Sundowner

6101 Central Avenue NE Albuquerque, NM 87108

Garrett Smith Ltd. - NewLife Homes

Historic Context

The Sundowner was built in 1960 as a Del Web style auto oriented motor court motel situated on historic Route 66 along Albuquerque's then developing East Central Avenue. It housed 110 motel rooms in a continuous U shaped 2 story building surrounding an acre of paved parking. With names like Sahara, Trade Winds, Sundowner, Oasis, and Tropicana displayed on their prominent neon signs, these motor courts evoked Las Vegas casino motels.

The Sundowner housed a popular night club for many years and is a landmark embedded in the memory of many Albuquerque residents. Surprisingly, in the mid 70's the Sundowner was home to visionaries Bill Gates and Paul Allen and the beginnings of Microsoft. The motel's viability declined along with Route 66, with the construction of the Interstate I-40, and closed permanently in 2009 after last seeing use as transitional housing for veterans.

East Elevation

Adjacent Apartments

West Elevation

Adjacent Apartments

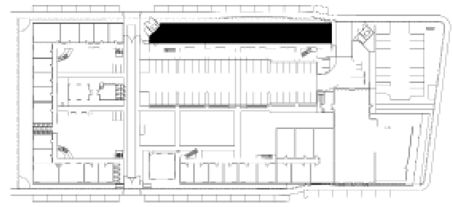
Existing Pool Area

TABLE OF CONTENTS

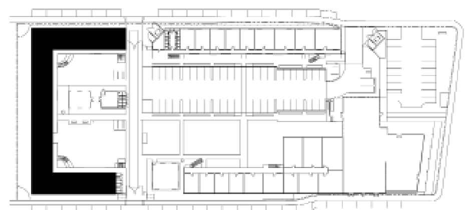
New Design – Adaptive Re-use

The new design concept reflects 3 key components that promise its success. It will strongly link and promote the surrounding community with the internal community; it will transform an asphalt vehicle court into a park-like atmosphere full of community amenities; it will transform a 1960s motor motel into a mixed use, mixed income, sustainable adaptation of use and structure.

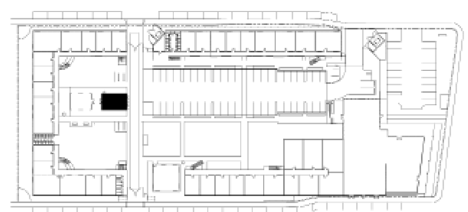
The proposed design respects the history of the Sundowner, whilst supporting sustainable infill redevelopment. The former Route 66 corridor has upwards of 50 derelict motels in need of renovation and it is envisaged that the redevelopment of the Sundowner will be a demonstration project of what is doable in the current economic climate with a public/private partnership. (Sundowner will be 70% funded by private investment). Utilizing the existing infrastructure, acknowledging Sundowner's history, creating the highest level of energy efficiency, supporting transit oriented housing, and supporting income generating opportunities, the Sundowner will be a catalyst for redeveloping the area, that can hopefully be replicated elsewhere.



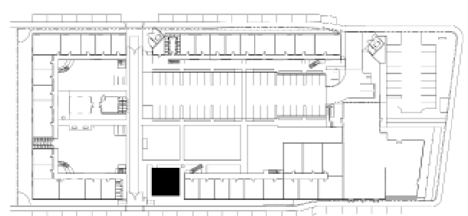
BUILDING I
10,184 SF
5,597 - GROUND FLOOR PLAN SF
4,587 - SECOND FLOOR PLAN SF
2 STORY
23'-0" HIGH
11 - EFFICIENCY UNITS
6 - 1 BEDROOM UNITS
2 - 2 BEDROOM UNITS



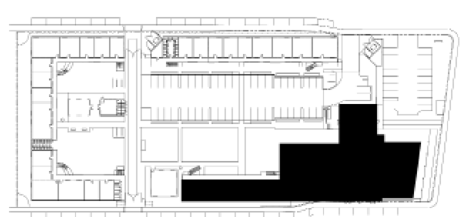
BUILDING II
16,143 SF
8,071 - GROUND FLOOR PLAN SF
8,072 - SECOND FLOOR PLAN SF
2 STORY
22"-0" HIGH
11 - EFFICIENCY UNITS / FIRST FLOOR
13 - EFFICIENCY UNITS / SECOND FLOOR
3 - 1 BEDROOM UNITS
6 - 2 BEDROOM UNITS



BUILDING III
600 SF
600 SF - GROUND FLOOR PLAN SF
1 STORY
12'-6" HIGH
LAUNDRY
BULK STORAGE
COVERED OUTDOOR COMMUNITY SPACE



BUILDING IV
1,084 SF
1,084 - GROUND FLOOR PLAN SF
1 STORY
14'-6" HIGH
1 - 3 BEDROOM UNIT



BUILDING V
18,754 SF
16,825 - GROUND FLOOR PLAN SF
1,929 - SECOND FLOOR PLAN SF
2 STORY
23'-0" HIGH
9 - EFFICIENCY UNITS
6 - 1 BEDROOM UNITS
3 - 2 BEDROOM UNITS
COMMUNITY / OFFICE SPACE

DIRECTIONS TO SUNDOWNER SITE

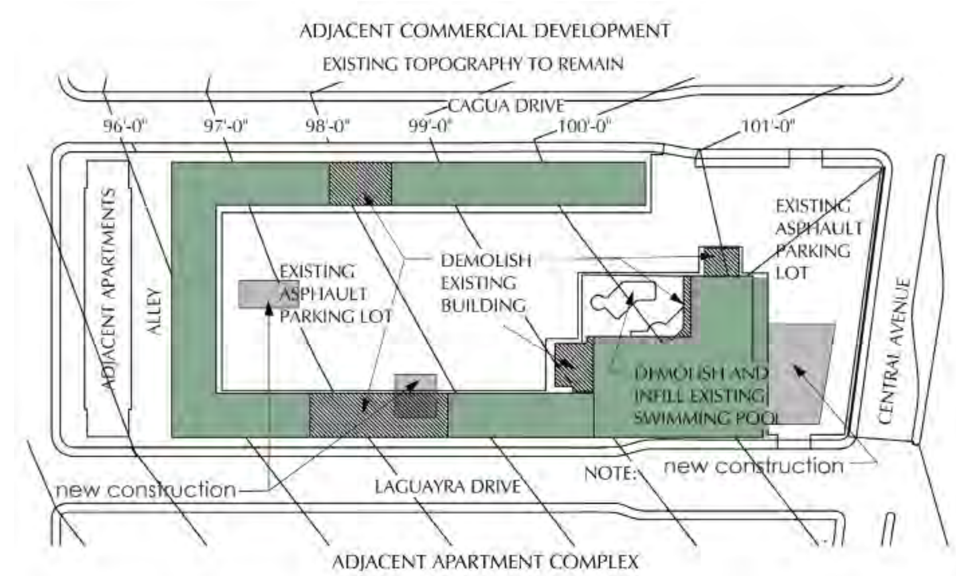
FROM THE INTERSECTION OF INTERSTATE 40 AND INTERSTATE 25, TAKE interstate 25 SOUTH TO THE CENTRAL AVENUE (FORMER ROUTE 66) EXIT. GO EAST ON CENTRAL AVENUE TO 6101 CENTRAL AVENUE NE.

SITE DATA

TYPE OF PROJECT	NEW LIFE HOMES RESIDENCES
LOCATION	ALBUQUERQUE, NM
SITE AREA	91,500 SF = 2.1 ACRES
FLOOR AREA RATIO	46,765 TOTAL BLD. SF / 91,500 SITE SF = 0.51 FAR
LOT COVERAGE	33,089 1ST FLOOR BLD. SF / 91,000 SITE SF = 36%
DENSITY	33 DU / ACRE (DUPA)

PARKING DATA

REQUIRED	41.5 SPACES (with 10% reduction for transit route location)
	39.5 SPACES (with 5% reduction for owner provided transit shelter)
PROVIDED	46 RESIDENTIAL SPACES (Including 4 ADA Spaces)
	16 COMMERCIAL SPACES (Including 2 ADA Spaces)
TOTAL	62 SPACES (Including 6 ADA Spaces)
MOTORCYCLE	4 SPACES
BICYCLE	20 SPACES



