



Architectural Review
and Historic Preservation Board
Agenda Report

Meeting Date 06/07/17

DATE: May 15, 2017

File : AR 17-08

TO: Architectural Review and Historic Preservation Board

FROM: Shannon Costa, Assistant Planner, (879-6807, shannon.costa@chicoca.gov)
Community Development Department

RE: Architectural Review 17-08 (Fountain Residential Partners)
322, 328, 332 Nord Avenue; APNs 043-230-006, -007, -008

RECOMMENDATION

Staff recommends that the Architectural Review and Historic Preservation Board adopt the required findings contained in the agenda report and approve the proposed project, subject to the recommended conditions.

Proposed Motion

I move that the Architectural Review and Historic Preservation Board adopt the required findings contained in the agenda report and approve Architectural Review 17-08 (Fountain Residential Partners), subject to the recommended conditions therein.

BACKGROUND

The applicant proposes to construct a three-story apartment building containing a total of 46 multi-family housing units located on the east side of Nord Avenue, north of West 1st Street (see **Attachment A**, Location Map and **Attachment B** Project Description). The subject parcels are designated Medium-High Density Residential in the General Plan and located in the R3 (Medium-High Density Residential) zoning district. Surrounding land uses include multi-family residential dwellings, commercial retail and a gas station immediately adjacent to the site. The site is developed with a commercial building, a single-family home, and multi-family housing complex. All existing buildings would be demolished.

Following a merger of the underlying parcels the proposed development would involve construction of a three-story apartment building containing, landscaping and associated parking (see **Attachment C**, Architectural Site Plan). The resultant density would be 21 dwelling units per acre, which is consistent with the allowable range of 14.1 to 22 du/ac for the R3 district.

The site plan illustrates the layout and orientation of the building, as well as the location of the trash enclosure, parking, parking lot lighting and landscaping. The project also features a swimming pool area within a central courtyard and covered bicycle parking. The building is oriented to front Nord Avenue, set back 15 feet from the street and 5 feet from the southerly property line. The proposal includes an 8-foot, slatted wood fence along the perimeter of the site.

Vehicle access to the site would be provided via a single driveway off Nord Avenue with off-street parking located at the side and rear of the site. Pedestrian access to the site is provided via multiple pedestrian walkways off Nord Avenue (see Site Plan, **Attachment D**, Civil Site

Plan). A total of 90 vehicle parking spaces would be provided. Abundant bicycle parking is provided (172 spaces) with covered rack locations within the central courtyard and uncovered racks located on the eastern side of the building (see **Attachment E**, Bicycle Shelter Elevations).

The landscape plans call for a variety of species with moderate to low water demands (see **Attachment F**, Landscape Plan). A mixture of trees, shrubs, and perennials is proposed around the new building and the site perimeter. An analysis provided by the applicant estimates parking lot shade to reach approximately 52 percent at maturity, with Black Tupelo trees providing most of the pavement shade (see **Attachment G**, Landscape Shade Plan). A total of 353 inches of tree diameter subject to the replacement requirements of the City's Tree Preservation Regulations (CMC 16.66) would be removed, which corresponds to 58 replacement trees. Some of the replacement trees will be planted onsite and the City will collect in-lieu fees for the remaining trees.

The landscape plans also feature site lighting consisting of 2 parking lot pole lights and low voltage landscape tree lighting along the north and west sides of the building. String lighting is proposed for the central courtyard, and wall-mounted light packs are proposed along three sides of the building.

The proposed architecture is a contemporary design utilizing a variety of material types (see **Attachment H**, Elevations). The buildings main body would be a combination of fiber cement and stucco siding, with metal paneling on the buildings primary corners. Cantilevered masses on the second and third floor feature woodstone siding with stucco trim. Each unit would feature a private patio or balcony secured with metal railing. Roof-mounted air condenser units would be hidden behind a roof well and parapet wall. The trash enclosure would be CMU wall with woodstone siding on the west elevation.

The proposed color scheme includes grays for the main field color (Sherwin Williams "Cyberspace" and Sherwin Williams "Network Grey") and red, white and wood material as secondary colors (Sherwin Williams "Show Stopper", Sherwin Williams "Toque White" and Mountain Cedar, respectively) (see **Attachment I**, Colors and Materials). Detailed specifications for the exterior lighting are provided as **Attachment J**.

DISCUSSION

The project embodies many desirable design concepts found in both the General Plan and the Design Guidelines. The project is located within walking distance of Chico State campus, and is located between a Class I and Class II bike lane. The building would be located close to the street, with parking in the side and rear to enhance a pedestrian-friendly streetscape. Rooftop condenser units and uncovered parking would be screened by the buildings. Landscaping will comply with State water conservation requirements.

Design Guidelines

The proposal is consistent with Design Guidelines (DGs) that call for creating a sense of community through incorporating common open space into the project design and including structural elements such as balconies and covered entryways (DG 4.1.11, 4.1.24, and 4.1.45).

The design is pedestrian friendly, obscures views to parking areas, integrates common open space amenities and provides a variety of building masses to avoid a monotonous appearance (DG 1.1.13, 1.1.14, 4.1.41, 4.1.42, and 4.1.24). Low-level tree lighting will flank pedestrian walkways and pole lights will illuminate the parking area without creating unnecessary glare (DG 4.1.44, 4.1.53, and 4.2.44). See Architect's Project Description, **Attachment B**, for additional DG analysis.

Parking

A reduction in the number of off-street parking spaces is proposed pursuant to Chico Municipal Code (CMC) section 19.70.050.A. The project includes 90 off-street parking spaces and the code typically requires 101 off-street spaces for the proposed mix of units and bedrooms. A reduction in off-street parking may be approved by the Board subject to making certain additional findings as outlined below. In this case, staff supports the slight reduction of off-street parking based on the site's proximity to CSUC, parking supplies are not overburdened in the immediate area, the site is served by a bus transit route as well as a Class I bicycle facility, and the project includes more covered bicycle parking than is required by the code. The additional findings required to approve a reduction in off-street parking are provided below.

Fencing

The proposed project features an 8-foot slated wood fence. Staff recommends a condition of approval that all new fencing shall demonstrate compliance with Chico Municipal Code (CMC) 19.60.060. Pursuant to CMC 19.60.060, side and rear yard fencing is limited to 6 foot in height for all fences; 7 foot if lattice or other 50% permeable material is incorporated into the top one foot of the fence design.

In conclusion, the project would advance City goals of achieving urban densities in the R3 zoning district and would do so in an aesthetically pleasing manner.

RECOMMENDED DISCUSSION ITEMS

Lighting: Discuss the specific location of all light fixtures and lamp intensities. Determine if adequate light is proposed in the parking area, particularly for security purposes given the sites proximity to the bike path, CSUC campus and the railroad tracks.

The proposed site plan indicates 2 parking lot light fixtures at an unknown height, and 8 wall mounted light fixtures on only three sides of the building; no lighting is proposed on the buildings south elevation. For reference, Chico Municipal Code 19.70.060.F provides that parking light lighting shall be "capable of providing adequate illumination for security and safety". DG 4.1.53 encourages safe and secure parking areas through appropriate lighting.

REQUIRED FINDINGS FOR APPROVAL

Environmental Review

The project has been determined to be categorically exempt under Section 1.40.220 of the Chico Municipal Code, and pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15332 (In-Fill Development Projects). This exemption applies to infill projects which: are consistent with the general plan and zoning; are on sites less than five acres in size within the City limits; substantially surrounded by urban uses; have no value as habitat for endangered, rare, or threatened species; would not create any significant effects

relating to traffic, noise, air quality, or water quality; and can be adequately served by all required utilities and public services.

Architectural Review

According to Chico Municipal Code Section 19.18.060, the Architectural Review and Historic Preservation Board shall determine whether or not a project adequately meets adopted City standards and design guidelines, based upon the following findings:

1. *The proposed development is consistent with the General Plan, any applicable specific plan, and any applicable neighborhood or area plans.*

The proposal is consistent with several General Plan policies, including those that encourage compatible infill development (LU-1, LU-4, and CD-5). The project includes new landscaping with low to moderate water needs, consistent with sustainability policies that promote water conservation and energy efficiency (SUS-4.2). There are no specific plans or neighborhood plans applicable to the site.

2. *The proposed development, including the character, scale, and quality of design are consistent with the purpose/intent of this chapter and any adopted design guidelines.*

The proposal is consistent with Design Guidelines (DGs) that call for creating a sense of community through incorporating common open space into the project design and including structural elements such as balconies and useable common space (DG 4.1.11, 4.1.24, and 4.1.45). The design is pedestrian friendly, obscures views to parking areas, and provides direct connections to the public sidewalk (DG 1.1.13, 1.1.14, and 4.1.35).

3. *The architectural design of structures, including all elevations, materials and colors are visually compatible with surrounding development. Design elements, including screening of equipment, exterior lighting, signs, and awnings, have been incorporated into the project to further ensure its compatibility with the character and uses of adjacent development.*

The design, materials and colors of the proposed new building reflect a modern vernacular residential style with a variety of masses and forms that will be visually compatible with the site and surrounding residential development. Exterior equipment will be properly screened from view by the buildings and landscape plantings.

4. *The location and configuration of structures are compatible with their sites and with surrounding sites and structures, and do not unnecessarily block views from other structures or dominate their surroundings.*

Three-story construction is generally appropriate in the R3 zoning district, and the proposed new building is consistent with surrounding two and three story residential buildings. Because the project is located within an area transitioning toward zoning compliance (i.e. redeveloping at higher densities with larger buildings), it is found that the proposed structures are compatible with the site and do not unnecessarily block views from other structures or unacceptably dominate their surroundings, and are consistent with General Plan policies that encourage infill development.

5. *The general landscape design, including the color, location, size, texture, type, and coverage of plant materials, and provisions for irrigation and maintenance, and protection of landscape elements, have been considered to ensure visual relief, to complement structures, and to provide an attractive environment.*

A variety of trees, shrubs and perennials are provided in the project and contain sufficient variation in colors, forms and texture to complement the development and provide visual relief.

Parking Reduction

According to Chico Municipal Code Section 19.70.050, the Board may approve a reduction in the minimum number of off-street parking spaces for a project based upon making the following findings:

1. *The project meets one of the following:*
 - a. *The site is zoned RMU or has a –COS overlay zone;*
 - b. *The site is located within an area of mixed-use development;*
 - c. *The project will implement sufficient vehicle trip reduction measures (such as vehicles loan programs and transit passes) to offset the reduction; or*
 - d. *The area is served by public transit, bicycle facilities, or has other features which encourage pedestrian access.*

The proposed site layout provides 90 of the 101 vehicle parking spaces required by the City's parking regulations. The project site is located within an area of mixed-use development consisting of a wide variety of commercial and service uses within the Safeway/Walgreens shopping center on Nord Avenue, and is near the CSUC campus. In addition, the site is served by a bus transit route as well as a Class I bicycle path that connects directly to CSUC, and the project will include covered tenant bicycle parking in excess of the minimum amount required.

2. *The proposed parking reduction is not likely to overburden public parking supplies in the project vicinity.*

The proposed project is in an area where street parking is not available (Nord Avenue). The nearest public parking to the site is located on Stewart Avenue (northwest) and the proposed parking reduction would not likely overburden parking supplies in that area.

RECOMMENDED CONDITIONS OF APPROVAL

1. All approved building plans and permits shall note on the cover sheet that the project shall comply with AR 17-10 (Fountain Residential Partners).
2. All wall-mounted utilities and roof or wall penetrations, including vent stacks, utility boxes, exhaust vents, gas meters and similar equipment, shall be screened by appropriate materials and colors. Adequate screening shall be verified by Planning staff prior to issuance of a certificate of occupancy.
3. The final landscape plans shall indicate creeping vines against trash enclosure stucco walls.

4. A parking reduction is authorized in compliance with CMC 19.70.050.
5. The proposed perimeter fence shall be reduced to 6 feet tall (7 foot with permeable material incorporated into the top 1 foot) to comply with CMC 19.60.060
6. All new electric, telephone, and other wiring conduits for utilities shall be placed underground in compliance with CMC 19.60.120.
7. As required by CMC 16.66, trees removed shall be replaced as follows:
 - a. On-site. For every six inches in DBH removed, a new 15 gallon tree shall be planted on-site. Replacement trees shall be of similar species, unless otherwise approved by the urban forest manager, and shall be placed in areas dedicated for tree plantings. New plantings' survival shall be ensured for three years after the date of planting and shall be verified by the applicant upon request by the director. If any replacement trees die or fail within the first three years of their planting, then the applicant shall pay an in-lieu fee as established by a fee schedule adopted by the City Council.
 - b. Off-site. If it is not feasible or desirable to plant replacement trees on-site, payment of an in-lieu fee as established by a fee schedule adopted by the City Council shall be required.
 - c. Replacement trees shall not receive credit as satisfying shade or street tree requirements otherwise mandated by the municipal code.
 - d. Tree removal shall be subject to the in-lieu fee payment requirements set forth by Chico Municipal Code (CMC) 16.66 and fee schedule adopted by the City Council.
 - e. All trees not approved for removal shall be preserved on and adjacent to the project site. A tree preservation plan, including fencing around drip lines and methods for excavation within the drip lines of protected trees to be preserved shall be prepared by the project developer pursuant to CMC 16.66.110 and 19.68.060 for review and approval by planning staff prior to any ground-disturbing activities.

