

North Domingo Baca (NDB) Park – Parking Analysis

Introduction

The City of Albuquerque (COA) asked Huitt-Zollars to provide a parking analysis for the North Domingo Baca Park. Our team evaluated the parking requirements for the completed Phases I, II and III, the soon to be completed parking lot east of the Center, and the future Aquatic Center and Spray Pad. The following information was taken from the adopted NDB Master Plan which described the planned parking at the time of the Master Plan:

Parking Facility Parking Requirements Parking requirements to meet the needs of the facility program total 1,035 spaces and distributed as follows:

| | |
|------------------------------------|-------------------|
| <i>Multi-Generational Center</i> | <i>250 spaces</i> |
| <i>Library</i> | <i>90 spaces</i> |
| <i>Pool Complex</i> | <i>250 spaces</i> |
| <i>Multi-Purpose Fields</i> | <i>240 spaces</i> |
| <i>Tennis Courts</i> | <i>30 spaces</i> |
| <i>Modular Skate Facility</i> | <i>50 spaces</i> |
| <i>Off-Leash Dog Exercise Area</i> | <i>25 spaces</i> |
| <i>Park and Ride Area</i> | <i>50 spaces</i> |
| <i>Active Recreation Area</i> | <i>50 spaces</i> |

Four major parking areas are designated within the Master Plan. Accessible spaces will be provided in each of these areas per the City of Albuquerque Zoning Code. Areas for bicycle parking will be distributed throughout the Park and at all of the buildings.

- 1. South of the Multi-Purpose Fields – This area holds approximately 325 spaces and is intended to serve the multi-purpose fields, the tennis courts, and general park use.*
- 2. Corona Avenue – This parking area holds approximately 160 spaces and serves the offleash dog exercise area, the multi-purpose fields, the active recreation/picnic area, and general park use.*
- 3. Community Building Area – The three parking areas associated with the community buildings hold approximately 460 spaces. These areas are separated by landscape buffering to minimize the visual impact of a large parking area. These areas will serve all of the community buildings and not have designated parking areas for each of the buildings.*
- 4. Underground Parking Facility – This facility is currently located beneath the Multigenerational Center and Library and holds approximately 225 spaces. If the community buildings are rearranged, the location of the underground parking facility will be adjusted accordingly*

There have been changes to the Master Plan since its adoption, however, the information above only serves as historical background for this effort.

Summary of Parking Calculations

Preliminary occupant load calculations for the Aquatic Center and Spray Pad were required in order to determine the parking count for the facility. Two methods were used for the occupant load calculations: 1.) The International Building Code, adopted version 2015 (IBC) and, 2.) The Model Aquatic Health Code version 2014 (MAHC). The difference between the two methods is the different occupant load factors used by each. The IBC uses 50sf/occupant for the flat water area and 15sf/occupant for the deck area. The MAHC uses 20sf/occupant for the flat area and 50sf/occupant for the deck area. The most stringent method was used to determine the occupant loads. See attached spreadsheet for the breakdown. Please note that these calculations are preliminary and will be revised during the course of the design. The COA Planning Department will also be included as the design process progresses.

Phases I, II & III

NDB Multigenerational Center and Gymnasium

262 existing parking spaces (includes 16 accessible spaces)

New Parking Area East of NDB (from Consensus Planning)

81 Parking Spaces (includes 4 accessible spaces)

Total parking spaces from above

343 parking spaces

Aquatic Center

Calculations based on Model Aquatic Health Code (2014) and International Building Code (2015)

- 25yd by 25m pool venue with 850 spectator seating (see attached spreadsheet for breakdown)
 - Total Occupant Load = 2,306 (worst case occupant load used for parking calculations)
 - Parking requirement = $2,306/3=$
 - MAHC Load = 653 spaces (includes 10% reduction for public transit)
 - **IBC Load = 692 spaces** (includes 10% reduction for public transit)
- 50m pool venue with 850 spectator seating (see attached spreadsheet for breakdown)
 - Total Occupant Load = 2,532 (worst case occupant load used for parking calculations)
 - Parking requirement = $2,532/3 =$
 - **MAHC Load = 760 spaces** (includes 10% reduction for public transit)
 - IBC Load = 750 spaces (includes 10% reduction for public transit)

Interactive Water Play Venue (Spray Pad)

