

PEORIA COMMUNITY CENTER

CITY OF PEORIA- COMMUNITY SERVICES DEPARTMENT
SUSTAINABILITY CASE STUDY



DESIGN FEATURES

- Walkable Access to Basic Services SEE EXHIBIT A
- Walkable Access to Public Transit SEE EXHIBIT B
- Maximize Open Space SEE EXHIBIT C
- Water Efficient Landscape (52% reduction in landscape water use) SEE EXHIBIT D
- Comprehensive Building Recycling Program SEE EXHIBIT E
- Smoking Prohibited w/n 25' of Entries SEE EXHIBIT F
- Use of Roll Out Mats and High Efficient Filters SEE EXHIBIT G
- Building Re-Use (65% of existing building slab on grade, structural roof deck and ext/int structural walls reused)
- Clerestory Glazing and efficient use of Daylighting
- Cool Roof (light colored roof reflects energy rather than absorb it)
- No New Parking Added

BUILDING SYSTEMS

- 34.5% reduction in total building power consumption (based on cost)
- Occupancy Sensors installed in all regularly occupied areas (lighting automatically turns off when no occupants are detected)
- High-Efficiency Urinals & Toilets/Low Flow Fixtures
- Variable Refrigerant Flow high-efficiency HVAC system
- Individually Controlled Lighting Fixtures (reduced overall energy use)

MATERIALS

- 95.4% of Construction Waste was recycled/diverted from landfills
- Low-Emitting Interior Finishes (finishes contain minimal Volatile Organic Compounds)
- 30% Recycled Content / 30% Regional Materials (based on cost)

The City of Peoria has dedicated itself to providing Sustainable Architecture in all future projects funded by the City, LEED Silver minimum certification. The existing building is based in Old Town Peoria, which is a combination of historic shops, government buildings, museums, performing arts center and park. While the character of the Old town district needs to be maintained the desire for a modern building that bridged the gap between new and old was apparent. The new facility, while maintaining its modernity, takes many cues from the surrounding historic architecture and character.

LEED has been mandated for this project from the planning phase and has been incorporated into every phase of design and construction. An initial Design Review will be submitted, with a construction review submit upon the completion of the construction phase.

While there are numerous sustainable aspects to the new facility there are several that can should be a prerequisite for future building project. The first sustainable decision made was to renovate an existing facility instead of demolishing the existing building and erecting a new facility. Approx. 60% of the existing building structural walls, foundations and roof framing have been utilized in the design of the new facility.

Based on the Climate in Peoria, Arizona, the orientation and shading of the new additions was a critical factor in designing/renovating the existing facility. Overhangs were provided on the South and East exposures along with storage spaces pushed towards the exterior to provide additional protection from the sun. Since the Kitchen does not have a daylighting requirement it was placed at the west of the building to provide protection to larger multi-occupant spaces within the building.

Finally, a simple strategy to increase the overall efficiency is a super insulated building envelope. All masonry walls and filled with an expanding foam insulation, furred and supplied with an additional R-11 batt insulation. The primary roof system is a white 1 1/2" foamed in place roof (which provides insulation and solar reflectance) with R-30 batt insulation.

These strategies along with LEED credits in this submittal we will have provided a building that not only bridges the gap between new and old but hopefully becomes a standard for efficiency in Peoria.