Proposed Changes to Site and Building Diagram

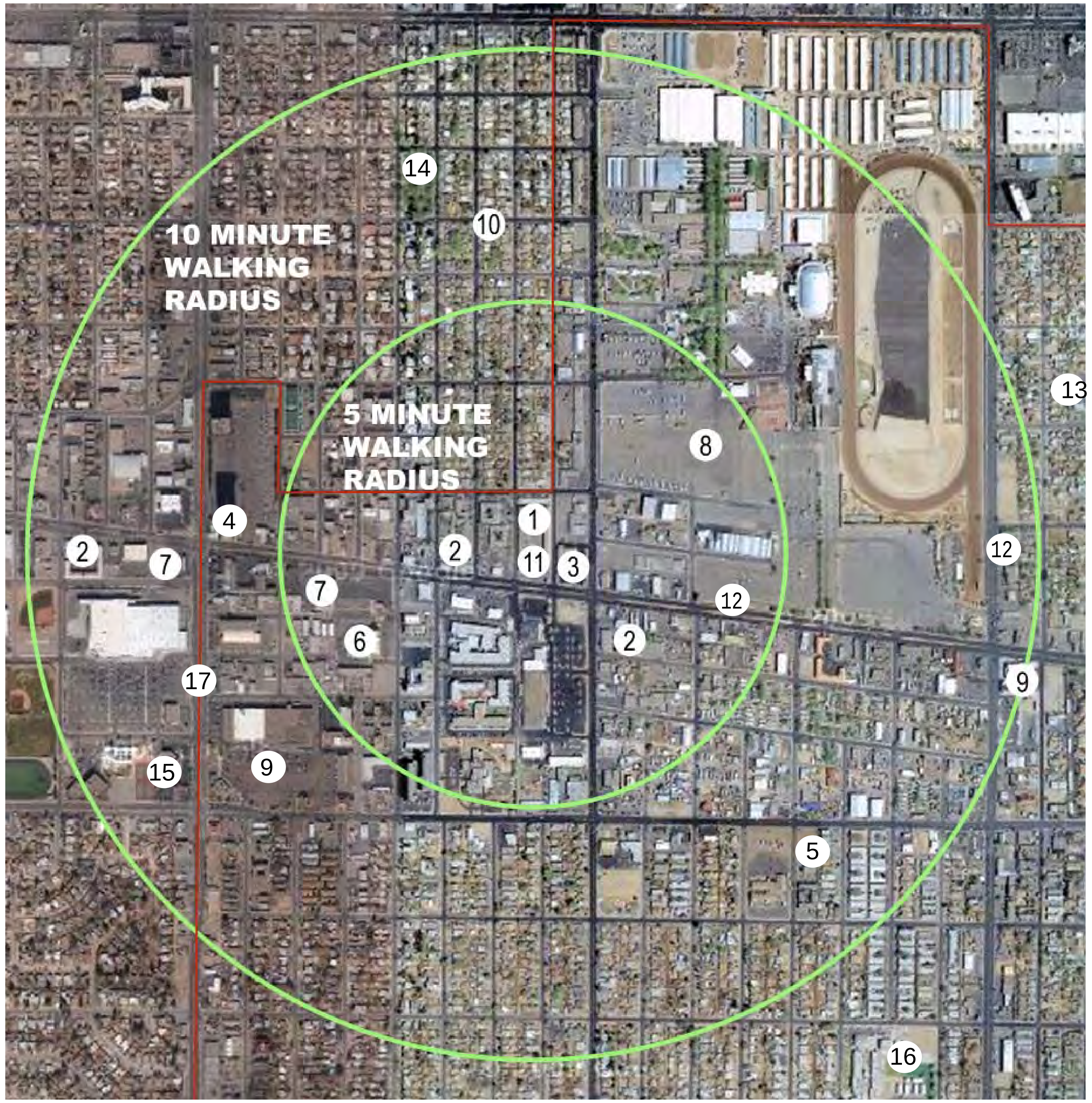
Central Entrance

Adjacent Apartments

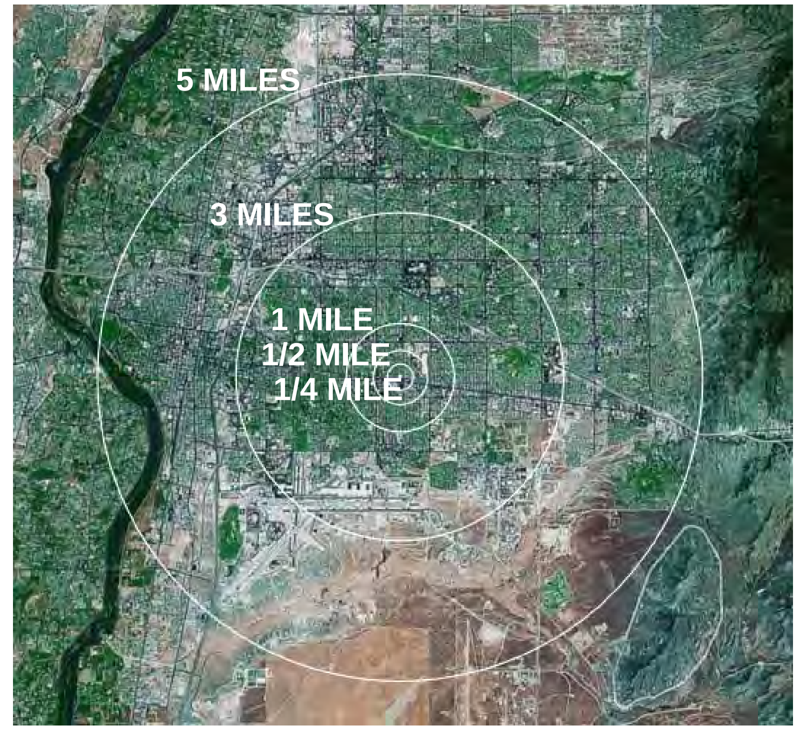
Central View

Adjacent Apartments

Motor Court Entrance



N



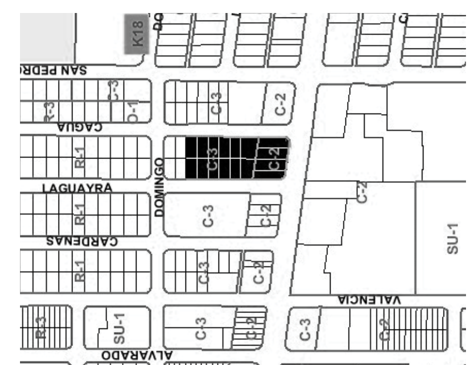
LEGEND

1	SITE
2	RESTAURANT
3	PHARMACY
4	BANK
5	CARILLO PARK EMERSON ELEMENTARY
6	POST OFFICE
7	CAR SERVICE
8	STATE FAIR GROUNDS (EMPLOYMENT OPPORTUNITY)
9	GROCERY (EMPLOYMENT OPPORTUNITY)
10	ENDORPHIN POWER CO.
11	NM VETERANS INTEGRATION CENTER
12	PRIMARY TRANSIT CORRIDOR
13	LA MESA ELEMENTARY
14	FOX MEMORIAL PARK
15	HIGHLAND HIGH SCHOOL
16	VANBUREN MIDDLE SCHOOL
17	BIKE AND PEDESTRIAN PATH ON ZUNI

Existing Sundowner Courtyard and Parking Lot

Existing West Elevation

Existing Entry to Courtyard and



Zone Atlas map K-18

Aerial View of Site

N


Outdoor Market

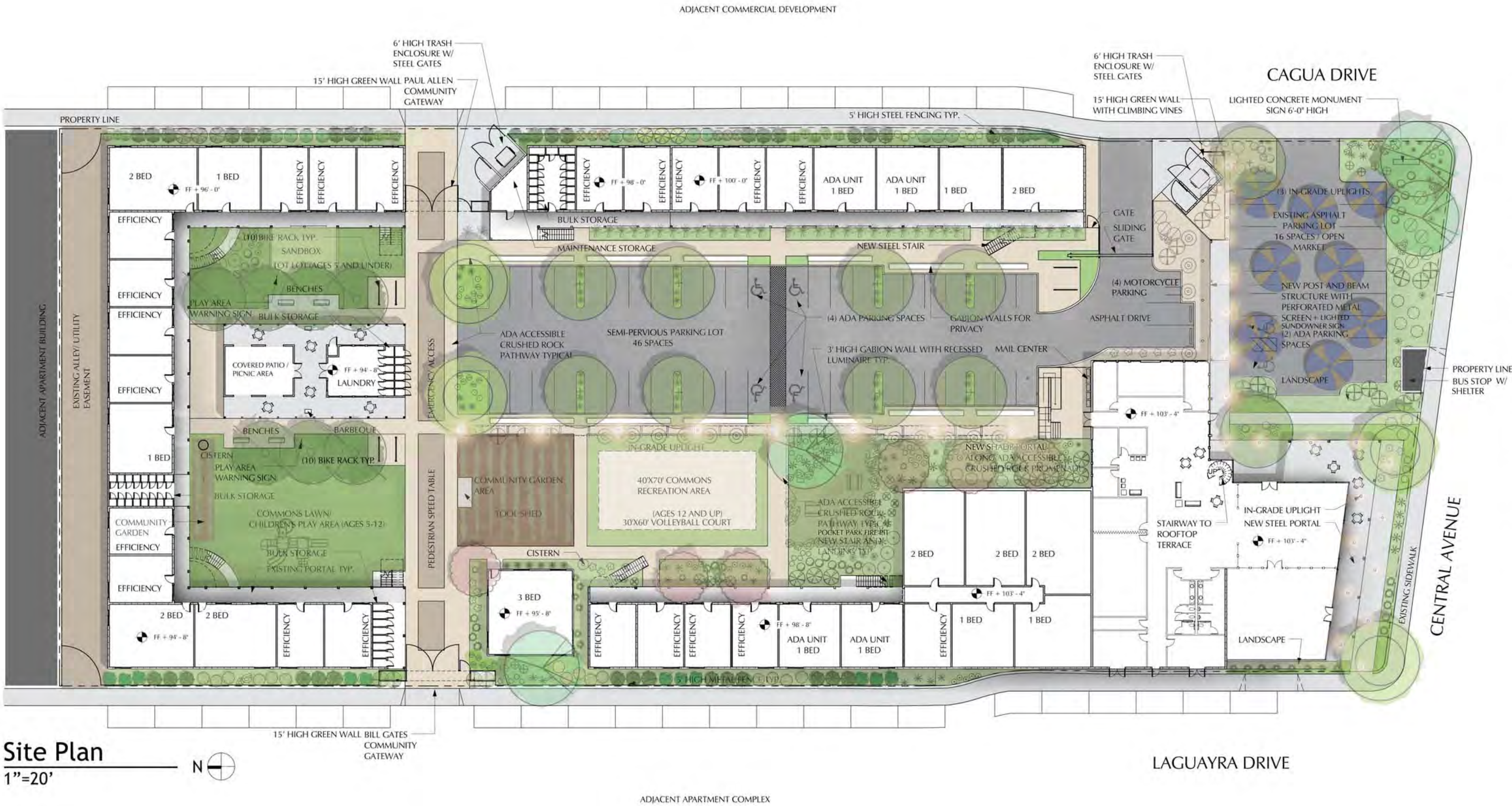

Sun Shade


Children's Play Area


Rooftop Terrace


Market Umbrellas


Outdoor Market



Site Plan

1"=20'

N

THE INTERIOR COURT

As you move north into the residential zone you see the single vehicular entry gateway neatly tucked behind the green wall and Sundowner super graphic that serves as a dividing line between public and private zones. The large, approximately 150' x 300,' motor court has been transformed into a series of recreational and community spaces. The parking has been reduced and segmented to a pedestrian scale with shade trees, bisecting raised cross walk and gabions used as screens to block headlights and protect pedestrian walkways. The courtyard includes play areas for tots and children separated by a new laundry and covered picnic area with 4 sided portal that allows a respite location for parents to sit and meet with neighbors, bbq, or just observe their children at play while laundry is in progress.

