

HISTORIC AND DESIGN REVIEW COMMISSION

December 19, 2018

HDRC CASE NO: 2018-469
COMMON NAME: Parking Garage
ADDRESS: 3903 N ST MARYS
ZONING: R-6, Public Property
CITY COUNCIL DIST.: 2
APPLICANT: Jeffrey Watson/Alamo Architects
OWNER: San Antonio Zoo/COSA
TYPE OF WORK: Construction of a parking garage
APPLICATION RECEIVED: November 30, 2018
60-DAY REVIEW: January 29, 2019
REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval to construct a parking garage to service the San Antonio Zoo and neighboring institutions including Alamo Stadium, Brackenridge Park and the Japanese Tea Gardens. The proposed parking garage is to feature parking for approximately 600 automobiles.

This property is public property, but is not located within the boundaries of the Brackenridge Park National Register of Historic Places District, nor is it located within a local historic district or the River Improvement Overlay.

APPLICABLE CITATIONS:

Unified Development Code Section 35-640 – Public Property and Rights-of-Way

(a) Public Property. Generally, the historic and design review commission will consider applications for actions affecting the exterior of public properties except in the case of building interiors that are the sites of major public assemblies or public lobbies. The historic and design review commission will also consider applications for actions affecting public properties such as city parks, open spaces, plazas, parking lots, signs and appurtenances.

(b) Public Rights-of-Way. Generally, the historic and design review commission will consider applications for actions affecting public rights-of-way whose construction or reconstruction exceeds in quality of design or materials standards of the design manual of the public works department.

Sec. 35-641. - Design Considerations for Historic and Design Review Commission Recommendations.

In reviewing an application, the historic and design review commission shall be aware of the importance of attempting to find a way to meet the current needs of the City of San Antonio, lessee or licensee of public property. The historic and design review commission shall also recognize the importance of recommending approval of plans that will be reasonable to implement. The best urban design standards possible can and should be employed with public property including buildings and facilities, parks and open spaces, and the public right-of-way. Design and construction on public property should employ such standards because the use of public monies for design and construction is a public trust. Public commitment to quality design should encourage better design by the private sector. Finally, using such design standards for public property improves the identity and the quality of life of the surrounding neighborhoods.

Sec. 35-642. - New Construction of Buildings and Facilities.

In considering whether to recommend approval or disapproval of a certificate, the historic and design review commission shall be guided by the following design considerations. These are not intended to restrict imagination, innovation or variety, but rather to assist in focusing on design principles, which can result in creative solutions that will enhance the city and its neighborhoods. Good and original design solutions that meet the individual requirements of a specific site or neighborhood are encouraged and welcomed.

(a) Site and Setting.

(1) Building sites should be planned to take into consideration existing natural climatic and topographical features. The intrusive leveling of the site should be avoided. Climatic factors such as sun, wind, and temperature should become an integral part of the design to encourage design of site-specific facilities which reinforces the individual identity of a neighborhood and promotes energy efficient facilities.

- (2) Special consideration should be given to maintain existing urban design characteristics, such as setbacks, building heights, streetscapes, pedestrian movement, and traffic flow. Building placement should enhance or create focal points and views. Continuity of scale and orientation shall be emphasized.
- (3) Accessibility from streets should be designed to accommodate safe pedestrian movement as well as vehicular traffic. Where possible, parking areas should be screened from view from the public right-of-way by attractive fences, berms, plantings or other means.
- (4) Historically significant aspects of the site shall be identified and if possible incorporated into the site design. Historic relationships between buildings, such as plazas or open spaces, boulevards or axial relationships should be maintained.

(b) Building Design.

- (1) Buildings for the public should maintain the highest quality standards of design integrity. They should elicit a pride of ownership for all citizens. Public buildings should reflect the unique and diverse character of San Antonio and should be responsive to the time and place in which they were constructed.
- (2) Buildings shall be in scale with their adjoining surroundings and shall be in harmonious conformance to the identifying quality and characteristics of the neighborhood. They shall be compatible in design, style and materials. Reproductions of styles and designs from a different time period are not encouraged, consistent with the secretary of the interior's standards. Major horizontal and vertical elements in adjoining sites should be respected.
- (3) Materials shall be suitable to the type of building and design in which they are used. They shall be durable and easily maintained. Materials and designs at pedestrian level shall be at human scale, that is they shall be designed to be understood and appreciated by someone on foot. Materials should be selected that respect the historic character of the surrounding area in texture, size and color.
- (4) Building components such as doors, windows, overhangs, awnings, roof shapes and decorative elements shall all be designed to contribute to the proportions and scale of their surrounding context. Established mass/void relationships shall be maintained. Patterns and rhythms in the streetscape shall be continued.
- (5) Colors shall be harmonious with the surrounding environment, but should not be dull. Choice of color should reflect the local and regional character. Nearby historic colors shall be respected.
- (6) Mechanical equipment or other utility hardware should be screened from public view with materials compatible with the building design. Where possible, rooftop mechanical equipment should be screened, even from above. Where feasible, overhead utilities should also be underground or attractively screened. Exterior lighting shall be an integral part of the design. Interior lighting shall be controlled so that the spillover lighting onto public walkways is not annoying to pedestrians.
- (7) Signs which are out of keeping with the character of the environment in question should not be used. Excessive size and inappropriate placement on buildings results in visual clutter. Signs should be designed to relate harmoniously to exterior building materials and colors. Signs should express a simple clear message with wording kept to a minimum.
- (8) Auxiliary design. The site should take into account the compatibility of landscaping, parking facilities, utility and service areas, walkways and appurtenances. These should be designed with the overall environment in mind and should be in visual keeping with related buildings, structures and places.

- (c) Multiple Facades.** In making recommendations affecting new buildings or structures which will have more than one
- (1) important facade, such as those which will face two (2) streets or a street and the San Antonio River, the historic and design review commission shall consider the above visual compatibility standards with respect to each important facade.

FINDINGS:

- a. The applicant is requesting a Certificate of Appropriateness for approval to construct a parking garage to service the San Antonio Zoo and neighboring institutions including Alamo Stadium, Brackenridge Park and the Japanese Tea Gardens. This property is public property, but is not located within the boundaries of the Brackenridge Park National Register of Historic Places District, nor is it located within a local historic district or the River Improvement Overlay.
- b. PREVIOUS APPROVAL – The applicant received conceptual approval for the construction of a parking garage at the October 3, 2018, Historic and Design Review Commission hearing. In addition to receiving conceptual approval for garage design, the applicant received a Certificate of Appropriateness for site clearing, site preparation, underground utilities and concrete foundations.

- c. SITE DESIGN – The UDC Section 35-642(a) notes that building sites should be planned to take into consideration existing natural climatic and topographical features, including the avoidance of intrusive leveling. Additionally, this section of the UDC notes that special consideration should be given to maintain the existing urban design characteristics, that accessibility from streets should be designed to accommodate safe pedestrian movement as well as vehicular traffic and that historically significant aspects of the site shall be identified and is possibly incarnated into the site design. The applicant has proposed site elements that include those which promote the pedestrian atmosphere of the site adjacent to the pedestrian right of way. While trees will be removed through the construction of the parking structure, much of the surrounding tree canopy will remain untouched.
- d. SITE DESIGN – The applicant has proposed one (1) vehicular entry on Tuleta Drive. Staff finds the proposed, single entry to be appropriate.
- e. SITE DESIGN – The applicant has proposed a significant buffer between vehicular traffic on Tuleta Drive and a pedestrian sidewalk that is to run parallel to both the proposed parking structure and Tuleta. Additionally, the applicant has provided staff with a landscaping plan as well as landscaping materials that staff's finds appropriate.
- f. BUILDING DESIGN – The UDC Section 35-642(b) notes that buildings for the public should maintain the highest quality standards of design integrity, shall be in scale with their adjoining surroundings, shall feature materials that are suitable to the type of building and design for which they are used, shall feature building components that are designed to contribute to the proportions and scale of their surrounding context and shall feature colors that are harmonious with their surroundings.
- g. BUILDING DESIGN (CLADDING) – The applicant has proposed to clad the concrete structure with green screen elements on the south, east and west facades, which will feature vegetation. The applicant has also proposed to install a perforated metal panel system that will clad the stair towers on the south, east and west facades. Staff finds the proposed green screen elements and the perforated metal panel system to be appropriate.
- h. BUILDING DESIGN (CLADDING) – The applicant has noted that on the primary stair tower (southeast corner), artwork will be commissioned and be installed over the proposed perforated metal cladding system. The applicant has noted that this will be submitted at a later date.
- i. MECHANICAL EQUIPMENT – The UDC Section 35-642(b)(6) notes that mechanical equipment or other utility hardware should be screened from public view with materials compatible with the building design. The applicant is responsible for complying with this section of the UDC.
- j. LIGHTING – The UDC Section 35-642(b)(6) notes that lighting should be an integral part of the design. The applicant has submitted product specifications for all lighting elements that will be incorporated into the project. The applicant has included the locations of top-level light poles as well as product specifications. Additionally, the applicant has noted the inability to located scone lights on the top level of the garage.
- k. SIGNAGE – The applicant has include general sizes, designs and locations for signage within this application; however, the applicant has noted that a separate signage application will be submitted to the Commission for signage.
- l. ARCHAEOLOGY – The project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology.

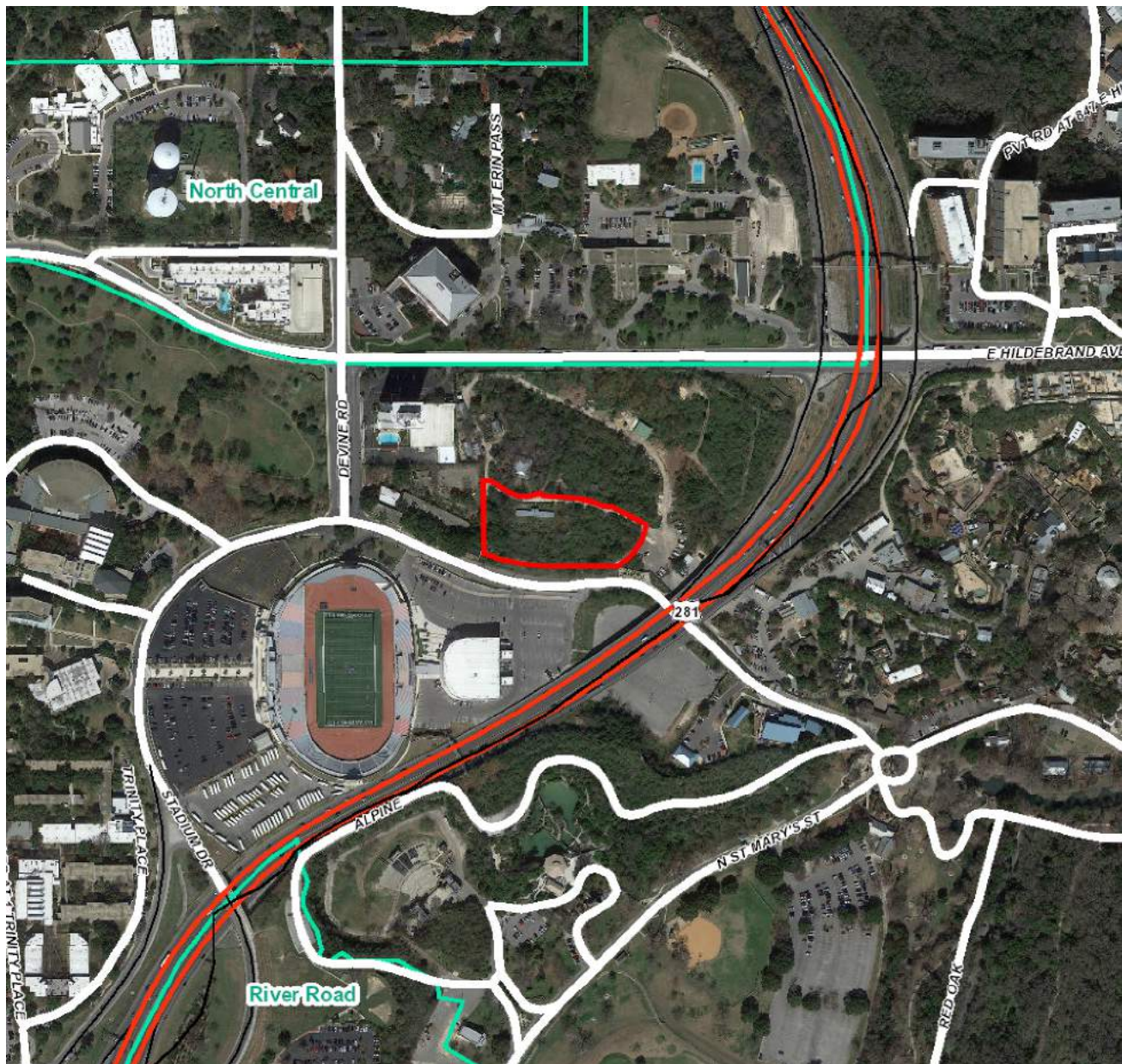
RECOMMENDATION:

Staff recommends approval based on findings a through k with the following stipulations:

- i. That the applicant submit a lighting diagram that notes that the proposed pole system will not produce light pollution.
- ii. That the applicant screen all mechanical equipment from view at the public right of way.
- iii. That the applicant return to the Commission with a design for commissioned art work and signage when developed.
- iv. ARCHAEOLOGY - The project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology.

CASE MANAGER:

Edward Hall



Flex Viewer

Powered by ArcGIS Server

Printed: Sep 27, 2018

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Project:

San Antonio Zoo Parking Garage
Alamo Architects Job No: 2018-27

Subject:

HDRC Submission – 2018-09-14

We're seeking final approval for design of a new parking structure servicing the San Antonio Zoo. In addition to providing parking for the San Antonio Zoo, and its Zoo School, the parking garage will help to alleviate parking for some of its neighboring institutions, which include: Alamo Stadium, Brackenridge Park, and the Japanese Tea Gardens. In addition. Although the project is adjacent to Brackenridge park, it is not included within the boundaries of the National Register of Historic Places as an Historic Landmark site for Brackenridge park, nor is it included in the RIO-1 Overlay.

The parking garage is located off of Tuleta Drive, just north west of the San Antonio Zoo entrance; and it will be a five story precast concrete structure accommodating approximately 600 cars, clad with green screen walls. Included in the scope of the project will be a new pedestrian path along Tuleta Drive from the garage to the entry of the zoo.

The design of the building will include green screen elements attached along the South, East, and West facades of the concrete structure. In addition to the green screen, perforated panel cladding will be provided at the stair towers. Signage is to be mounted on the south and east facades, with reverse channel letters, with halo lighting, and final approval for signage will be sought at a later date.

While not currently in the scope of the project, it is the intent and hope that artwork will enhance both the South, and East facades in the future as the San Antonio Zoo works to commission an artist to design and install these elements, these elements will also be submitted for review at a later date as appropriate.