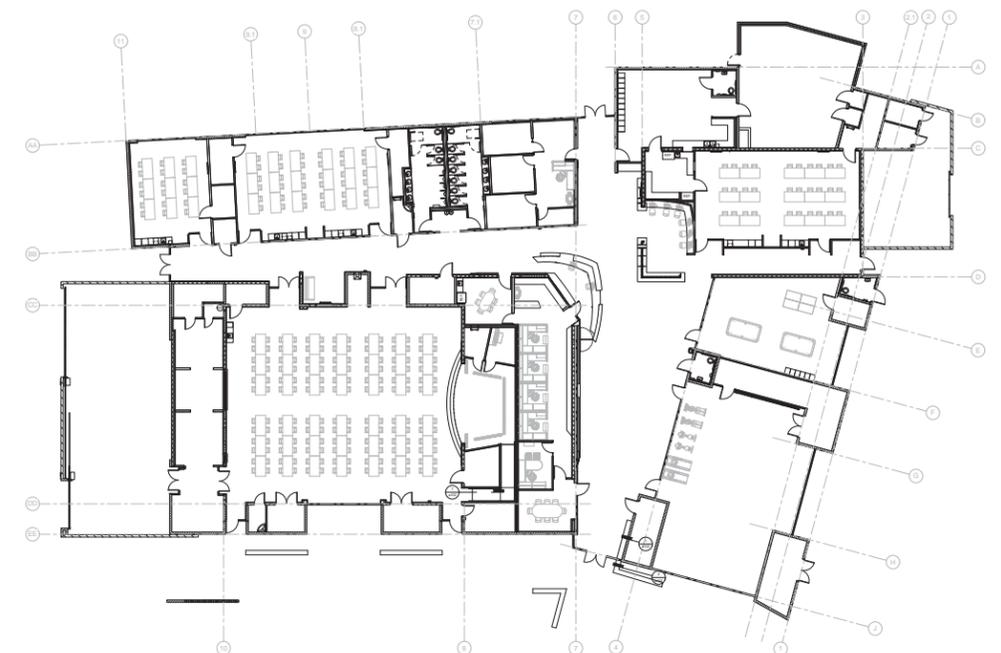


EXHIBIT A

SUNTREE APARTMENTS
(216 dwelling units on 10.1 acres
= average density of 21.3 dwelling
units per acre.)

Project Site:
8335 W. Jefferson Street
Peoria, AZ 85345

1/2 MILE RADIUS

Access to Basic services
within 1/2 mile radius and
10 dwelling units per acre
residential development

1. **Peoria Public Library** (library)
2. **K-May Donuts & Bagels** (restaurant)
3. **Touchdown Sportswear** (fitness center)
4. **NAPA Autoparts** (hardware)
5. **Bikers Edge Cycle & Fitness** (fitness center)
6. **Bud's Barber Shop** (beauty salon)