Other community spaces include a large community garden fed by a rain water catchment system and tool shed; a pocket park with benches and fire pit is located in the vicinity of the mail center, and a sand volley ball recreation area is third in the design sequence. Each of these features aim to create the sense of community found at other NewLife Homes projects.

Pervious paving will be used, demolition materials will be recycled as gabion walls, and an overall natural appearance will be developed. The pedestrian paths are all ADA compliant and have been carefully planned to connect, clarify, and distinguish way finding. Connections have been made with the neighborhood, Central Avenue, and link all buildings with community areas and parking. Green Screens are located throughout the design and aid in protecting the privacy of the residents but also to integrate a more sustainable and green environment. By replacing the existing asphalt and concrete with softscapes and landscaping, the heat island effect will be reduced making the inner court comfortable for visitors and tenants, while the new vegetation will shade the activity areas and add another level of privacy to each unit.

Comunity Garden

Volleyball Court

Trellis / Pergola

Green Wall

Portal

Patio


Community Gym


Children's Play Area


Portal


Community Garden


Outdoor Cafe Umbrellas


Outdoor Market

Landscape Plan

1"=20'

N

PLANT LEGEND

SYMBOL SCIENTIFIC NAME
COMMON NAME

TREES

- CERCIS RENIFORMIS 'OKLAHOMA' — OKLAHOMA REDBUD
- FRAXINUS PENN. 'URBANITE' — GREEN ASH
- JUNIPERUS SCOPULORUM 'SKYROCKET' — SKYROCKET ROCKY MTN. JUNIPER
- QUERCUS VIRGINIANA — SOUTHERN LIVE OAK
- PYRUS CALLER 'AUTUMN BLAZE' — AUTUMN BLAZE FLOWERING PEAR
- KOELREUTERIA PANICULATA — GOLDEN RAIN TREE

SHRUBS/GROUNDCOVERS

- ARTEMISIA TRIDENTATA — BIG SAGE
- BERBERIS THUN ATROPURPUREA — REDLEAF BARBERRY
- BUDDLEIA DAVIDVII 'NANHOENSIS' — DWARF BUTTERFLY BUSH
- CHAMAEBATIARIA MILLEFOLIUM — FERNBUSH
- ERICAMERIA LARICOFOLIA 'AGUIRRE' — TURPENTINE BUSH

SHRUBS/GROUNDCOVERS

- LONICERA JAPONICA — HALLS HONEYSUCKLE
- MAHONIA AQUIFOLIUM — OREGON GRAPE HOLLY
- NEPETA MUSSINI — CATMINT
- PEROVSKIA ATRIPLICIFOLIA — RUSSIAN SAGE
- PINUS MUGO 'VALLEY CUSHION' — DWARF MUGO PINE
- POTENTILLA FRUTICOSA — SHRUBBY CINQUEFOIL
- ROSMARINUS OFFICINALIS — ROSEMARY
- SALVIA GREGGII — CHERRY SAGE
- SALVIA LAVANDULIFOLIA — LAVENDER SAGE
- SEDUM TELEPHIUM — AUTUMN JOY SEDUM
- SENECIO CINERARIA — DUSTY MILLER
- WISTERIA — WISTERIA SPP.

ORNAMENTAL GRASSES

- CORTADERIA SELLOANA 'PUMA' — DWARF FOUNTAIN GRASS
- MISCANTHUS SPP. — MAIDEN GRASS
- MUHLENBERGIA CAPILLARIS — GULF MUHLY
- SCHIZACHYRIUM SCOPARIUM — LITTLE BLUE STEM

DESERT ACCENTS

- AGAVE PARRYI — PARRY'S AGAVE
- ECHINOCEREUS TRIGLOCHIDATUS — CLARET HEDGHOG
- HESPERALOE PARVIFLORA — RED YUCCA

DESERT ACCENTS

- PARK BLEND - (KENTUCKY BLUEGRASS, TALL FESCUE, RYEGRASS)
- 7/16" SANTA FE BROWN GRAVEL MULCH
- 3' (MIN) - 5' MOSS ROCK BOULDERS


Catmint


Green Wall


Halls Honeysuckle


Rainwater Cistern


Fernbush


Claret Hedghog


Big Sage

Comunity Cafe

Computer Room

Mail Center

Community Lobby

Game Area

Comunity Gallery

Overall First Floor Plan*

N

1"=20'

*Second Story Units repeated from First Floor Units

THE ADAPTIVE RE-USE BUILDINGS

The buildings, while structurally sound are being stripped to the framing to be rebuilt to meet LEED for HOMES (Gold) certification. The basic motel units have been redesigned into four unit types ranging from efficiencies to 3 bedroom. All units are fully ADA accessible Type B units that meet visitability requirements.

While generally the units are being developed with the same amenities, there will be subtle differences depending on the orientation of the unit to increase energy efficiency and occupant comfort. Vine screens and sunshades are used to block harsh sun but allow daylight into units at calculated angles in conjunction with the calendar.

The covered walkways at first and second levels are designed as streets with cover at all doorways. Solar gain is accomplished through cutouts in the covered walkway. Balconies and patios have been added to the "streets" to give tenants an outdoor area to sit and meet with neighbors. A raised deck has been designed with views of the Sandia Mountains to the east and an overview of the general community to the west.

Comunity Library

Vine Screen

Community Health Center

Kids Yard

Training Center





LEED FOR HOMES

THE FOLLOWING ARE THE LEED FOR HOMES CRITERIA THAT WILL BE INCLUDED, SEE GENERAL NOTES ON EACH SHEET FOR SPECIFIC IMPLEMENTATION OF THE FOLLOWING GREEN BUILDING CONCEPTS.

INNOVATION AND DESIGN PROCESS


1.1 PRELIMINARY RATING: GOLD
(CERTIFIED: 35 PTS. SILVER: 50 PTS. GOLD: 65 PTS PLATINUM: 80)
1.2 **(1 POINT)** INTEGRATED PROJECT TEAM:
INDIVIDUALS OR ORGANIZATIONS WITH NECESSARY CAPABILITIES, ALL TEAM MEMBERS INVOLVED IN VARIOUS PROJECT PHASES, AND REGULAR MEETINGS ARE HELD WITH THE PROJECT TEAM
1.3 **(1 POINT)** PROFESSIONAL CREDENTIALED WITH RESPECT TO LEED FOR HOMES
2.1 DURABILITY PLANNING
2.2 DURABILITY MANAGEMENT
2.3 THIRD-PARTY DURABILITY MANAGEMENT VERIFICATION
3.2 **(1 POINT)** INNOVATION #2 - EXEMPLARY PERFORMANCE WE 2.1

LOCATION AND LINKAGES

2.0 **(2 POINTS)** SITE SELECTION: BUILT ABOVE A 100-YEAR FLOODPLAIN DEFINED BY FEMA, NOT BUILT ON HABITAT FOR THREATENED OR ENDANGERED SPECIES, NOT BUILT WITHIN 100 FT. OF WATER. NOT BUILT ON PUBLIC PARKLAND PRIOR TO ACQUISITION, SOILS, UNIQUE SOILS, OR SOILS OF STATE SIGNIFICANCE.
3.2 **(2 POINTS)** INFILL: 75% OF THE PERIMETER IMMEDIATELY BORDERS PREVIOUSLY DEVELOPED LAND.
3.3 **(1 POINT)** PREVIOUSLY DEVELOPED: BUILT ON A PREVIOUSLY DEVELOPED LOT.
4.0 **(1 POINT)** EXISTING INFRASTRUCTURE: A LOT THAT IS WITHIN 1/2 MILE OF EXISTING WATER SERVICE LINES AND SEWER SERVICE LINES.
5.3 **(3 POINTS)** OUTSTANDING COMMUNITY RESOURCES / TRANSIT

SUSTAINABLE SITE

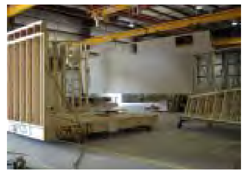
1.1 EROSION CONTROLS DURING CONSTRUCTION
1.2 **(1 POINT)** MINIMIZE DISTURBED AREA OF SITE: DEVELOP TREE / PLANT PRESERVATION PLAN WITH "NO-DISTURBANCE" ZONES LEAVE 40% OF BUILDABLE LOT AREA, NOT INCLUDING AREA UNDER ROOF, UNDISTURBED.
2.1 NO INVASIVE PLANTS
2.2 **(2 POINTS)** BASIC LANDSCAPING DESIGN: ANY TURF MUST BE DROUGHT TOLERANT, NO USE OF TURF IN DENSELY SHADED AREAS, NO TURF IN AREAS WITH A SLOPE OF 25%, ADDED MULCH OR SOIL AMENDMENTS AS MUCH AS POSSIBLE, AND ALL COMPACTED SOIL TO BE TILLED TO AT LEAST 6 INCHES.
2.3 **(3 POINTS)** LIMIT CONVENTIONAL TURF
2.4 **(2 POINTS)** DROUGHT TOLERANT PLANTS
4.3 **(1 POINT)** MANAGEMENT OF RUNOFF FROM ROOF
5.0 **(1 POINT)** PEST CONTROL ALTERNATIVES
6.3 **(4 POINTS)** COMPACT DESIGN: VERY HIGH DENSITY

WATER EFFICIENCY

1.1 **(3 POINTS)** RAINWATER HARVESTING SYSTEM
2.2 **(1 POINT)** THIRD PARTY INSPECTION
3.1 **(3 POINTS)** HIGH EFFICIENCY FIXTURES AND FITTINGS
AVERAGE FLOW RATE OF LAVATORY FAUCETS IS < 2.00 GPM
AVERAGE FLOW RATE FOR ALL SHOWERS IS < 2.00 GPM

ENERGY AND ATMOSPHERE

1.2 **(18.5 POINTS)** EXCEPTIONAL ENERGY PERFORMANCE
7.2 **(1 POINT)** PIPE INSULATION
11.1 REFRIGERANT CHARGE TEST
11.2 **(1 POINT)** APPROPRIATE HVAC REFRIGERANTS



