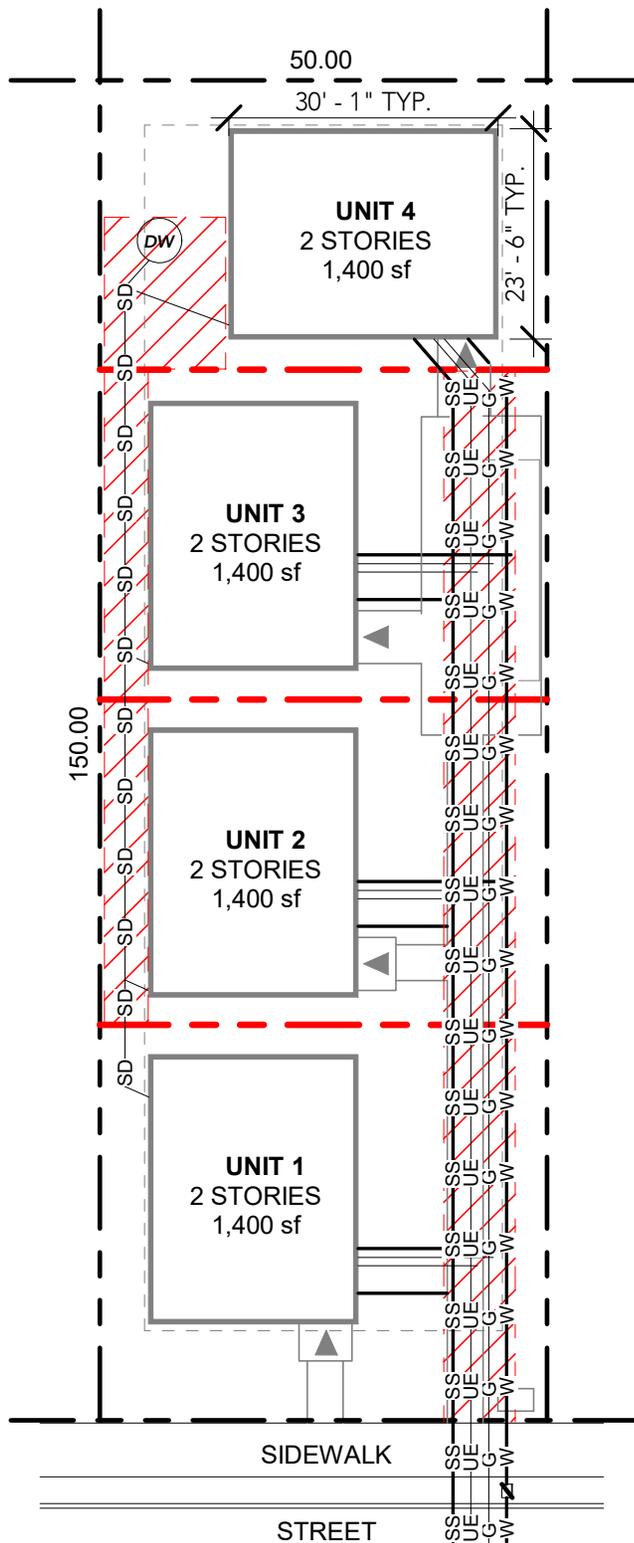
Site zoning:	R5	
Site area:	7,500 sf	
Total bldg footprint:	2,800 sf / 37%	(max 900 sf / unit)
Total bldg area:	5,600 sf / 0.75:1 FAR	(max 1,400 sf / unit avg)
Bldg height:	24 ft / 2 stories	(max 25 ft)
Average area per unit:	1,400 sf	(max 1,400 sf avg)
Bike parking:	0	(none req'd)

**NOTES:**

1. Based on DRAFT cottage cluster zoning code standards currently in development.
2. Developers may favor plans w/ repetitive (efficient) cottage units.
3. How will trash/recycling be accommodated? No dedicated area is required for <5 units.
4. Most remote point at unit exterior wall exceed 150 ft. Solutions to fire access include sprinklering most remote unit (NFPA Type 13D acceptable?) or developing the easement as a fire apparatus access surface.
5. Entry orientation standards will drive design of outdoor area.