7. **VIP Grooming** (cleaners)
8. **Peoria Center for the Performing Arts** (theater)
9. **Peoria Jail House Museum** (museum)
10. **Mountain View Church of God** (place of worship)
11. **Valley Community Church** (place of worship)
12. **Peoria Cafe** (restaurant)
13. **Grand Market** (convenience grocery)
14. **Osuna Park** (park)
15. **Peoria Arizona Historical Society** (museum)
16. **Peoria Fire Dept.** (fire station)

EXHIBIT B



Route 106
(Public City Bus Route)
.18 miles (947ft)

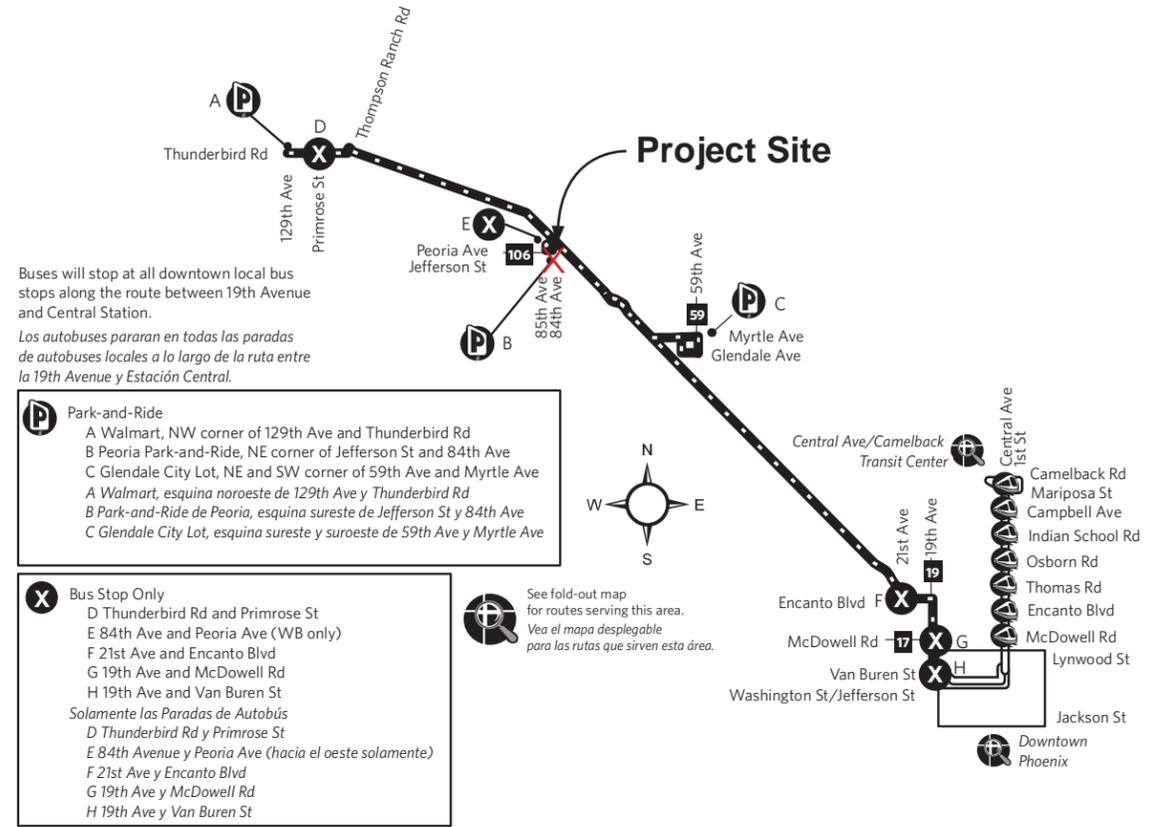
Grand Avenue Limited
(Public City Bus Route)
.08 miles (393')