In association with:



Alamo
ARCHITECTS

SAN ANTONIO
ZOO

San Antonio Zoo Parking Garage

Historic Design and Review Commission - Final Submission

November 30, 2018



Site Location

Scale: NTS



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Historic Design and Review Commission - Final Submission
November 30, 2018



Site Location

Scale: 1"=50'-0" @ 11x17



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November 30, 2018

Site Photos
Northbound Drive
Scale: N/A



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CONSTRUCTION

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San Antonio Zoo Parking Garage

Historic Design and Review Commission - Final Submission

November 30, 2018

Site Photos

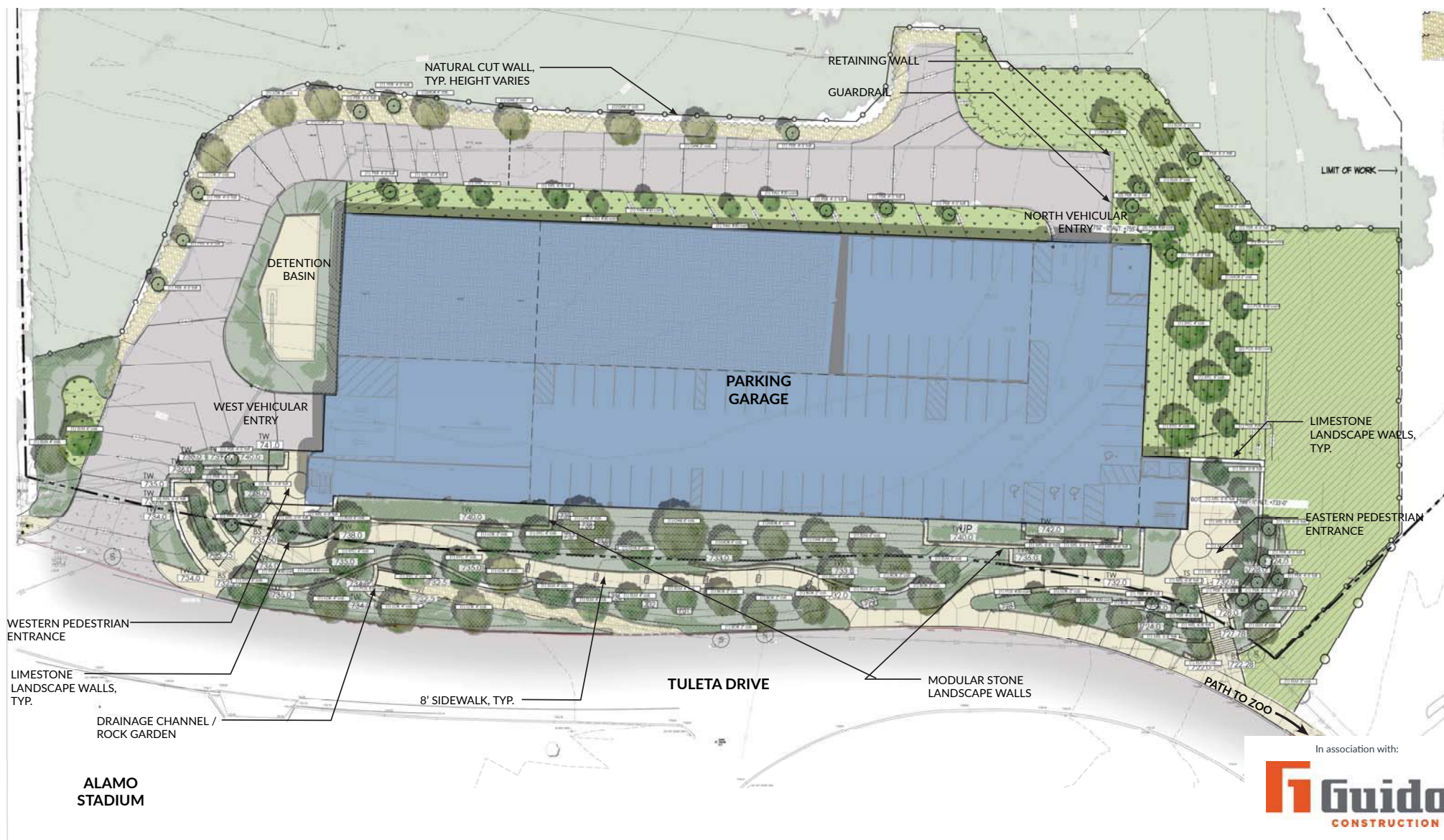
Southbound Tuleta Drive

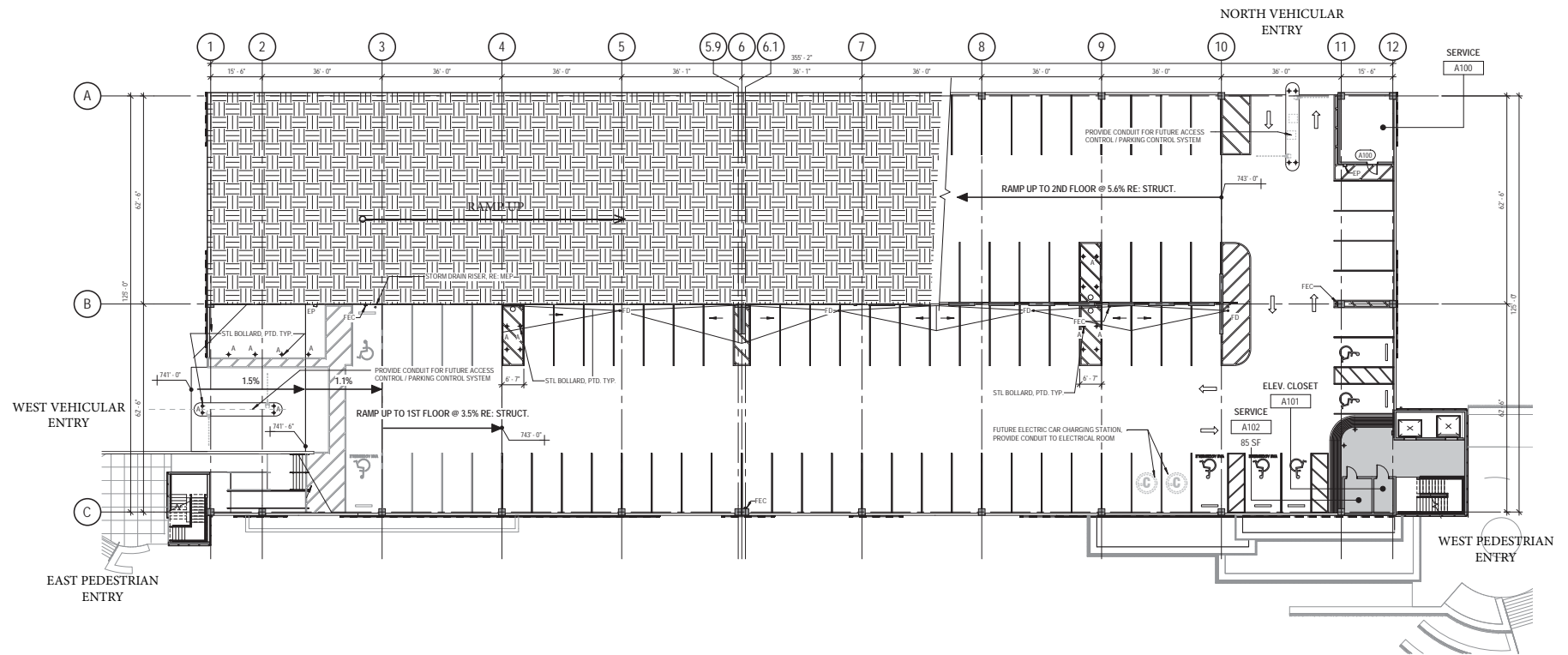
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PROJECT SITE







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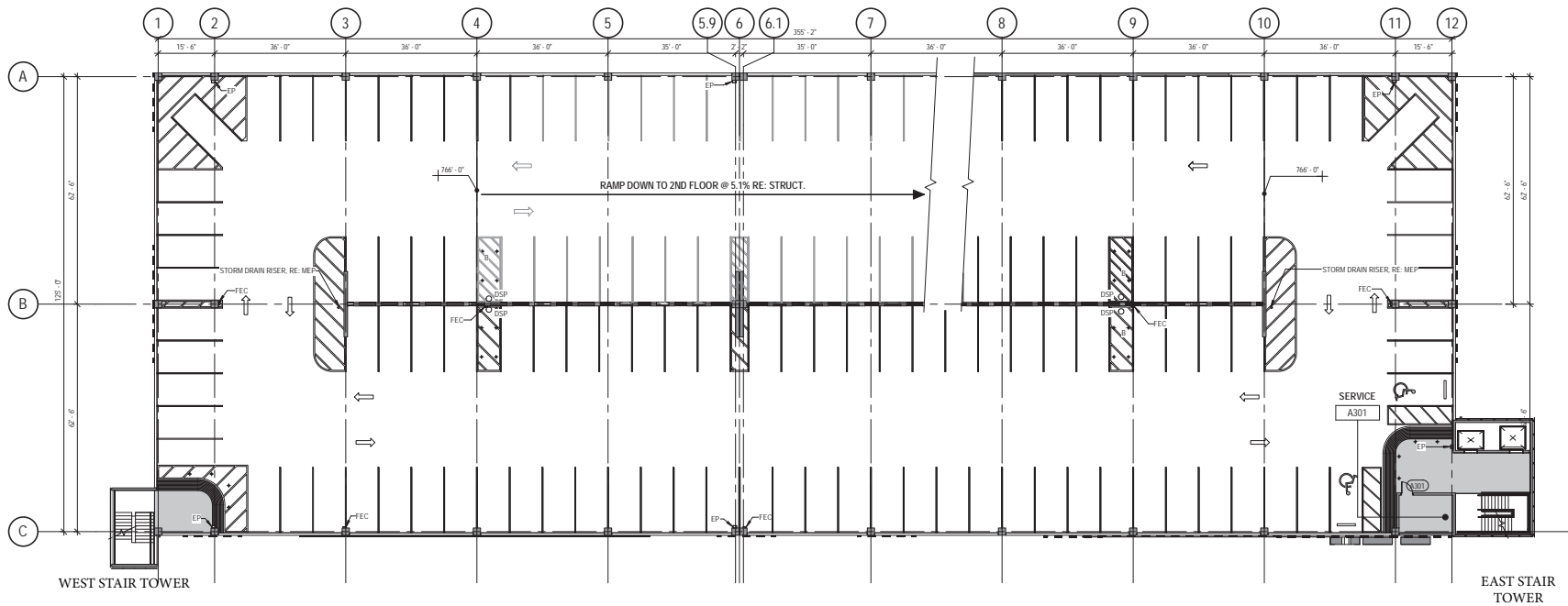
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Floor Plan
1st Floor

Scale: 1"=30'=0" @ 11x17



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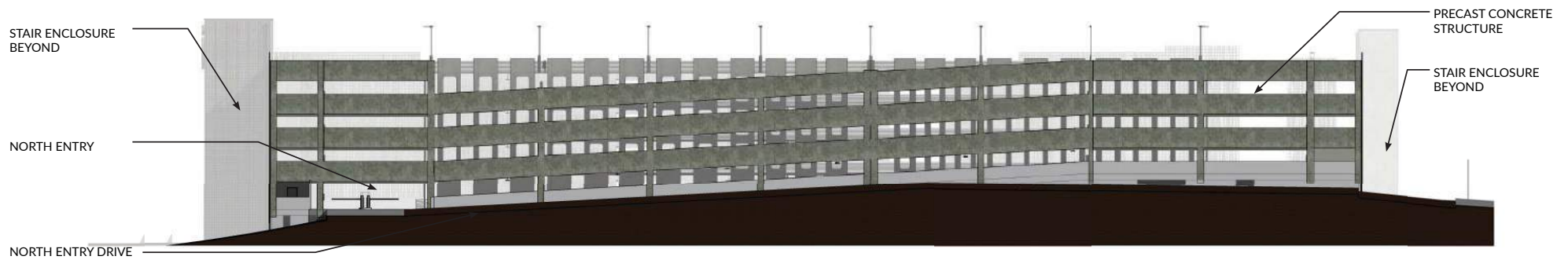
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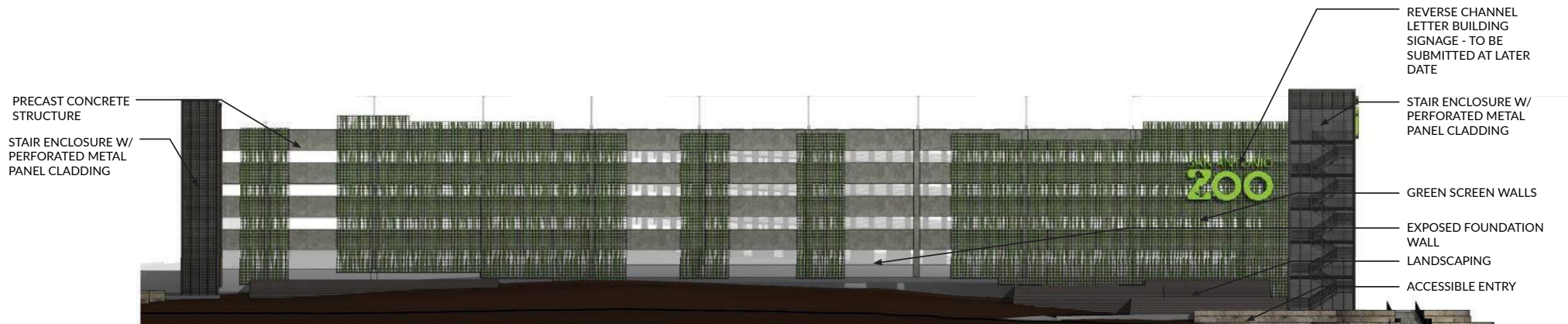


Floor Plan
3rd - 4th Floors Sim.