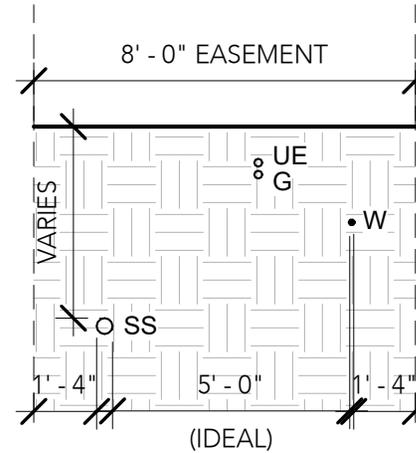


**OPTION C2**  
4 UNITS, 50X150 INTERIOR LOT

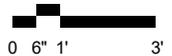


**NOTES:**

1. Utilities accommodated via a shared utility easement.
2. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.
3. Deep sites may require electrical delivered via underground feeder or service, increasing cost of development on site.



UTILITY SECTION



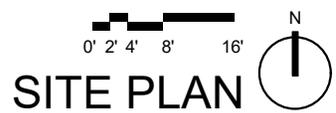
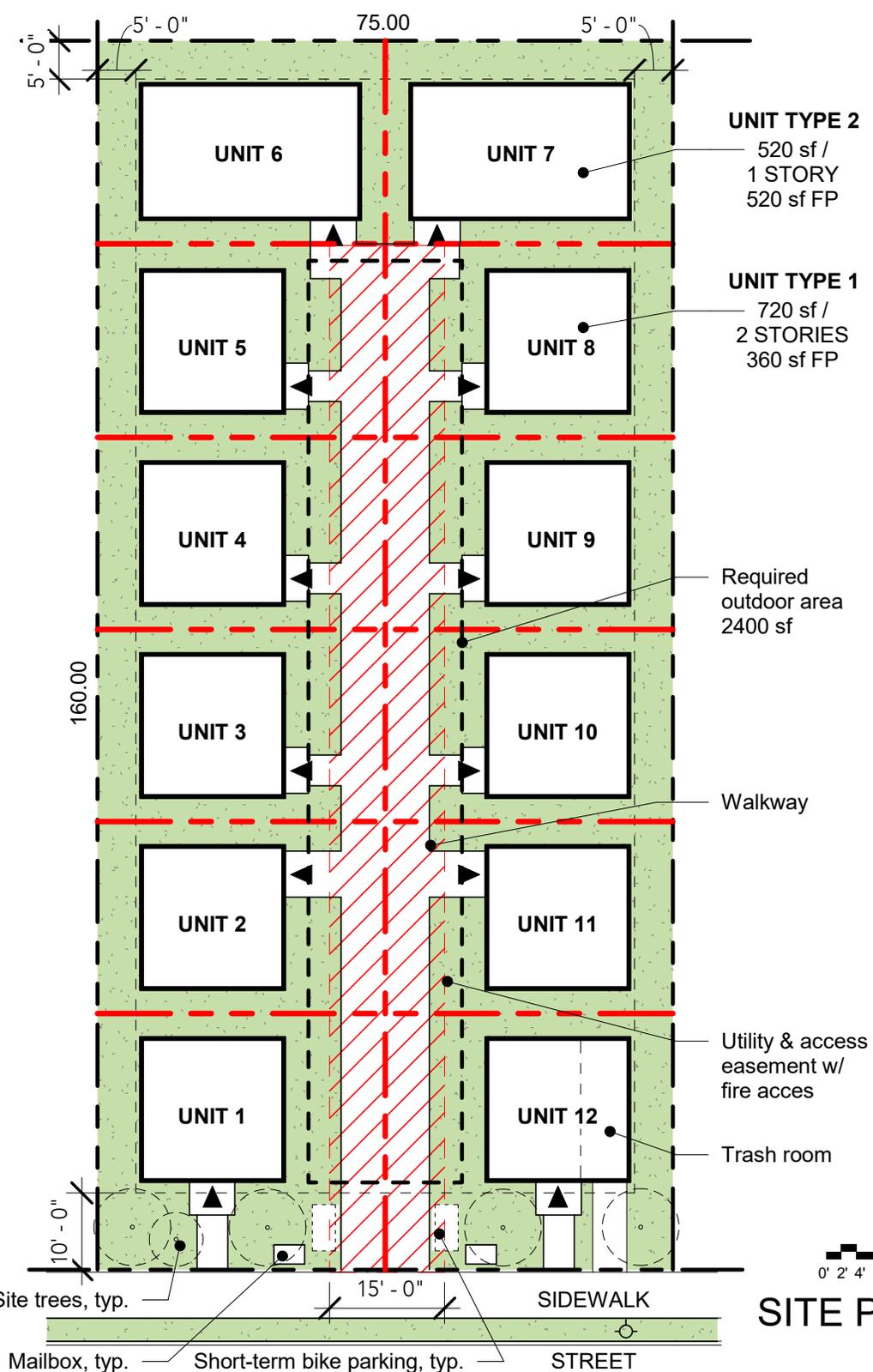
**OPTION C2**  
4 UNITS, 50X150 INTERIOR LOT