1/4 MILE RADIUS

Project Site:
8335 W. Jefferson Street
Peoria, AZ 85345

Close proximity to Public Transportation.

Grand Avenue Limited



Route 106 — Peoria/Shea

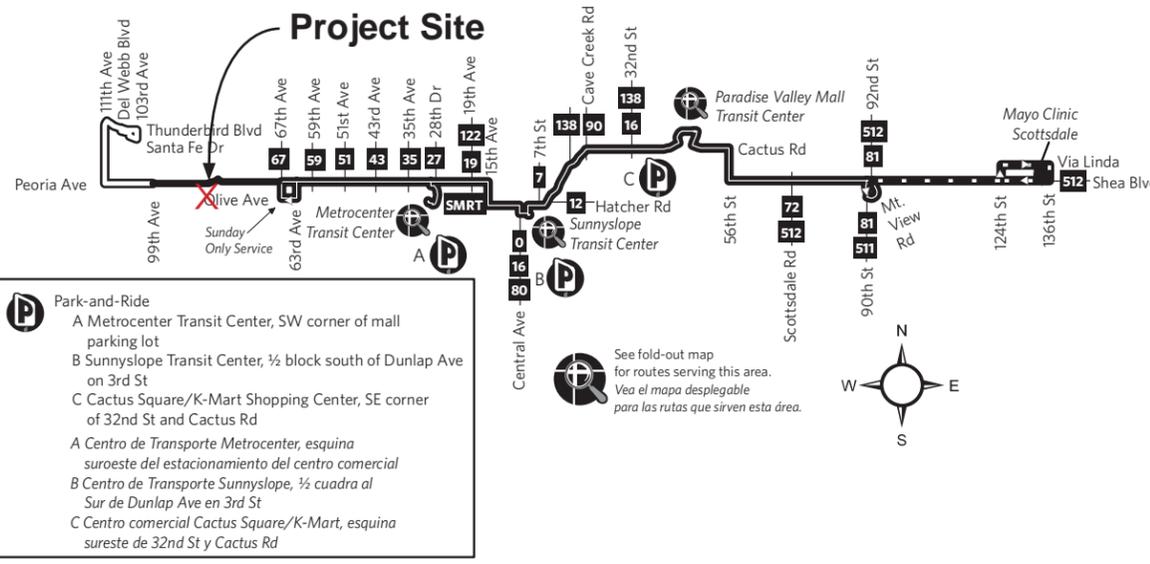
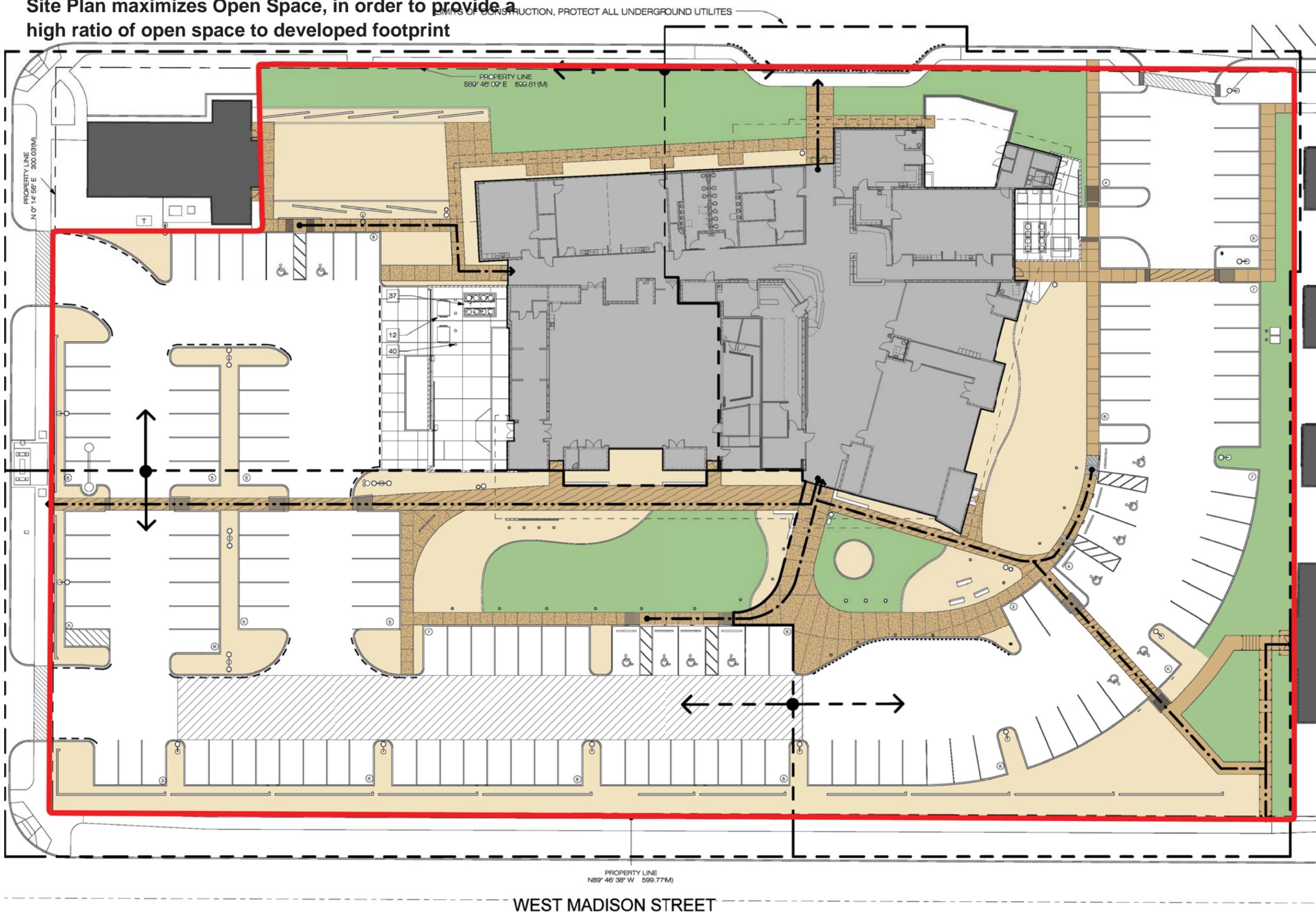


EXHIBIT C

Site Plan maximizes Open Space, in order to provide a high ratio of open space to developed footprint