Scale: 1"=30'-0" @ 11x17



NORTH ELEVATION



SOUTH ELEVATION

In association with:



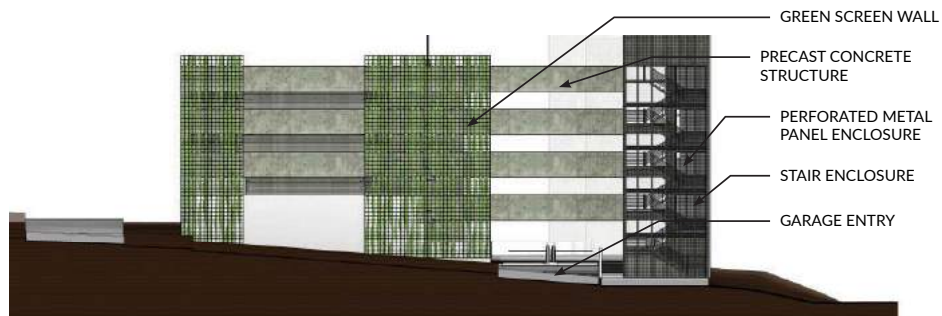
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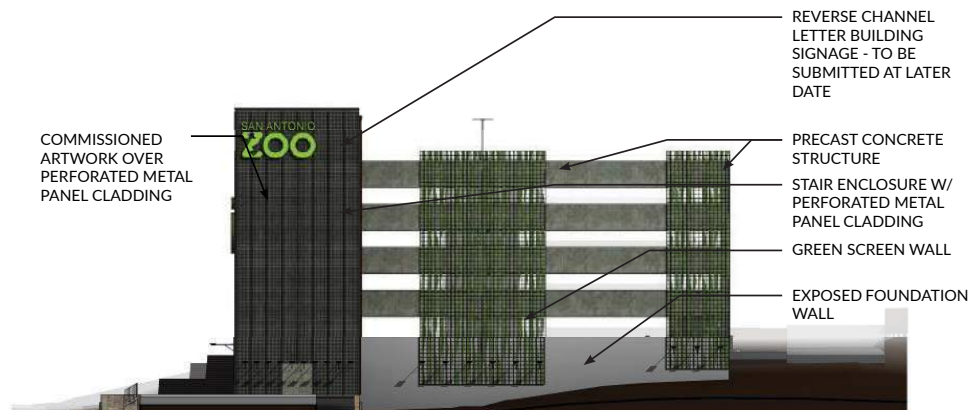
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Building Elevations

Scale: 1/16" = 1'-0" @ 11"x17"



WEST ELEVATION



EAST ELEVATION

MATERIAL / FINISH LIST:

METAL PANEL:

- 8 ga. Perforated Metal Panel
- 3/4" Rounds on 1" Staggered Centers
- Pre-finished Aluminum - Mill / Gray Finish

GREEN SCREEN:

- greenscreen Basis of Design
- Pre-Finished - Dark Green or Galvanized

CAST IN PLACE CONCRETE:

- Exposed, unfinished

PRECAST CONCRETE STRUCTURE:

- Exposed, unfinished, with reveals as shown

LIMESTONE QUARRY LANDSCAPE WALLS:

- 1x2x5 Block, Natural Stone Finish, Smooth Face

MODULAR STONE RETAINING WALLS:

- 1x2x5 Block, Natural Stone Finish, Smooth Face

EXTERIOR SITE LIGHTING

TOP LEVEL PARKING LIGHTING:

- 10'-0" Pole Mounted Light Fixture, refer to detail and cut-sheets

BUILDING ACCENT LIGHTING:

- Linear uplighting at Green Screens, typical.
- Linear up and down lighting @ perforated metal panel, typical

PEDESTRIAN LIGHTING:

- Pole mounted Pedestrian level lighting at Plaza entries and walk

SIGNAGE:

- Reverse Channel Signage to be back halo lit
- Signage to be submitted at later date

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Building Elevations

Scale: 1/16" = 1'-0" @ 11"x17"



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Perspective Rendering

281 Northbound

Scale: NTS



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San Antonio Zoo Parking Garage
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November 30, 2018

Perspective Rendering
281 Northbound

Scale: NTS



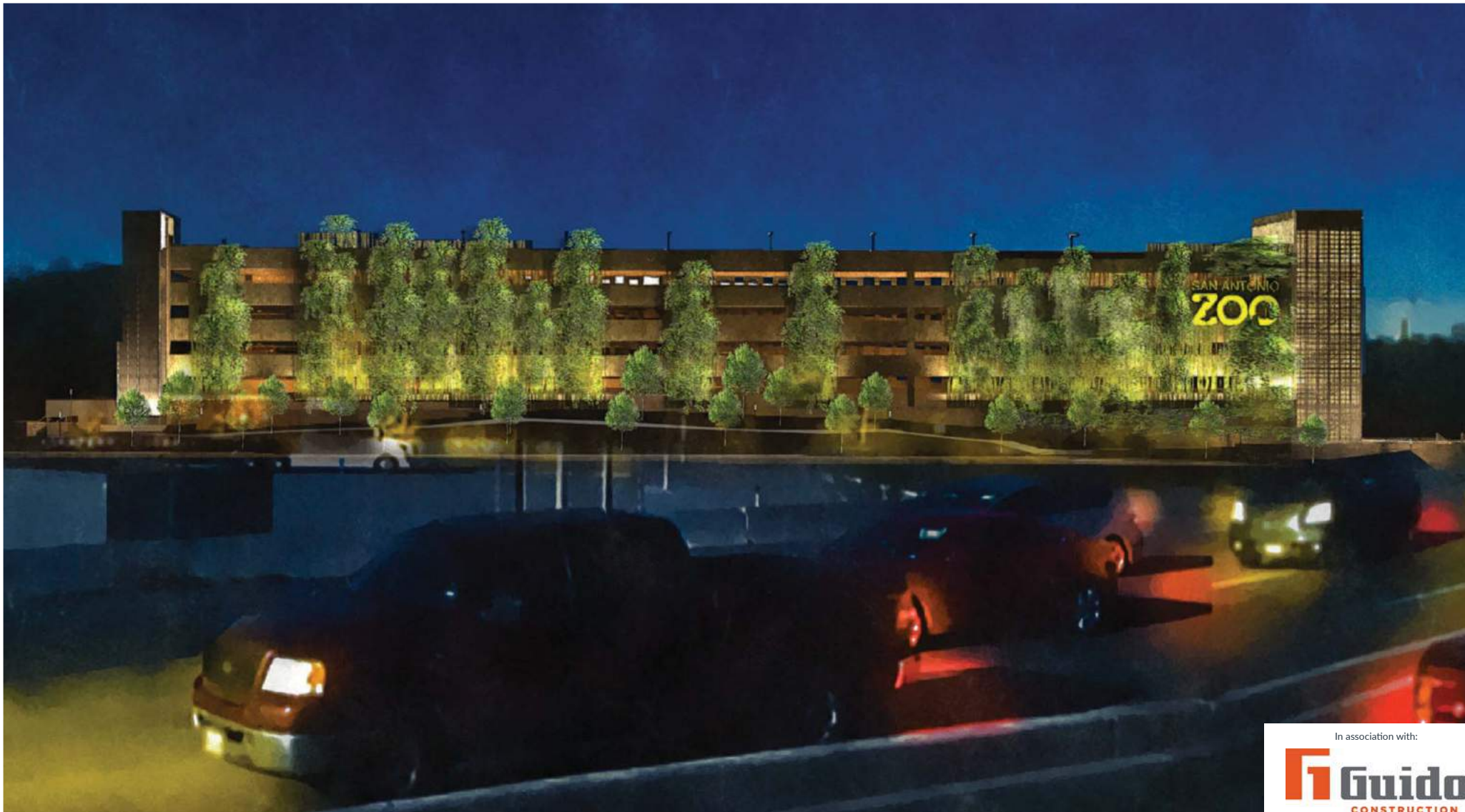
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Perspective Rendering
281 Northbound
Scale: NTS



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Historic Design and Review Commission - Final Submission

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Perspective Rendering

281 Northbound

Scale: NTS



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Perspective Rendering

Tuleta Approach

Scale: NTS



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Perspective Rendering
Tuleta Approach

Scale: NTS



GREEN SCREEN

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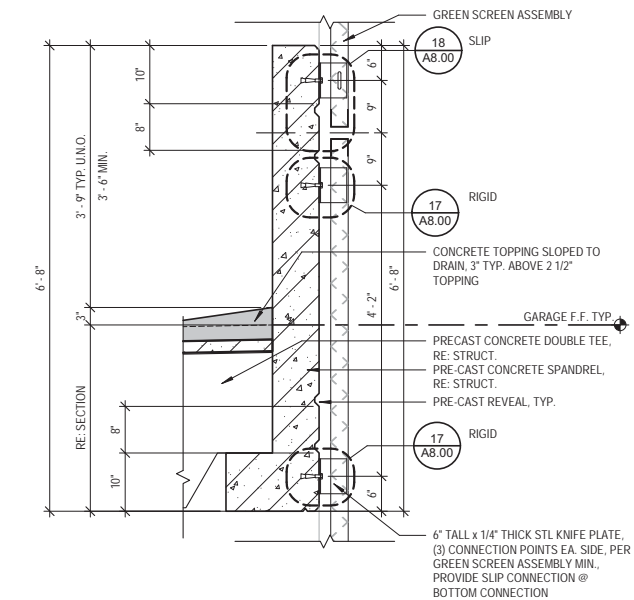
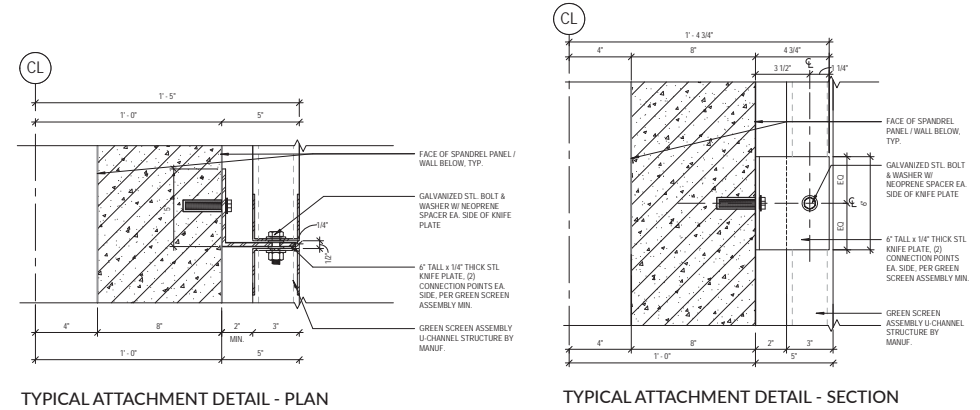
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Product Specifications
Building Materials

Scale: NTS



GREEN SCREEN



GREEN SCREEN SPECIFICATIONS:

BASIS OF DESIGN:
-greenscreen®

SPACING:
-2x2, 2x4, or 3x3

ASSEMBLY WIRE:
-2x2, 3x3, or 2x4 WELDED-WIRE MESH
-CONTINUOUS TRIM

FINISH:
-Polyester or polyester-urethane powder coat

COLOR:
-Green, or Galvanized

THICKNESS:
-3" Typical

SIZE:
Refer to Drawings

In association with:



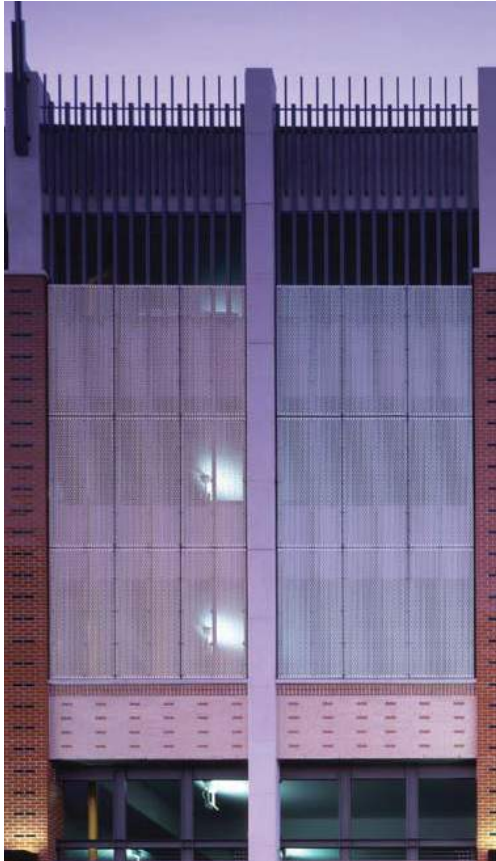
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Product Specifications
Building Materials

Scale: NTS



PERFORATED METAL PANEL

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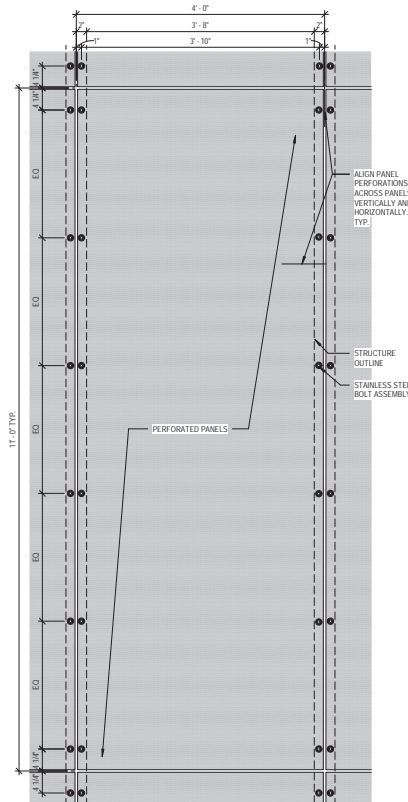
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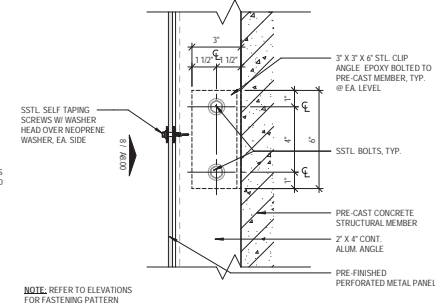
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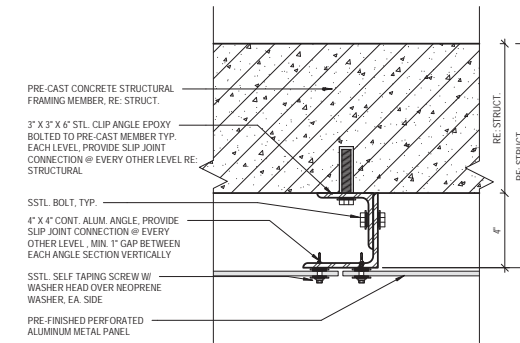
PERFORATED METAL PANEL



TYPICAL PANEL



TYPICAL ATTACHMENT DETAIL - SECTION



TYPICAL ATTACHMENT DETAIL - PLAN

METAL PANEL SPECIFICATIONS:

BASIS OF DESIGN:
-McNichols

SPACING:
-3/4" on 1" Staggered Rounds

MATERIAL:
-Pre-Finished Aluminum or Steel

FINISH:
-Polyester or polyester-urethane powder coat

COLOR:
-Silver or Mill Finish

THICKNESS:
-8 gage

SIZE:
Refer to Drawings



LIMESTONE LANDSCAPE WALLS

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Product Specifications
Building Materials