PUBLIC CONTACT

Public notice requirements are fulfilled by placing a notice on the project site and by posting of the agenda at least 10 days prior to the ARHPB meeting.

ATTACHMENTS

- A. Location Map
- B. Architect's Project Description
- C. Architectural Site Plan
- D. Civil Site Plan
- E. Landscape Plans

- F. Bicycle Shelter Plan and Elevations
- G. Landscape Shade Plan
- H. Building Elevations (4 sheets)
- I. Colors and Materials
- J. Lighting Details

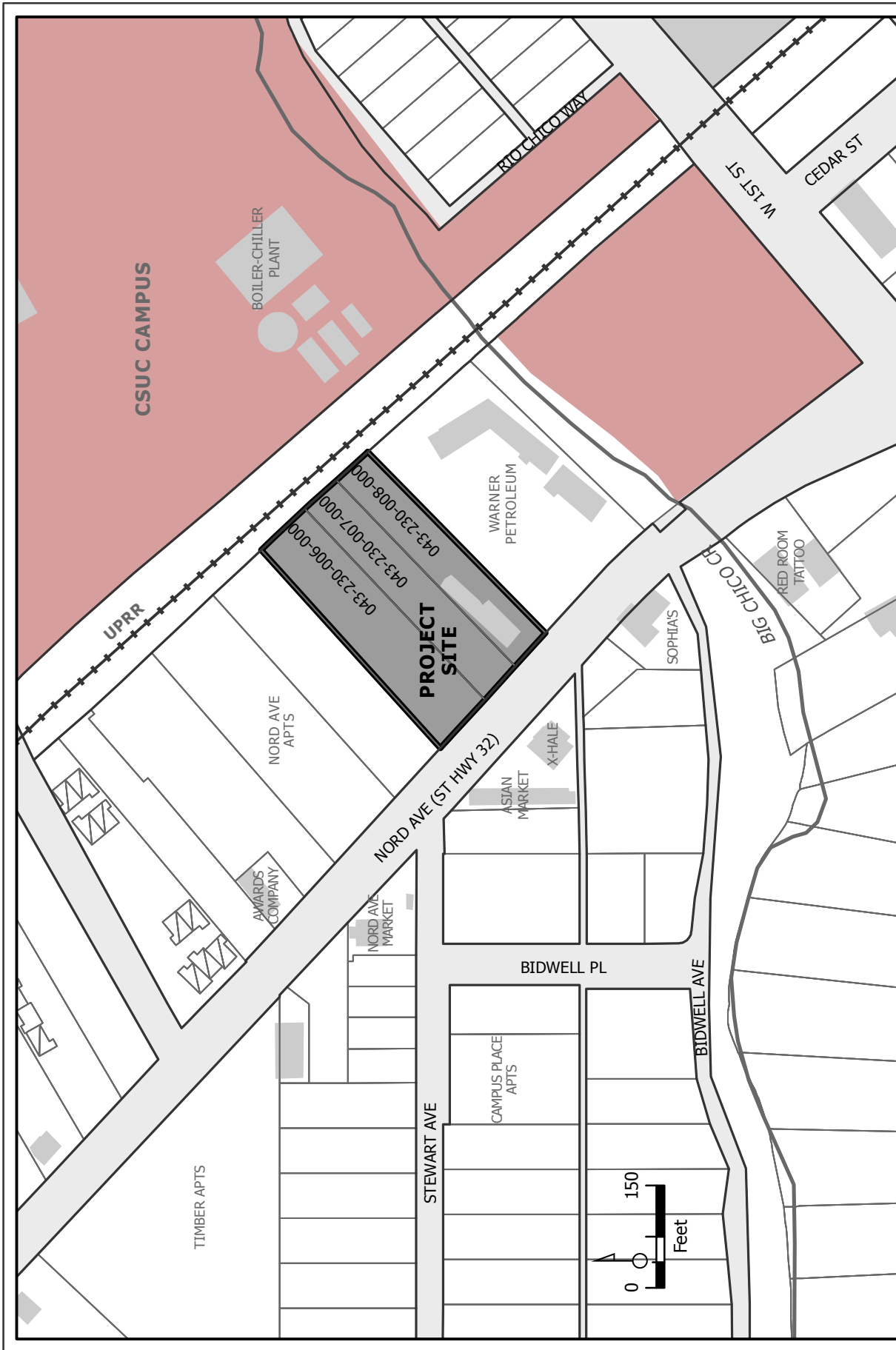
DISTRIBUTION

Fountain Residential Partners, Attn: Trevor Tollett, 2626 Cole Avenue, suite 620, Dallas, TX 75204

David Demarest, 2320 Valdina Street, Studio B, Dallas, TX, 75207

Files: AR 17-08

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AR 17-08 (Fountain Residential Partners)
 322, 328, 332 Nord Avenue
 APNs 043-230-(006, -007, -008)-000

Nord Avenue Apartments
Supplemental Information Summary
February 20, 2017
Revised March 24, 2017
Revised May 3, 2017

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1. Brief Project Description

Fountain Residential Partners is under contract to acquire the subject properties and proposing to develop a student housing project on a 1.97 acre site at the following address: 322, 328, 332 Nord Avenue. The site is an assemblage of 3 parcels and Fountain is under contract with all 3 property owners. Additionally, the project team will be pursuing a parcel merger once the ownership transition is complete.

A three-story, 46-unit, multifamily building, consisting of two and four bedroom dwelling units, which wraps a central pool courtyard.. On the Nord Avenue side, the building is designed to engage the street with walkways from the units to the public way.

Vehicle access to the site is via a single entry driveway off of Nord Avenue. Pedestrian access to the site is via several sidewalk connections to the public right of way off of Nord Avenue. The parcels are located adjacent to the CSU Chico campus and have easy access to bike and pedestrian paths to the campus. This portion of Nord Avenue is mostly mixed use and residential, with some retail elements interspersed.

2. Architectural Concept / Design Approach

The overall concept of the project is to create a place for students to call home with all the comforts of a typical multifamily project. The main structure is based on a contemporary design, which relate to and are influenced by the surrounding context. The main structure's primary corners will be clad with a red

metal panel emphasizing the main entry and façade of the project. The western portion will connect directly to the public sidewalk which will create an urban streetscape for residents and the public to enjoy as they stroll past the property. A pool in the courtyard, for social gatherings, is accompanied by additional useable open space for residents to enjoy at their leisure.

3. [Design Guidelines Adherence](#)

DG 4.2.11 Reduce architectural massing into smaller components that are representative of individual dwelling units. Design techniques to reduce mass include:

- ⊕ Fenestration that defines entries, windows, porches, or patios;
- ⊕ Articulation of dormers, overhangs, balconies, wall projections and porches;
- ⊕ Varied roof forms (e.g. hip, gable, dormers, and varied roof pitch) that are appropriate to the overall architectural style;
- ⊕ Thoughtful material changes to create harmonious variations;
- ⊕ Staggered or jogged unit plans that are harmonious in scale and repetition to the proposed buildings.

The project includes single-hung windows, glazed patio doors, and aluminum storefront window that define entries and spaces beyond. Each dwelling unit has a patio or balcony at the main living space and most project past the face of the building with overhangs which protect the patios/balconies below. Flat roofs with Parapet for the main structure. The elevations stagger because of the layout of the unit plans to create an appropriate scale and rhythm throughout the main structure.

DG 4.2.12 - DPLX, TPLX, and MFR - Transition the scale of multi-unit structures along the project edge to adjacent one or two-story single-family detached homes.

There is no single family detached homes in the vicinity of the project.

DG 4.2.13 Clearly define individual units by building masses, entries, and roof forms to avoid an institutional appearance.

The project is made up of one structure: the main structure is 3 story flat roof with parapet building with single-hung windows, glazed patio doors, and aluminum storefront window to define the spaces beyond.

DG 4.2.14 Achieve a pedestrian-level scale by placing lower architectural masses and smaller architectural details closer to sidewalks and street frontages including front porches, entry overhangs, trellises, and steps, with attention to window proportions and trim sizes.

Pedestrian-level scale is established for the project by articulating the first floor with an accent color from the upper floors. Also on the west-side of the project the units will be directly connected to the main public sidewalk with paving from the patios to the public sidewalk. The building uses multiple materials and techniques with massing to create an interesting street frontage.

DG 4.2.21- All Types - Avoid visual monotony by not locating identical floor plans or elevations adjacent or across the street from another.

This guideline does not apply to our project.

DG 4.2.22 Utilize architectural design themes or styles to establish a unified project identity.

The structures are designed in a contemporary style. A similar material palette of stucco, siding and metal panel are harmoniously placed throughout the project.

DG 4.2.31 - All Types - Enhance visual interest on front elevations facing public right-of-ways or open space by the following methods:

- ⊕ Select facade colors and accent materials from a rich palette that enhances the streetscape, rather than simply blends with surrounding architecture. Avoid bland colors and unnecessary and/or trendy accent materials;
- ⊕ Provide additional detail along the base of multi-story buildings such as wainscots;
- ⊕ Reduce monotony along expansive facades or multistory facades by use of trim with sufficient depth and detail, window boxes, brackets, overhangs, trellises, lattice, and/or art.

The streetscape is enhanced by connections between the structure and the public sidewalk. Red metal panel emphasizes the primary corner. Additional detailing is provided along the streetscape with the massing projecting out past the building to articulate certain areas. These projections are clad with stucco, while the additional exterior walls are clad with siding of different colors depending on location. Trim is used between the first floor and upper floors to articulate the change in color from the base.

DG 4.2.32 cont. - All Types - Include on front elevations porches and other architectural elements that relate to the human scale and provide a transition from public to private space with the following characteristics:

- ⊕ Clear sidewalk or path treatment from the public sidewalk or parking lots to the front door;
- ⊕ Front porches that are functional with ample area to accommodate seating and access.

Clear sidewalk connections on the west-side to the public sidewalk are in place to connect the public area to private area. The west-side of the building's units have patios that provide adequate roof for seating and access to the streetscape.

DG 4.2.41 - All Types - Clearly denote front entrances by use of distinct architectural elements, massing, and materials.

Primary entrances are indicated with awnings, storefront window, and signage.

DG 4.2.42 Select entry doors that complement the architectural style, including color and hardware

Entry doors will complement the architectural style, including color and hardware.

DG 4.2.43 - All Types - Include in the design of building entries architectural elements that provide protection from the elements, including rain and excessive heat gain by overexposure to the sun, by utilizing techniques that can include the following:

- ⊕ Functional roof or porch overhangs;
- ⊕ Awnings;
- ⊕ Recessed building alcoves.

Main building entries include awnings, recess building alcoves or roofs to achieve visual identification of primary entries and/or protection of certain areas.

DG 4.2.44 Offer sufficient security for residents with clear visibility of entry doors from the public right-of-way and by the use of adequate lighting without glare impacts to off-site residents.

The buildings entries will be designed to provide clear visibility from common routes and areas through-out the project. Outdoor lighting will be placed for security and safety around the site.

4. [Parking Reduction/Variance Request](#)

The subject site was primarily chosen for its pedestrian location to the Chico State campus as well as downtown and surrounding retail. With the advent of online transportation networks, e.g. Uber and Zip Car, as well as Chico State and Butte County public transit, the need for minimum parking requirements have been relieved. The subject project is going to focus on pedestrians, cyclists, and riders, not parked cars. Therefore, a variance from the standard parking requirements of the City's municipal code is requested. It is our understanding that the City allows for a 10% ± allowance on the total parking requirements, and our project has adhered to that 10% allowable reduction.

Furthermore, the following justifications are provided for the reduction in parking:

- Our project is located less than a ¼ mile from the main bike access to CSU Chico from the Nord Avenue Corridor.
- Additionally, there is a bike lane along our project frontage connecting the subject project to the main bike access corridor.
- Furthermore, we are greatly improving pedestrian access from our project frontage to CSU Chico with the addition of new CalTrans standard sidewalk.
- There is a bus route (Route 3 of the Chico B-Line) that runs along Nord Ave, and has a stop directly adjacent to our project site at Nord Ave and Stewart.
- As we anticipate that the majority of the project's residents will be CSU Chico students, we have made accommodations to include more than triple the required bicycle parking spots on site. Our market research indicates that Chico is very cycling-friendly City, therefore we believe that a large portion of our residents will not have their own vehicles and instead use bicycles for everyday commuting.

5. [Hydrology and Water Quality Summary](#)

This project will be a regulated project under the guidelines of the City of Chico's Post-Construction Standards, as it includes more than 5,000 square feet of new and/or replaced impervious area, resulting in an increase of more than 50 percent of the impervious surface of the previously existing development. Therefore, runoff from the entire project, consisting of all existing, new, and / or replaced impervious surfaces, will be included in the selection and sizing of site design measures, LID design standards, and hydromodification management measures to the maximum feasible extent. The project will be required to meet the following standards:

- Site Design and Treatment Control Measures
- Source Control Measures
- LID Design Standards
- Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed.
- Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.
- Limit overall impervious coverage of the site with paving and roofs.
- Set back development from creeks, wetlands, and riparian habitats.
- Preserve significant trees.
- Conform the site layout along natural landforms.
- Avoid excessive grading and disturbance of vegetation and soils.
- Maintain the site's natural drainage patterns.