MATERIALS AND RESOURCES

1.1 FRAMING ORDER WASTE FACTOR LIMIT
1.5 **(4 POINTS)** OFF-SITE FABRICATION
2.1 FSC CERTIFIED TROPICAL WOOD
2.2 **(4 POINTS)** ENVIRONMENTALLY PREFERABLE PRODUCTS
3.1 CONSTRUCTION WASTE MANAGEMENT PLANNING
3.2 **(1 POINT)** WASTE MANAGEMENT: 38% OF WASTE DIVERTED

INDOOR ENVIRONMENTAL QUALITY

2.1 BASIC COMBUSTION VENTING MEASURES
2.2 **(2 POINTS)** ENHANCED COMBUSTION VENTING MEASURES
4.1 BASIC OUTDOOR AIR VENTILATION
5.1 BASIC LOCAL EXHAUST
5.2 **(1 POINT)** ENHANCED LOCAL EXHAUST
6.1 ROOM-BY-ROOM LOAD CALCULATIONS
7.1 GOOD FILTERS
8.1 **(1 POINT)** INDOOR CONTAMINANT CONTROL DURING CONSTRUCTION
8.3 **(1 POINT)** PRE-OCCUPANCY FLUSH: FLUSH PRIOR TO OCCUPANCY BUT AFTER ALL PHASES OF CONSTRUCTION
10.4 **(3 POINTS)** DETACHED GARAGE OR NO GARAGE

AWARENESS AND EDUCATION

1.1 BASIC OPERATIONS TRAINING
2.0 **(1 POINT)** EDUCATION OF THE BUILDING MANAGER

SUMMARY OF LEED CHECKLIST

SUMMARY POINTS

INNOVATION AND DESIGN PROCESS	3
LOCATION AND LINKAGES	9
SUSTAINABLE SITES	14
WATER EFFICIENCY	7
ENERGY AND ATMOSPHERE	20.5
MATERIALS AND RESOURCES	9
INDOOR ENVIRONMENTAL QUALITY	8
AWARENESS AND EDUCATION	1
TOTAL	71.5
LEED GOLD	65 - 79

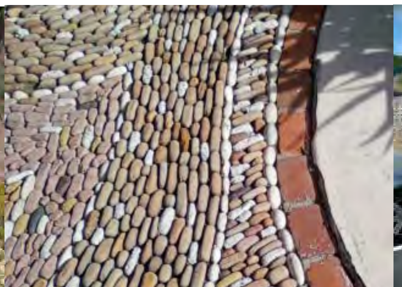
SUSTAINABLE DESIGN

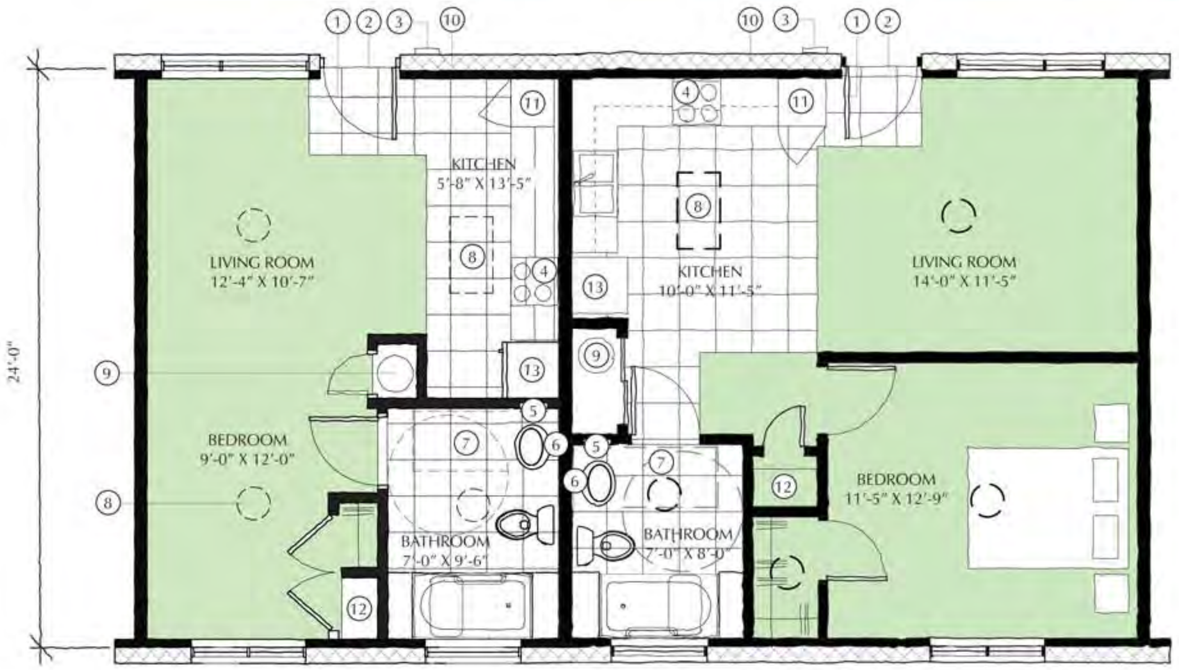
The design achieves energy conservation and efficiency by using the solar orientation, shade devices, operable windows, heat reflecting roof and increased insulation values. These design decisions reduce heating and cooling energy demands, which are responsible for up to 50% of the average American household's annual energy needs. Specification of energy star systems including rated appliances, on-demand electric water heaters, energy star rated lighting and windows further reduce energy requirements for the apartments. Low-flow shower heads, faucets and toilets meet Albuquerque "Green Path" criteria for saving water.

particular attention has been paid to designing a project that recycles buildings, collects and recycles demolition materials, and demonstrates the nature of sustainability to tenents. Asphalt and concrete are used in gabion and site walls, wood is sent to a wood pellet manufacturer, and other materials are sent to be recycled. Story boards will be produced and shown in public spaces depicting the adaptive re-use story of the Sundowner.

This project is also committed to a relatively high level of energy efficiency with a Home Energy Rating System (HERS) index of 60 or better. This means that the units will be at least 40% more efficient than a standard code built unit. This may enable additional NM energy tax credits. These units therefore will well exceed the requirements to be certified as an Energy Star home under EPA guidelines. If available and applicable the project should also be capable of achieving certification as a Water Sense home.



Efficiency ADA Unit
432 SF - Gross Heated SF
1/4" = 1'-0"

One Bedroom ADA Unit
576 SF - Gross Heated SF
1/4" = 1'-0"

KEYED NOTES

1. Single level deadbolt and eye viewer at entry door, typ.
2. Zero step at threshold, typ.
3. Contrasting color unit identification, typ.
4. Energy Star rated range and oven with hood, vented to exterior
5. Recessed medicine cabinet, typ.
6. Mirror
7. 30" x 48" clear area beyond door
8. Ceiling-mounted Energy Star rated lighting fixture
9. Energy Star rated on-demand electric water heater
10. Existing CMU wall
11. Pantry
12. Linen closet
13. Energy Star rated refrigerator

GENERAL NOTES

A. All hot and cold water pipes to be insulated
B. All plumbing will be new
C. All bathroom exhaust vented to exterior
D. All passage doors to be 2'10" with minimum 32" clear passage width
E. All plumbing fixtures to be low flow
F. Carpet in all residences to be tacked down
G. No plumbing located in exterior walls
H. Bulk storage located outside of units, see overall floor plans
4 primary bulk storage areas are located throuhgout the site.
I. All units will be pre-wired for high speed internet and cable services

VISITABILITY

All units shall meet the following requirements

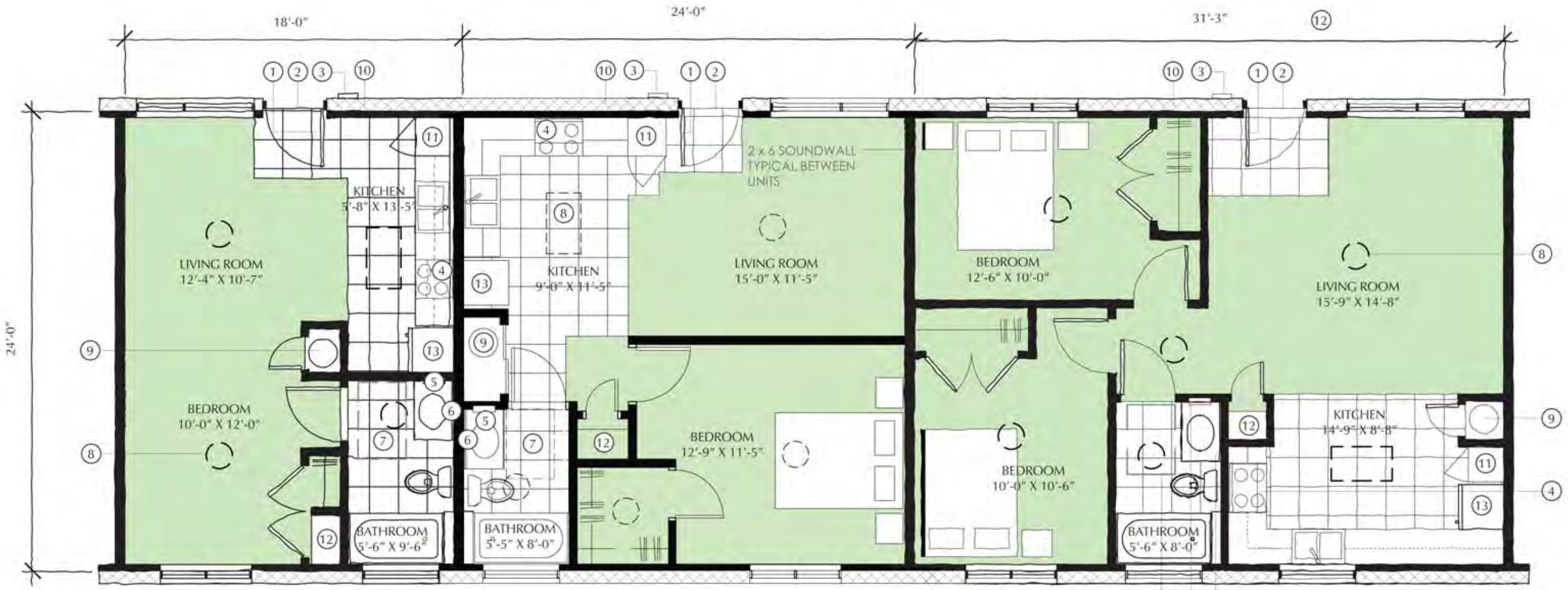
A. One zero step entrance on a route that has no steps, steep slopes, or abrupt level changes from the driveway, sidewalk, or other point of arrival. Zero step means there is no, or a low (3/4" maximum, beveled) level change at threshold.