Interactive Water Play

- Spray Pad (enclosed fenced area) = approximately 18,000 sf
 $18,000/100 = 18$ parking spaces

Total combined spaces required/provided

Phases I, II & III **262** (provided)
 East Parking Area **81** (future)

Aquatic Center **692** (required for 25y x 25m) or **760** (required for 50m pool)
 Spray Pad **18** (required – can be shared with existing NDB parking area)

Approximate parking spaces from early concept sketch had approximately 140 spaces on the south side of the facility. This number will most likely be reduced to 50-75 spaces depending on the development of the aquatic center design. Spray Pad will share parking to the south and west of the venue. Parking shared with skate park, play area and NDB Center.

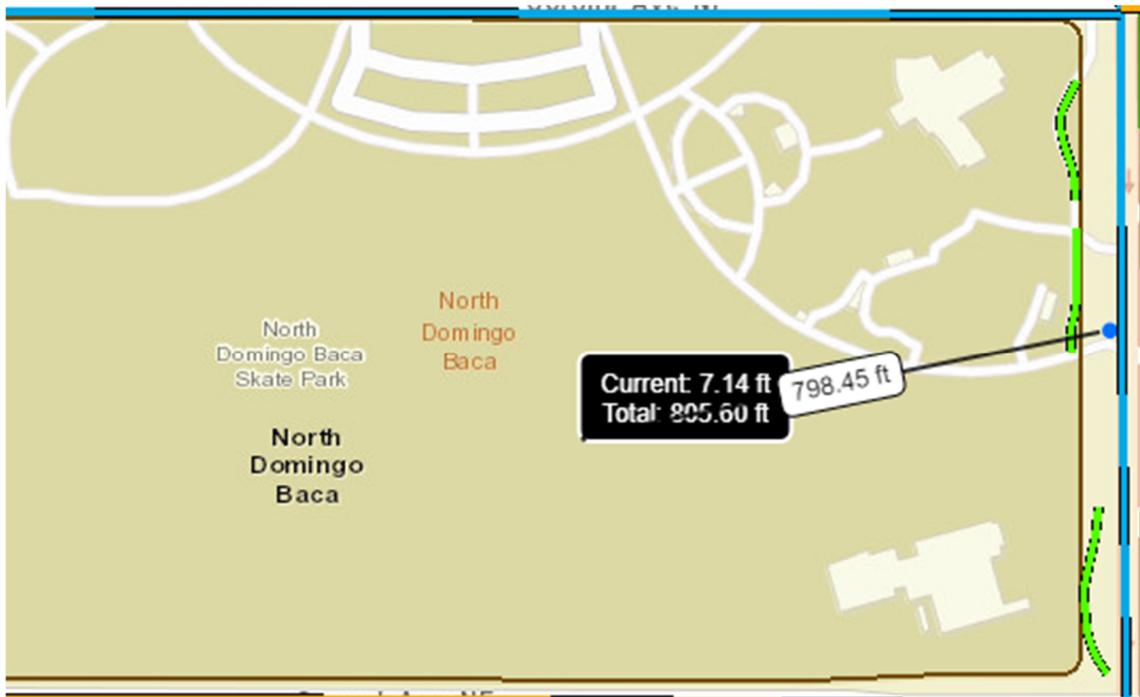
References from COA

5-5(C)(5) Parking Reductions

The minimum amounts of off-street automobile parking required by Table 5-5-1 and Table 5-5-2 above shall be adjusted by the factors in this Subsection 14-16-5-5(C)(5).

These factors may be applied individually or in combination, with each reduction being calculated from the requirement in Table 5-5-1 and Table 5-5-2.

The cumulative reduction shall not exceed 50 percent of the off-street parking spaces required by Table 5-5-1 and Table 5-5-2 unless the applicant satisfies the requirements of Subsections 14-16-5-5(C)(5)(d) (Public Parking Reduction) or 14-16-5-5(C)(5)(e) (Parking Study Reduction).



5-5(C)(5)(c) Reduction for Proximity to Transit

1. The minimum number of off-street parking spaces required may be reduced by 30 percent if the proposed development is located within 1,320 feet (¼ mile) in any direction of any transit stop or transit station with a peak service frequency of 15 minutes or better.
2. The minimum number of off-street parking spaces required may be reduced by 10 percent if the proposed development is located within 330 feet in any direction of any transit stop or transit station with a peak service frequency between 15 minutes and 45 minutes

5-5(C)(6) Parking Credits

5-5(C)(6)(a) Electric Vehicle Charging Station Credit

Each off-street electric vehicle charging station with a rating of 240 volts or higher shall count as 2 vehicle parking spaces toward the satisfaction of minimum off-street parking requirements.