- Hydromodification – prevent the post-project runoff from exceeding the pre-project flow rate for the 2-year, 24-hour storm event
- Operation and Maintenance Plan for Post-Construction Measures

It is anticipated that that the site will employ the use of bio-retention basins/swales located along the perimeter of the site to treat flows from the site's impervious areas. These facilities will be sized to meet flow or volume criteria. For volumetric sizing, we will employ the City of Chico's worksheet that calculates the volumetric criteria. For flow based criteria, the facilities will need to be sized to evapo-transpire, infiltrate, harvest/use and biotreat flows of runoff produced by an event equal to at least 0.2 inches per hour intensity or a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity.

A preliminary Stormwater Control Plan is included as part of the civil engineering preliminary plans included with the submittal drawings.

6. Phase 1 Environmental Site Assessment (ESA) Summary

A Phase 1 ESA was completed for the project by SHN Engineers & Geologists in January of 2017. As part of their detailed investigation of the parcels, SHN found *"no evidence of past land uses on the subject parcels that may have generated or caused the release of a hazardous material, which was identified as a recognized environmental condition (REC): as defined in ASTM-International Standard E1527-13."* Furthermore, SHN's report states that *"there is no condition at the subject property that requires remedial action at this time."* SHN's research included reviews of historical maps, aerial photographs, agency records, conducting site interviews, and the review of ESA questionnaires completed by current property owners.

SHN's report is included in this submittal package as Appendix A.

7. Cultural Resources Screening Summary

A cultural resources screening was completed for the project by ENPLAN in late December 2016. As part of their detailed investigation of the parcels, ENPLAN determined that *" no prehistoric cultural resources were identified on the site."*

ENPLAN's report is included in this submittal package as Appendix B.

8. Biological Screening Summary

A reconnaissance-level survey for special-status species habitat, wetland presence, and the potential for nesting birds within the three parcels was completed by Bargas Environmental Consulting in January of 2017. Per the report, no suitable habitat that may support special-status species, the presence of wetland habitat, or the potential for nesting birds was found on the project site.

Bargas's report is included in this submittal package as Appendix C.

9. Tree Survey Summary

A tree survey report was conducted by NorthState Resources in February of 2017. The report includes information on all trees on the project, site, including 12 trees that would qualify under the City of Chico's Tree Preservation Regulations. At this time, we anticipate that removal of all of the 12 trees will be required in order to construct the project and the necessary parking and stormwater treatment elements. The project owner/applicant is aware of the mitigation fees associated with the tree removal and will submit the appropriate form and fees with the project engineering submittal for permit.

The tree survey is included in this submittal package as Appendix D

10. [Traffic Evaluation Summary](#)

Kimley Horn's traffic engineers completed a access evaluation assessment for the subject project, including collecting traffic counts for the project site during open CSU Chico times. The analysis shows that the study intersections operate from LOS C to LOS E during the AM and PM peak-hours both with and without the project. These results indicate that the addition of the project does not create a significant impact at the study intersections. Though the northbound left-turn lane along Nord Avenue/SR-32 blocks the proposed project driveway from utilizing the benefits of the TWLTL along Nord Avenue/SR-32, there is no queuing issue at either of the two study intersections.

The traffic memorandum is included in this submittal package as Appendix E.

11. [Lighting Summary](#)

All exterior lighting would be low-intensity and energy efficient. One monument sign will be installed by the entrance to the project site from Nord Avenue. You will find the pole lights for the parking lot, wall packs for the building, and string lights for the pool area. Cut sheets for each of the type of lights proposed is included in the submittal package. This information can be found in Appendix F.

APPENDIX A
Phase 1 Environmental Assessment

APPENDIX B
Cultural Screening Report

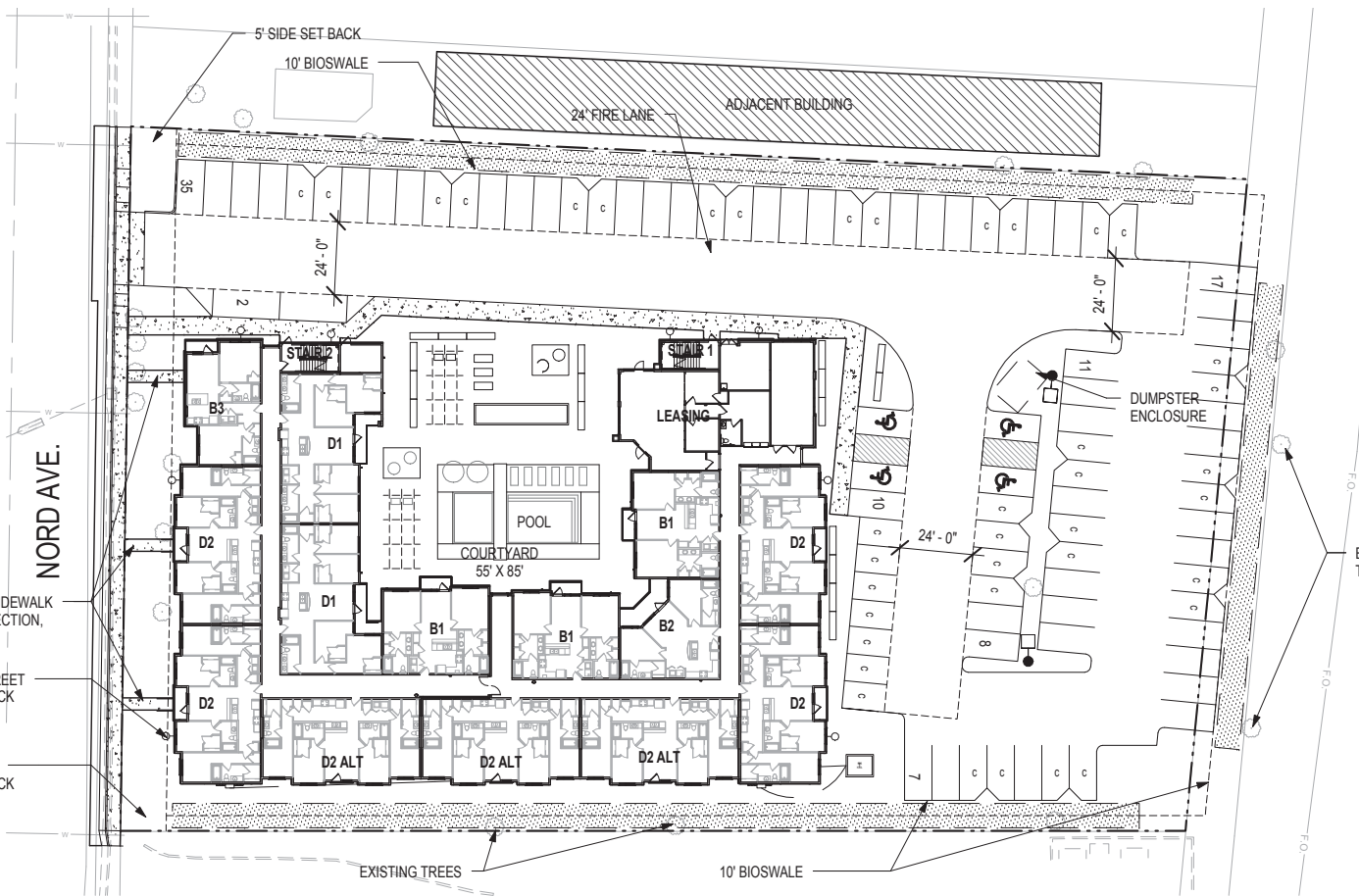
APPENDIX C
Biological Screening Report

APPENDIX D
Tree Survey Report

APPENDIX E
Traffic Memorandum

APPENDIX F

Lighting Cut Sheets



DEVELOPMENT STANDARDS:

MAX LOT COVERAGE: 65%
ACTUAL LOT COVERAGE: 35.0%
MAX HEIGHT: 45'
MIN. LOT SIZE: 4,000 SF.

16055 NORD AVENUE APARTMENTS CHICO, CA 4/25/2017

Unit Type	B1	B2	B3	D1	D2	D2 Alt	Subtotal
Percentage	19.6%	10.9%	10.9%	13.0%	26.1%	19.6%	100.0%
Beds	36	60	20	24	48	36	174
Units	9	6	6	6	12	9	48
Net Rentable SF	654	883	860	1,354	1,400	1,432	55,113

Parking	Req.	
2 bed Unit	1.75	33.3
3 bed + Unit	2	54.0
Guest Parking	1 per 5 units	9.2
Total Parking Required - Supp. Information Summary, Section 4		96
Total Parking Provided		90

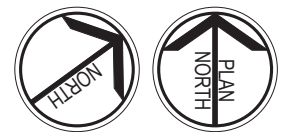
Leasing	2270 SF
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Mix Percentage	
2 Bedroom Units	41.3%
4 Bedroom Units	58.7%

Site Access to Cl. of Nord Density	2.11
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Accessible Parking Required	4
Accessible Parking Provided	4