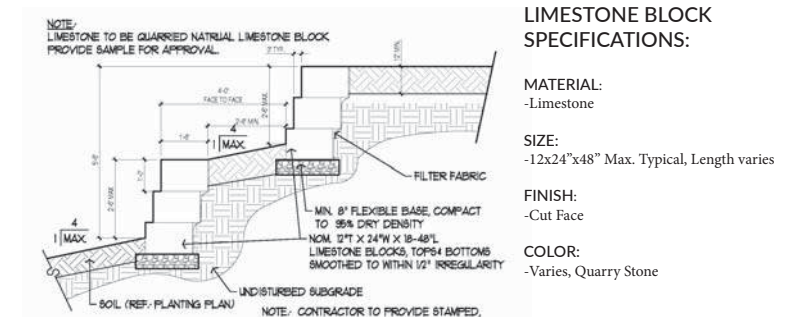
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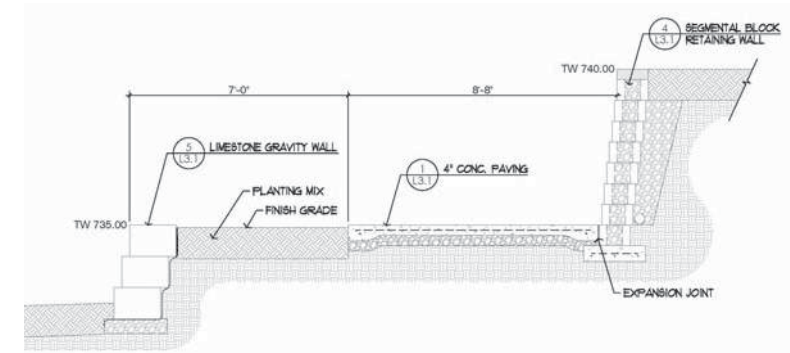
LIMESTONE LANDSCAPING WALLS



TYPICAL LIMESTONE LANDSCAPE WALL DETAIL

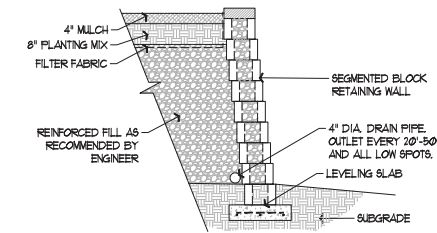


LIMESTONE WALL SECTION





MODULAR RETAINING WALL



TYPICAL MODULAR BLOCK WALL DETAIL



#827 - Straight Unit

MODULAR BLOCK SPECIFICATIONS:

BASIS OF DESIGN:

-Keystone - Regal Stone Pro - Straight

MATERIAL:

-Concrete Block with integrated color

SIZE:

-8"x18,6"x12"

FINISH:

-Straight Face, Rough

COLOR:

-Mixture of Gray, see supporting image

In association with:



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November 30, 2018

Product Specifications
Building Materials

Scale: NTS

Catalog # :

Project : TYPE P1

Prepared By :

Date :

Constitution - XCNA

LED Decorative Pedestrian & Area Light

This latest iteration of the LED Constitution decorative and pedestrian area light features LSI's innovative and high-performance silicone optics, as also featured in LSI's ground-breaking, patent-pending Mirada Series fixtures.

The Constitution is designed to illuminate pathways, walkway areas and campus sites. Its contemporary, sleek design complements architectural design elements well.

Features & Specifications

Optical System

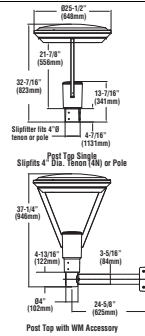
- State-of-the-art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP68 rated sealed optical chamber in 1 component
- Proprietary silicone reflector optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W and FT
- Silicone optical material does not yellow or crack with age and provides a minimum light transmittance of 95%
- Optical distributions are field rotatable (in 90° increments)
- Available in 5000K, 4000K, and 3000K (v=2700) color temperatures
- Minimum CRI of 70. Consult Factory for Higher CRI requirements
- Integral Louver (L) option available for improved back-light control without sacrificing street side performance. See page 4 for more details

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection
- 5-10W dimming (10% - 100%) standard
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (247-480 Vac)
- 120 Calculated Life >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion <20%
- Operating temperature -40°C to +50°C (-40°F to +122°F)
- Power factor >90
- Input power stays constant over life
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE Std 47.2)
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Terminal block provided accepts up to 10ga wire, however the luminaire is supplied with a 32/3 conductor wire harness
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed



Product Dimensions



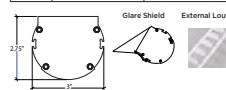
LSI Industries Inc. 8000 Alamo Rd. Channahon, IL 60440 • www.lsiindustries.com • (815) 372-3200 • © LSI Industries Inc. All Rights Reserved

PARKING LOT TOP DECK LIGHTING - TYPICAL - 10' POLE MOUNTED ON 4" PRECAST WALL (15' +/- ABOVE DECK)

PEDESTRIAN POLE LIGHTING - TYPICAL - 10' POLE



120VAC	
LED Output	LS
Length	2 ft. 3 ft. 4 ft. 8 ft. 2 ft. 3 ft. 4 ft. 8 ft.
Color	27K, 35K, 35K, & 40K
Optics	45° 120°
Package	120VAC
Mounting	4W/ft. 8W/ft.
Wattage	8W 12W 16W 32W 16W 24W 32W 64W
Max. Run	100 ft. max. run
Lumen/ft.	525 lm/ft. 1050 lm/ft.
CRI	>90



ORDER GUIDE

1400	Length	LH	40	U	15	SW	Finish	Options
1400	2' Nom.	LS Standard	27 27K	U 120-277 Vac	ND Non Dimming	15 15°	SW Silver Mount	15 15°
1400	3' Nom.	LS Standard	35 35K	U 120-277 Vac	ND Non Dimming	30 30°	LB L-Bracket Mount	32 Bronze
1400	4' Nom.	LS Standard	35 35K	U 120-277 Vac	ND Non Dimming	45 45°	WH White	N None
1400	8' Nom.	LS Standard	40 40K	U 120-277 Vac	ND Non Dimming	120 120°	CU Custom	N None
1400	8' Nom.	LS Standard	40 40K	U 120-277 Vac	ND Non Dimming	120 120°	CU Custom	N None
1400	8' Nom.	LS Standard	40 40K	U 120-277 Vac	ND Non Dimming	120 120°	CU Custom	N None
1400	8' Nom.	LS Standard	40 40K	U 120-277 Vac	ND Non Dimming	120 120°	CU Custom	N None
1400	8' Nom.	LS Standard	40 40K	U 120-277 Vac	ND Non Dimming	120 120°	CU Custom	N None
1400	8' Nom.	LS Standard	40 40K	U 120-277 Vac	ND Non Dimming	120 120°	CU Custom	N None
1400	8' Nom.	LS Standard	40 40K	U 120-277 Vac	ND Non Dimming	120 120°	CU Custom	N None

Example: 1400-4-LH-35-U-ND-45-SW-BZ-2

Accessories

Part No.	Description
1400-LED-GLS	Glare Shield
1400-LED-LS	External Blade Louver
A4xx-PWB & A4xx	4" Extended Arm - QTH fixture uses only 1 part # A4xx-PWB
A4xx-PWB & A4xx	Custom Length Extended Arm - QTH fixture uses only 1 part # A4xx-PWB
PERMAPOST & PERMAPOST-PWB	PermaPost - QTH fixture uses only 1 part # PERMAPOST-PWB

x = Length: 2, 3, 4, 8 c = Custom length (specify in inches) xx = Color (SO) Silver, (BZ) Bronze, (WH) White, (CU) Custom

BUILDING ACCENT LIGHTING MOUNTED OFF FACE OF PRECAST STRUCTURE - TYPICAL @ GREEN SCREEN AND PERFORATED PANEL

ORGATECH

Architura 1400

Linear Wallwash LED 120/277VAC

Project

Type

Date

Using the latest highly energy efficient LED arrays, Architura creates the perfect replacement for T5 fluorescent linear luminaires. Providing pin-point accurate lighting distribution, Orgatech's four lensing options created for grazing, wallwashing, long throw wallwashing, and floodlighting. Careful positioning of accurately lensed LEDs within fixtures reduces glare, while using the power of LEDs to their greatest advantage.

Super bright LED fixtures should be aimed away from the casual visual field to avoid glare and visual discomfort.

Construction

Architectural extruded aluminum housing. Diecast endcaps. Polycarbonate lens. Swivel adjustment.

Warranty

5 year/50,000 hour limited warranty.

Mounting

Wall, ceiling or ground post mount. Sliding swivel or space saving brackets adjust along the fixture to allow for mounting condition changes.

Finish

Anodized or polyester powder coated. Silver, bronze, or white. Custom colors at added cost.

Environment

Dry, damp or wet location - IP66.

Certifications

UL Listed. Certified to CSA Standard C22.2 No. 9. Tested in accordance with IESNA LM-79 and LM-80 Standards.

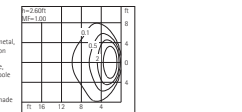
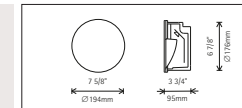
ERCO

Visor Floor washlight TYPE ST



34730.021
LED 180 6000 4000K neutral white
Tailing edge dimmable
Visor 2
Flush mounting detail
Spherulitic lens, wide beam

Product description
Housing: polycarbonate
Tailing edge dimmable
Visor 2
Flush mounting detail
Spherulitic lens, wide beam
Control gear: 60Hz, 120V dimmable, 277V switchable, 1 cable entry, 3-pole terminal block
LED module: high-power LEDs on metal-core PCB. Collimating lens made of optical polymer.
Cover with non-reflective safety glass: corrosion-resistant cast aluminum, No-Retex surface treatment. Graphite in double powder-coated.
Suitable for wet location (IP66). Dust-proof and water jet-proof.
120V: dimming with external dimmers possible (trailing edge).
Weight: 3.9 lbs / 1.8 kg



Technical data	4000K
Luminaire type	ERCO
Connected load	60W
Luminaire efficiency	94lm/W
Color deviation	2 SDCM
Color rendition index	CRI 90
Lumen maintenance (LM-80/TL-2)	LM-80: >100,000h
Lumen maintenance (LED manufacturer specification)	LM-80: >100,000h
LED failure rate	0.1% <50,000h
LMF	0

For your regional contact in the ERGO Sales network click here
www.ergocon.com/contact

Technical region: 120/60Hz, 277V/60Hz
We reserve the right to make technical and design changes

SITE STEP LIGHTING

In association with:



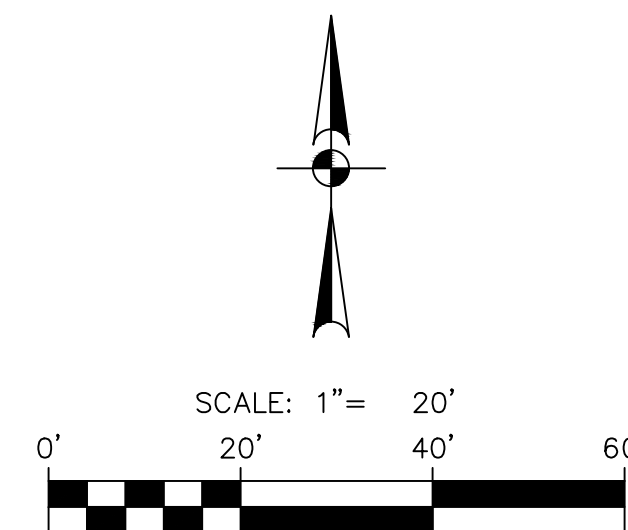
Alamo
ARCHITECTS

SAN ANTONIO
ZOO






San Antonio Zoo Parking Garage
Historic Design and Review Commission - Final Submission
November 30, 2018

Product Specifications
Light Fixtures

Scale: NTS



LEGEND

- | | |
|---|--|
|  | PROPERTY LINE |
|  | RETAINING WALL WITH HAND RAILS
(SEE LANDSCAPE AND STRUCTURAL PLANS) |
|  | DETENTION BASIN CUT WALL (SEE SHEET C3.30 FOR DETAIL) |
|  | CUT WALL
(SEE DETAIL SHEET) |
|  | HEAVY DUTY CONCRETE (SEE C2.30 FOR DETAIL) |

KEYED NOTES

- 1 8" CONCRETE CURB (TYPICAL)
SEE DETAIL SHEET C2.30
- 2 8" CONCRETE SIDEWALK
(UNLESS OTHERWISE NOTED)
SEE DETAIL SHEET C2.30
- 3 RIGHT TURN ARROW
SEE DETAIL SHEET C2.30
- 4 LEFT TURN ARROW
SEE DETAIL SHEET C2.30
- 5 SAWTOOTH CURB
SEE DETAIL SHEET C2.30
- 6 VEHICULAR STEEL GUARDRAIL
SEE DETAIL SHEET C2.30
- 7 4" WHITE STRIPES (TYPICAL)
- 8 ARROW
SEE DETAIL SHEET C2.30
- 9 7" CONCRETE CURB
SEE DETAIL SHEET C2.30
- 10 SIDEWALK RAMP
SEE DETAIL SHEET C2.30
- 11 STOP SIGN
SEE DETAIL SHEET C2.30

NOTES:

ALL SIDEWALKS, CURBS, RAMPS AND DRIVE APPROACHES IN THE RIGHT OF WAY SHALL BE IN COMPLIANCE WITH CURRENT TEXAS ACCESSIBILITY STANDARDS AND CITY OF SAN ANTONIO DESIGN STANDARDS PRIOR TO FINAL INSPECTION APPROVAL



1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2612 / F. 210.227.9457

GENERAL CONTRACTOR

GUIDO CONSTRUCTION
8526 Vidor Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pane Dawson Engineers

2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studios

2425 Broadway, Suite 105
San Antonio, Tx 78215
P. 210 828 1155 / F. 210 828 1399

STRUCTURAL ENGINEER

Datum Engineers

5021 Broadway Street
San Antonio, Tx. 78209
P. 210.858.2880

MEP ENGINEERS

Alderson Associates

7700 Torino, Suite 101
San Antonio, Tx 78229
P. 210.614.1110




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[illegible]

PROJECT NUMBER: 8980-08

DRAWN BY: JG

APPROVED BY: 