WEST JEFFERSON STREET



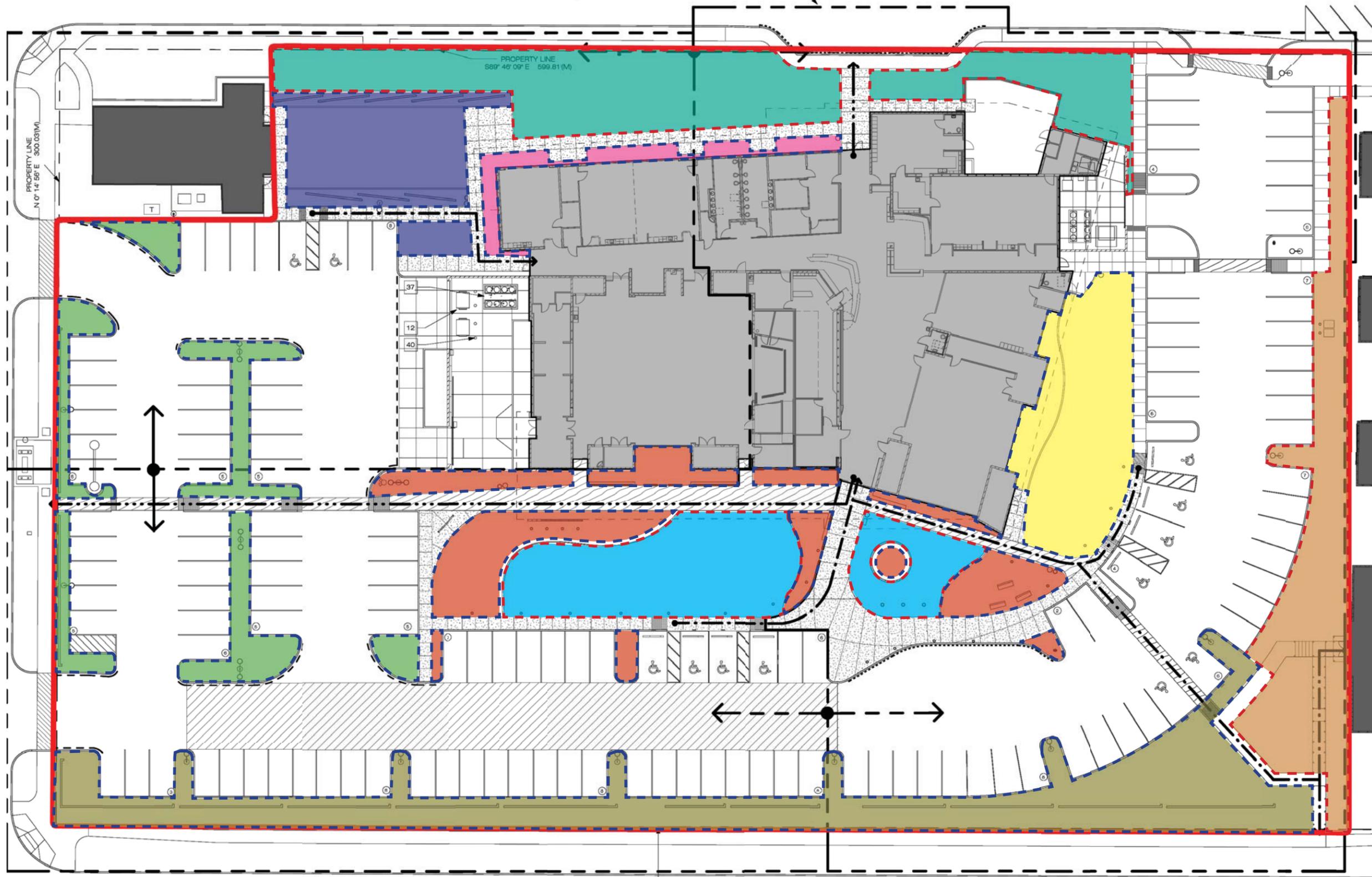
-  **TURF** (16,398sf)
-  **PEDESTRIAN HARDSCAPE** (12,603sf)
-  **VEGETATED DECOMPOSED GRANITE AREAS** (23,424sf)

TOTAL OPEN SPACE:
52,425 SF

WEST MADISON STREET

EXHIBIT D

LIMITS OF CONSTRUCTION, PROTECT ALL UNDERGROUND UTILITIES



- Area 1** (TURF 4,400sf)
- Area 2** (DG 8,048sf)
- Area 3** (TURF 5,003sf)
- Area 4** (DG 4,773sf)
- Area 5** (DG 3,895sf)
- Area 6** (DG 3,262sf)
- Area 7** (DG 2,561sf)
- Area 8** (TURF 6,995sf)
- Area 9** (DG 885sf)

TOTAL DG LANDSCAPE:
23,424 SF

TOTAL TURF LANDSCAPE:
16,398 SF

TOTAL LANDSCAPE:
39,822 SF

Landscape reduces water usage 52% based on a calculated baseline.