B. All main floor interior passage doors, including bathrooms, should have 32 inches of clear passage space.

C. A full bath in the unit with a minimum area of 30" by 48" beyond the swing of the door.

INTERIOR DESIGN

Unit Type	Minimum Standard Size	Actual Size
Efficiency Unit	425 gross heated SF	432 gross heated SF
One Bedroom Unit	575 gross heated SF	576 gross heated SF
Two Bedroom Unit	750 gross heated SF	750 gross heated SF
Three Bedroom Unit	1,000 gross heated SF	1,084 gross heated SF
ADA Efficiency Unit	425 gross heated SF	432 gross heated SF
ADA One Bedroom Unit	575 gross heated SF	576 gross heated SF



Efficiency Unit
432 SF - Gross Heated SF
1/4" = 1'-0"

One Bedroom Unit
576 SF - Gross Heated SF
1/4" = 1'-0"

Two Bedroom Unit
750 SF - Gross Heated SF
1/4" = 1'-0"

Thre Bedroom Unit
1,084 SF - Gross Heated SF
1/4" = 1'-0"

Sundowner
Garrett Smith Ltd-NewLife Homes

Typical Unit Plans

Building 5 West Street Elevation (Typ.)

1/8” = 1’

Building 5 and Building 4 East Courtyard (Typ.)

1/8” = 1’

Commercial, Commons Building, and Courtyard East Elevation

1/8" = 1'

Building 5 West Street Sun Shades

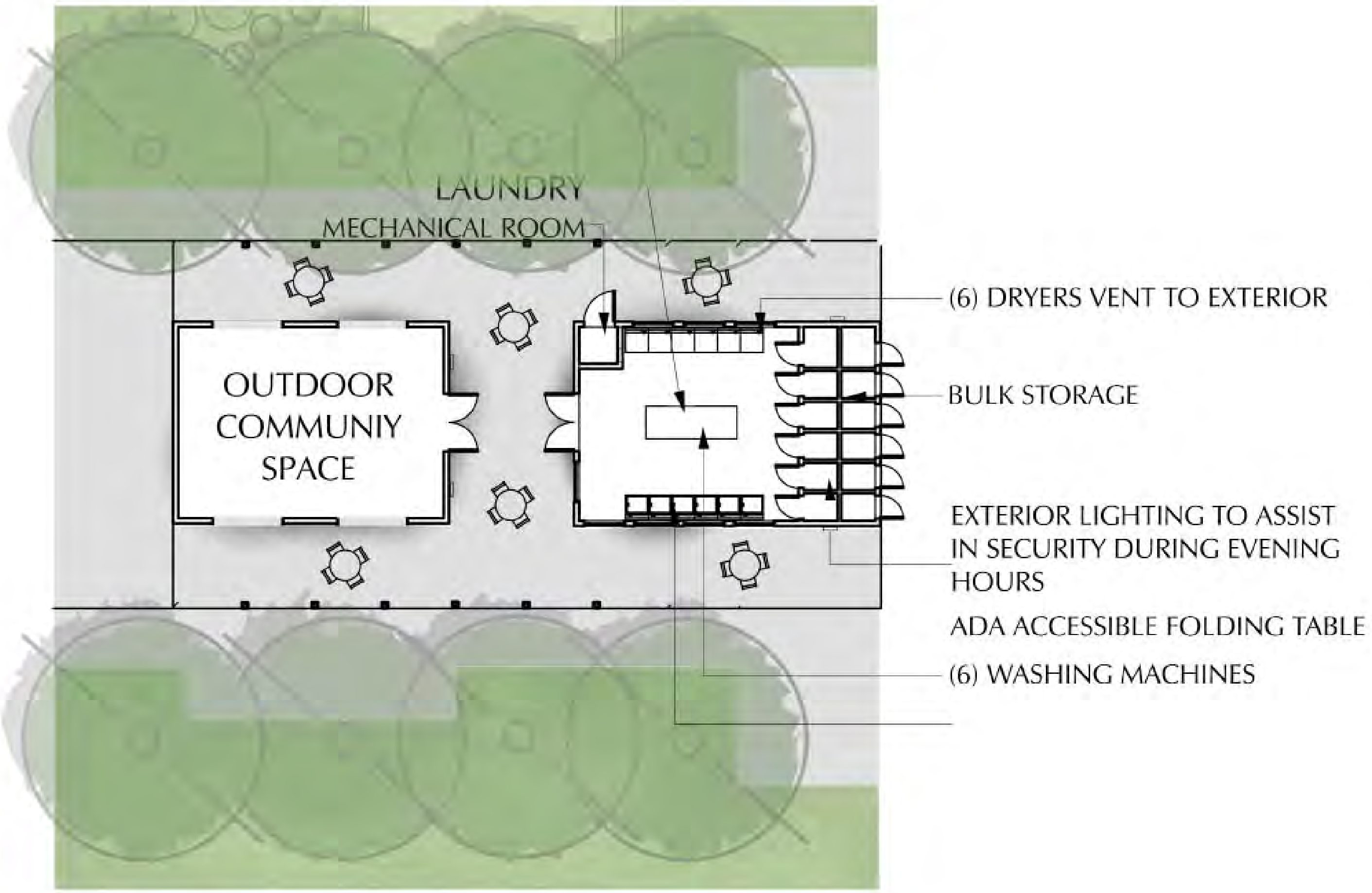
Commercial and Commons Building Street Side South Elevation

1/8" = 1'