DATE: 11/06/11

CLIENT

CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENTS

PROJECT NAME

SAN ANTONIO
ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-31

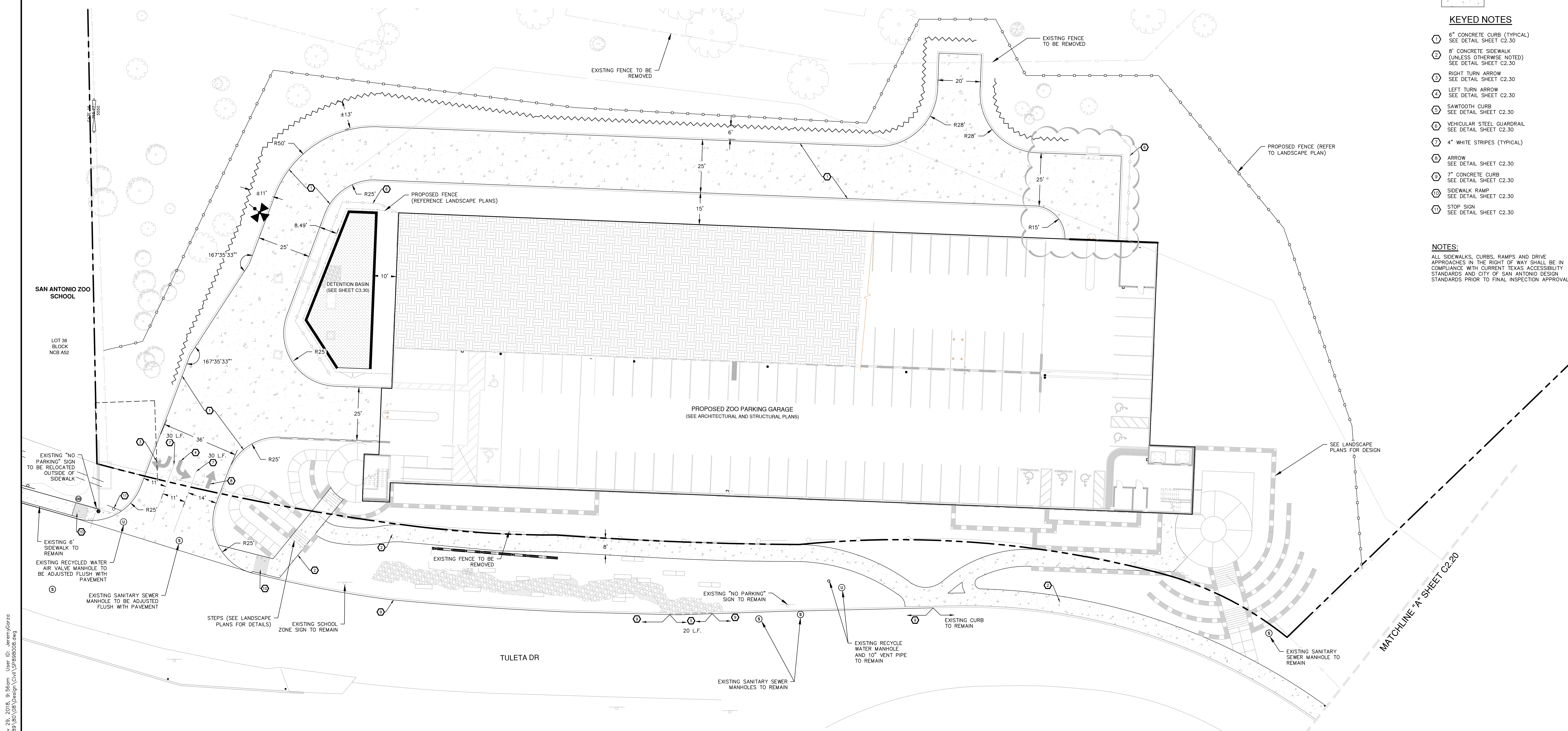
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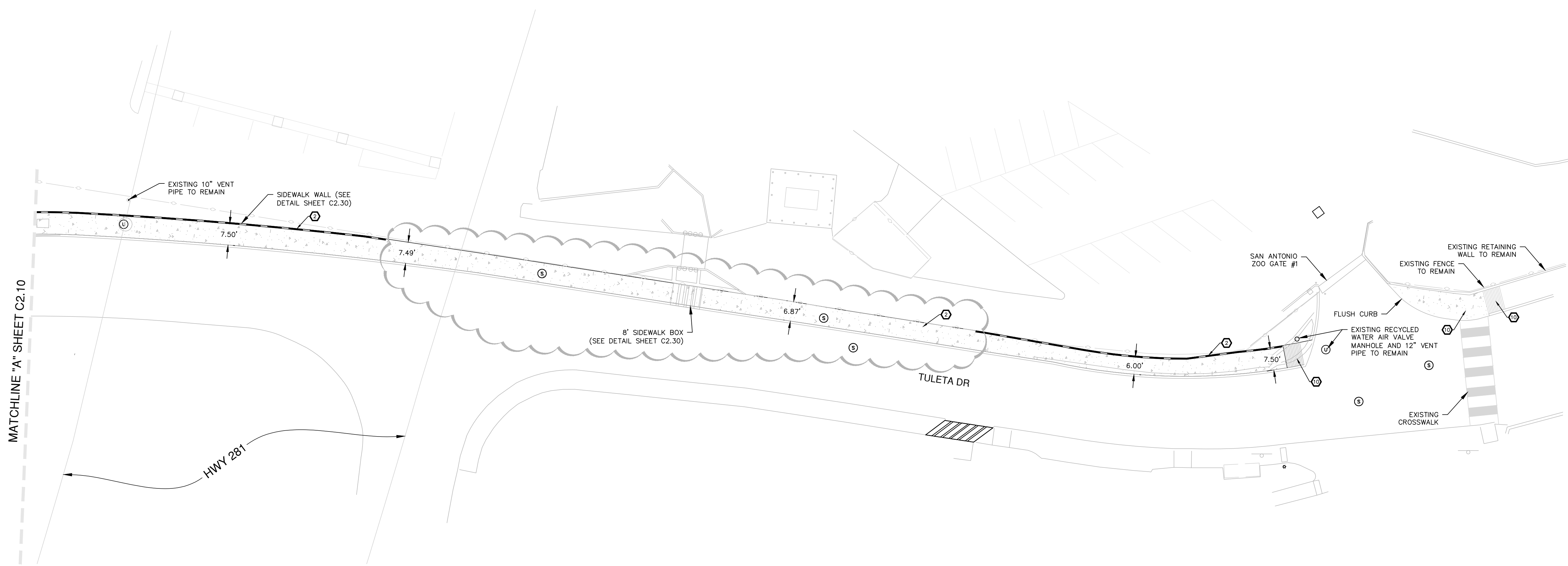
SHEET TITLE

SITE AND PAVING PLAN

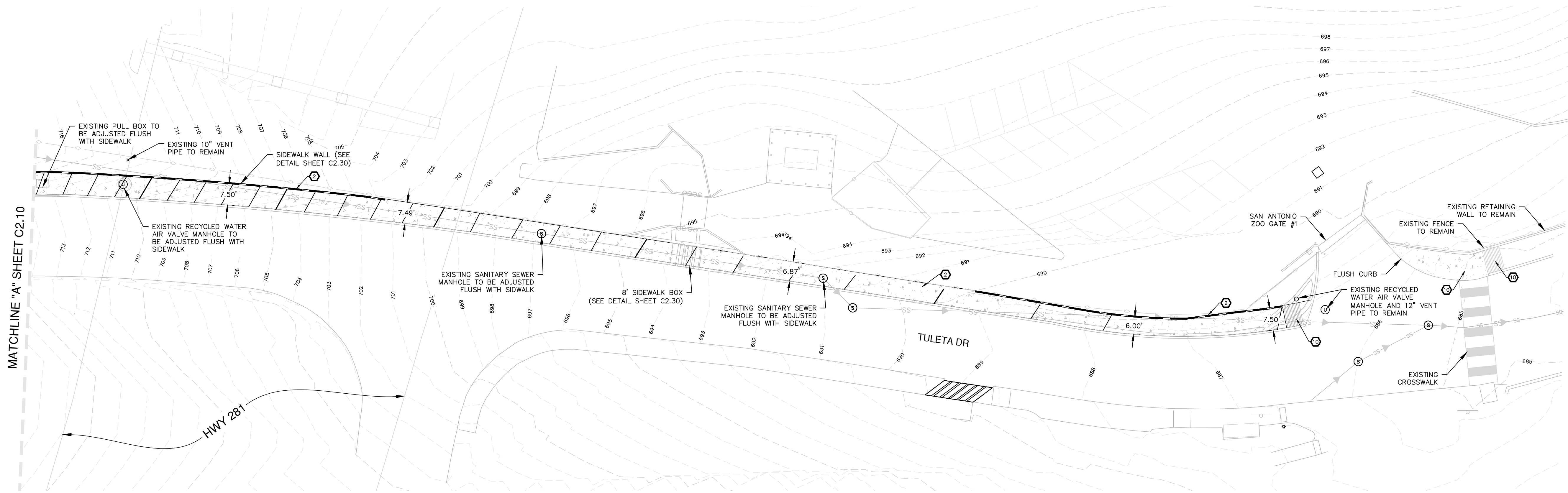
C2.10



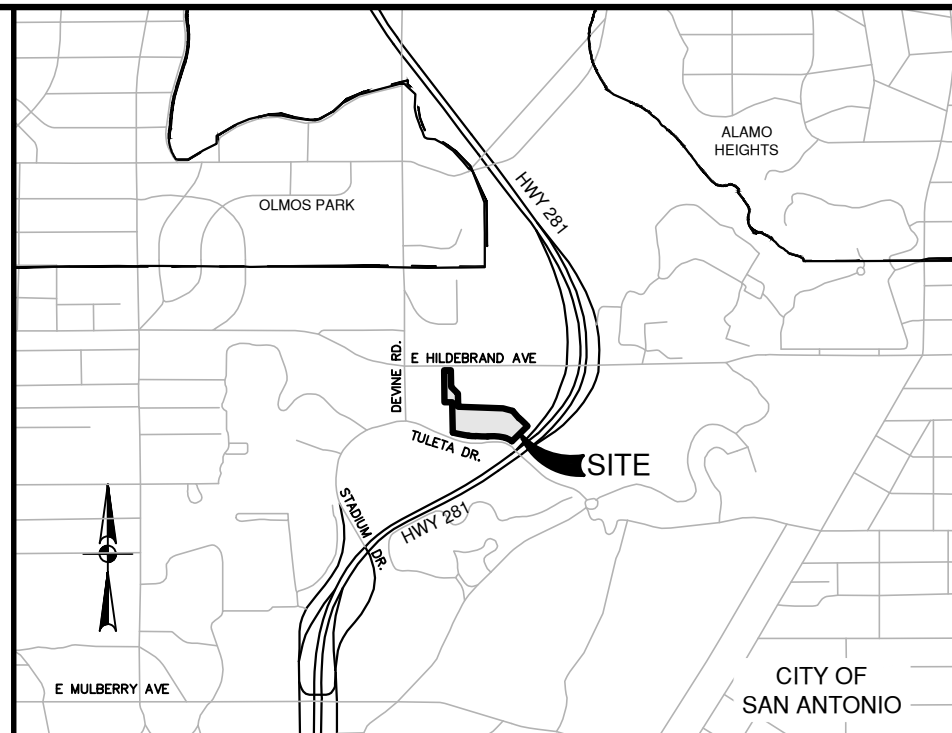
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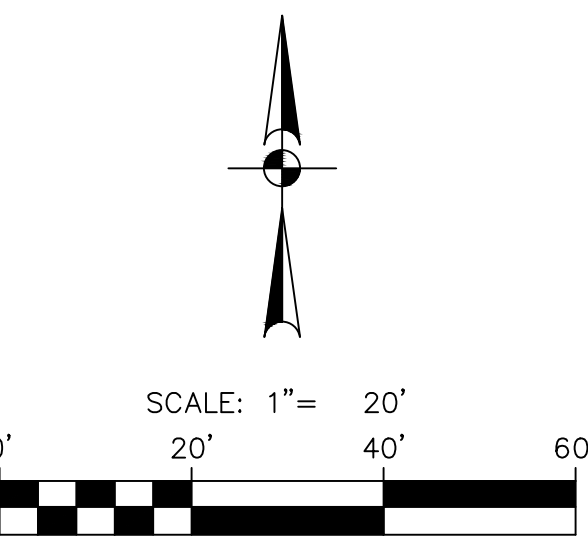
SITE PLAN



GRADING PLAN



LOCATION MAP
NOT-TO-SCALE



KEYED NOTES

- 8" CONCRETE SIDEWALK (UNLESS OTHERWISE NOTED) SEE DETAIL SHEET C2.30
- SIDEWALK RAMP SEE DETAIL SHEET C2.30
- SIDEWALK WALL SEE DETAIL SHEET C2.30

NOTES:

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1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2612 / F. 210.227.9457

GENERAL CONTRACTOR

GUIDO CONSTRUCTION

8526 Vidor Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pape Dawson Engineers

2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studios

2425 Broadway, Suite 105
San Antonio, Tx. 78215
P. 210.828.1155 / F. 210.828.1399

STRUCTURAL ENGINEER

Datum Engineers

5021 Broadway Street
San Antonio, Tx. 78209
P. 210.858.2880

MEP ENGINEERS

Alderson Associates

7700 Torino, Suite 101
San Antonio, Tx. 78229
P. 210.614.1110



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PROJECT NUMBER: 8880-08

DRAWN BY: JG

APPROVED BY: AR

DATE: 11/06/18

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CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENTS

PROJECT NAME

SAN ANTONIO
ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3199

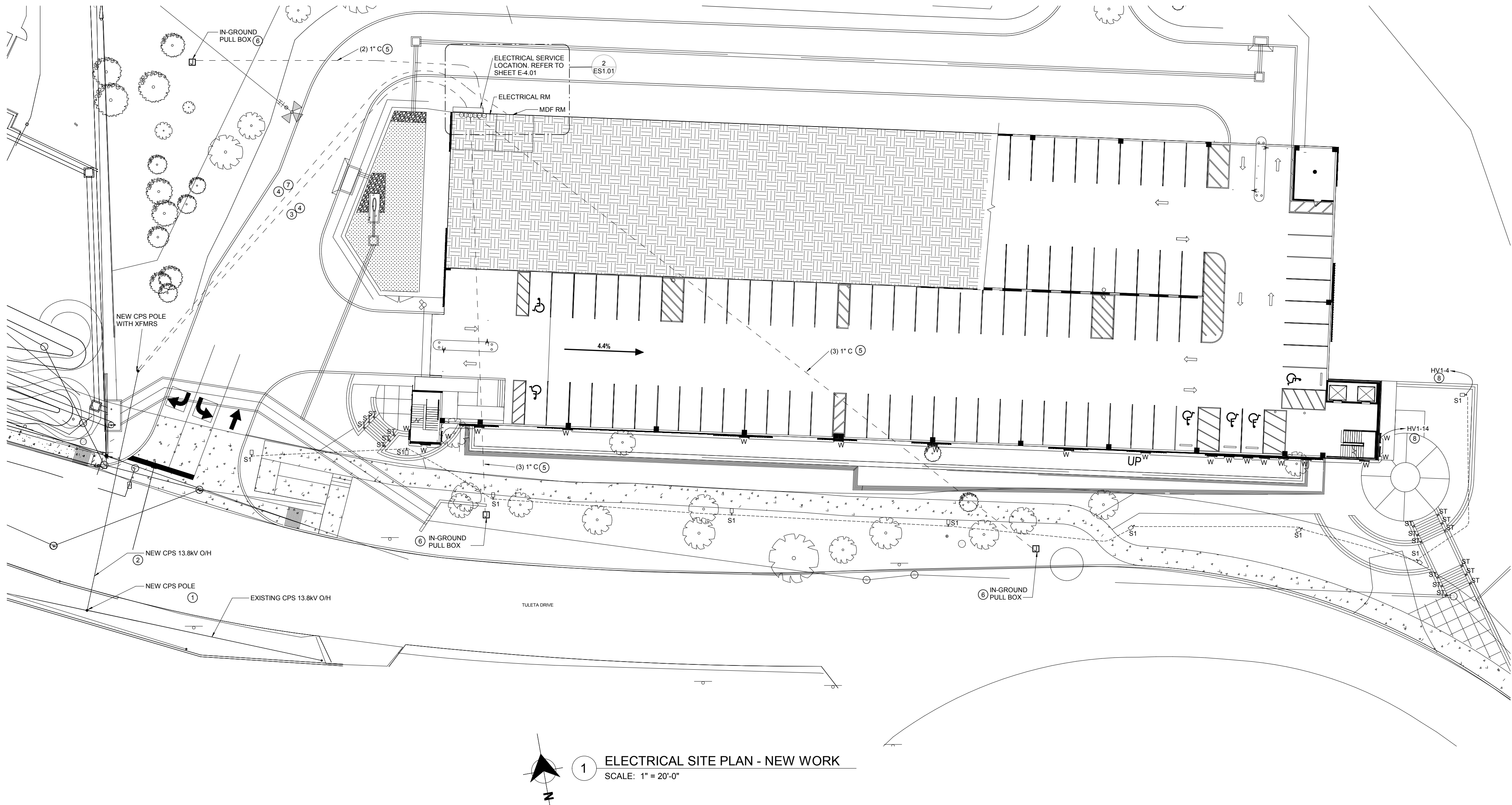
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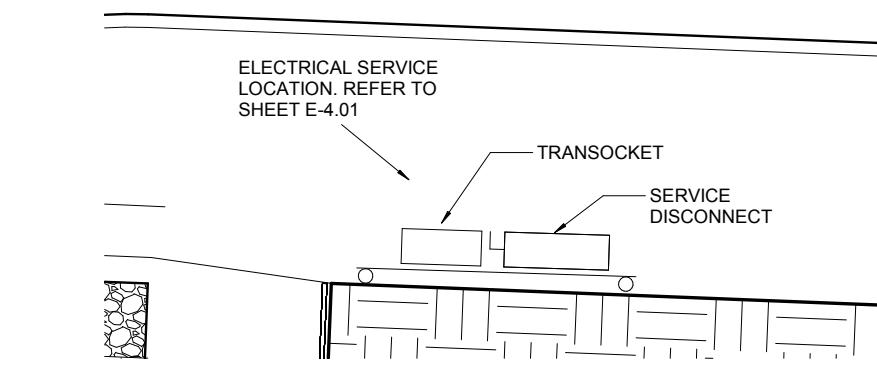
SHEET TITLE

OFFSITE
SIDEWALK
PLAN

C2.20



1 ELECTRICAL SITE PLAN - NEW WORK
SCALE: 1" = 20'-0"



2 ELECTRICAL ENLARGED SITE PLAN
SCALE: 1/8" = 1'-0"

GENERAL
SITE PLAN NOTES

(THIS SHEET ONLY)

1. COMPLETE WORK IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND INTERPRETATIONS OF AHJ.
2. COORDINATE WORK WITH OTHER TRADES AS REQUIRED TO PROVIDE COMPLETE SYSTEMS AND AVOID CONFLICTS.
3. COORDINATE WORK IN THE PARKING AND CONSTRUCTION AREAS WITH OWNER, TO AVOID CONFLICT WITH OTHER ACTIVITIES OR FUNCTIONS THAT REQUIRE ACCESS TO THE AREA.
4. COORDINATE AND SCHEDULE ALL EXCAVATION, TRENCHING, BACKFILL, CONCRETE WORK, LIGHT POLE ERECTION, AND OTHER SITE WORK WITH OWNER IN ADVANCE OF THIS WORK, GIVING SPECIAL CONSIDERATION TO WORK INVOLVING CONTROLLED ACCESS TO PARKING LOTS AND OCCUPIED AREAS.
5. REQUEST UTILITY LOCATING SERVICE TO IDENTIFY ALL UNDERGROUND UTILITIES IN THE VICINITY OF UNDERGROUND WORK. VERIFY WITH UTILITY LOCATING SERVICE THAT MARKING IS COMPLETE PRIOR TO COMMENCING WORK.
6. LIGHT FIXTURES, WIRING DEVICES, AND EQUIPMENT SHALL BE LISTED AND LABELED BY A NRTL.

KEYED NOTES

(APPLIES TO THIS SHEET ONLY)

1. NEW CPS ENERGY POLE FOR SLACK SPAN CROSSING OF TULETA DRIVE BY CPS ENERGY.
2. MAXIMUM SEPARATION DISTANCE BETWEEN CPS ENERGY POLES IS 100 FEET FOR SLACK SPAN. CONTRACTOR SHALL FIELD VERIFY EXACT DISTANCE AND COORDINATE EXACT LOCATION OF CPS ENERGY TRANSFORMER/ERISER POLE WITH CPS ENERGY AND SITE CIVIL WORK.
3. UNDERGROUND ELECTRICAL SERVICE LATERAL TO ELECTRICAL ROOM. REFER TO SHEET E-4.01.
4. REFER TO ELECTRICAL DETAIL SHEET FOR CONDUIT BURIAL DETAIL.
5. UNDERGROUND CONDUITS FOR LANDSCAPE LIGHTING. ROUTE CONDUITS FROM STUB-UP IN ELECTRICAL ROOM TO IN-GROUND PULL BOX AS INDICATED. PROVIDE PULL STRING.
6. PROVIDE IN-GROUND PULL BOX. REFER TO ELECTRICAL DETAIL SHEET.
7. PROVIDE (2) 1" CONDUITS FOR OWNER'S TELECOM PROVIDER. ROUTE CONDUITS UNDERGROUND FROM CPS ENERGY POLE TO MDF RM ADJACENT TO MAIN ELECTRICAL ROOM.
8. ROUTE EXTERIOR LIGHTING CIRCUIT THRU LIGHTING CONTROL PANEL VIA #10 AWG WIRE MINIMUM.

PROJECT # 1802
ALDERSON & ASSOCIATES, INC.
MEP ENGINEERING | COMMISSIONING
7700 Torino St, Suite 101
San Antonio, TX 78209
Telephone: 210.614.1110
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F-1008

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Engineer: Dean Alderson
P.E. Reg. No. 24441
Firm: Alderson & Associates, F-1008



1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2612 / F. 210.227.9457

GENERAL CONTRACTOR

GUIDO CONSTRUCTION

8326 Vidar Ave.
San Antonio, TX 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pape Dawson Engineers

2000 NW Loop 410
San Antonio, TX 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studios

2425 Broadway, Suite 105
San Antonio, TX 78215
P. 210.828.1150 / F. 210.828.1399

STRUCTURAL ENGINEER

Datum Engineers

5021 Broadway Street
San Antonio, TX 78209
P. 210.858.2000

MEP ENGINEER

Alderson Associates

7700 Torino, Suite 101
San Antonio, TX 78209
P. 210.614.1110

PROJECT NUMBER: 2018-27
DRAWN BY: VCR
APPROVED BY: LMC
DATE: 11/16/18

CLIENT
**CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENT**

PROJECT NAME
**SAN ANTONIO
ZOO PARKING
GARAGE**

3903 N. St. Mary's St.
San Antonio, TX 78212-3199

**75%
CONSTRUCTION
DOCUMENTS**

SHEET TITLE

**ELECTRICAL
SITE PLAN**

ES1.01

GENERAL CONTRACTOR

GUIDO CONSTRUCTION

8526 Vidor Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pape Dawson Engineers

2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studios

2425 Broadway, Suite 105
San Antonio, Tx 78215
P. 210.828.1155 / F. 210.828.1399

STRUCTURAL ENGINEER

Datum Engineers

5021 Broadway Street
San Antonio, Tx. 78209
P. 210.858.2880

MEP ENGINEER

Alderson Associates

7700 Torino, Suite 101
San Antonio, Tx. 78295
P. 210.614.1110

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PROJECT NUMBER: 2018-27

DRAWN BY: VCR

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DATE: 11/20/11

CLIENT

CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENT

PROJECT NAME

SAN ANTONIO
ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3195

75%
CONSTRUCTION
DOCUMENTS

SHEET TITLE

LIGHTING
FLOOR PLAN
LEVEL 1

E1.01

GENERAL LIGHTING NOTES (THIS SHEET ONLY)

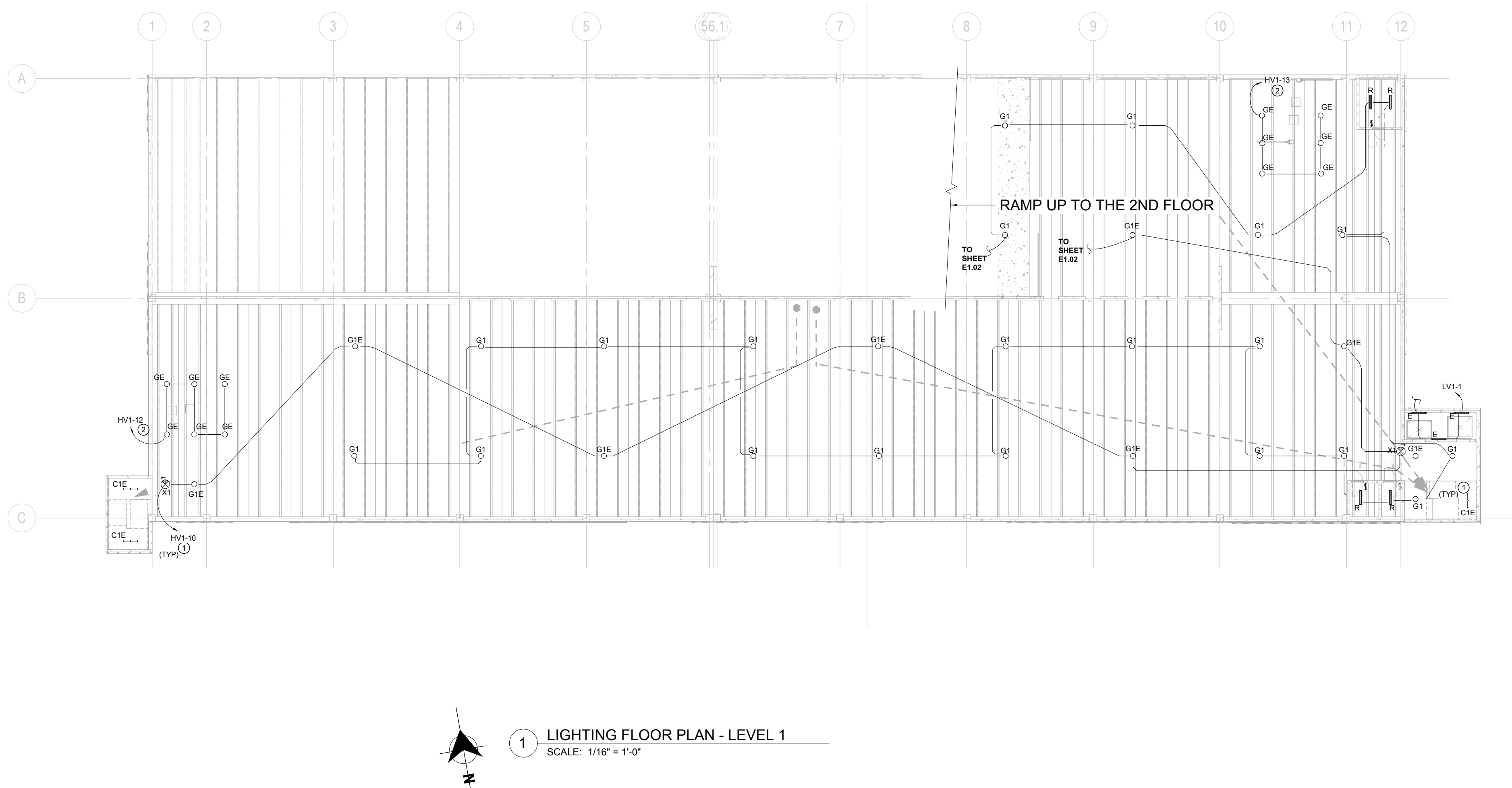
3. COMPLETE WORK IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND INTERPRETATIONS OF AHJ.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH TRADES AS REQUIRED TO PROVIDE COMPLETE SYSTEMS AND AVOID CONFLICTS.
5. MOUNT LIGHT SWITCHES AT 4'4" AFF, AS MEASURED FROM BOTTOM OF BOX. CONDUCTORS SHALL BE WORKED IN ACCORDANCE WITH REQUIREMENTS OF GFCI PER A MINIMUM OF FOUR 9/4" GALVANIZED WIRES ATTACHED TO THE FIXTURE AT EACH CORNER.
6. CONDUCTOR INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR PLUMBING AND MECHANICAL EQUIPMENT, BOTH CURRENT AND FUTURE, KEEP CONDUITS TOP OF CEILING, OR RUN OUT THROUGH STRUCTURAL TRUSSES WHEREVER POSSIBLE.
7. SINGLE PHASE WIRING IS SHOWN FOR CIRCUIT IDENTIFICATION ONLY. ALL CIRCUITS MAY BE GROUPED UP TO THREE (3) PHASE CONDUCTORS PER INSTALLED, UNLESS NOTED OTHERWISE.
8. ALL TRUNK (SHARED) NEUTRAL CONDUCTORS SHALL NOT BE RERUN. PROVIDE DEDICATED NEUTRAL CONDUCTORS FOR ALL SINGLE-PHASE BRANCH CIRCUITS.
9. MULTIPLE RUNS BEHIND JUNCTION BOXES SHALL BE MINIMUM OF 3/4" CONDUIT AND SHALL INCLUDE #10 MINIMUM CONDUCTORS AND INSULATED GREEN GROUNDING CONDUCTOR. SHALL CARRY EXTEND FROM OCPD TO A JUNCTION BOX IN THE AREA OF THE BRANCH CIRCUIT. ALL WIRING SHALL BE EQUIPMENT, DROPS TO INDIVIDUAL, 20-AMP WIRING DEVICES SHALL INCLUDE #12 AWG MINIMUM CONDUCTORS.
10. VOLTAGE DROP TO LAST DEVICE ON BRANCH CIRCUIT SHALL NOT EXCEED 3% PER DEVICE. MAXIMUM INCREASE BRANCH CIRCUIT CONDUCTOR SIZES TO 10% OF THE FIRST DEVICE.
11. ALL WIRING SHALL BE RUN ABOVE HAND CEILING, UNLESS OTHERWISE NOTED. DO NOT LOCATE JUNCTION BOXES ABOVE HAND CEILING. ALL CONNECTIONS TO FIXTURES IN A HAND CEILING WILL COME FROM A JUNCTION BOX LOCATED IN THE AREA OF THE BRANCH CIRCUIT.
12. FIXTURES SHALL NOT BE DAISY CHAINED TOGETHER. EACH FIXTURE TYPE SHALL HAVE ONLY ONE FLEXIBLE CONDUIT CONNECTION FROM A JUNCTION BOX TO THE FIXTURE AREA OF 6 FEET.
13. FMC SHALL BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES, IN RUNS UP TO 10 FEET LONG.
14. FMC SHALL BE USED FOR CONNECTIONS TO VIBRATION PRODUCING EQUIPMENT, SUCH AS MOTORS, TRANSFORMERS AND HVAC EQUIPMENT. FMC SHALL BE USED IN RUNS TO THE EQUIPMENT.
15. LIGHT FIXTURES, WIRING DEVICES, AND EQUIPMENT SHALL BE LISTED AND LABELED BY A NRTL.
16. PROVIDE UL LISTED FIRE STOP SYSTEMS AT ALL PENETRATIONS THROUGH RAISED ACCESS FLOORS.
17. MARK JUNCTION BOX COVERS USING PERMANENT MARKER INDICATING THE PANEL AND CIRCUIT NUMBER OF THE JUNCTION BOX COVER.
18. MARK SWITCH COVERS USING PERMANENT MARKER INDICATING THE PANEL AND CIRCUIT NUMBER SERVING THE SWITCHES).
19. CIRCUIT EXIT SIGNS, EMERGENCY SERVO FIXTURES, AND EMERGENCY LIGHTS EXITING OUTSIDE THE SPACE AND CIRCUIT AREA OF CIRCUIT DEVICES.
20. EXTERIOR LIGHTS THROUGH PHOTOCELL/TIMELOCK/BASIS-CONTROLLED LIGHTING CONTROL.