**DEVELOPMENT SUMMARY:**

Site zoning:	R5	
Site area:	12,000 sf	
Total bldg footprint:	4,640 sf / 38%	(max 900 sf / unit)
Total bldg area:	8,240 sf / 0.68:1 FAR	(max 1,400 sf / unit avg)
Bldg height:	24 ft / 2 stories	(max 25 ft)
Average area per unit:	685 sf	(max 1,400 sf avg)
Bike parking:	18	long-term bike parking (standard A)
	2	short-term bike parking (standard A)

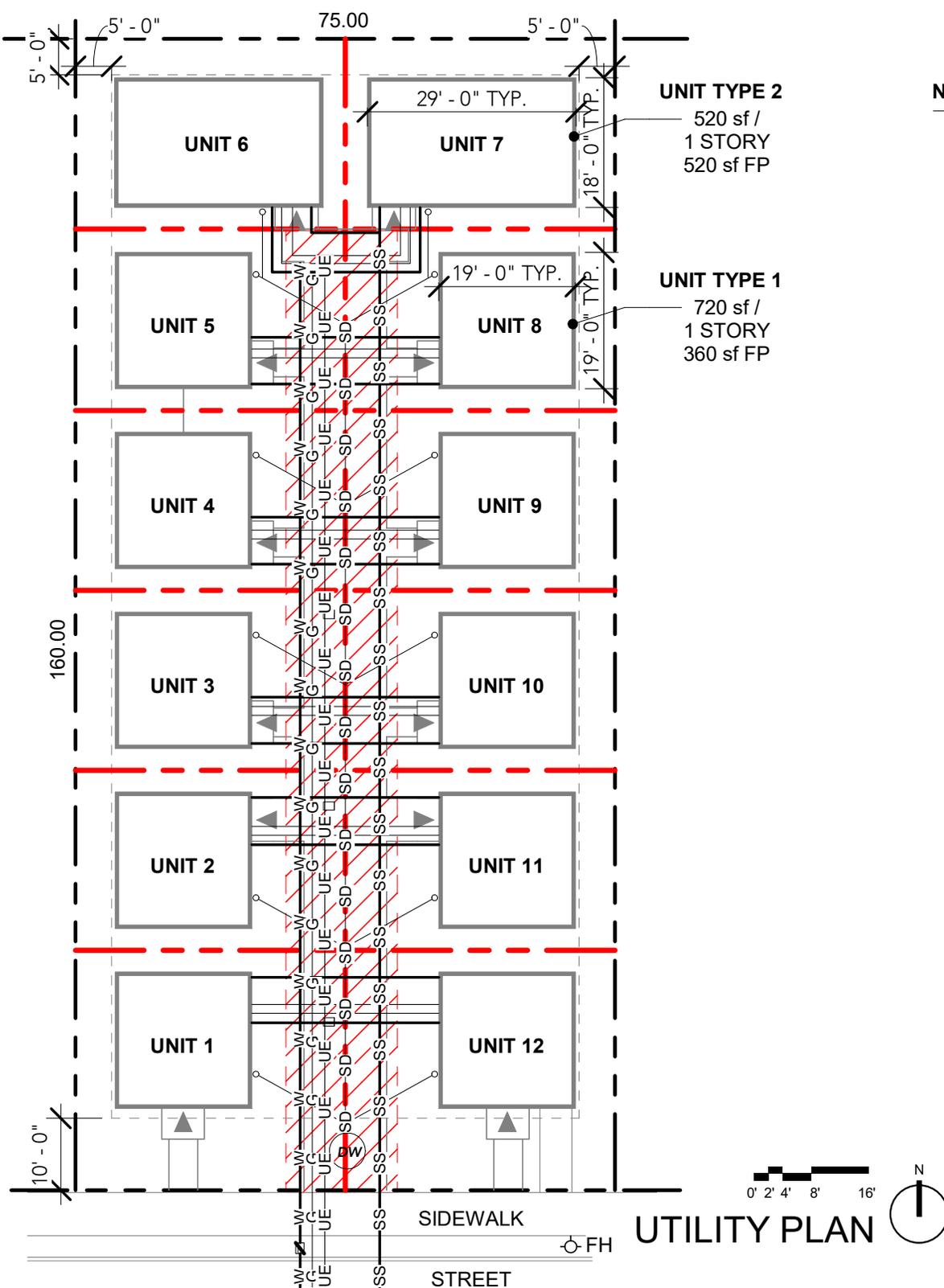
**NOTES:**

1. Based on DRAFT cottage cluster zoning code standards currently in development.
2. Developers may favor plans w/ repetitive (efficient) cottage units.
3. Can an easement be utilized for utilities in lieu of a tract?
4. Center space to serve as fire apparatus access road to avoid sprinklering two northernmost units. Designed as an all-weather surface easily distinguishable from surrounding areas and supporting heavy fire apparatus loads. Meeting outdoor area requirements and fire access requirements in one space could be challenging.
5. 100% long-term bike parking stored within dwelling units.