1 Architectural Site Plan
1" = 40'-0"

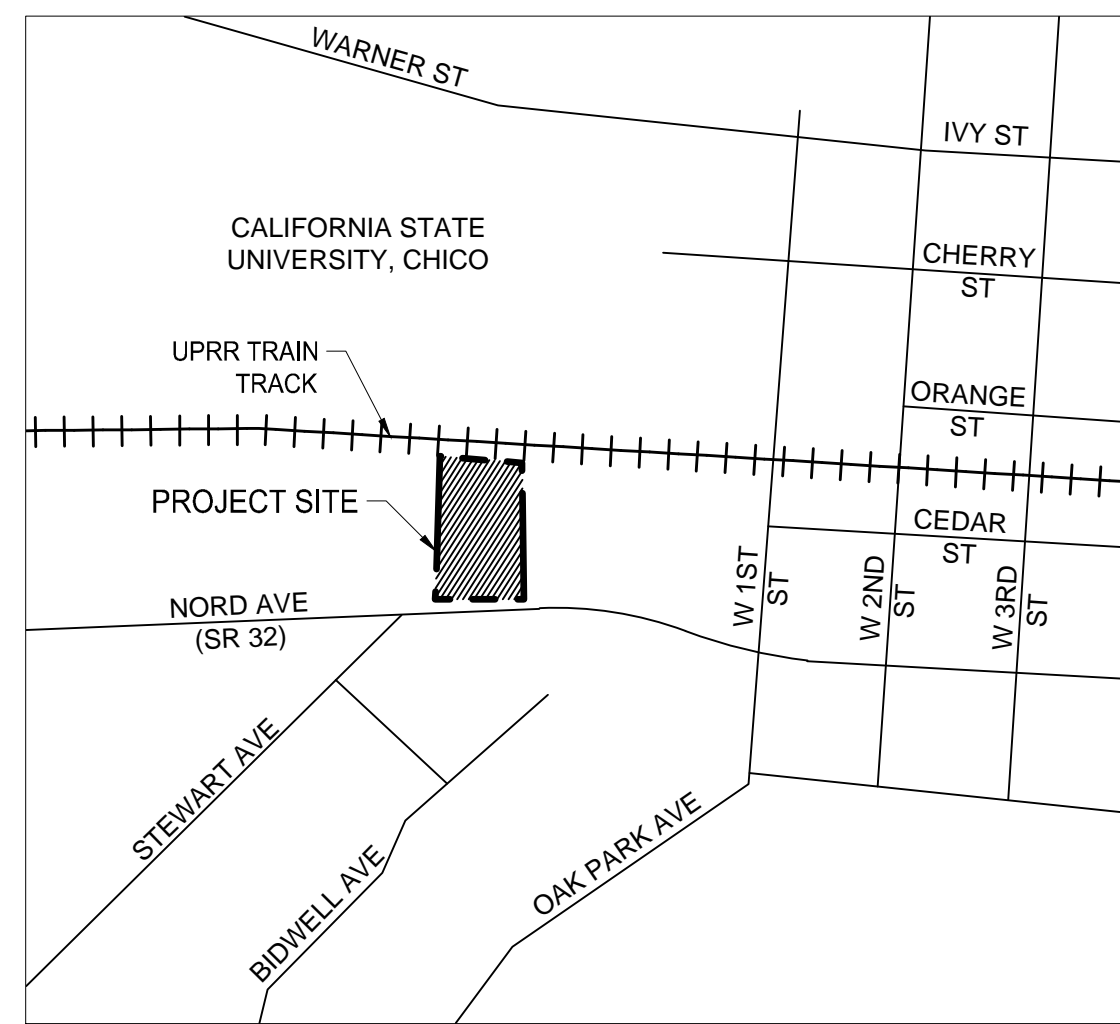


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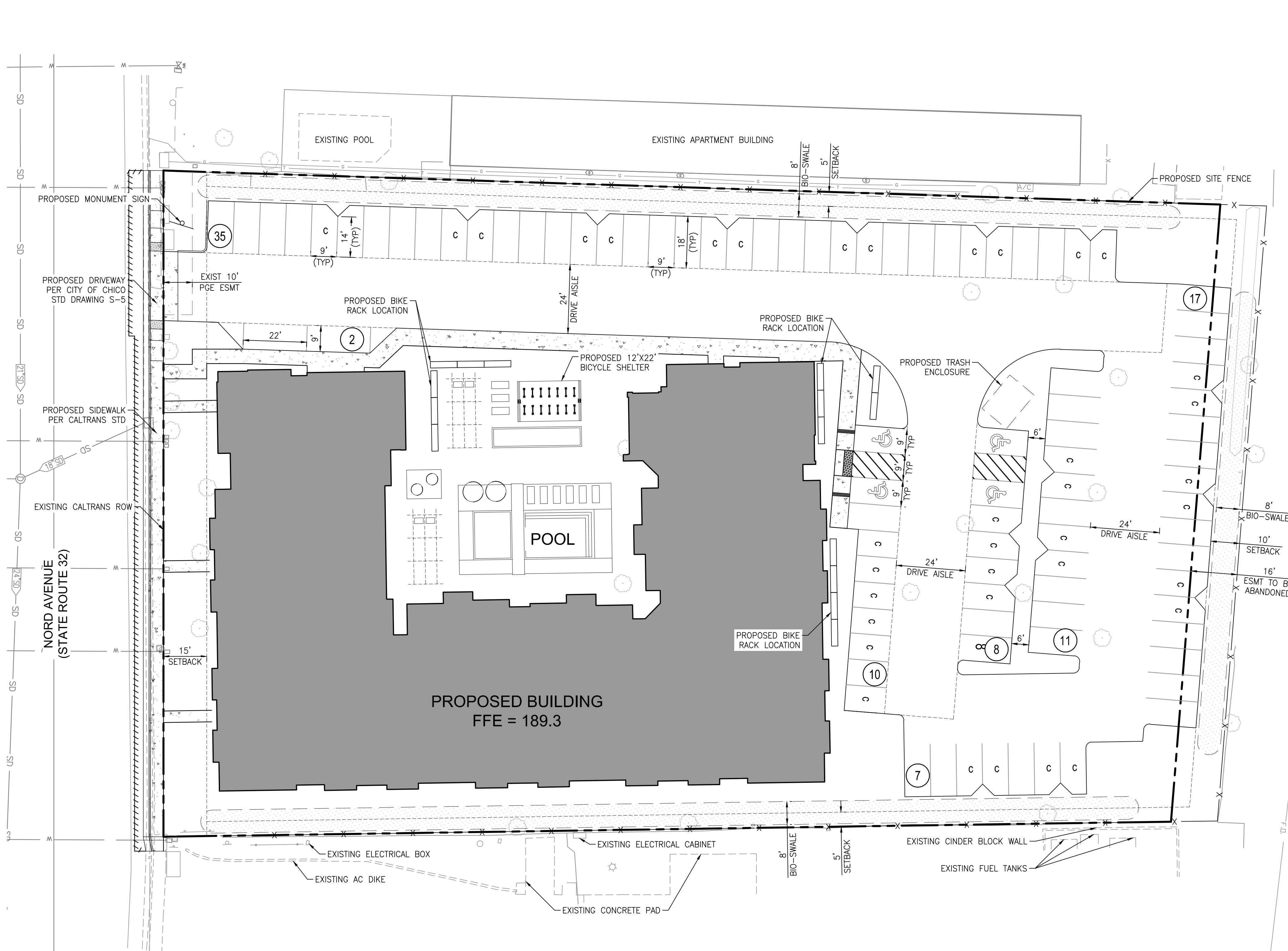
Architectural Site Plan

16055: NORD AVENUE APARTMENTS
CHICO, CALIFORNIA
APRIL 25, 2017

Attachment C



VICINITY MAP
N.T.S.



LEGEND

- EXISTING LOT LINES
- - - - - PROPERTY BOUNDARY
- - - - - BUILDING SETBACK
- EXISTING TREE
- X - PROPOSED SITE FENCE (8' TALL, SLATED WOOD OR EQUAL)
- █ PROPOSED BUILDING
- ▬ PROPOSED CONCRETE SIDEWALK/WALKWAY
- (11) PARKING SPACE COUNT
- ▨ PROPOSED BIO-SWALE AREA
- TRASH ENCLOSURE
- PROPOSED BIKE RACK LOCATION

ABBREVIATIONS

C	COMPACT
ESMT	EASEMENT
EXIST	EXISTING
FFE	FINISHED FLOOR ELEVATION
N.T.S	NOT TO SCALE
PGE	PACIFIC GAS AND ELECTRIC
ROW	RIGHT OF WAY
SF	SQUARE FEET
SD	STORM DRAIN
SS	SANITARY SEWER
STD	STANDARD
TYP	TYPICAL

PARKING SUMMARY

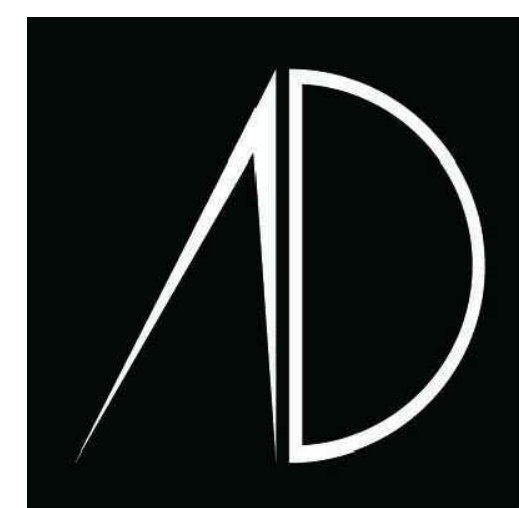
PARKING	REQUIRED	PROVIDED
2 BED UNIT	49	86
3 BED + UNIT	42	
GUEST PARKING	10	
ADA	4	4
TOTAL PARKING	101	90*
BICYCLE PARKING	49	172

* SEE SUPPLEMENTARY INFORMATION SUMMARY, SECTION A.

SITE COVERAGE SUMMARY

COVERAGE TYPE	AREA (SF)	AREA (AC)	% COVERAGE
OPEN SPACE	28,849	0.66	35
PARKING	30,852	0.71	37
BUILDING	23,362	0.54	28
TOTAL SITE AREA	83,063	1.91*	100

- NOTES:**
- SEE EXISTING CONDITIONS AND DEMOLITION SHEET FOR EXISTING ONSITE CONDITIONS
 - TOTAL SITE AREA TO CENTERLINE OF NORD AVENUE FOR ZONING PURPOSES: 2.11 ACRES (91,876 SQUARE FEET)



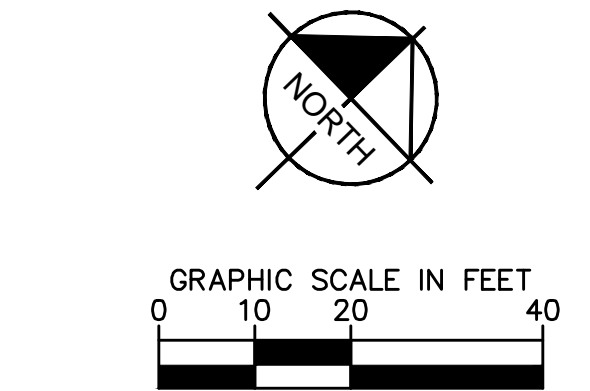
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CIVIL SITE PLAN

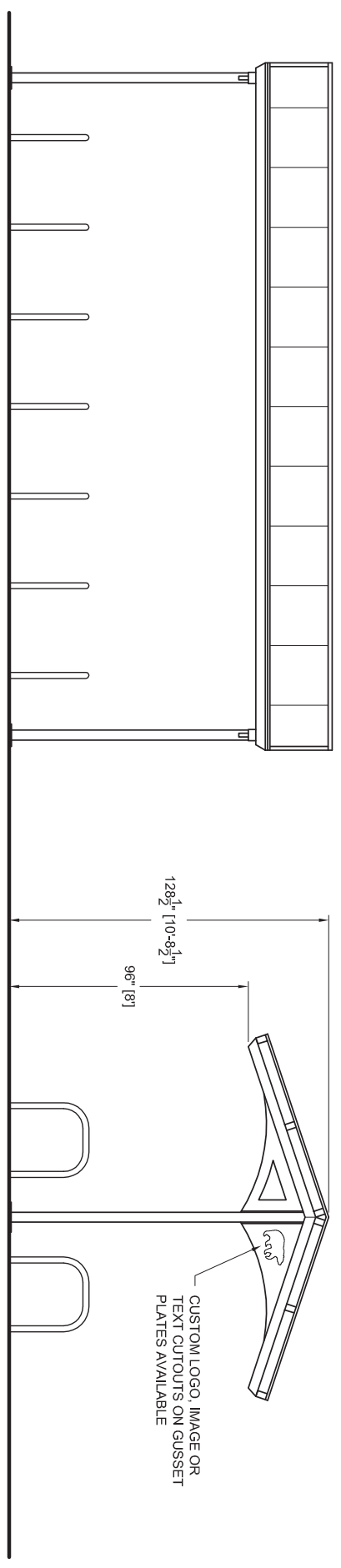
NORD AVENUE APARTMENTS

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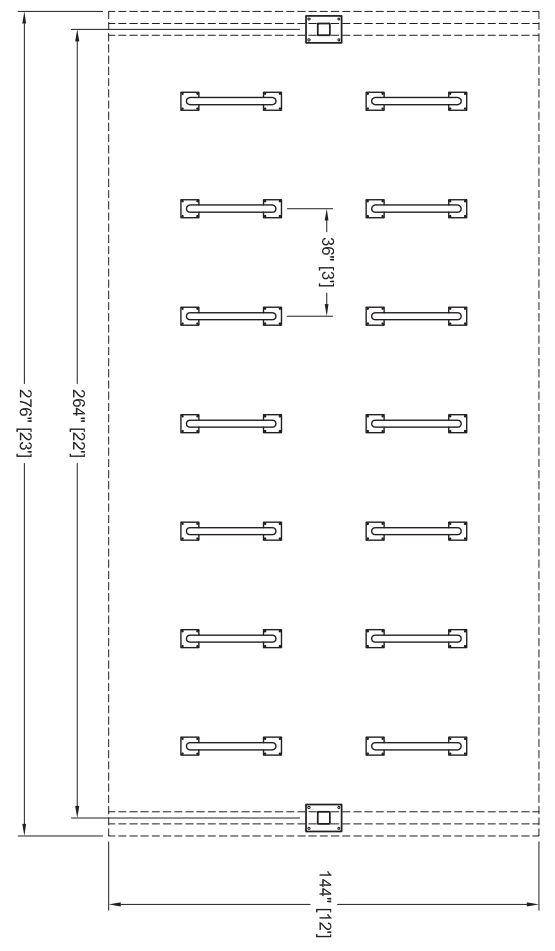


CHICO, CALIFORNIA
MAY 03, 2017

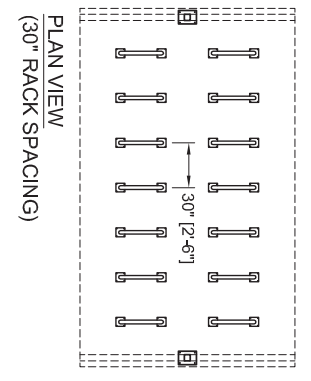


SIDE ELEVATION

END ELEVATION



PLAN VIEW
(36" RACK SPACING)



PLAN VIEW
(30" RACK SPACING)

- NOTES:**
- FRAMEWORK TO BE WELDED AND MECHANICALLY FASTENED STEEL
 - ALL FASTENERS TO BE STAINLESS STEEL
 - ROOF GLAZING TO BE: 8MM POLYCARBONATE STRUCTURED SHEET, TONGUE AND GROOVE SYSTEM, IN ALUMINUM TRIM.
 - STEEL FINISHING:
 MEDIA BLAST PREP
 PRIMER: Tnemec Tnemec Zinc 90497
 Tnemec Series N69 H-HALD EPOXOLINE 2-PART
 EPOXY MICOAT, Tnemec Series 73 ENDURASHIELD TOPCOAT, ALUMINUM TRIM TO HAVE SAME TOP TWO COATS (OR IN MATCHING ANODIZED), COLOR _____
 - ALL DIMENSIONS TO BE FIELD VERIFIED
 - DESIGN IS PRELIMINARY, AND CONCEPTUAL, AND SUBJECT TO CHANGE BASED ON FINAL ENGINEERING PHASE AND CUSTOMER APPROVAL.