**LIGHTING FUNCTIONAL TESTING
AND COMMISSIONING PLAN:**

1. CONTRACTOR SHALL ENGAGE A THIRD PARTY CERTIFIED COMMISSIONING AGENCY TO COMPLETE THE TASKS BELOW TO VERIFY THE LIGHTING CONTROLS ARE OPERATING AS DESIGNED AND TO PROVIDE PROJECT DOCUMENTS AND APPLICABLE CODES. WRITTEN DOCUMENTATION SHALL BE PROVIDED TO THE ARCHITECT AND THE AGENCY SHALL PROVIDE THE FOLLOWING INFORMATION FOR EACH TASK: TASK DESCRIPTION, FINAL SETTINGS, AND THE DATE, INITIALS, SETTINGS OBSERVED, AND FINAL SETTINGS UPON COMPLETION.
2. CONTRACTOR SHALL COMPLETE AND DOCUMENT THE FOLLOWING TASKS:
 - A. VERIFY THE LIGHTING CONTROLS ARE FUNCTIONING AS PROJECT REQUIREMENTS.
 - B. PERFORM OPERATIONAL TESTING OF EMERGENCY EXIT AND EGRESS LIGHTING INDICATORS TO VERIFY THEY ARE FUNCTIONING AS REQUIRED.
 - C. ENSURE OCCUPANCY SENSORS ARE INSTALLED AND OPERATIONAL.
 - D. ENSURE DAYLIGHT PHOTOSENSORS ARE INSTALLED AND OPERATIONAL.
 - E. VERIFY SENSORS ARE INSTALLED AND OPERATIONAL.
 - F. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
 - G. SENSORS INDICATE WHEN THEY ARE NOT IN THE FIELD OF VIEW.
 - H. FEATURES ARE SWITCHED OR DAMAGED AS INDICATED IN THE DRAWINGS.
 - I. TIME DELAYS ARE SET APPROPRIATELY, AND
 - J. THE OUTSIDE OF THE SENSORS DOES NOT CAUSE THE SENSOR TO OPERATE.
3. TESTING OF PHOTOSENSORS DEVICES SHALL ENSURE THE FOLLOWING:
 - A. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
 - B. STATUS INDICATORS ARE FUNCTIONING.
 - C. FEATURES ARE DAMAGED AS INDICATED IN THE DRAWINGS.
 - D. LOCATION AND RATE OF RESPONSE ARE SET PER MANUFACTURER TO AVOID AIRPORT LIGHT LEVEL CHANGES, AND
 - E. THE LIGHTING CONTROL SYSTEM DOES NOT REDUCE THE SPACE DEPTH TO CAUSE UNNECESSARY OPERATION.
4. IN CORRIDOR, OCCUPANCY SENSOR CONTROL SHALL TURN LIGHTING ON TO MATCH THE OUTPUT OF LIGHTING CONTROLS IN THE ROOM OF ORIGIN. ALL OTHER AREAS, OCCUPANCY SENSOR CONTROL SHALL TURN LIGHTING ON TO NOT MORE THAN 50% PERCENT OF LIGHTING POWER OR MAXIMUM OF 100 WATT.
5. TEST SHALL BE SET WITH MANUFACTURER'S RECOMMENDED OCCUPATION.
6. CONTRACTOR SHALL DOCUMENT THE STEPS ABOVE ARE COMPLETED PRIOR TO COMPLETION OF THE PROJECT. CONTRACTOR SHALL OBTAIN CERTIFICATE OF OCCUPANCY CONTROL FROM THE ARCHITECT. PROVIDE DOCUMENTATION AS REQUIRED BY THE AIA TO SATISFY ALL PERMITTING AGENCIES.

KEYED NOTES (APPLIES TO THIS SHEET ONLY) ☐

- 1 CONNECT ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGN IN GARAGE TO
KV INVERTER.
- 2 ROUTE ENTRANCE LIGHTING CIRCUIT THRU LIGHTING CONTROL PANEL VIA
#10 AWG WIRE MINIMUM.



GENERAL LIGHTING NOTES (THIS SHEET ONLY)

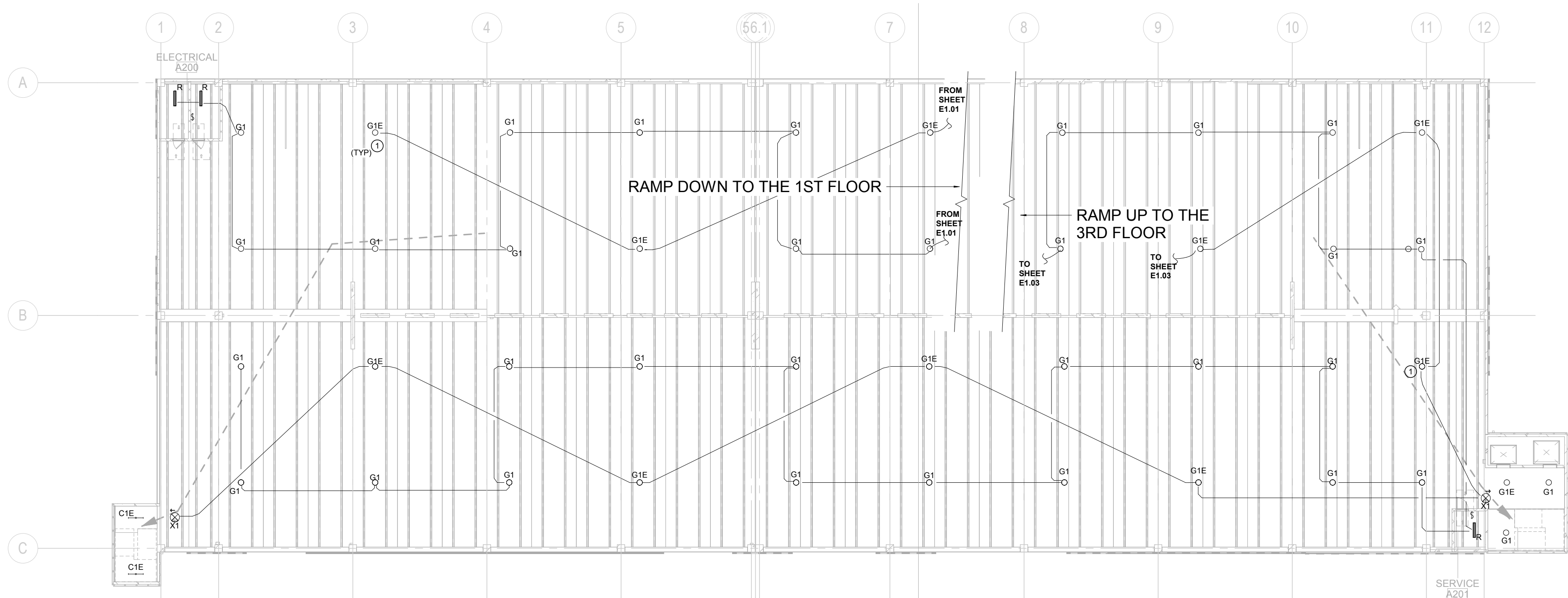
3. COMPLETE WORK IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND INTERPRETATIONS OF AHJ.
4. ALL WORK SHALL BE IN ACCORDANCE WITH TRADES AS REQUIRED TO PROVIDE COMPLETE SYSTEMS AND AVOID CONFLICTS.
5. MOUNT LIGHT SWITCHES AT 48" AFF, AS MEASURED FROM BOTTOM OF BOX. ALL SWITCHES IN LATH AND PLASTER ARE TO BE REPRESENTED BY GRID BY A MINIMUM OF FOUR 96" GALVANIZED WIRES ATTACHED TO THE FIXTURE AT EACH CORNER.
6. CONDUIT INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR PLUMBING AND MECHANICAL EQUIPMENT. BOTH CURRENT AND FUTURE, KEEP CONDUITS TO THE FLOOR OR TO THE FLOOR THROUGH STRUCTURAL TRUSSES WHEREVER POSSIBLE.
7. ALL CIRCUITS ARE SHOWN FOR CIRCUIT IDENTIFICATION ONLY. CIRCUITS MAY BE GROUPED UP TO THREE (3) PHASE CONDUCTORS PER RACEWAY, UNLESS NOTED OTHERWISE.
8. ALL SHARED NEUTRAL CONDUCTORS SHALL BE IDENTIFIED AND SHALL NOT BE INSTALLED. PROVIDE DEDICATED NEUTRAL CONDUCTORS FOR ALL SINGLE-PHASE BRANCH CIRCUITS.
9. MINIMUM CONDUCTOR SIZE IN JUNCTION BOXES SHALL BE MINIMUM OF 14 GAGE CUP AND SHALL INCLUDE 10% MINIMUM CONDUCTORS AND INSULATED GREEN GROUNDING CONDUCTOR. SHALL INCLUDE WIRE EXTEND FROM OCPD TO A MINIMUM OF 18" ABOVE THE AREA OF THE JUNCTION BOX. SHALL INCLUDE ALL EQUIPMENT, DROPS TO INDIVIDUAL, 20-AMP WIRING DEVICES SHALL INCLUDE 1/2" MINIMUM CONDUCTOR.
10. VOLTAGE DROP TO LAST DEVICE ON BRANCH CIRCUITS SHALL NOT EXCEED 3% PERCENT. PERMANENT INCREASE BRANCH CIRCUIT CONDUCTOR SIZES AS NECESSARY TO MAINTAIN VOLTAGE DROP TO 3% PERCENT.
11. DO NOT LOCATE JUNCTION BOXES ABOVE HARD CEILINGS. ALL CONNECTIONS TO FIXTURES IN A HARD CEILING WILL COME FROM A JUNCTION BOX LOCATED AT LEAST 18" ABOVE THE AREA OF THE JUNCTION BOX.
12. FIXTURES SHALL NOT BE DAISY CHAINED TOGETHER. EACH FIXTURE SHALL HAVE ONLY ONE FLEXIBLE CONDUIT CONNECTION FROM A JUNCTION BOX LOCATED AT LEAST 18" ABOVE THE AREA OF THE JUNCTION BOX.
13. FMC SHALL BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES, IN RUNS UP TO 10 FEET LONG.
14. CONDUIT SHALL BE USED FOR CONNECTIONS TO VIBRATION PRODUCING EQUIPMENT, SUCH AS MOTORS, TRANSFORMERS, AND HVAC EQUIPMENT.
15. CONDUIT SHALL BE USED IN RUNS TO ALL MOTORS, TRANSFORMERS, AND HVAC EQUIPMENT.
16. LIGHT FIXTURES, WIRING DEVICES, AND EQUIPMENT SHALL BE LISTED AND LABELED BY A NRTL.
17. PROVIDE UL LISTED FIRE STOP SYSTEMS AT ALL PENETRATIONS THROUGH ROOFING.
18. MARK JUNCTION BOX COVERS USING PERMANENT MARKING INDICATING THE LOCATION OF THE JUNCTION BOX AND THE BRANCH CIRCUIT.
19. MARK SWITCH COVERS/PLATES USING APPROVED LABELS PERMANENTLY INDICATING THE PANEL AND CIRCUIT NUMBER SERVING THE SWITCHES).
20. CIRCUIT IDENT. SIGNS, EMERGENCY EGRESS FIXTURES, AND EMERGENCY SIGNS TO NOTIFY OF EMERGENCY ARE TO BE SPACED AND CIRCUIT AHEAD OF CONDUIT DEVICES.
21. PROVIDE FIBER OPTIC LIGHTS THROUGH PHOTOCELL/TIMECLOCK/BAZOOKA CONTROLLED LIGHTING CONTROL ARM.