5-5(C)(6)(b) Van and Car Pool Parking Credit

1. Each off-street parking space designated and signed for the exclusive use of a shared carpool vehicle shall count as 4 spaces toward the satisfaction of minimum off-street parking requirements.
2. Each off-street parking space designated and signed for the exclusive use of a shared vanpool vehicle shall count as 7 spaces toward the satisfaction of minimum off-street parking requirements.

Table 5-5-4: Minimum Motorcycle Parking Requirements

| Number of Motorcycle Spaces Required | |
|--------------------------------------|--|
| 1-25 | 1 space |
| 26-50 | 2 spaces |
| 51-100 | 3 spaces |
| 101-150 | 4 spaces |
| 151-300 | 5 spaces |
| 301-500 | 6 spaces |
| 501-750 | 7 spaces |
| 751-1,000 | 8 spaces |
| 1,000 and above | 8 spaces plus 1 space per each additional 500 spaces |

Table 5-5-5: Minimum Bicycle Parking Requirements

Non-residential uses not listed in this table
 3 spaces or 10% of required off-street parking spaces, whichever is greater

SECTION 2 – NMBC TABLE 1106.1 – ACCESSIBLE PARKING SPACES

Table 1106 complies with NM State Law (Section 66-7-352.4 NMSA 1978) and provides more accessible parking in smaller lots than IBC Table 1106.1 and 2010 ADA Standards Table 208.2.

TOTAL REQUIRED ACCESSIBLE PARKING SPACES

| | | NUMBER REQUIRED TO BE VAN ACCESSIBLE (IBC 1106.5 Van Parking) |
|-----------|----|---|
| 1-25 | 1 | 1 |
| 26-35 | 2 | 1 |
| 36-50 | 3 | 1 |
| 51-100 | 4 | 1 |
| 101-300 | 8 | 2 |
| 301-500 | 12 | 2 |
| 501-800 | 16 | 3 |
| 801-1,000 | 20 | 4 |

Over 1,001 20 spaces plus 1 space for every 100 spaces, or fraction thereof, over 1,000 1 of every 6 accessible parking spaces.

25y x 25m Pool

North Domingo Baca Aquatic Center Occupant Calculations (25y x 25m Pool)

4/1/2021

| Bodies of Water Program Space | Net SF | Occupancy Factor Per MAHC | Occupant Load Per MAHC | Occupancy Factor Per IBC | Occupant Load Per IBC | Comments |
|-------------------------------|--|---------------------------|------------------------|--------------------------|-----------------------|----------|
| Indoor Pool | | | | | | |
| Flat water | | | | | | |
| Competition Pool | 6,161 | 20 | 308 | 50 | 123 | |
| Warm-up / Cool-down Pool | 1,740 | 20 | 87 | 50 | 35 | |
| Diving Well | 1,153 | 20 | 58 | 50 | 23 | |
| Deck | 8,351 | 50 | 167 | 15 | 557 | |
| Bleachers (850 Spectators) | | | 850 | | 850 | |
| Outdoor Pool | | | | | | |
| Flat water | | | | | | |
| Recreation Pool | 4,050 | 20 | 203 | 50 | 81 | |
| Lap Pool | 2,317 | 20 | 116 | 50 | 46 | |
| Landing Pool | Occupant Load Determined by Manufacturer | | | | | |
| Agitated Water | 255 | 15 | 17 | 50 | 5 | |
| Deck | 4,616 | 50 | 92 | 15 | 308 | |
| Sub Total | | | 1897 | | 2028 | |