BIKE DOCK CAPACITY		
RACK SPACING	# OF RACKS	# OF BIKES
36"	14	28
30"	14	28

© Design by Duo-Gard Industries, Inc., 2010

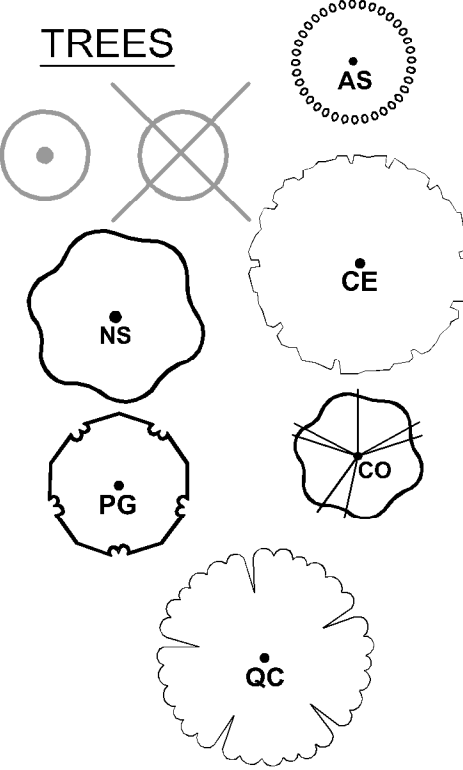
DUO-GARD
FORCE AHEAD!
 Duo-Gard Industries, Inc.
 Tel (734) 207-9700 Fax (734) 207-7995
 www.duo-gard.com

THIS DRAWING IS PROPRIETARY AND FOR THE SOLE USE OF OUR CUSTOMER AND MAY NOT BE COPIED OR REPRODUCED WITHOUT PRIOR WRITTEN CONSENT FROM DUO-GARD INDUSTRIES, INC. LEAD TIME BEGINS UPON RECEIPT OF SIGNED SHOP DRAWINGS.

APPROVAL SIGNATURE _____ DATE _____

PROJECT NAME		CUSTOMER NAME		DESCRIPTION	
12' X 22' "APEX" BICYCLE SHELTER, PLAN AND ELEVATION DETAILS		BDI		SM	
PRJ ENG	PRJ MGR	DRFTR	DRW G DATE	REV1	REV2
BDI	SM	GS	12.17.2014		
SCALE			PAGE	OF	DRWG #
3/16" = 1'-0"			1	1	1222APEX

PLANT LEGEND:



SCREENING SHRUBS



ACCENT SHRUBS



LOW SHRUBS



GROUND COVERS



VINES



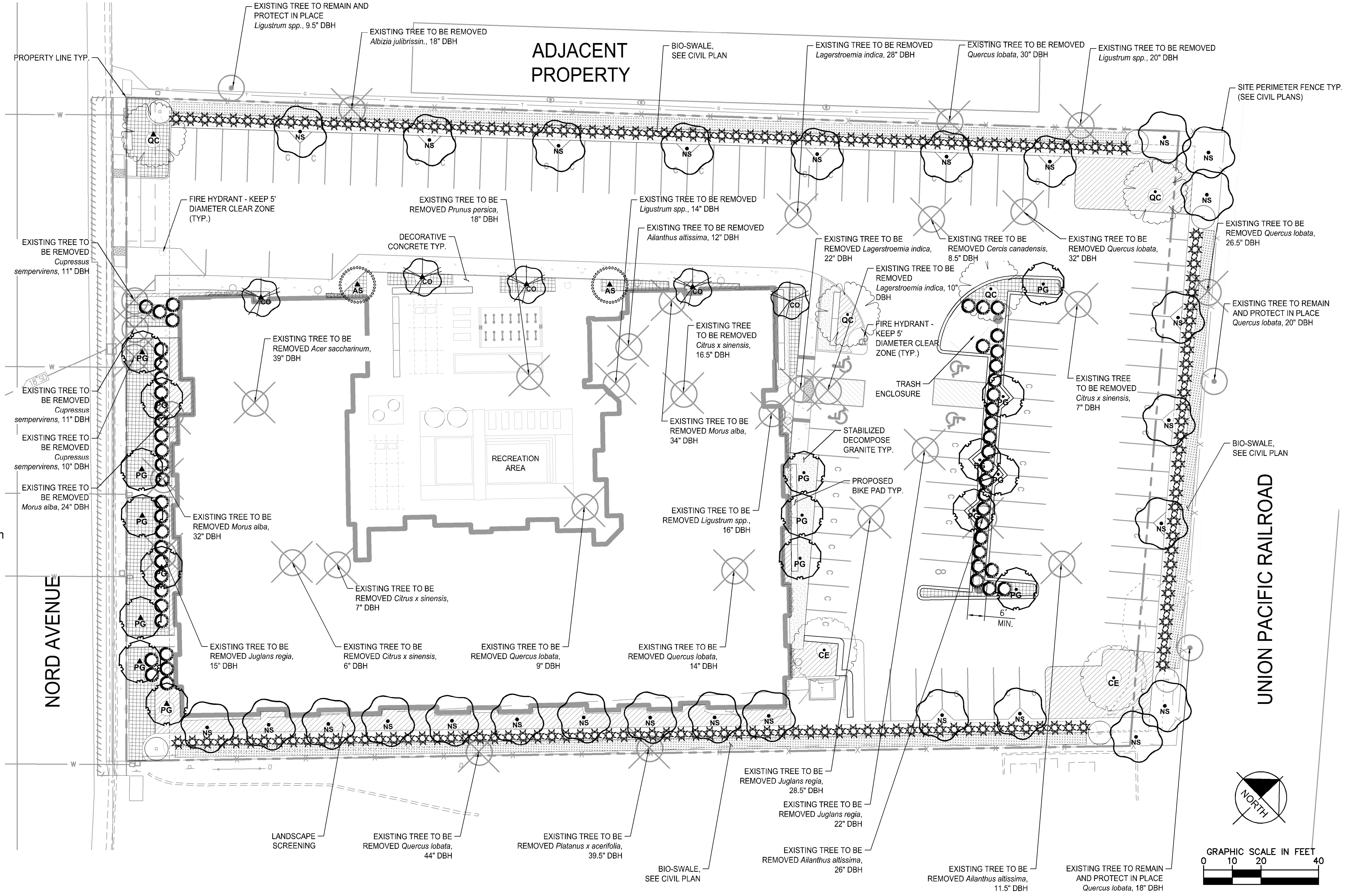
BIOSWALE



MISCELLANEOUS



CODE	BOTANICAL NAME / COMMON NAME
O	Existing trees to remain and protect in place
X	Existing trees to be removed
AS	Acca sellowiana / Pineapple Guava
CE	Cedrus deodara / Deodar Cedar
CO	Cercis occidentalis / Western Redbud
NS	Nyssa sylvatica / Black Tupelo
PG	Podocarpus gracilior / African Fern Pine
QC	Quercus coccinea / Scarlett Oak
PC	Prunus caroliniana / Carolina Laurel Cherry
PM	Podocarpus macrophyllus 'Maki' / Yew Pine
HS	Helictotrichon sempervirens / Blue Oat Grass
MR	Muhlenbergia rigens / Deer Grass
PR	Phormium tenax / New Zealand Flax
FT	Festuca spp. / Fescue
LP	Leucophyllum spp. / Texas Ranger
MCC	Myrtus communis 'Compacta' / Dwarf Myrtle
RO	Rosmarinus officinalis 'Prostratus' / Dwarf Rosemary
BA	Berberis aquifolium 'Compacta' / Oregon Grape
JP	Juniperus horizontalis / Creeping Juniper
MP	Myoporum parvifolium 'Putah Creek' / Putah Creek Myoporum
FP	Ficus pumila / Creeping Fig
HP	Hesperaloe parviflora / Red Yucca
CT	Carex Tumulicola / Berkeley Sedge
MC	Muhlenbergia capillaris 'Regal Mist' / Muhly
	NAME
	Low Voltage Landscape Tree Lighting



LANDSCAPE REQUIREMENT

INTERIOR OFF STREET PARKING LANDSCAPED AREA (PER CHICO MUNICIPAL CODE 19.70.060.E.1)
 REQUIRED: 5% (1,542.6 S.F.)
 PROVIDED: 22.9% (7,078.34 S.F.)

GENERAL NOTE:
 REFER TO GENERAL NOTES AND WATER CALCULATIONS SHEET FOR PLANT QUANTITIES, HARDSCAPE LEGEND, WATER USE INFORMATION AND ADDITIONAL INFORMATION.



Kimley»Horn

PRELIMINARY LANDSCAPE PLAN

NORD AVENUE APARTMENTS

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 WWW.KIMLEY-HORN.COM

CHICO, CALIFORNIA
 MAY 03, 2017

PLANT LEGEND:

<u>TREES</u>		<u>CODE</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT</u>	<u>WUCOLS</u>
		O	Existing trees to remain and protect in place		
		X	Existing trees to be removed		
		AS	Acca sellowiana / Pineapple Guava	15 gal	L
		CE	Cedrus deodara / Deodar Cedar	15 gal	L
		CO	Cercis occidentalis / Western Redbud	15 gal	VL
		NS	Nyssa sylvatica / Black Tupelo	15 gal	M
		PG	Podocarpus gracilior / African Fern Pine	15 gal	M
		QC	Quercus coccinea / Scarlett Oak	15 gal	M
<u>SCREENING SHRUBS</u>		<u>CODE</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>WUCOLS</u>
		PC	Prunus caroliniana / Carolina Laurel Cherry	5 gal	L
		PM	Podocarpus macrophyllus 'Maki' / Yew Pine	5 gal	L
<u>ACCENT SHRUBS</u>		<u>CODE</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>WUCOLS</u>
		HS	Helictotrichon sempervirens / Blue Oat Grass	5 gal	L
		MR	Muhlenbergia rigens / Deer Grass	5 gal	L
		PR	Phormium tenax / New Zealand Flax	5 gal	L
<u>LOW SHRUBS</u>		<u>CODE</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>WUCOLS</u>
		FT	Festuca spp. / Fescue	5 gal	L
		LP	Leucophyllum spp. / Texas Ranger	5 gal	L
		MCC	Myrtus communis 'Compacta' / Dwarf Myrtle	5 gal	L
		RO	Rosmarinus officinalis 'Prostratus' / Dwarf Rosemary	5 gal	VL
<u>GROUND COVERS</u>		<u>CODE</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>WUCOLS</u>
		BA	Berberis aquifolium 'Compacta' / Oregon Grape	1 gal	L
		JP	Juniperus horizontalis / Creeping Juniper	1 gal	L
		MP	Myoporum parvifolium 'Putah Creek' / Putah Creek Myoporum	flat	L
<u>VINES</u>		<u>CODE</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>WUCOLS</u>
		FP	Ficus pumila / Creeping Fig	flat	L
<u>BIOSWALE</u>		<u>CODE</u>	<u>BOTANICAL NAME / COMMON NAME</u>	<u>CONT.</u>	<u>WUCOLS</u>
		HP	Hesperaloe parviflora / Red Yucca	1 gal	L
		CT	Carex Tumulicola / Berkeley Sedge	1 gal	L
		MC	Muhlenbergia capillaris 'Regal Mist' / Muhly	1 gal	L
<u>MISCELLANEOUS</u>		<u>NAME</u>			
			Low Voltage Landscape Tree Lighting		

GENERAL NOTES:

- DESIGN SHALL MEET ALL APPLICABLE STATE AND LOCAL CODES.
- SEE CIVIL PLANS FOR GRADES, STORMWATER MANAGEMENT, AND ADA PATH OF TRAVEL.
- VERIFY EXISTING SITE INFORMATION, INCLUDING BUT NOT LIMITED TO; GRADES, UTILITIES, PROPERTY LINES, SETBACKS, EASEMENTS, LIMITS OF ROADWAYS, CURBS AND GUTTERS.

IRRIGATION NOTES:

- ALL PLANT GROUPS ARE LAID OUT BY WATER ZONES DEPENDING ON WATER NEEDS. ALL PLANTING IS WATERED BY SUB-SURFACE DRIP OR BUBBLERS. THE NEW IRRIGATION CONTROL SYSTEM WILL CONNECT TO A WEATHER SENSOR AND BACKFLOW PREVENTOR. ALL COORDINATION SHALL BE DONE WITH THE CLIENT'S REPRESENTATIVE.
- ALLOW ONE VALVE MINIMUM PER HYDRO ZONE IN EACH PLANTER.

PLANTING & WATER USE NOTES:

- ALL PLANT GROUPS ARE DESIGNED FOR LOW WATER USE, AND LAID OUT BY WATER ZONES DEPENDING ON WATER NEEDS. ALL PLANTING IS WATERED BY SUB-SURFACE DRIP OR BUBBLERS.
- ALL GROUNDCOVER PLANTING AREAS ARE EXPECTED TO UNIFORMLY PROVIDE COMPLETE COVER OVER THE PLANTING AREA IN TWO (2) YEARS. ALL SHRUB PLANTING AREAS ARE EXPECTED TO UNIFORMLY PROVIDE COMPLETE COVER OVER THE PLANTING AREA IN FIVE (5) YEARS.
- ALL NEW TREES ARE 15 GALLON, ALL SHRUBS ARE 5 GALLON, AND ALL GROUNDCOVERS ARE 1 GALLON UNLESS SPECIFIED ON PLAN.
- ALL NEW PLANTING AREAS SHALL HAVE A MINIMUM 3" DEPTH LAYER OF ORGANIC MULCH APPLIED. STABILIZING MULCH PRODUCTS SHALL BE APPLIED TO SLOPES OF 3 TO 1 OR GREATER.
- ALL PLANTING AREAS SHALL BE PREPARED WITH APPROPRIATE SOIL AMENDMENTS, FERTILIZERS AND APPROPRIATE SUPPLEMENTS BASED UPON A SOILS REPORT FROM AN AGRICULTURAL SUITABILITY SOIL SAMPLE TAKEN FROM THE SITE.
- ALL LANDSCAPE IMPROVEMENTS SHALL FOLLOW THE GUIDELINES SET FORTH BY THE CITY OF CHICO AND COUNTY OF BUTTE.