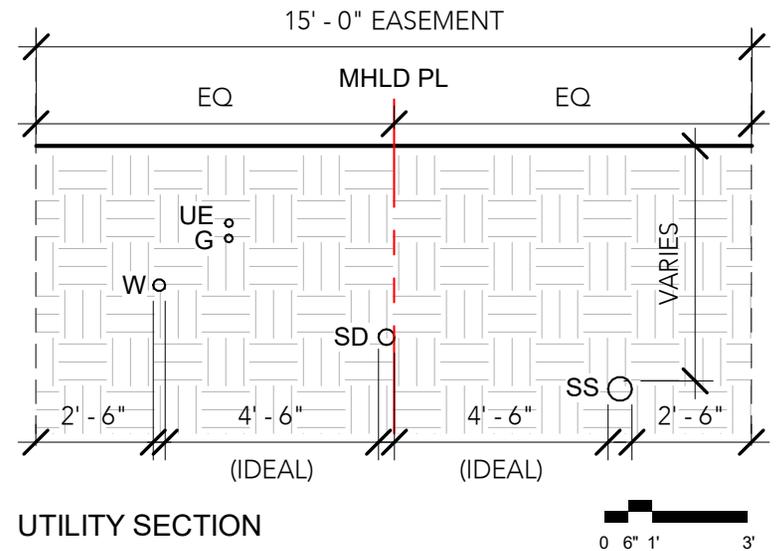
**SITE PLAN**

**OPTION C3**  
12 UNITS, 75X160 INTERIOR LOT

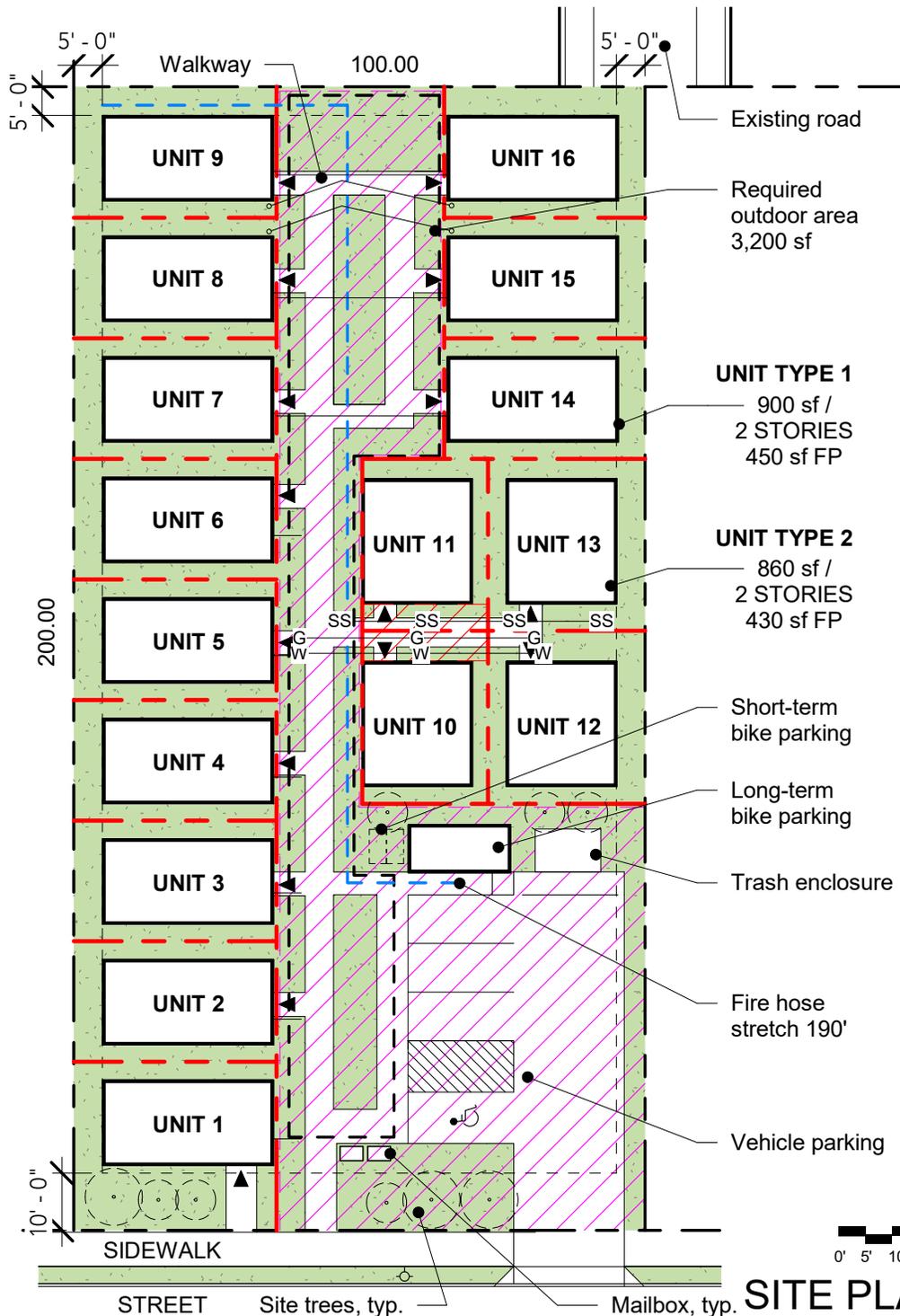


**NOTES:**

1. Utilities accommodated via a shared utility easement.
2. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.
3. Deep sites may require electrical delivered via underground feeder or service, increasing cost of development on site.