Parking / Removable Umbrellas



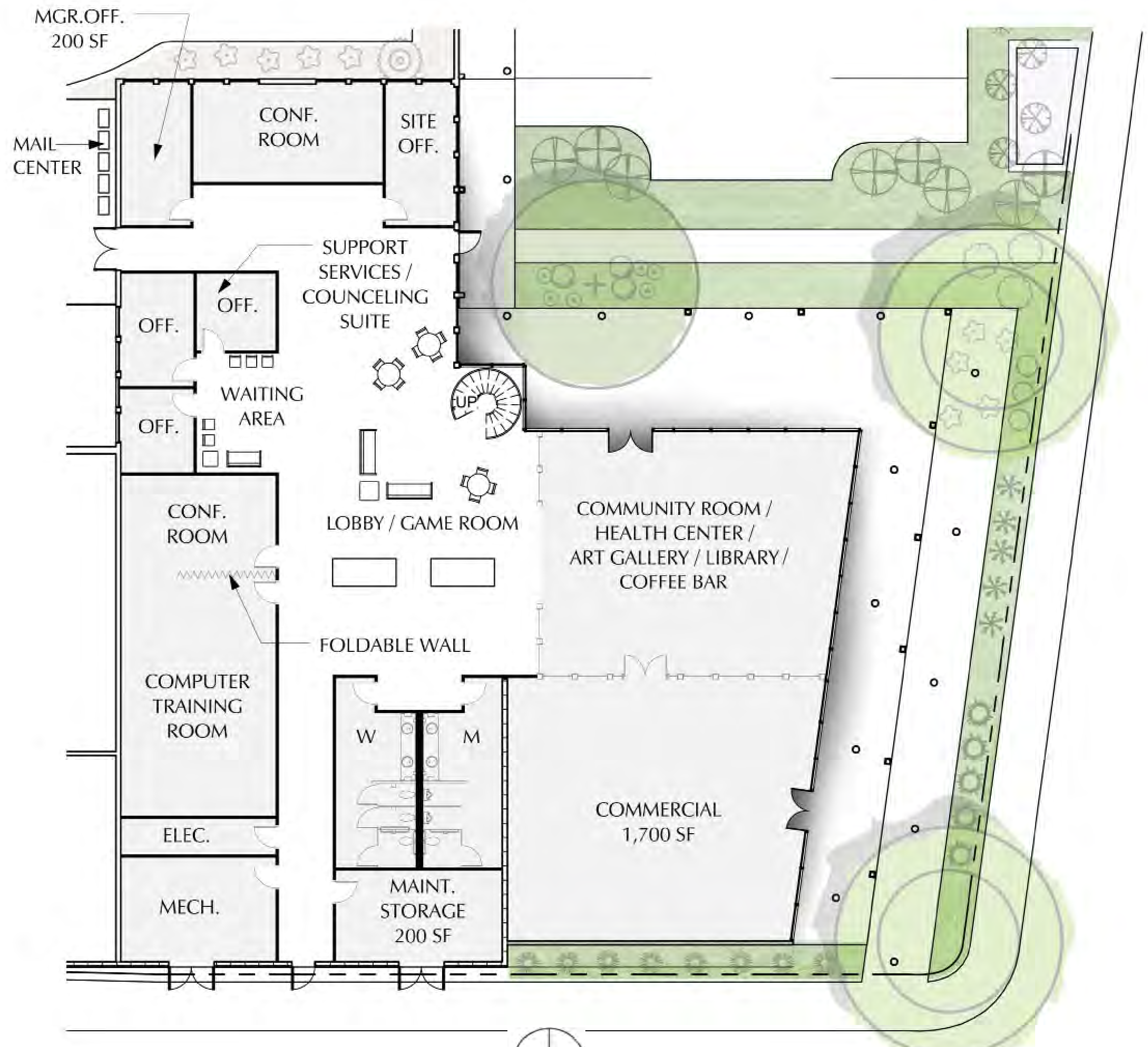




Enlarged Laundry Building Plan N

Laundry South Elevation

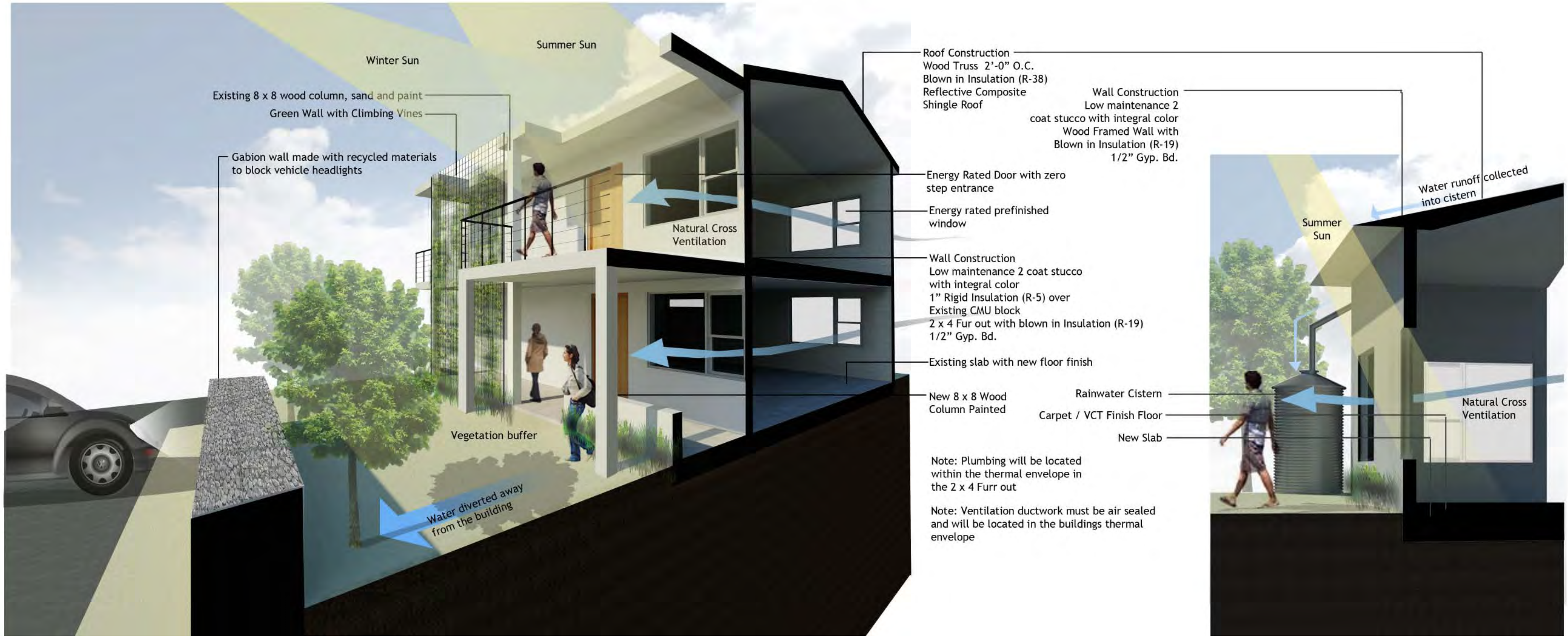
Laundry West Elevation



Enlarged Community and Commercial Plan N







Typical Building Section Looking North

Three Bedroom Wall Section Looking South

Sundowner

Garrett Smith Ltd. - NewLife Homes

Community Building from Inner Court

Community Gardens

Bill Gates Community Gateway

Children's Play Area / Community Gardens

OUTLINE SPECIFICATION

THESE SPECIFICATIONS SATISFY THE LEED FOR HOMES CERTIFICATION REQUIREMENTS.

INTRODUCTION – DEFINITIONS

LEED FOR HOMES PROVIDER

LEED homes are rated by LEED for Homes Providers (Providers). These are local and regional organizations with demonstrated experience, expertise in their market, and a proven record of supporting builders in the construction of high-performance, sustainable homes. A provider manages a team of Green Raters and works under contract with the US Green Building Council (USGBC). USGBC reviews and completes certifications.

GREEN RATER

The Green Rater is an individual who conducts field inspections and performance testing, whether as a part of the Provider's in-house staff or as a subcontractor to the Provider.

DIVISION 1 – GENERAL REQUIREMENTS

01000 CONTRACTOR'S SCOPE OF WORK

1. Supervision, permits, layout, quality control, temp utilities, construction facilities, equipment, daily and final cleanup, start-up and close-out
2. Testing new structural elements of existing buildings

01010 SUMMARY OF THE WORK

Project Description:	New Life Homes – Sundowner
Rehabilitation and New Construction:	Multi-family Residential
Size:	71 Units plus Commons, Laundry, etc. 46,765 Heated sf

01300 SUBMITTALS

Provide submittals for all components of the project; proceed with related work only after such submittals have been reviewed and approved. Provide one set of reproducible originals for each shop drawing.

01320 LEED REQUIREMENTS

This project will attempt LEED for Homes Certification requirements through points in the following categories:

Innovation and Design (ID):	3 of 11 possible
Location and Linkages (LL):	9 of 10 possible
Sustainable Sites (SS):	14 of 22 possible
Water Efficiency (WE):	7 of 15 possible
Energy and Atmosphere (EA):	20.5 of 38 possible
Materials and Resources (MR):	9 of 16 possible
Indoor Environmental Quality (EQ):	8 of 21 possible
Awareness and Education (AE):	1 of 3 possible

01600 PRODUCT REQUIREMENTS (MR 2.2)

Meet the requirements of LEED for Homes MR 2.2, "Environmentally Preferable Products" based on the selections in the LEED for Homes Project Checklist.

01740 CONSTRUCTION WASTE DIVERSION (MR 3.2)

A. Investigate and document local options for diversion (e.g., recycling, reuse) of all anticipated major constituents of the project waste stream, including cardboard packaging and household recyclables (e.g., beverage containers).
B. Document the diversion rate for construction waste. Record the diversion rate for land clearing and/or demolition, if applicable, separately from the rate for the new construction phase of the project.
C. Send no more than 2.5 lbs of construction waste to landfills/incinerators for each square foot of conditioned space OR divert 37.5% of construction waste from going to landfills/incinerators.

01810 COMMISSIONING (EA 3.1)

Air leakage rate from envelope must be verified by Provider's third party rater.
Building inspections per contract.

01820 DEMONSTRATION AND TRAINING (AE 1.1)

The builder shall provide the home occupant(s) with:

1. An operations and maintenance manual / binder that meets the requirements of LEED for Homes AE 1.1, "Basic Operations Training."
2. A minimum 60-minute walkthrough of the home that meets the requirements of LEED for Homes AE 1.1, "Basic Operations and Training."

01840 DURABILITY MANAGEMENT AND VERIFICATION (ID 2.2-2.3)

A. Implement a quality management program as part of the risk management activities OR inspect and check off measures on the Durability Inspection Checklist.
B. The Green Rater shall visually verify that strategies listed on the durability inspection checklist were incorporated into the home. Upon verification, the Green Rater will check off and sign the Durability Inspection Checklist.

<u>DIVISION 2 – SITEWORK</u>

02410 DEMOLITION (MR 3)

The buildings will be rehabilitated and reused as residential living with accompanying ancillary spaces. Demolition will include interiors, roof, and doors, existing site fences and windows in existing buildings. Other items scheduled for demolition may include the wall at sections of the 2 story structure including foundations.

Reduce waste generation to a level below the industry norm.
Construction waste management planning (MR 3.1)

1. Document the diversion rate for construction waste. Record the diversion rate for land clearing and/or demolition separately from the rate for the new construction phase of the project.
2. Concrete and asphalt will be recycled into gabion walls.

02370 EROSION AND SEDIMENTATION CONTROL (SS 1.1)

Develop and implement an Erosion Control Plan (SWPP) and provide a copy to the Architect. The Architect shall provide a copy to the Provider's Green Rater. Erosion control measures must include all of the following:

a. Stockpile and protect disturbed topsoil from erosion (for reuse).
b. Control the path and velocity of runoff with silt fencing or comparable measures.
c. Protect on-site storm sewer inlets, streams, and lakes with straw bales, silt fencing, silt sacks, rock filters, or comparable measures.
d. Provide swales to divert surface water from hillsides.

e. If soils in a sloped area (i.e., 25% or 4:1 slope) are disturbed during construction, use tiers, erosion blankets, compost blankets, filter socks and berms, or some comparable approach to keep soil stabilized.

Minimize disturbed area of previously developed site by meeting the following:

a. Develop a tree or plan preservation plan with “no-disturbance” zones clearly delineated on drawings and on the lot and rehabilitate the lot by undoing any previous soil compaction, removing existing invasive plants, and meeting the requirements of SS 2.2.

02622 DRAINAGE – FOUNDATION

Provide drainage of water to the lowest level of concrete away from windows, walls and foundations. Foundation walls should be carefully waterproofed on the exterior to avoid moisture migration. Moisture retarders on the exterior of foundation should not leach chemicals into the soil. If poured concrete walls are used, release agents used to free forms from concrete walls should not be comprised of used motor oil or some other toxic material. Install a coating on footers to keep moisture from wicking up through them.

02795 SURFACE WATER MANAGEMENT (SS.4.1)

Meet the requirements of LEED for Homes SS 4.

a. Management of Runoff from Roof such that one or more of the following runoff control measures is incorporated:
    1. Install permanent storm water controls (e.g. vegetated swales, on-site rain garden, dry well, or rainwater cistern, see Specification Section 07750) designed to manage runoff from the home.
    2. Have the site designed by a licensed or certified landscape design or engineering professional such that all water runoff from the home is managed through an on-site design element.
    3. Water will be diverted away from the building walls and foundations by sloping exterior grade, or the insulation of crushed rock and / or drainage pipe to allow for water drainage in cases where exterior grade cannot be sloped away from building.
    4. Roof water must be diverted away from the building by the use of gutters and downspouts or roof overhangs.

02800 SITE IMPROVEMENTS AND AMENITIES

Provide site improvements and furnishings.