WEST MADISON STREET

PROPERTY LINE
N89° 46' 38" W 599.77'(M)

PROPERTY LINE
N 0° 14' 56" E 300.03'(M)

PROPERTY LINE
S89° 46' 09" E 599.81'(M)

EXHIBIT E



Location of recycling receptacles within the building.

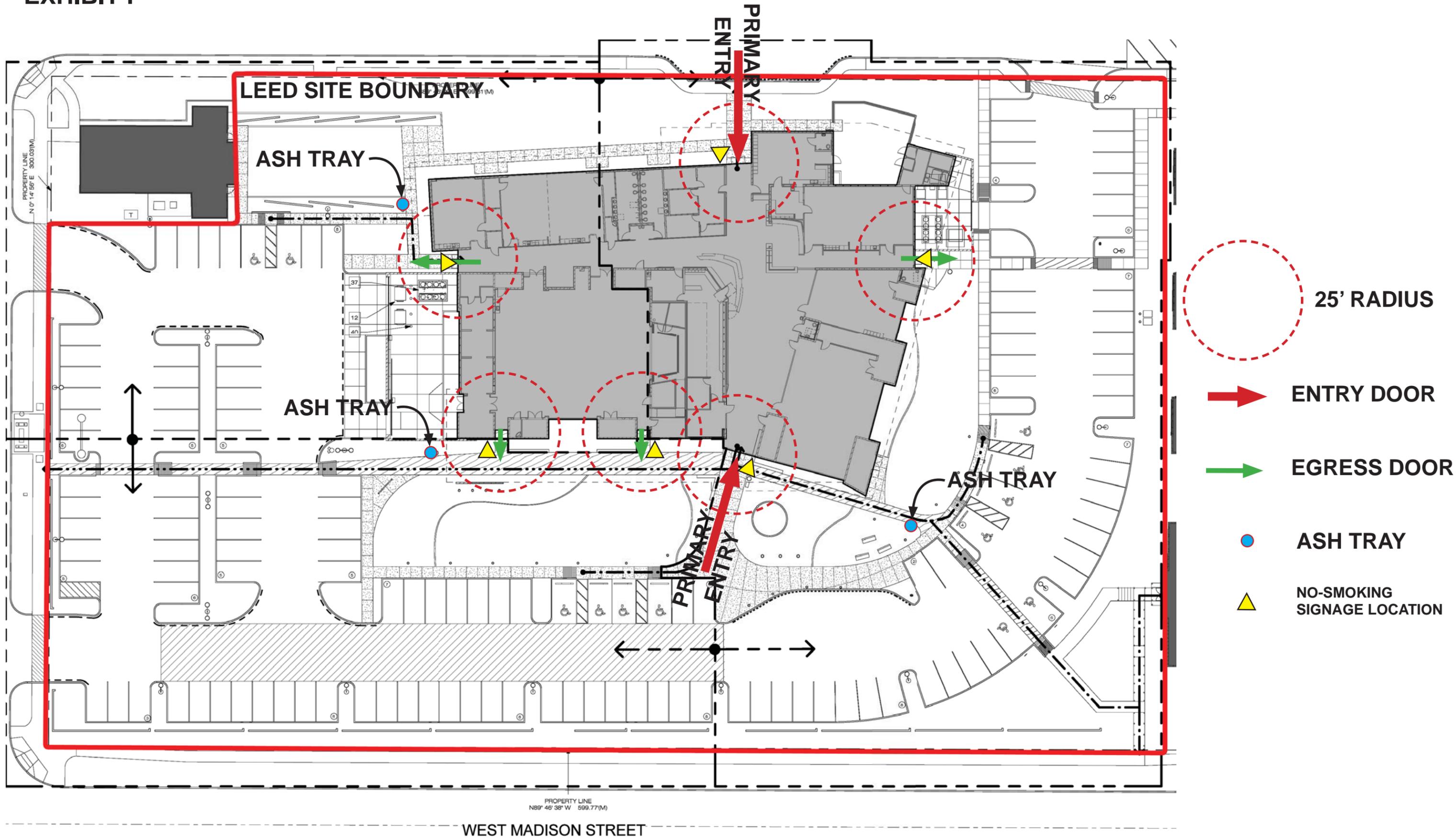
 **EXTERIOR RECEPTACLE**

 **LARGE CAN (18.75 SF*)**

 **SMALL CAN (10.75 SF*)**

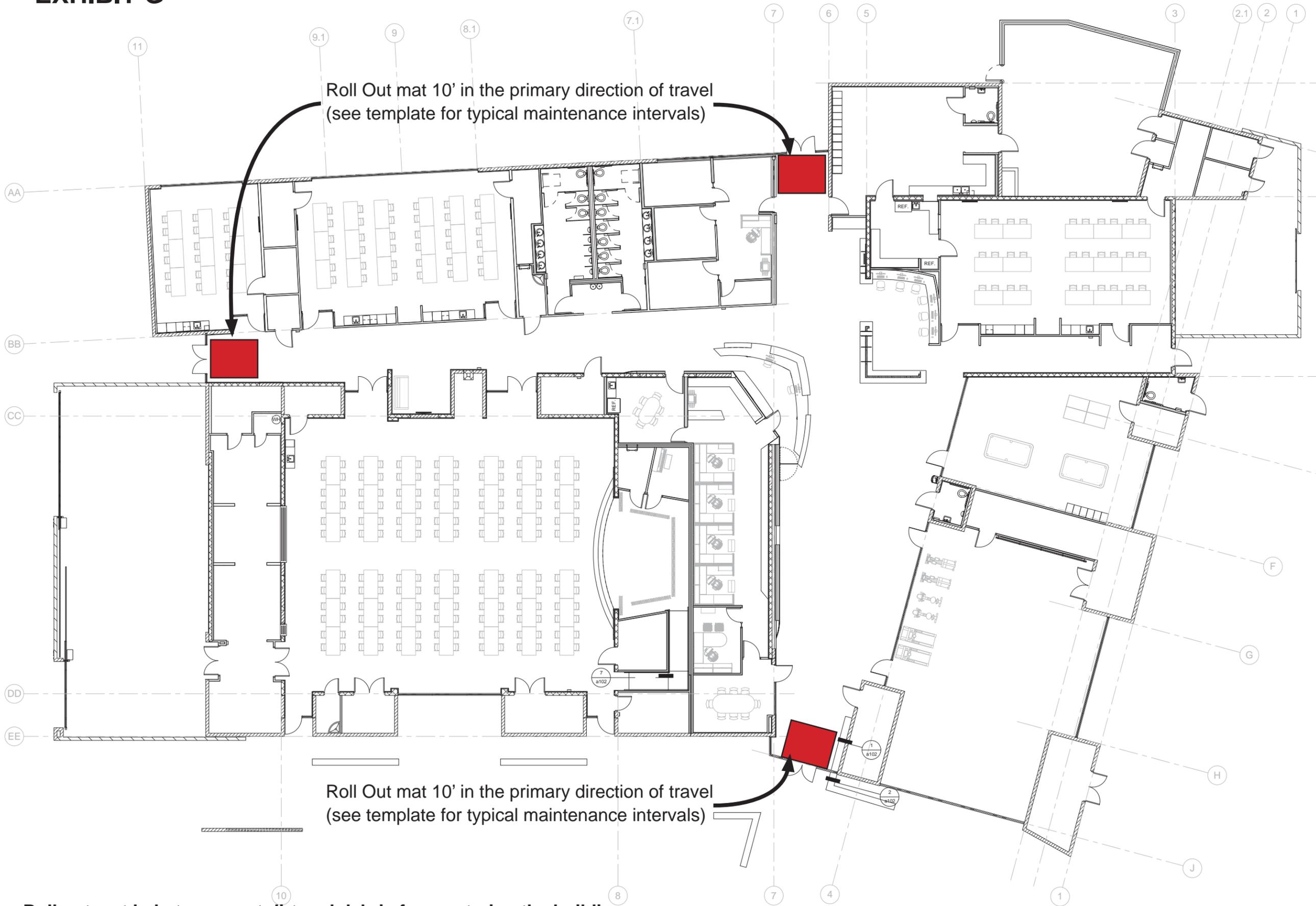
* SQUARE FOOTAGE INCLUDES TYPICAL ADA APPROACH (30" x 42")

EXHIBIT F



Smoking is prohibited within 25' of any building entry to in order to promote a healthy Indoor Environmental Quality

EXHIBIT G



NOTE: 10' Roll Out mats are only supplied at the primary building entries, the other doors are used primarily for egress.

Roll out mat help to prevent dirt and debris from entering the building and prevents a reduction of the Indoor Environmental Quality.