| Building Program Space | NSF | Occupancy Factor Per MAHC | Occupant Load Per MAHC | Occupancy Factor Per IBC | Occupant Load Per IBC | Comments |
|--------------------------------|-------|---|---------------------------------|--------------------------|-----------------------|----------|
| General Building | | | | | | |
| Lobby | 1,500 | | | 15 | 100 | |
| Admin suite | | | | | | |
| Office | 150 | | | 100 | 2 | |
| Office | 100 | | | 100 | 1 | |
| Office | 100 | | | 100 | 1 | |
| Open Office/Break Room | 350 | | | 100 | 4 | |
| Staff Restroom | | | | Accessory | 0 | |
| Flex Room/Training Room | 1,500 | | | 15 | 100 | |
| Flex Room Storage | | | | Accessory | 0 | |
| Party Room | 1,000 | | | 15 | 67 | |
| Life Guard Room | 270 | | | 100 | 3 | |
| Spectator Men's Restrooms | | | | Accessory | 0 | |
| Spectator Women's Restrooms | | | | Accessory | 0 | |
| Control Room | 200 | | | 100 | 2 | |
| Hygiene Area | | | | | | |
| Family Restroom | | | | Accessory | 0 | |
| Men's Restroom / Locker Room | | | | Accessory | 0 | |
| Women's Restroom / Locker Room | | | | Accessory | 0 | |
| Building support | | | | | | |
| Fire Riser | | | | Accessory | 0 | |
| Data Room | | | | Accessory | 0 | |
| Building Mechanical Room | | | | Accessory | 0 | |
| Main Electrical Room | | | | Accessory | 0 | |
| Electrical Closet | | | | Accessory | 0 | |
| Janitor | | | | Accessory | 0 | |
| Pool Support | | | | | | |
| Pool Mechanical Room | | | | Accessory | 0 | |
| Sanitizer Room | | | | Accessory | 0 | |
| PH Buffer Room | | | | Accessory | 0 | |
| Indoor Pool Storage | | | | Accessory | 0 | |
| Outdoor Pool Storage | | | | Accessory | 0 | |
| Sub Total | | | | | 278 | |
| | | Includes Building Program Space Occupants | Plumbing Fixtures Occupant Load | | Egress Occupant Load | |
| Total | | * | 2176 | | 2306 | |

| Parking Calculations | | | |
|---|------------|------------|---------------------------------------|
| Total Design Capacity (Occupants) | 2,176 | 2,306 | |
| 1 space per 3 persons Design Capacity (per COA IDO Table 5-5-2) | 725 | 769 | Per IBC 2015 |
| 10% Public Transit Route Reduction | (73) | (77) | |
| Total Bather/Occupant | 653 | 692 | Includes 16 Accessible Parking Spaces |

North Domingo Baca Aquatic Center Plumbing Count per MAHC

| Occupant Load | Description | Required Plumbing Fixtures | Comments |
|---------------|------------------------|----------------------------|---|
| 2176 | Total Occupants | | |
| 1088 | Male | | |
| | Water Closet (WC) | 15 | 1 per 75 |
| | Lavs | 5 | 1 per 200 |
| | Cleansing Showers | 3 | |
| 1088 | Female | | |
| | Water Closet (WC) | 27 | 1 per 40 |
| | Lavs | 7 | 1 per 150 |
| | Cleansing Showers | 3 | |
| | Showers | | |
| | Rinse | | |
| | Indoor around deck | 3 | 1 per body of Water |
| | Outdoor Beach Entry | 4 | |
| | Outdoor Water Slide | 1 | |
| | Cleansing | 6 | *1 per 4000 SF of Aquatic Venue Water Surface, evenly distributed between genders |
| | Drinking Fountains | 3 | 1 per 1000 |
| | Service Sink | 1 | |

*Total Aquatic venue Surface = 29,382 sf

SECTION 2 – NMBC TABLE 1106.1 – ACCESSIBLE PARKING SPACES TABLE
 NMBC Table 1106 complies with NM State Law (Section 66-7-352.4 NMSA 1978) and provides more accessible parking in smaller lots than IBC Table 1106.1 and 2010 ADA Standards Table 208.2.

| TOTAL PARKING SPACES | TOTAL REQUIRED ACCESSIBLE PARKING SPACES | NUMBER REQUIRED TO BE VAN ACCESSIBLE (IBC 1106.5 Van Parking) |
|----------------------|--|---|
| 1-25 | 1 | 1 |
| 26-35 | 2 | 1 |
| 36-50 | 3 | 1 |
| 51-100 | 4 | 1 |
| 101-300 | 8 | 2 |
| 301-500 | 12 | 2 |
| 501-800 | 16 | 3 |
| 801-1,000 | 20 | 4 |
| Over 1,001 | 20 spaces plus 1 space for every 100 spaces, or fraction thereof, over 1,000 | 1 of every 6 accessible parking spaces, or fraction thereof |