1. Install a bench near the playground on an accessible route. The bench must be permanently anchored and be weather resistant.
2. Install a “warning” sign near the playground. The “warning” sign advises residents that children playing at the playground will be doing so at their own risk. The sign must be posed at a visible location and use contrasting colors for better identification.
3. Install a wood shade structure that is permanently anchored. See 06060 Wood Material (MR 2.1).
4. Install mail boxes that meet USPS curbside or residential recipient requirements. Locate mail boxes on an accessible route.

02810 IRRIGATION SYSTEM (WE 2.1)

For high efficiency irrigation system (WE 2.1), irrigation system must meet at least three of the following requirements:

1. Irrigation system with head-to-head coverage
2. Install central shut-off valve
3. Install submeter for the irrigation system
4. Use drip irrigation for minimum 50% of planting beds
5. Create separate zones for each type of bedding
6. Install timer or controller for each watering zone
7. Install pressure-regulating devices

For third party inspection (WE 2.2), a third-party inspection of the irrigation system in operation, including observation of the following:

1. All spray heads are operating and delivering water only to intended zones,
2. Any switches or shut-off valves are working properly
3. Any timers or controller are set properly,
4. Any irrigation systems are located at least 2 fee from the home,
5. Irrigation spray does not hit the home.

For reduce overall irrigation demand by at least 45% (WE 2.3), the design of the landscape and irrigation system to reduce the overall irrigation water demand budget.

8. For Rainwater Harvesting see Specification Section 07750

02900 LANDSCAPING (SS 2.1-2.4, ID 3.1, SS 3, SS 5)

A. Introduce no invasive plant species into the landscape.
B. Any turf must be drought-tolerant.
C. Add mulch or soil amendments as appropriate.
D. All compacted soil must be tilled to at least 6 inches.
E. Install drought-tolerant, native, or semi-native plants.
F. Reduce local heat island effects by locating trees or other plantings to provide shading for at least 50% of sidewalks, patios, and driveways within 50 feet of the home.
G. Pest control alternatives include the installation of landscaping such that all parts of mature plants will be at least 24 inches from the home or install a sand or diatomaceous earth barrier.

DIVISION 3 – CONCRETE

03000 CONTRACTOR'S SCOPE OF WORK

1. New concrete footings at new construction
2. Slab infill at new concrete footing sawcuts
3. Patch/repair concrete at balcony walkways
4. Concrete site work

03200 CEMENT AND AGGREGATE (MR 2.2)

All aggregate and cement shall be locally produced (extracted, processed, and manufactured within 500 miles of the home).

03300 CAST-IN-PLACE CONCRETE (SS 3)

1. All site concrete including sidewalks, patios, driveways and other concrete surfaces shall be light-colored, high-albedo materials for at least 50% of the areas within 50 feet of the home.
2. An accessible route shall be provided with no steps, steep slopes or abrupt level changes from the driveway, handicap parking, sidewalk to the unit entrance.

DIVISION 4 – MASONRY

04000 CONTRACTOR'S SCOPE OF WORK

1. Standard 8" CMU dumpster/recycle enclosures
2. Gabion walls 36"h on 8" gravel base at site as shown.
3. All masonry shall be locally produced (extracted, processed, and manufactured within 500 miles of the home).

DIVISION 5 – METALS

05000 CONTRACTOR'S SCOPE OF WORK

1. Steel portal
2. Miscellaneous metals to include:

a. Guardrails at balconies
b. Bollards at dumpster recycle enclosure
c. Bike rack
d. Steel pan stairs
e. 2x2 welded wire vine mesh panels on building and on site as shown
f. Metal planter boxes at wire vine mesh panels
g. Miscellaneous connectors

DIVISION 6 – WOOD AND PLASTICS

06060 WOOD MATERIAL (MR 2.1)

1. All purchased wood must be either FSC-certified, reclaimed, or not tropical in origin. Provide suppliers with a notice of preference for FSC products AND request country of manufacture for each wood product.
2. Low or no emissions of volatile organic compounds (VOCs).
3. Local production—the product was extracted, processed and manufactured with 500 miles of the site.

06110 MATERIAL-EFFICIENT FRAMING (MR 1.1, 1.2 AND 1.4)

1. Limit the overall estimated framing waste factor to 10% or less. If the waste factor on any portion of the framing order exceeds 10%, calculate the overall waste factor in accordance with LEED for Homes requirements.
2. Create detailed framing plans or scopes of work and accompanying architectural details for use on the job site. Specific locations, sizing, spacing of all framing members in floors, walls, roof, and ceiling.
3. Ceiling joists spacing must be greater than 24" on center
4. Floor joist spacing must be greater than 16" on center
5. Implement framing efficiencies.
6. Off-site fabrication.

06410 CABINETS (MR 2.2)

1. All wood cabinet material shall be FSC-certified OR have 25% postconsumer recycled content OR be reclaimed material.
2. Low or no emissions of volatile organic compounds (VOCs).

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

07200 ENERGY STAR FOR HOMES (EA 1)

Improve the overall energy performance of a home by meeting or exceeding the performance of an Energy Star labeled home.

1. Performance of Energy Star for Homes: meet the performance of Energy Star for homes including third-party inspections.
2. Exceptional Energy Performance: exceed the performance of Energy Star for homes using Home Energy Standards (HERS) Index to the appropriate number of LEED points.

07210 INSULATION (EA 2.1)

Insulation that meets or exceeds the R-value requirements listed in 2006 International Energy Conservation Code (IECC). Insulation to include

1. 3" sound batt insulation at party walls
2. R-38 blown-in insulation between roof trusses
3. 3" acoustic batts at mid floor of residences
4. 1" rigid insulation (R-5) at exterior of exterior walls

5. Blown-in insulation (R-19) at exterior walls and fur-outs

07300 ROOFING (EA 1.1, 1.2, SS 3)

1. TPO roofing, 0.060-mil, white, over ½" recovery board, fully adhered including all flashings, copings at perimeter cap, collector boxes and downspouts
2. Composite shingle roof with a minimum 20 year guarantee.
3. To reduce local heat island effects, roof material much have a solar reflectance index (SRI) of at least 29.

07710 GUTTERS AND DOWNSPOUTS

Divert water drainage away from the building by directing gutters and downspouts to flow onto splash blocks, into cisterns, or into a proper drainage system. If possible, water should infiltrate on site at least 12 feet from any building foundation.

07750 RAINWATER HARVESTING SYSTEM/CISTERN (WE 1.1)

Design and install a rainwater harvesting and storage system for landscape irrigation use or indoor water use. The storage system must be sized to hold all the water from a 1-inch rainfall event taking into consideration the size of the harvest system.

07920 JOINT SEALANT AND ADHESIVES

All adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. All caulks and sealants must comply with regulation 8, rule 51, of the Bay Area Air Quality Management District. Caulking and sealants must contain no VOCs.

<u>DIVISION 8 – DOORS AND WINDOWS</u>

08500 WINDOWS

1. Manufactured prefinished windows, insulated with double glazing
2. Design and install windows and glass doors that have NFRC ratings that meet or exceed the window requirements of the ENERGY STAR for Homes national Builder Option Package for the "North Central" zone. Use low-e glass.
3. Residential window flashing wraps at exterior windows.

08800 DOORS

1. Metal insulated doors with R-2.6 rating.
2. There will be a zero (no, or ¾" maximum, beveled) step at the entrance to each residential unit.
3. Single lever deadbolts and eye viewers will be located on all entry doors to residential units
4. All main floor interior passage doors in each residential unit will have 32" of clear passage space.
5. At the bath on the main floor of the unit, a minimum area of 32" by 48" area beyond the swing of the door shall be provided.

08900 GLAZED CURTAIN WALLS

Work included: The glazing contractor shall furnish all necessary labor, materials and equipment for the complete installation of aluminum storefront called for in the contract documents.

1. Design and install windows and glass doors that have NFRC ratings that meet or exceed the window requirements of the ENERGY STAR for Homes national Builder Option Package for the "North Central" zone. Use low-e glass.

DIVISION 9 – FINISHES

09000 CEMENT PLASTER (STUCCO) SYSTEM
Two coat stucco system with synthetic finish over vapor barrier, building exteriors throughout.

09100 VINYL FLOORING
Vinyl composition tile at residence kitchens and bathrooms, community room, and high traffic areas.

09210 GYPSUM BOARD (MR 2.2)
1. All gypsum board shall be produced locally (extracted, processed, and manufactured within 500 miles of the site).
2. Gypsum drywall walls and ceilings, taped and orange peel textured as required per code throughout.

09680 CARPET (MR 2.2)
All carpet and pad shall have a MINIMUM of 25% postconsumer recycled content AND shall comply with the Carpet and Rug Institute Green Label Plus program. Installation of carpet must be tacked down, not glued down.

DIVISION 10 – SPECIALTIES

10290 PEST CONTROL (SS 5)
1. Seal external cracks, joints, etc. with caulking and install pest-proof screens.
2. Install landscaping such that mature plants are MINIMUM 24” from home.

10300 FIREPLACES AND STOVES (EQ 2)
Enhanced combustion venting measures:
1. Install no fireplace or woodstove, or design and install a fireplace or woodstove according to the requirements of LEED for Homes, EQ 2.2.

10433 SIGNAGE
1. Provide exterior signage at buildings and individual dwelling units with visible, contrasting identifying devices.
2. The building identifying devices must be illuminated from dusk until dawn.

10810 TOILET ACCESSORIES
Provide toilet accessories:
1. Toilet tissue dispensers, single roll.
2. Shower curtain rods
3. Shower curtains and hooks
4. Towel bars
5. Recessed medicine cabinets
6. Mirrors

ADA toilet accessories:
1. All of the above.
2. Grab bars.