SOIL TYPE STATEMENT:

UPON COMPLETION OF THE GEOTECHNICAL AND/OR BIO-ASSAY INVESTIGATIONS, SOIL SUITABILITY WILL BE ANALYZED AND ANY SOIL DEFICIENCIES IDENTIFIED. IF NECESSARY, AMENDMENTS WILL BE ADDED TO THE SOIL TO ENSURE PROPER AND HEALTHY PLANT ESTABLISHMENT AND GROWTH.

WATER CALCULATIONS:

TOTAL LANDSCAPE AREA: 16,457 S.F.
 TOTAL NEW TREES: 58
 ETO: 51.7

HYDROZONE	PLANT WATER USE	IRRIGATION EFFICIENCY	PLANT FACTOR (PF)*	HYDROZONE AREA (HA)(SQUARE FEET)	ESTIMATED TOTAL WATER USE (ETWU)
DRIP	LOW	.81	0.2	15,529 SF	122,895 GALLONS PER YEAR
TREE BUBBLER	LOW - MODERATE	.81	0.4	928 SF	14,665 GALLONS PER YEAR

TOTAL HA: 16,457 SF ETWU: 137,560 GALLONS PER YEAR

SUMMARY

ESTIMATED TOTAL WATER USE (ETWU): 137,560 GALLONS PER YEAR (47%)
 ETO(0.62)((PF)(HA)/IE)

MAXIMUM APPLIED WATER ALLOWANCE (MAWA): 290,132 GALLONS PER YEAR
 ETO(ETAF)(HA)(CONVERSION FACTOR)
 51.7(0.55)(16,457)(.62)



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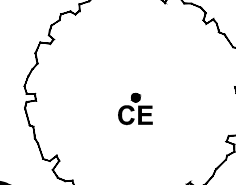
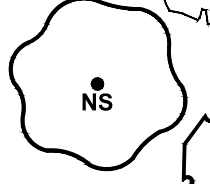

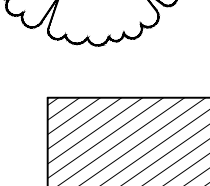
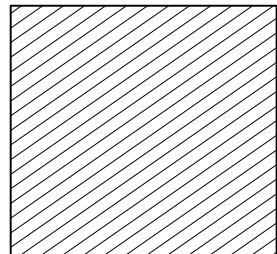
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LANDSCAPE NOTES AND CALCULATIONS

NORD AVENUE APARTMENTS

CHICO, CALIFORNIA
 MAY 03, 2017

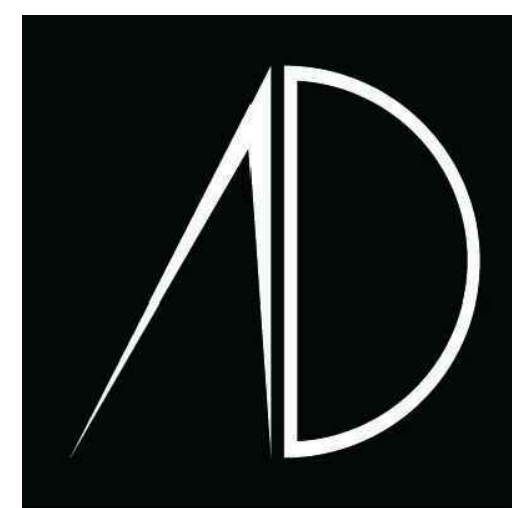
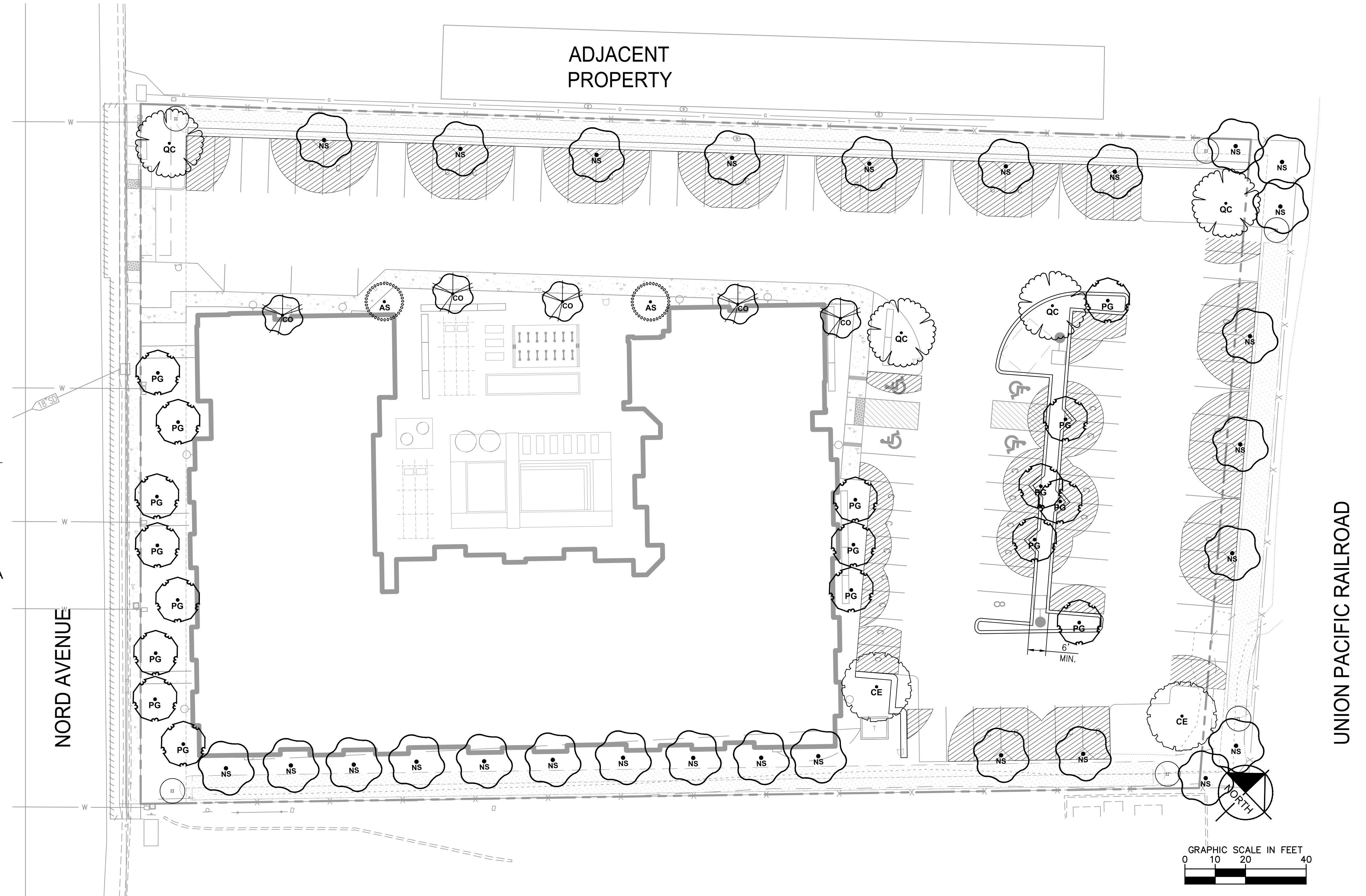
TREE SHADING LEGEND

TREES	BOTANICAL NAME / COMMON NAME	QTY	15 YEAR MATURE CANOPY SIZE
	Cedrus deodara / Deodar Cedar	2	45' DIAMETER
	Nyssa sylvatica / Black Tupelo	12	35' DIAMETER
	Podocarpus gracilior / African Fern Pine	8	25' DIAMETER
	Quercus coccinea / Scarlett Oak	4	40' DIAMETER
	Parking area shaded by trees		

SHADING SUMMARY (VEHICULAR PARKING AREA)

PARKING AREA: (EXCLUDES DRIVE AISLES AND COVERED PARKING SPACES)	14,953 S.F.
50% SHADING REQUIRED FOR UNCOVERED AREAS:	7,477 S.F.
PARKING AREA SHADED BY TREES:	9,330 S.F. 62% OF UNCOVERED PARKING AREA

* TREE SHADE SIZE SHOWN AT 15 YEARS MATURITY, PER THE APPROVED STREET AND PARKING LOT TREES FOR THE CITY OF CHICO, PREPARED BY CITY OF CHICO GENERAL SERVICES DEPARTMENT



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PRELIMINARY LANDSCAPE SHADE PLAN

NORD AVENUE APARTMENTS

CHICO, CALIFORNIA
MAY 03, 2017

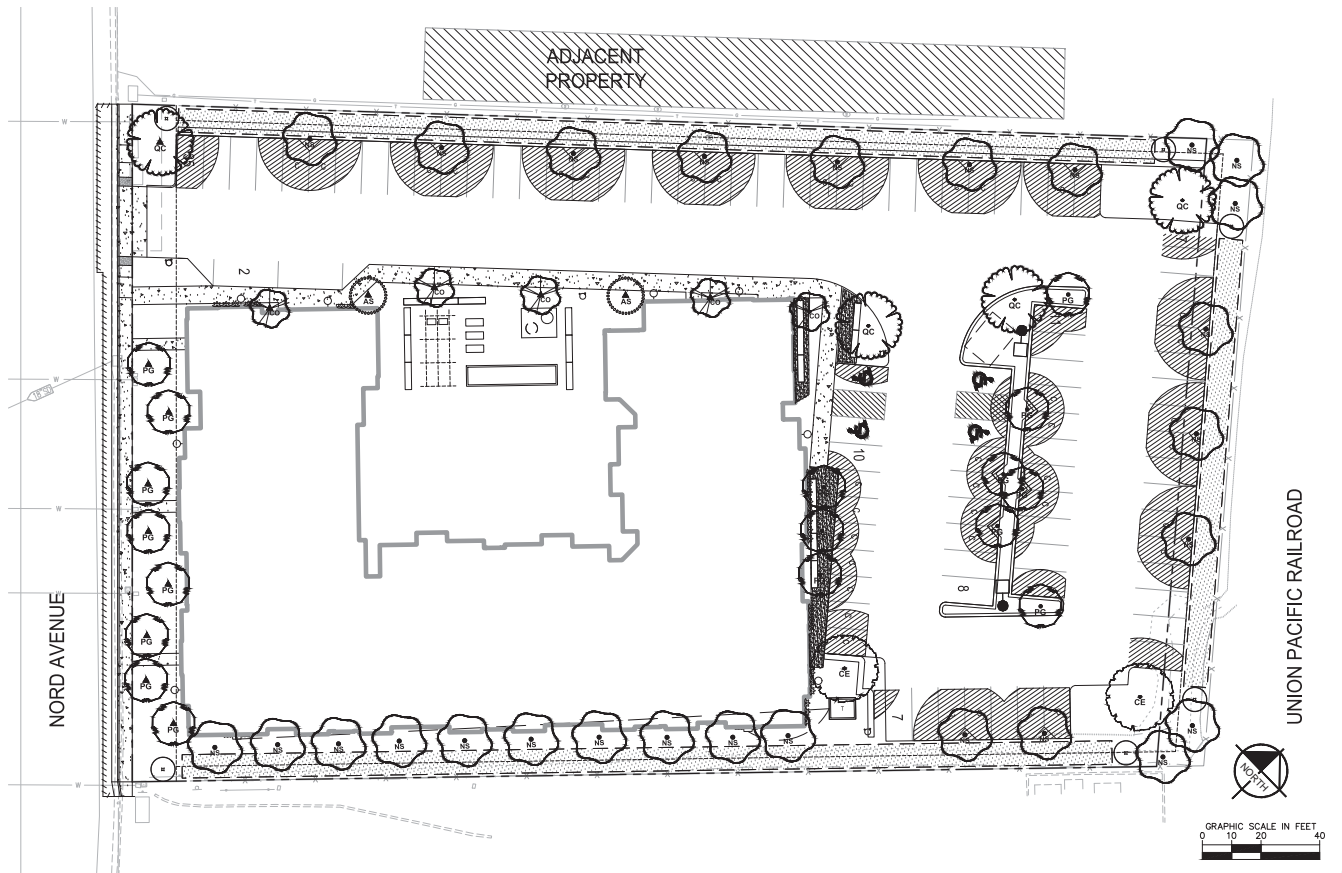
TREE SHADING LEGEND

TREES	BOTANICAL NAME / COMMON NAME	15 YEAR MATURE CANOPY SIZE
	Cedrus deodara / Deodar Cedar	45' DIAMETER
	Nyssa sylvatica / Black Tupelo	35' DIAMETER
	Podocarpus gracilior / African Fern Pine	25' DIAMETER
	Quercus coccoloba / Scarlett Oak	40' DIAMETER
	PARKING AREA SHADED BY TREES	