Table 5-5-4: Minimum Motorcycle Parking Requirements

| Required Off-street Vehicle Parking Spaces | Number of Motorcycle Spaces Required |
|--|--|
| 1-25 | 1 space |
| 26-50 | 2 spaces |
| 51-100 | 3 spaces |
| 101-150 | 4 spaces |
| 151-300 | 5 spaces |
| 301-500 | 6 spaces |
| 501-750 | 7 spaces |
| 751-1,000 | 8 spaces |
| 1,000 and above | 8 spaces plus 1 space per each additional 500 spaces |

Table 5-5-5: Minimum Bicycle Parking Requirements

| Use | IDO Bicycle Parking Requirement |
|---|--|
| Vocational school | 3 spaces / 1,000 sq. ft. GFA |
| Hotel or motel | 2 spaces + 1 space / 6,000 sq. ft. GFA of conference, restaurant, bar, and banquet space |
| Grocery store | 1 space / 2,000 sq. ft. of GFA |
| Non-residential uses not listed in this table | 3 spaces or 10% of required off-street parking spaces, whichever is greater |

50m Pool

North Domingo Baca Aquatic Center Occupant Calculations (50m Pool)

4/1/2021

| Bodies of Water Program Space | NSF | Occupancy Factor Per MAHC | Occupant Load Per MAHC | Occupancy Factor Per IBC | Occupant Load Per IBC | Comments |
|-------------------------------|--|---------------------------|------------------------|--------------------------|-----------------------|----------|
| Indoor Pool | | | | | | |
| Flat water | | | | | | |
| Competition Pool | 12,931 | 20 | 647 | 50 | 259 | |
| Warm-up / Cool-down Pool | 1,740 | 20 | 87 | 50 | 35 | |
| Diving Well | 1,153 | 20 | 58 | 50 | 23 | |
| Deck | 9,237 | 50 | 185 | 15 | 616 | |
| Bleachers (850 Spectators) | | | 850 | | 850 | |
| Outdoor Pool | | | | | | |
| Flat water | | | | | | |
| Recreation Pool | 4,050 | 20 | 203 | 50 | 81 | |
| Lap Pool | 2,317 | 20 | 116 | 50 | 46 | |
| Landing Pool | Occupant Load Determined by Manufacturer | | | | | |
| Agitated Water | 255 | 15 | 17 | 50 | 5 | |
| Deck | 4,616 | 50 | 92 | 15 | 308 | |
| Sub Total | | | 2254 | | 2222 | |

| Building Program Space | NSF | Occupancy Factor Per MAHC | Occupant Load Per MAHC | Occupancy Factor Per IBC | Occupant Load Per IBC | Comments |
|--------------------------------|-------|---------------------------|------------------------|--------------------------|-----------------------|----------|
| General Building | | | | | | |
| Lobby | 1,500 | | | 15 | 100 | |
| Admin suite | | | | | | |
| Office | 150 | | | 100 | 2 | |
| Office | 100 | | | 100 | 1 | |
| Office | 100 | | | 100 | 1 | |
| Open Office/Break Room | 350 | | | 100 | 4 | |
| Staff Restroom | | | | Accessory | 0 | |
| Flex Room/Training Room | 1,500 | | | 15 | 100 | |
| Flex Room Storage | | | | Accessory | 0 | |
| Party Room | 1,000 | | | 15 | 67 | |
| Life Guard Room | 270 | | | 100 | 3 | |
| Spectator Men's Restrooms | | | | Accessory | 0 | |
| Spectator Women's Restrooms | | | | Accessory | 0 | |
| Control Room | 200 | | | 100 | 2 | |
| Hygiene Area | | | | | | |
| Family Restroom | | | | Accessory | 0 | |
| Men's Restroom / Locker Room | | | | Accessory | 0 | |
| Women's Restroom / Locker Room | | | | Accessory | 0 | |
| Building support | | | | | | |
| Fire Riser | | | | Accessory | 0 | |
| Data Room | | | | Accessory | 0 | |
| Building Mechanical Room | | | | Accessory | 0 | |
| Main Electrical Room | | | | Accessory | 0 | |
| Electrical Closet | | | | Accessory | 0 | |
| Janitor | | | | Accessory | 0 | |
| Pool Support | | | | | | |
| Pool Mechanical Room | | | | Accessory | 0 | |
| Sanitizer Room | | | | Accessory | 0 | |
| PH Buffer Room | | | | Accessory | 0 | |
| Indoor Pool Storage | | | | Accessory | 0 | |
| Outdoor Pool Storage | | | | Accessory | 0 | |
| Sub Total | | | | | 278 | |