**OPTION C3**  
12 UNITS, 75X160 INTERIOR LOT

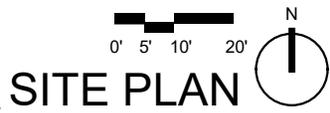


**DEVELOPMENT SUMMARY:**

Site zoning:	R5	
Site area:	20,000 sf	
Total bldg footprint:	7,120 sf / 36%	(max 900 sf / unit)
Total bldg area:	14,240 sf / 0.71:1 FAR	(max 1,400 sf / unit avg)
Bldg height:	24 ft / 2 stories	(max 25 ft)
Average area per unit:	890 sf	(max 1,400 sf avg)
Bike parking:	24	long-term bike parking
	2	short-term bike parking

**NOTES:**

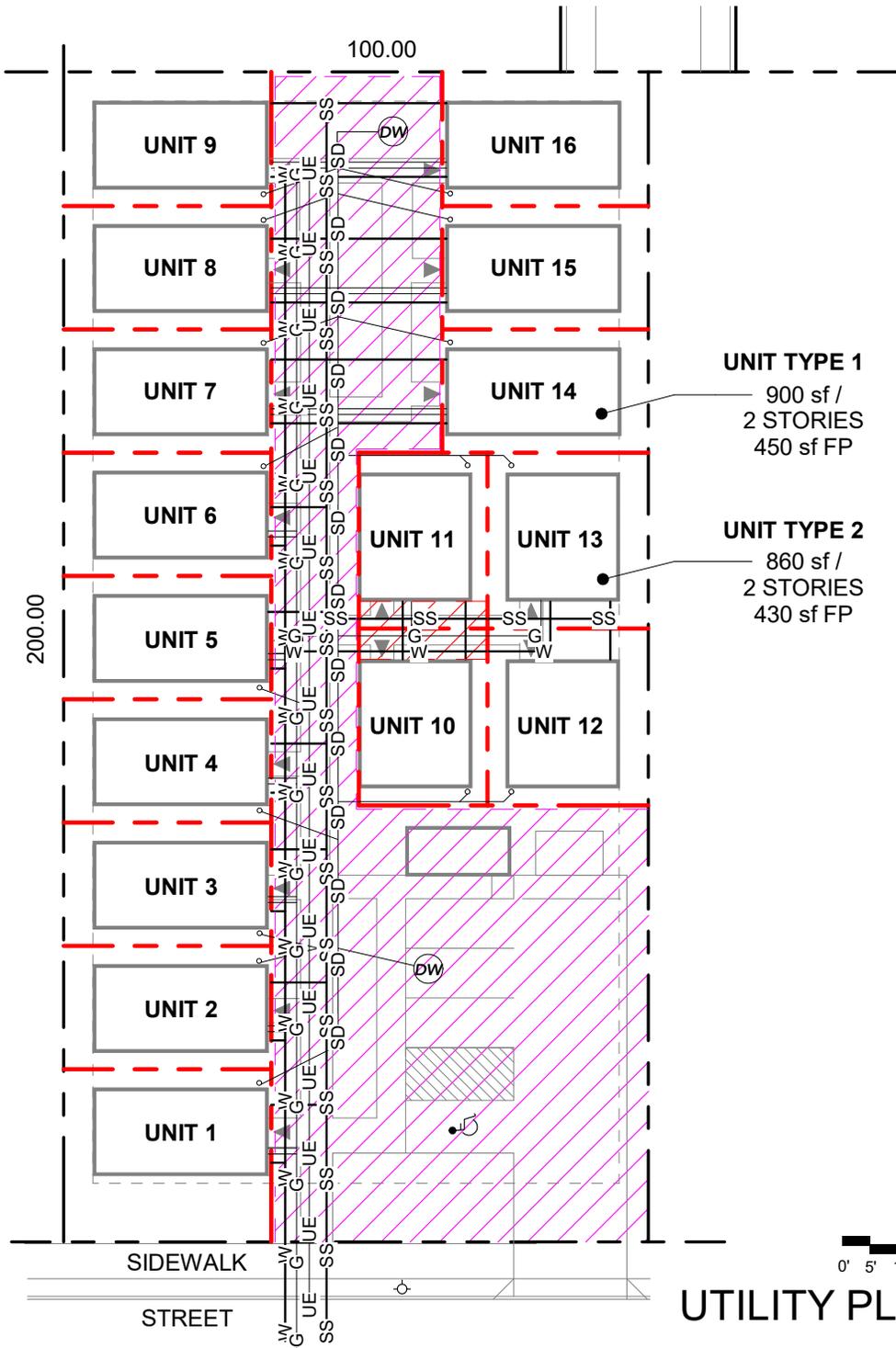
1. Based on DRAFT cottage cluster zoning code standards currently in development.
2. Developers may favor plans w/ repetitive (efficient) cottage units.
3. Parking area positioned to compliment future development to the east.
4. Most remote point at unit exterior wall exceed 150 ft. Solutions to fire access include sprinklering most remote unit (NFPA Type 13D acceptable?) or developing the easement as a fire apparatus access surface.
5. Outdoor area distributed among site.
6. Quantity of units may warrant a tract/private street rather than an easement. Unclear if tract can be created as an MHLD lot, or if a standard land division is needed.
7. MHLD lots adjoining a tract assumed to be treated similar to ROW for purposes of regulating exterior wall openings.
8. Parking areas are allowed between a building and the street in an R5 zone through lot, per table 266-3. Parking area meets frontage, screening, and landscaping standards for this size of parking lot.
9. 50% long-term bike parking stored within dwelling units.
10. Need clarity regarding required number of outdoor areas.