**SHADING SUMMARY
(VEHICULAR PARKING AREA)**

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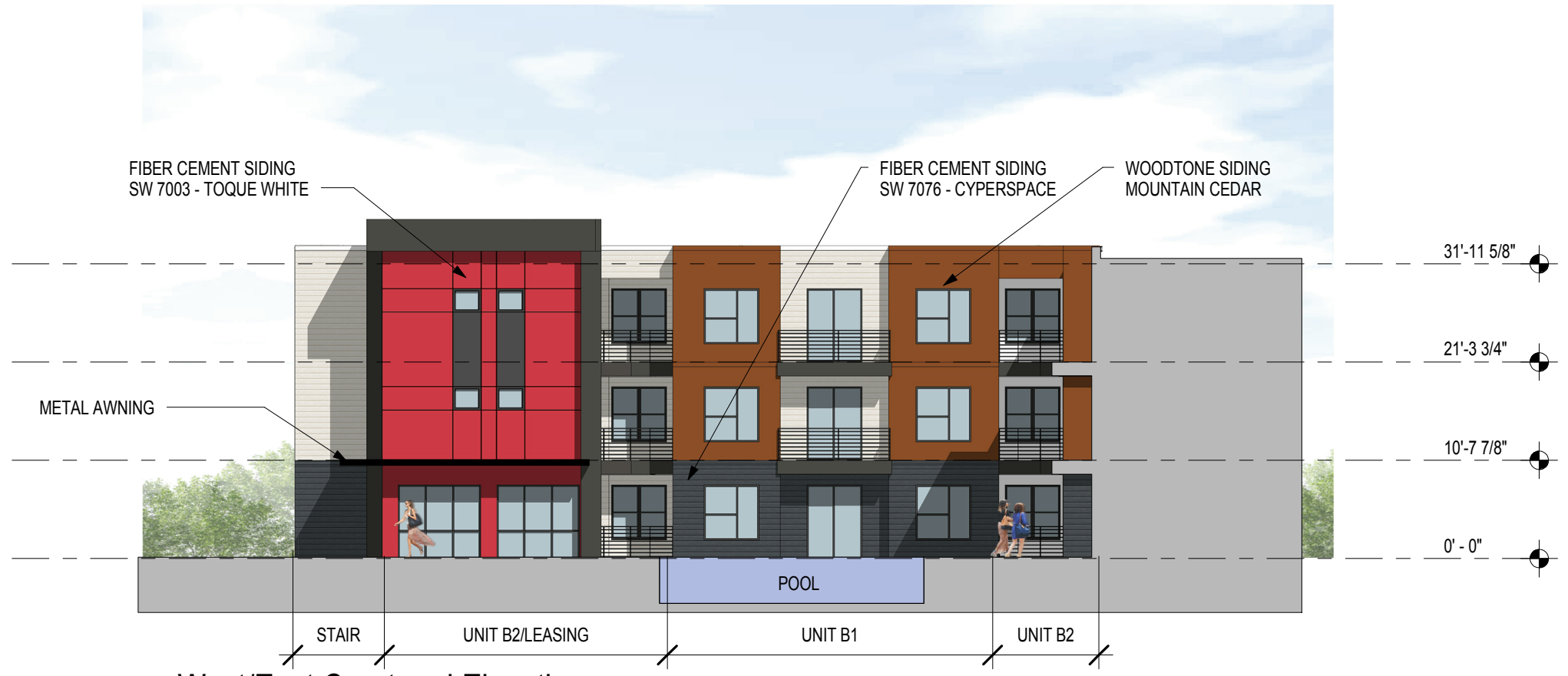
PRELIMINARY LANDSCAPE SHADE PLAN

NORD AVENUE APARTMENTS

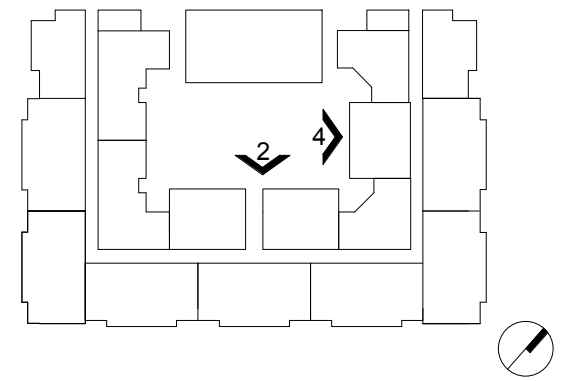
CHICO, CALIFORNIA
APRIL 25, 2017



2 North Courtyard Elevation
1/16" = 1'-0"

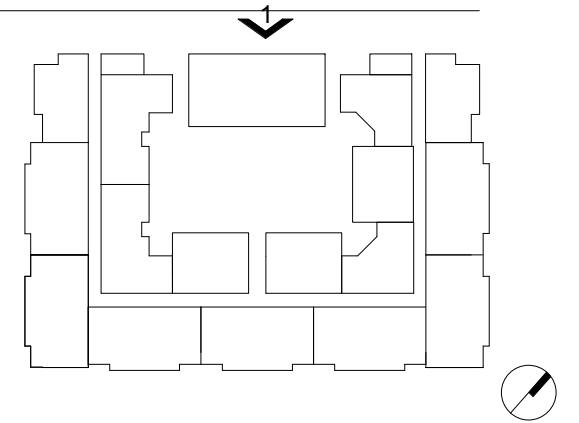


1 West/East Courtyard Elevation
1/16" = 1'-0"





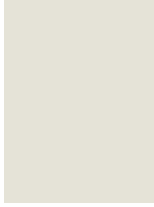
1 North Elevation
1/16" = 1'-0"



METAL PANEL
SHERWIN WILLIAMS
SW 7588 - SHOW STOPPER



STUCCO
SHERWIN WILLIAMS
SW 7003 - TOQUE WHITE



FIBER CEMENT SIDING
SHERWIN WILLIAMS
SW 7076 - CYBERSPACE



FIBER CEMENT SIDING
SHERWIN WILLIAMS
SW 7003 - TOQUE WHITE



FIBER CEMENT SIDING
SHERWIN WILLIAMS
SW 7073 - NETWORK GRAY



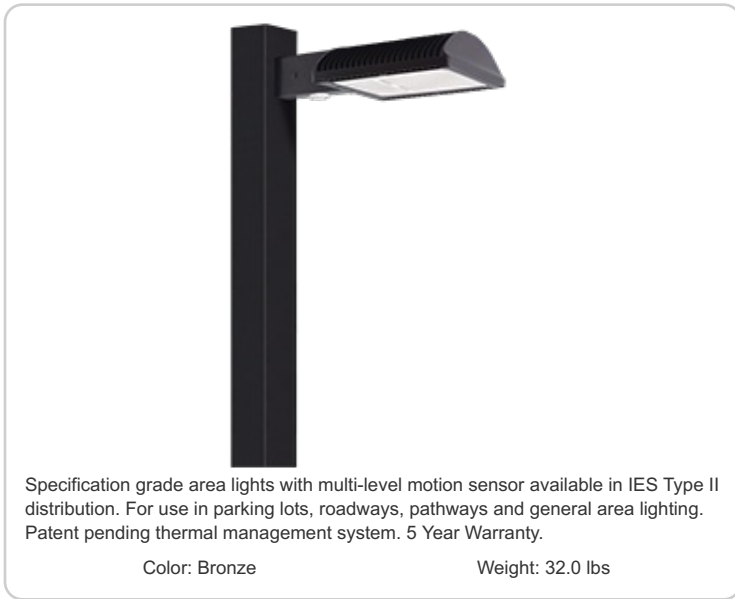
WOODTONE SIDING/TRIM
MOUNTAIN CEDAR



BALCONY/PATIO RAILING
SHERWIN WILLIAMS
SW 7675 - SEALSKIN



ALED2T105N/D10/WS2



Specification grade area lights with multi-level motion sensor available in IES Type II distribution. For use in parking lots, roadways, pathways and general area lighting. Patent pending thermal management system. 5 Year Warranty.

Color: Bronze

Weight: 32.0 lbs

Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	105W
120V:	0.89A	Color Temp:	4000K
208V:	0.58A	Color Accuracy:	82 CRI
240V:	0.50A	L70 Lifespan:	100000
277V:	0.44A	Lumens:	8,377
Input Watts:	106W	Efficacy:	79 LPW
Efficiency:	99%		

FESTOON LIGHT STRING

Made to your specifications with watertight, shock resistant modules in either 12V DC LED or 24V AC Xenon versions.

Performance

- Durable clear polycarbonate globes are shatterproof, weatherproof and resistant to vibrations
- UL Listed, IP68 custom built lengths are made to order (allow 3-4 weeks lead time)
- Provides safe and reliable service even in adverse conditions

Construction

- Durable clear polycarbonate globes cover specially designed sockets, engineered to absorb vibrations
- Stranded tinned copper conductors in heavy duty rubber cable supports spans up to 15 feet
- Injection molded nylon sockets are pre-assembled prior to shipping

Installation

- Requires 12V DC input (power supply sold separately) for LED modules, 24V AC input for Xenon
- For horizontal mount to wall or vertical mount to shine upwards from a ledge, order LFS-CABLE CLIPs (one per module, will ship pre-assembled)
- For span distances greater than 15 feet, Festoon Light String needs to be supported with a guy wire or catenary cable system
- Be sure to seal all outdoor connections with dielectric grease and shrink tube

Ordering Information

When ordering, specify socket spacing and total cable length including lead and tail wire requirements, preferably in a line drawing with notations. Designate the type of socket assembly to be factory-assembled onto cable. Choose between 12V DC LED and 24V AC Xenon. Socket assemblies include clear globes. Colored globes are sold separately.



Specifications

Series	LFS-12V-1.5-LED / LFS-24V
Input voltage	12V DC (LED) / 24V AC, 60Hz (Xenon)
Color temperature	2950K / 2800K
CRI	74 / 99
Wattage	1.5W LED / 5W, 8.5W, 10W Xenon
Lumens	See individual product
Maximum run	300W LED / 600W Xenon
Beam angle	310°
Dimming	N/A
Housing	Rubber cable, nylon sockets
Lens	Polycarbonate globe
Rating	c/UL/us Listed, wet locations
Dimensions	Custom spacing, 2-3/8" globes
Switching	Hardwire
Mounting	Backplate or cable clip
Linking	N/A
Lamp type	9 x 3528 SMD LEDs / T4 Xenon
Rated life	80,000 hrs / 20,000 hrs



Photos are for representational purposes and do not display actual socket spacing

Attachment J

Festoon Light String



12V LED Festoon Socket Assembly
3000K / 1.5W / 80,000hr rated life
Black base; max run = 300W
LFS-12V-1.5-LED-WW 1.5 watts



24V Xenon Festoon Socket Assembly
3000K / 20,000hr rated life
Black base; max run = 600W
LFS-24V-5W 5 watts
LFS-24V-8.5W 8.5 watts
LFS-24V-10W 10 watts



Festoon Light String Accessories



LFS-CABLE Black
12-gauge heavy duty cable
for Festoon Lights



LFS-BP Clear
Mounting backplate with screw
for Festoon Lights



LFS-CABLE-CLIP Black
Cable clip with nail
(sold in bags of 100)



2-3/8" polycarbonate replacement globe
for Festoon Lights

- LFS-GLOBE-CL** Clear
- LFS-GLOBE-BL** Blue
- LFS-GLOBE-PI** Pink
- LFS-GLOBE-PU** Purple
- LFS-GLOBE-RE** Red
- LFS-GLOBE-YE** Yellow



24V Xenon replacement bulb
20,000hr rated life

- LFS-5-24-CL** 5 watts
- LFS-8.5-24-CL** 8.5 watts
- LFS-10-24-CL** 10 watts



12V DC regulated output
driver for use with LED
Festoon Light Strings

- LED-DR50-12-LU** 50W driver
- LED-DR100-12-LU** 100W driver
- LED-DR150-12-LU** 150W driver



24V AC transformer
for use with Xenon
Festoon Light Strings

- TR-150-24** 150W transformer
- TR-300-24** 300W transformer
- TR-600-24** 600W transformer

Attachment J



WST LED

Architectural Wall Sconce



Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Luminaire

Height: 8-1/2"
(21.59 cm)

Width: 17"
(43.18 cm)

Depth: 10-3/16"
(25.9 cm)

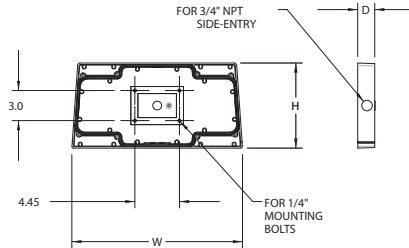
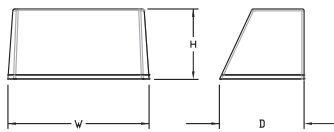
Weight: 20 lbs
(9.1 kg)

Optional Back Box (BBW)

Height: 4"
(10.2 cm)

Width: 5-1/2"
(14.0 cm)

Depth: 1-1/2"
(3.8 cm)



Introduction

The WST LED is designed with the specifier in mind. The traditional, trapezoidal shape offers a soft, non-pixelated light source for end-user visual comfort. For emergency egress lighting, the WST LED offers six battery options, including remote. For additional code compliance and energy savings, there is also a Bi-level motion sensor option. With so many standard and optional features, three lumen packages, and high LPW, the WST LED is your "go to" luminaire for most any application.