| | | | | | | |
|--------------|--|--|---------------------------------|--|----------------------|--|
| | | *Includes Building Program Space Occupants | Plumbing Fixtures Occupant Load | | Egress Occupant Load | |
| Total | | | 2532 | | 2501 | |

| Parking Calculations | | | |
|---|------------|------------|-------------------------------|
| Total Design Capacity (Occupants) | 2,532 | 2,501 | |
| 1 space per 3 persons Design Capacity (per COA IDO Table 5-5-2) | 844 | 834 | Per IBC 2015 |
| 10% Public Transit Route Reduction | (84) | (83) | |
| Total | 760 | 750 | Includes 16 Accessible spaces |

North Domingo Baca Aquatic Center Plumbing Count per MAHC

| 2532 Total Occupants | | | |
|----------------------|---------------------|----------------------------|---|
| Occupant Load | Description | Required Plumbing Fixtures | Comments |
| 1266 | Male | | |
| | Water Closet (WC) | 17 | 1 per 75 |
| | Lavs | 6 | 1 per 200 |
| | Cleansing Showers | 4 | |
| 1266 | Female | | |
| | Water Closet (WC) | 32 | 1 per 40 |
| | Lavs | 8 | 1 per 150 |
| | Cleansing Showers | 4 | |
| | Showers | | |
| | Rinse | | |
| | Indoor around deck | 3 | 1 per body of Water |
| | Outdoor Beach Entry | 4 | |
| | Outdoor Water Slide | 1 | |
| | Cleansing | 8 | *1 per 4000 SF of Aquatic Venue Water Surface, evenly distributed between genders |
| | Drinking Fountains | 3 | 1 per 1000 |
| | Service Sink | 1 | |

*Total Aquatic venue Surface = 37,038 sf

| SECTION 2 - NMBC TABLE 1106.1 - ACCESSIBLE PARKING SPACES TABLE | | |
|--|--|---|
| NMBC Table 1106 complies with NM State Law (Section 66-7-352.4 NMSA 1978) and provides more accessible parking in smaller lots than IBC Table 1106.1 and 2010 ADA Standards Table 208.2. | | |
| TOTAL PARKING SPACES | TOTAL REQUIRED ACCESSIBLE PARKING SPACES | NUMBER REQUIRED TO BE VAN ACCESSIBLE (IBC 1106.5 Van Parking) |
| 1-25 | 1 | 1 |
| 26-35 | 2 | 1 |
| 36-50 | 3 | 1 |
| 51-100 | 4 | 1 |
| 101-300 | 8 | 2 |
| 301-500 | 12 | 2 |
| 501-800 | 16 | 3 |
| 801-1,000 | 20 | 4 |
| Over 1,001 | 20 spaces plus 1 space for every 100 spaces, or fraction thereof, over 1,000 | 1 of every 6 accessible parking spaces, or fraction thereof |

Table 5-5-4: Minimum Motorcycle Parking Requirements

| Required Off-street Vehicle Parking Spaces | Number of Motorcycle Spaces Required |
|--|--|
| 1-25 | 1 space |
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| 101-150 | 4 spaces |
| 151-300 | 5 spaces |
| 301-500 | 6 spaces |
| 501-750 | 7 spaces |
| 751-1,000 | 8 spaces |
| 1,000 and above | 8 spaces plus 1 space per each additional 500 spaces |

Table 5-5-5: Minimum Bicycle Parking Requirements

| Use | IDO Bicycle Parking Requirement |
|---|--|
| Vocational school | 3 spaces / 1,000 sq. ft. GFA |
| Hotel or motel | 2 spaces + 1 space / 6,000 sq. ft. GFA of conference, restaurant, bar, and banquet space |
| Grocery store | 1 space / 2,000 sq. ft. of GFA |
| Non-residential uses not listed in this table | 3 spaces or 10% of required off-street parking spaces, whichever is greater |