10824 SHOWER ENCLOSURES
Use one-piece fiberglass or similar enclosure. Use backing materials such as cement board, fiber cement board, fiberglass-reinforced board or cement plaster.
1. ADA roll in showers at ADA units with fold down seats, adjustable shower head, and grab bars

10830 LAUNDRY ACCESSORIES (EA 9)

High-Efficiency Appliances (EA 9.1)

1. Install ENERGY STAR labeled clothes washer and clothes dryer.
2. Water-efficient clothes washer (EA 9.2) install clothes washer with modified energy factor (MEF) greater than or equal to 2.0 and water factor (WF) greater than 5.5. A clothes washer that meets these requirements and the requirement in EA 9.1 can be counted for both.
3. Clothes dryer shall vent to exterior

DIVISION 11 – EQUIPMENT

11401 ELECTRIC KITCHEN EQUIPMENT

1. Kitchen appliances shall be ENERGY STAR labeled.
2. All appliances (range, range hood, refrigerator) shall be electric.
3. Range hood must vent to the exterior.
4. Kitchen ranges must be equipped with hoods.

11452 EXHAUST FANS – RESIDENTIAL (EQ 5.1)

A. Design and install local exhaust systems in bathrooms and kitchen to meet the requirements of Section 5 of ASHRAE Standard 62.2-2007.
B. Design and install fans and ducts to meet the requirements of Section 7 of ASHRAE 62.2-2007.
C. Exhaust air to the outdoors.
D. Use ENERGY STAR labeled exhaust fans, except if serving multiple bathrooms.

DIVISION 12 – FURNISHINGS

12000 WINDOW COVERINGS

1. Aluminum horizontal blinds at all window openings in residential units.

DIVISION 13 – SPECIAL CONSTRUCTION

13287 RADON PROTECTION (EQ 9)

Reduce occupant exposure to radon gas and other soil gas contaminants.

1. Radon-resistant construction in high-risk areas (EQ 9.1): design and building the home with radon-resistant construction techniques as prescribed by the EPA, the IRC, Washington State Ventilation and Indoor Air Quality Code or some equivalent code or standard.

2. Radon-resistant construction in moderate-risk areas.

13856 CARBON MONOXIDE DETECTORS (EQ 2)

1. A carbon monoxide (CO) monitor must be installed on each floor.
   Carbon monoxide detector shall be a System Sensor model number CO1224T, listed to Underwriters Laboratories UL 2075 for Gas and Vapor Detectors and Sensors. The detector shall be equipped with a sounder and a trouble relay. The detector's base shall be able to mount to a single-gang electrical box or direct (surface) mount to the wall or ceiling. Wiring connections shall be made by means of SEMS screws. The detector shall provide dual-color LED indication that blinks to indicate normal standby, alarm, or end-of-life. When the sensor supervision is in a trouble condition, the detector shall send a trouble signal to the panel. When the detector gives a trouble or end-of-life signal, the detector shall be replaced. The detector shall provide a means to test CO gas entry into the CO sensing cell. The detector shall provide this with a test mode that accepts CO gas from a test agent and alarms immediately upon sensing CO entry.

DIVISION 15 – MECHANICAL

15080 PLUMBING INSULATION (EA 5.1 AND EA 7.2)

1. Plumbing fixtures must be low flow fixtures with the following specifications:
   a. 2.0 gallons per minute showerheads
   b. 1.5 gallons per minute kitchen faucets
   c. 1.0 gallon per minute bathroom faucet
2. Meet the requirements of LEED for Homes EA 7.2, "Pipe Insulation."
3. All hot and cold water lines are to be insulated.
4. No plumbing is to be located in the exterior walls.
5. For rehabilitation projects, insulate all water lines hot and cold to the extent possible by insulating all exposed waterline or those exposed during the course of rehabilitation.

15300 FIRE PROTECTION SYSTEM

Fire sprinkler system at new residence building per NFPA 13, including backflow preventer and post indicator valve

15400 PLUMBING (EA 7)

Reduce energy consumption associated with the domestic hot water system.

1. Efficient Hot Water Distribution (EA 7.1)must select one of the following designs:
   a. Structured plumbing system with demand-controlled circulation loop that is insulated to at least R-4, total length of loop must be less than 40 linear feet, branch lines from loop to each fixture must be less than 10 feet long and system must be designed with a punch button control in each full bathroom and the kitchen and an automatic pump shut-off.
   b. Central manifold distribution system.
   c. Compact design of conventional system.
2. Pipe Insulation (EA 7.2) all domestic hot water piping shall have R-4 insulation and shall be properly installed on all piping elbows to adequately insulate the 90-degree bend.
3. Efficient Domestic Hot Water Equipment (EA 7.3) Design and install energy-efficient water heating equipment.

15410 PLUMBING FIXTURES (WE 3.1)

Install water-conserving fixtures with the following specifications:

a. Toilets – less than or equal to 1.6 GPF (gallons per flush) OR dual-flush toilets OR toilets that meet the EPA Water Sense specification
b. Showerheads – Less than or equal to 2.0 GPM (gallons per minute)
c. Bathroom faucets – Less than or equal to 1.0 GPM
d. Kitchen faucets – Less than or equal to 1.5 GPM

15480 DOMESTIC HOT WATER EQUIPMENT

1. Install ENERGY STAR labeled on-demand electric water heaters.
2. Water heaters will meet or exceed the Energy Star energy factor (EF) of 2.0
3. The water heater must not be located in areas required for storage.
4. The water heater must meet or exceed the heater energy factors (EF) for the Energy Star recommended levels.

15600 REFRIGERATION EQUIPMENT (EA 11)

Meet the requirements of LEED for Homes EA 11.1, "Refrigerant Charge Test" and 11.2, "Appropriate HVAC Refrigerants."

15700 HEATING, VENTILATION AND AIR CONDITIONING EQUIPMENT

1. Provide proof of proper refrigerant charge of the air-conditioning system.

2. Meet the requirements of LEED for Homes EA 6.1, “Good HVAC Design and Installation” and EA 6.3, “Very High-Efficiency HVAC.”
3. All combustion appliances shall be direct vented.
4. All ventilation ductwork must be air sealed and located within the building’s thermal envelope.
5. All bathrooms shall be equipped with exhaust fans that vent directly to the exterior.

Outdoor air ventilation (EQ 4)

Basic outdoor air ventilation, reduce occupant exposure to indoor pollutants by ventilating with outdoor air:

1. Design and install a whole building ventilation system that complies with ASHRAE, Standard 63.3-2007.
2. Provide continuous ventilation meeting the requirements of LEED for Homes, EQ 4.
3. Provide intermittent ventilation using equation 4.2, ASHRAE Standard.
4. Passive ventilation system approved and verified by a licensed HVAC engineer.

Enhanced outdoor air ventilation per EQ 4.2.

Third-party performance testing where flow rate of air brought into the home is tested and verified the requirements of ASHRAE are met.

15800 AIR DISTRIBUTION (EQ 6.1)

Perform design calculations (using ACCA Manuals J and D, the ASHRAE Handbook of Fundamentals, or an equivalent computation procedure) and install ducts accordingly.

15810 DUCTS (EQ 8.1)

Indoor contaminant control during construction.

1. Upon installation, seal all permanent ducts and vents to minimize contamination during construction. Remove any seals after all phases of construction are complete.
2. All ventilation ductwork will be air sealed and located within the building’s thermal envelope.

Preoccupancy flush where the home is flushed with fresh air according to the following:

1. Flush prior to occupancy but after all phases of construction are completed.
2. Flush the entire home, keeping all interior door open.
3. Flush for 48 total hours; the hours may be nonconsecutive, if necessary.
4. Keep all windows open and run a fan continuously or flush the home with all HVAC fans and exhaust fans operating continuously at the highest flow rate.
5. Use additional fans to circulate air within the home.
6. Replace or clean HVAC air filter afterward, as necessary.

15862 AIR FILTRATION EQUIPMENT (EQ 7.1)

Install air filters with a MERV rating of at least 8 and ensure that air handlers can maintain adequate pressure and air flow. Air filter housings must be airtight to prevent bypass or leakage.

15892 EXHAUST FANS (EQ 5)

Basic local exhaust (EQ 5.1) must meet all of the following:

1. Design and install local exhaust systems in all bathrooms and the kitchen to meet the requirements of Section 5 of ASHRAE Standard 62.2-2007.
2. Design and install the fans and ducts to meet the requirements of Section 7 of ASHARE Standard 62.2-2007.
3. Exhaust air to the outdoors.
4. Use ENERGY STAR labeled bathroom exhaust fans.

Enhanced local exhaust must meet one of the following strategies in every bathroom to control the use of the local exhaust fan:

1. An occupancy sensor.

2. An automatic humidistat controller.
3. An automatic timer to operate the fan for a timed interval after occupant leaves the room.
4. A continuously operating exhaust fan.

Third-party performance testing. Perform a third-party test of each exhaust air flow rate for compliance with the requirements in Section 5 of ASHRAE Standard 62.2-2007.

DIVISION 16 – ELECTRICAL

16500 LIGHTING (EA 8)

Energy Star Lights (EA 8.1)

1. In each home, install at least four ENERGY STAR labeled light fixtures or ENERGY STAR labeled compact fluorescent light bulbs (CFLs) in high-use rooms (kitchen, dining room, living room, family room, hallways).

Improved lighting (EA 8.2)

2. Install three additional ENERGY STAR labeled light fixtures or ENERGY STAR compact fluorescent light bulbs in high-use rooms. These are in additional to the four ENERGY STAR lights required by EA 8.1
3. All exterior lighting must have either motion sensor controls or integrated photovoltaic cells. The following lighting is exempt: emergency lighting, lighting required by code for health and safety purposes; and lighting use for eye adaptation near covered vehicle entrances or exits.

Advanced lighting package (EA 8.3)

Lighting package using only ENERGY STAR labeled fixtures.

a. Package consists of a minimum of 60% ENERGY STAR qualified hard-wired fixtures and 100% ENERGY STAR qualified ceiling fans.
b. Or package consists of ENERGY STAR labeled lamps in 80% of the fixtures throughout the home. ENERGY STAR labeled CFLs are acceptable.

Other requirements:

1. All lighting should be permanent and fixed. Lighting must not depend on switched outlets or floor lamps for lighting.
2. Building identifying devices must be well lighted from dusk until dawn.

16600 FANS

Ceiling fans shall be ENERGY STAR labeled.

END