Ordering Information

EXAMPLE: WST LED P1 40K VF MVOLT DDBTXD

WST LED					
Series	Performance Package	Color temperature	Distribution	Voltage	Mounting
WST LED	P1 1,500 Lumen package	27K 2700 K	VF Visual comfort forward throw	MVOLT ¹ 277 ¹	Shipped included (blank) Surface mounting bracket Shipped separately BBW Surface-mounted back box ² PBBW Premium surface-mounted back box ^{2,3}
	P2 3,000 Lumen package	30K 3000 K	VW Visual comfort wide	120 ¹ 347	
	P3 6,000 Lumen package	40K 4000 K		208 ¹ 480	
		50K 5000 K		240 ¹	

Options			Finish (required)			
PE	Photoelectric cell, button type		E7WC	Emergency battery backup (cold, 7W) ^{7,8}	DDBXD	Dark bronze
PER	NEMA twist-lock receptacle only		E7WHR	Remote emergency battery backup (remote 7W) ^{7,9}	DBLXD	Black
PER5	Five-wire receptacle only		E20WH	Emergency battery backup (20W) ^{7,10}	DNAXD	Natural aluminum
PER7	Seven-wire receptacle only		E20WC	Emergency battery backup (cold, 20W) ^{7,8,10}	DWHXD	White
PIR	Motion/Ambient Light Sensor, 8-15' mounting height ⁴		E23WHR	Remote emergency battery backup (remote 20W) ^{7,9}	DSSXD	Sandstone
PIR1FC3V	Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc ⁴		LCE	Left side conduit entry ¹¹	DBBTXD	Textured dark bronze
PIRH	180° motion/ambient light sensor, 15-30' mounting height ⁴		RCE	Right side conduit entry ¹¹	DBLBXD	Textured black
PIRH1FC3V	Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc ⁴		Shipped separately			
SF	Single fuse (120, 277, 347V) ⁵		RBPW	Retrofit back plate ²	DNATXD	Textured natural aluminum
DF	Double fuse (208, 240, 480V) ⁵		VG	Vandal guard ¹²	DWHGXD	Textured white
DS	Dual switching ⁶		WG	Wire guard ¹²	DSSTXD	Textured sandstone
E7WH	Emergency battery backup (7W) ⁷					

Accessories

Ordered and shipped separately.

WSTVCPBBW DDBXD U	Premium Surface - mounted back box
WSBBW DDBTX U	Surface - mounted back box
RBPW DDBXD U	Retrofit back plate

NOTES

- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only, when ordering with button type photocell (PE), fusing (SF, DF), or dual switching (DS).
- Also available as a separate accessory; see accessories information.
- Top conduit entry standard.
- Not available with PE, PER, PER5, PER7, VG or WG.
- Not available with MVOLT option. Button photocell (PE) can be ordered with a dedicated voltage option. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.

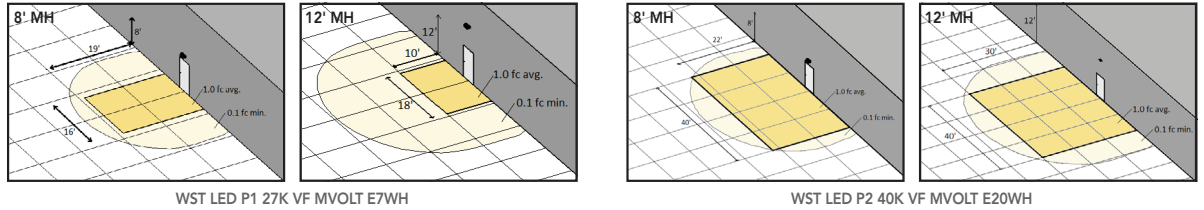
- Not available with E7WH, E7WC, E7WHR, E20WC, E20WH, or E23WHR. Used with inverter system. Not available with 347/480V. Not available with PE, PER, PER5 & PER7.
- Not available with 347/480V.
- Battery pack rated for -20° to 40°C.
- Comes with PBBW.
- Warranty period is 3-years.
- Not available with BBW.
- Must order with fixture; not an accessory.



Emergency Battery Operation

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency backup configurations include an independent secondary driver with an integral relay to immediately detect AC power loss, meeting interpretations of NFPA 70/NEC 2008 - 700.16. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time supply power is lost, per International Building Code Section 1006 and NFPA 101 Life Safety Code Section 7.9, provided luminaires are mounted at an appropriate height and illuminate an open space with no major obstructions. The examples below show illuminance of 1 fc average and 0.1 fc minimum of the P1 power package and VF distribution product in emergency mode.

10' x 10' Gridlines
8' and 12' Mounting Height



Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Performance Package	System Watts (MVOLT ¹)	Dist. Type	27K (2700K, 70 CRI)					30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	12W	VF	1,494	0	0	0	125	1,529	0	0	0	127	1,639	0	0	0	137	1,639	0	0	0	137
		VW	1,513	0	0	0	126	1,548	0	0	0	129	1,660	0	0	0	138	1,660	0	0	0	138
P2	25W	VF	3,162	1	0	1	126	3,236	1	0	1	129	3,468	1	0	1	139	3,468	1	0	1	139
		VW	3,202	1	0	0	128	3,277	1	0	0	131	3,512	1	0	0	140	3,512	1	0	0	140
P3	50W	VF	6,023	1	0	1	120	6,164	1	0	1	123	6,607	1	0	1	132	6,607	1	0	1	132
		VW	6,100	1	0	1	122	6,242	1	0	1	125	6,691	1	0	1	134	6,691	1	0	1	134

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Electrical Load

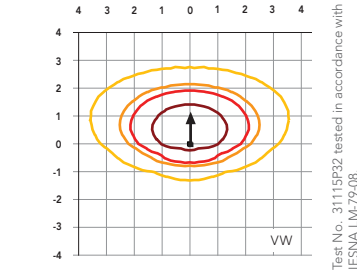
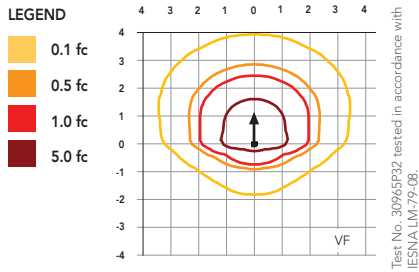
Performance package	System Watts	Current (A)					
		120	208	240	277	347	480
P1	11	0.1	0.06	0.05	0.04	---	---
	14	---	---	---	---	0.04	0.03
P1 DS	14	0.12	0.07	0.06	0.06	---	---
P2	25	0.21	0.13	0.11	0.1	---	---
	30	---	---	---	---	0.09	0.06
P2 DS	25	0.21	0.13	0.11	0.1	---	---
P3	50	0.42	0.24	0.21	0.19	---	---
	56	---	---	---	---	0.16	0.12
P3 DS	52	0.43	0.26	0.23	0.21	---	---

Projected LED Lumen Maintenance

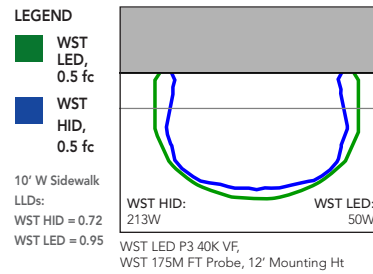
Values calculated according to IESNA TM-21-11 methodology and valid up to 40°C.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.95	>0.92	>0.87

Isofootcandle plots for the WST LED P3 40K VF and VW. Distances are in units of mounting height (10').



Distribution overlay comparison to 175W metal halide.



FEATURES & SPECIFICATIONS

INTENDED USE

The classic architectural shape of the WST LED was designed for applications such as hospitals, schools, malls, restaurants, and commercial buildings. The long life LEDs and driver make this luminaire nearly maintenance-free.

CONSTRUCTION

The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP65 rating for the luminaire.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS

Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WST LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine(s) consist of 98 high-efficacy LEDs mounted to a metal core circuit board and integral aluminum heat sinks to maximize heat dissipation and promote long life (100,000 hrs at 40°C, L87). Class 2 electronic driver has a power factor >90%, THD <20%. Easily-serviceable surge protection device meets a minimum Category B (per ANSI/IEEE C62.41.2).

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections.

LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. PIR options are rated for wet location. Rated for -30°C to 40°C ambient.

DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Technical Specifications

Listings

UL Listing:

Suitable for wet locations.

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have been received the Department of Energy "Lighting Facts" label.

Dark Sky Approved:

The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

LED Characteristics

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

LEDs:

Multi-chip, high-output, long-life LEDs

Color Stability:

LED color temperature is warranted to shift no more than 200K in CCT over a 5 year period.

Color Uniformity:

RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Construction

IES Classification:

The Type II distribution is ideal for wide walkways, on ramps and entrance roadways, bike paths and other long and narrow lighting applications. This type is meant for lighting larger areas and usually is located near the roadside. This type of lighting is commonly found on smaller side streets or jogging paths.

Effective Projected Area:

EPA = 0.75

Maximum Ambient Temperature:

Suitable for use in 104°F (40°C) ambient temperatures

Cold Weather Starting:

The minimum starting temperature is -40°C/-40°F

Thermal Management:

Superior thermal management with external Air-Flow fins.

Housing:

Die-cast aluminum housing, lens frame and mounting arm.

Mounting:

Heavy-duty mounting arm with "O" ring seal & stainless steel screws

Reflector:

Specular vacuum-metallized polycarbonate

Gaskets:

High-temperature silicone gaskets

IP Rating:

Ingress Protection rating of IP66 for dust and water

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.

Green Technology:

Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

For use on LEED Buildings:

IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Electrical

Drivers:

Two Drivers, Constant Current, Class 2, 1400mA, 100-277V, 50/60Hz, 0.8A, Power Factor 99%

THD:

5.4% at 120V, 15.4% at 277V

Surge Protection:

4kV

Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.

Other

California Title 24:

See ALED2T105/BL, ALED2T105/PCS, ALED2T105/PCS2, or ALED2T105/PCT for a 2013 California Title 24 compliant product. Any additional component requirements will be listed in the Title 24 section under technical specifications on the product page.

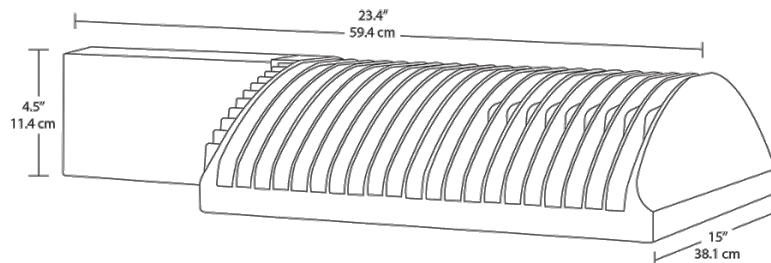
Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

Technical Specifications (continued)

<p>Other</p> <hr/> <p>Country of Origin: Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.</p> <p>Buy American Act Compliant: This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.</p> <p>Recovery Act (ARRA) Compliant: This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).</p> <p>GSA Schedule: Suitable in accordance with FAR Subpart 25.4.</p> <p>Optical</p> <hr/> <p>BUG Rating: B1 U0 G2</p> <p>Sensor Specifications</p> <hr/> <p>Operating Voltage: 120V or 277V</p> <p>Power Consumption: 1W</p>	<p>0-10V Sinking Current: 50mA</p> <p>Adjustable High and Low Modes: High: 0-10V; Low: off, 0-9.8V</p> <p>Adjustable Time Delay: Amount of time in high mode with no motion before switching to low mode: 5 min., 1 -30 min.</p> <p>Adjustable Cut Off Delay: Time in which the fixture will remain on low mode with no motion before turning off and waiting for new motion to turn on: None, 1 -60 min., 1 -5 hrs.</p> <p>Adjustable Sensitivity: None, low, medium, maximum</p> <p>Adjustable Setpoint: None, 1 to 250 fc, auto</p> <p>Adjustable Ramp Up and Fade Down Times: 1 to 60 sec.</p>	<p>Operating Temperature: -40°F/-40°C. to 167°F (-40°C to +75°C)</p> <p>Operating Humidity: 20% to 90% noncondensing</p> <p>Relay Life Rating: 200,000 cycles (120/277VAC), 50,000 cycles (230VAC)</p> <p>IP Rating: Ingress Protection rating of IP66 for dust and water</p> <p>UL Listing: Suitable for Wet Locations as factory installed.</p> <p>Handheld Wireless Configuration Tool: Adjust settings using handheld wireless configuration tool. Only available with 0-10V dimming driver options.</p> <p>Multi Level Motion Sensor: 40 ft. diameter coverage from 20 ft. height.</p>
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Dimensions



Features

- Includes integrated motion sensor/photocell for multi-level control
- 66% energy cost savings vs. HID
- 100,000-hour LED lifespan
- Type II distribution
- 5-year warranty

Ordering Matrix

Family	Distribution	Watts	Color Temp	Finish	Dimming	Sensor	
ALED	2T = Type II	360 =	Blank = 5000K (Cool)	Blank = Bronze	Blank = No Dimming	/WS2 = Multi-Level Motion Sensor - only available for 120-277V with /D10 for 105W	
	3T = Type III	360W					
	4T = Type IV	260 =	Y = 3000K (Warm)	W = White	/D10 = Dimmable		/WS4 = Multi-Level Motion Sensor - only available for 120-277V with /D10 for 260W, 125W & 150W
		260W	N = 4000K (Neutral)	RG = Gray			
		150 =					
	150W						
	125 =						
	125W						
	105 =						
	105W						