**SITE PLAN**

**OPTION C4**

**16 UNITS, 100X200 INTERIOR LOT**



**UNIT TYPE 1**  
 900 sf /  
 2 STORIES  
 450 sf FP

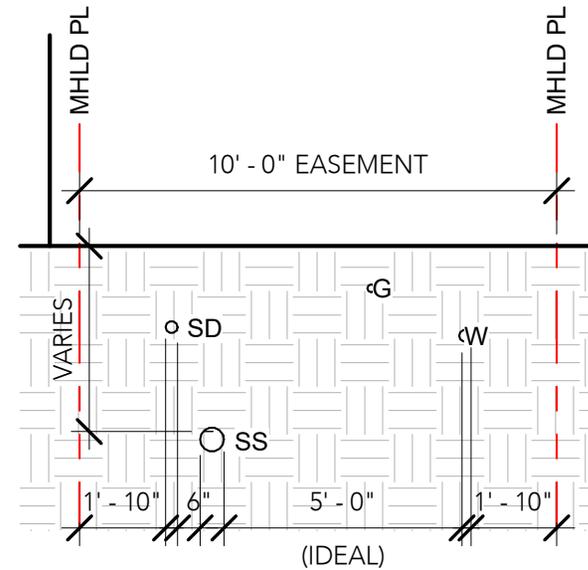
**UNIT TYPE 2**  
 860 sf /  
 2 STORIES  
 430 sf FP



UTILITY PLAN

**NOTES:**

1. Utilities accommodated via a tract & utility easement as required
2. Parking to serve as fire lane, getting apparatus within 150' of all exit walls and reducing need to sprinkler northern most units
3. Applicants may desire a single shared stormwater facility to minimize cost. An easement may be required, confirm minimum size and clearances.
4. Deep sites may require electrical delivered via underground feeder or service, increasing cost of development on site.



UTILITY SECTION



**OPTION C4**

16 UNITS, 100X200 INTERIOR LOT