**LIGHTING FUNCTIONAL TESTING
AND COMMISSIONING PLAN:**

- CONTRACTOR SHALL ENGAGE A THIRD PARTY CERTIFIED COMMISSIONING AGENT TO COMPLETE THE TASKS BELOW TO VERIFY THE LIGHTING SYSTEM IS OPERATIONAL AND MEETS THE PROJECT'S REQUIREMENTS. THE FOLLOWING INFORMATION FOR EACH TASK, DATE PERFORMED, AND THE RESULTS OF THE TESTING, INITIALS, TESTINGS OBSERVED, AND FINAL SETTING UPON COMPLETION.
- CONTRACTOR SHALL COMPLETE AND DOCUMENT THE FOLLOWING TASKS:
- A. VERIFY LIGHT FIXTURES ARE INSTALLED AND FUNCTIONING.
 - B. PERFORM OPERATIONAL TESTING OF EMERGENCY EXIT AND EGRESS LIGHTS TO ENSURE THEY ARE OPERATIONAL.
 - C. ENSURE OCCUPANCY SENSORS ARE INSTALLED AND OPERATIONAL.
 - D. ENSURE DAYLIGHT PHOTOSENSORS ARE INSTALLED AND OPERATIONAL.
 - E. VERIFY SENSORS ARE INSTALLED AND FUNCTIONING.
 - F. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
 - G. SENSORS ARE SWITCHED ON AND INDICATED IN THE DRAWINGS.
 - H. TIME DELAYS ARE SET APPROPRIATELY.
 - I. TESTS OUTSIDE OF THE SPACE DOES NOT CAUSE THE SENSOR TO OPERATE.
- TESTS OUTSIDE OF PHOTOSENSOR DEVICES SHALL ENSURE THE FOLLOWING:
- A. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
 - B. SENSORS ARE SWITCHED ON AND INDICATED IN THE DRAWINGS.
 - C. FIXTURES ARE DIMMED AS NOTICED IN THE DRAWINGS.
 - D. LOCATION AND RATING ARE SET PER MANUFACTURER'S INSTRUCTIONS TO AVOID ABUSEPT LIGHT LEVEL CHANGES, AND
 - E. TESTS OUTSIDE OF THE SPACE DOES NOT CAUSE THE SPACE TO CAUSE UNNECESSARY OPERATION.
- IN CORRIDOR, OCCUPANCY SENSOR CONTROL, SHALL TURN LIGHTING ON TO MATCH OUTPUT LIGHT LEVELS TO THE LEVEL OF OCCUPANCY. ALL OTHER AREAS, OCCUPANCY SENSOR CONTROL, SHALL TURN LIGHTING ON TO NOT MORE THAN 50 PERCENT OF LIGHTING POWER OR MAXIMUM OUTPUT.
- TEST OUTSIDE OF THE SPACE SHALL BE COMPLETED TO VERIFY THE FOLLOWING:
- A. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
 - B. SENSORS ARE SWITCHED ON AND INDICATED IN THE DRAWINGS.
 - C. LOCATION AND RATING ARE SET PER MANUFACTURER'S INSTRUCTIONS TO AVOID ABUSEPT LIGHT LEVEL CHANGES, AND
 - D. TESTS OUTSIDE OF THE SPACE DOES NOT CAUSE THE SPACE TO CAUSE UNNECESSARY OPERATION.
- CONTRACTOR SHALL COMPLETE THE TASKS ABOVE AND PROVIDE A COMMISSIONING REPORT TO THE ARCHITECT. THE COMMISSIONING REPORT SHALL PROVIDE THE DOCUMENTATION AS REQUIRED BY THE AIA TO SATISFY ALL PERMITTING AGENCIES.

KEYED NOTES (APPLIES TO THIS SHEET ONLY) ☐

- 1 CONNECT ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGN IN GARAGE TO _____
KV INVERTER.



1 LIGHTING FLOOR PLAN - LEVEL 2
SCALE: 1/16" = 1'-0"

1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2612 / F. 210.227.9457

GENERAL CONTRACTOR

GUIDO CONSTRUCTION

8526 Vidor Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pape Dawson Engineers

2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studios

2425 Broadway, Suite 105
San Antonio, Tx 78215
P. 210.828.1155 / F. 210.828.1399

STRUCTURAL ENGINEER

Datum Engineers

5021 Broadway Street
San Antonio, Tx. 78209
P. 210.858.2380

MEP ENGINEER

Alderson Associates

7700 Torino, Suite 101
San Antonio, Tx. 78295
P. 210.614.1110

[illegible]

PROJECT NUMBER: 2018-27

DRAWN BY: Author

APPROVED BY: Approve

DATE: 09/25/18

CLIENT

CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENT

PROJECT NAME

SAN ANTONIO
ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3195

75%
CONSTRUCTION
DOCUMENTS

SHEET TITLE

LIGHTING
FLOOR PLAN
LEVEL 2

E1.02

3. COMPLETE WORK IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND INTERPRETATIONS OF AHJ.
4. ALL WORK SHALL BE IN ACCORDANCE WITH TRADES AS REQUIRED TO PROVIDE COMPLETE SYSTEMS AND AVOID CONFLICTS.
5. MOUNT LIGHT SWITCHES AT 4' 0" AFF, AS MEASURED FROM BOTTOM OF BOX. ALL SWITCHES IN LATH AND PLASTER ARE TO BE REPRESENTED BY GRID BY A MINIMUM OF FOUR 96" GALVANIZED WIRES ATTACHED TO THE FIXTURE AT EACH CORNER.
6. CONDUIT INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR PLUMBING AND MECHANICAL EQUIPMENT. BOTH CURRENT AND FUTURE, KEEP CONDUITS TO THE FLOOR OR TO THE TRUSS THROUGH STRUCTURAL TRUSSES WHEREVER POSSIBLE.
7. ALL CIRCUITS ARE SHOWN FOR CIRCUIT IDENTIFICATION ONLY. CIRCUITS MAY BE GROUPED UP TO THREE (3) PHASE CONDUCTORS PER RACEWAY, UNLESS NOTED OTHERWISE.
8. ALL SHARED NEUTRAL CONDUCTORS SHALL BE IDENTIFIED BY RED TAPE. RED TAPE PROVIDED. DEDICATED NEUTRAL CONDUCTORS FOR ALL SINGLE-PHASE BRANCH CIRCUITS.
9. ALL MINIMUM AND RUNG BENEATH JUNCTION BOXES SHALL BE MINIMUM OF 34" CONDUIT AND SHALL INCLUDE 10(1) MINIMUM CONDUCTORS AND INSULATED GREEN GROUNDING CONDUIT. SHALL INCLUDE WIRE EXTEND FROM OCPD TO A MINIMUM OF 12" ABOVE THE AREA OF THE JUNCTION BOX. SHALL INCLUDE EQUIPMENT DROPS TO INDIVIDUAL 20-AMP WIRING DEVICES. SHALL INCLUDE 1/2" MINIMUM CONDUIT TO EACH DEVICE.
10. VOLTAGE DROP TO LAST DEVICE ON BRANCH CIRCUITS SHALL NOT EXCEED 3% PERCENT. PERMANENT INCREASE BRANCH CIRCUIT CONDUCTOR SIZES AS NECESSARY TO MEET VOLTAGE DROP REQUIREMENTS.
11. DO NOT LOCATE JUNCTION BOXES ABOVE HARD CEILINGS. ALL CONNECTIONS TO FIXTURES IN A HARD CEILING WILL COME FROM A JUNCTION BOX LOCATED AT LEAST 12" ABOVE THE AREA OF THE CEILING.
12. FIXTURES SHALL NOT BE DAISY CHAINED TOGETHER. EACH FIXTURE SHALL HAVE ONLY ONE FLEXIBLE CONDUIT CONNECTION FROM A JUNCTION BOX LOCATED AT LEAST 12" ABOVE THE AREA OF THE CEILING.
13. FMC SHALL BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES, IN RUNS UP TO 10 FEET LONG.
14. CONDUIT SHALL BE USED FOR CONNECTIONS TO VIBRATION PRODUCING EQUIPMENT, SUCH AS MOTORS, TRANSFORMERS, AND HVAC EQUIPMENT.
15. CONDUIT SHALL BE USED IN RUNS TO AND FROM ALL CONNECTIONS.
16. LIGHT FIXTURES, WIRING DEVICES, AND EQUIPMENT SHALL BE LISTED AND LABELED BY A NRTL.
17. PROVIDE UL LISTED FIRE STOP SYSTEMS AT ALL PENETRATIONS THROUGH ROOFING.
18. MARK JUNCTION BOX COVERS USING PERMANENT MARKING INDICATING THE LOCATION OF THE JUNCTION BOX AND THE NUMBER OF THE JUNCTION BOX.
19. MARK SWITCH COVERS UTILSING AN APPROVED LABEL MARKING INDICATING THE PANEL AND CIRCUIT NUMBER SERVING THE SWITCHES).
20. CIRCUIT IDENT. SIGNS, EMERGENCY EGRESS FIXTURES, AND EMERGENCY SIGNS TO NOTIFY OF EMERGENCY AND SPACE AND CIRCUIT AHEAD OF CONDUIT DEVICES.
21. PROVIDE FIBER OPTIC LIGHTS THROUGH PHOTOCELL/TIMECLOCK/BAZON CONTROLLED LIGHTING CONTROL ARM.

CONTRACTOR SHALL ENGAGE A 3RD PARTY CERTIFIED COMMISSIONING AGENT TO COMPLETE THE TASKS BELOW TO VERIFY THE LIGHTING CONTROLS ARE OPERATIONAL AND THE LIGHTING SYSTEMS ARE MEETING THE PROJECT DOCUMENTS AND APPLICABLE CODES. WRITTEN DOCUMENTATION SHALL BE PROVIDED TO THE ARCHITECT AND THE COMMISSIONING AGENT. THE FOLLOWING INFORMATION FOR EACH TASK, DATE PERFORMED, AND THE RESULTS OF THE TASK, INITIALS, TESTINGS OBSERVED, AND FINAL SETTING UPON COMPLETION.

CONTRACTOR SHALL COMPLETE AND DOCUMENT THE FOLLOWING TASKS:

- A. LIGHT FIXTURES ARE INSTALLED AND OPERATIONAL.
- B. PERFORM OPERATIONAL TESTING OF EMERGENCY EXIT AND EGRESS LIGHTING SYSTEMS AND RECORD THE RESULTS OF THE TESTING.
- C. ENSURE OCCUPANCY SENSORS ARE INSTALLED AND OPERATIONAL.
- D. ENSURE DAYLIGHT PHOTOSENSORS ARE INSTALLED AND OPERATIONAL.
- E. VERIFY SENSORY DATA IS BEING COLLECTED AND REPORTED.
- F. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
- G. SENSITIVITY IS SET PER MANUFACTURER'S INSTRUCTIONS.
- H. C. FICTURES ARE SWITCHED OR DIMMED AS NOTICED IN THE DRAWINGS.
- I. TIME DELAYS ARE SET APPROPRIATELY, AND
- J. OUTSIDE OF THE SPACE DOES NOT CAUSE THE CAUSEOR TO OPERATE.

TESTING OF DAYLIGHT PHOTOSENSORS DESIRES SHALL ENSURE THE FOLLOWING:

- A. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
- B. SENSITIVITY IS SET PER MANUFACTURER'S INSTRUCTIONS.
- C. FICTURES ARE DIMMED AS NOTICED IN THE DRAWINGS.
- D. SENSITIVITY AND RATIO ARE SET PER MANUFACTURER'S INSTRUCTIONS TO AVOID ABRUPT LIGHT LEVEL CHANGES.
- E. LIGHTING FROM ADJACENT SPACES WITHIN THE SPACE DOES NOT CAUSE UNNECESSARY OPERATION.

IN CORRIDOR, OCCUPANCY SENSOR CONTROL SHALL TURN LIGHTING ON WHEN LIGHT OUTPUT FALLS TO 10% OF THE OCCUPANCY SENSOR CONTROL. ALL OTHER AREAS, OCCUPANCY SENSOR CONTROL SHALL TURN LIGHTING ON TO NOT LESS THAN 10% OF THE OCCUPANCY SENSOR CONTROL.

TEST SYSTEM WORK WHERE APPLICABLE FOR CORRECT OPERATION.

CONTRACTOR SHALL ENSURE THE STEPS ABOVE ARE COMPLETED PRIOR TO THE COMPLETION OF THE PROJECT. CONTRACTOR SHALL PROVIDE A CERTIFICATE OF OCCUPANCY SENSOR CONTROL SHALL PROVIDE ALL INFORMATION AS REQUIRED BY THE AHO TO SATISFY ALL PERMITTING REGULATIONS.

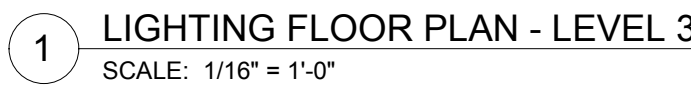
1 CONNECT ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGN IN GARAGE TO _____ KV INVERTER.

DATE: 09/25/18

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3195

SHEET TITLE

E1.03



3. COMPLETE WORK IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND INTERPRETATIONS OF AHJ.
4. ALL WORK SHALL BE IN ACCORDANCE WITH TRADES AS REQUIRED TO PROVIDE COMPLETE SYSTEMS AND AVOID CONFLICTS.
5. MOUNT LIGHT SWITCHES AT 4' 0" AFF, AS MEASURED FROM BOTTOM OF BOX. ALL SWITCHES IN LATH AND PLASTER ARE TO BE REPRESENTED BY GRID BY A MINIMUM OF FOUR 9/16" GALVANIZED WIRES ATTACHED TO THE FIXTURE AT EACH CORNER.
6. CONDUIT INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR PLUMBING AND MECHANICAL EQUIPMENT. BOTH CURRENT AND FUTURE, KEEP CONDUITS TO THE FLOOR OR TO THE TRUSS THROUGH STRUCTURAL TRUSSES WHEREVER POSSIBLE.
7. ALL CIRCUITS ARE SHOWN FOR CIRCUIT IDENTIFICATION ONLY. CIRCUITS MAY BE GROUPED UP TO THREE (3) PHASE CONDUCTORS PER RACEWAY, UNLESS NOTED OTHERWISE.
8. ALL SHARED NEUTRAL CONDUCTORS SHALL BE IDENTIFIED BY RED TAPE. RED TAPE PROVIDED. DEDICATED NEUTRAL CONDUCTORS FOR ALL SINGLE-PHASE BRANCH CIRCUITS.
9. ALL MINIMUM AND RUNG BENEATH JUNCTION BOXES SHALL BE MINIMUM OF 34" CONDUIT AND SHALL INCLUDE 10(1) MINIMUM CONDUCTORS AND INSULATED GREEN GROUNDING CONDUIT. SHALL INCLUDE WIRE EXTEND FROM OCPD TO A MINIMUM OF 12" ABOVE THE AREA OF THE JUNCTION BOX. SHALL INCLUDE EQUIPMENT DROPS TO INDIVIDUAL 20-AMP WIRING DEVICES SHALL INCLUDE 1/2" CONDUIT TO EACH DEVICE.
10. VOLTAGE DROP TO LAST DEVICE ON BRANCH CIRCUITS SHALL NOT EXCEED 3% PERCENT. PERMANENT INCREASE BRANCH CIRCUIT CONDUCTOR SIZES AS NECESSARY TO MEET VOLTAGE DROP REQUIREMENTS.
11. DO NOT LOCATE JUNCTION BOXES ABOVE HARD CEILINGS. ALL CONNECTIONS TO FIXTURES IN A HARD CEILING WILL COME FROM A JUNCTION BOX LOCATED AT LEAST 12" ABOVE THE AREA OF THE CEILING.
12. FIXTURES SHALL NOT BE DAISY CHAINED TOGETHER. EACH FIXTURE SHALL HAVE ONLY ONE FLEXIBLE CONDUIT CONNECTION FROM A JUNCTION BOX LOCATED AT LEAST 12" ABOVE THE AREA OF THE CEILING.
13. FMC SHALL BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES, IN RUNS UP TO 10 FEET LONG.
14. CONDUIT SHALL BE USED FOR CONNECTIONS TO VIBRATION PRODUCING EQUIPMENT, SUCH AS MOTORS, TRANSFORMERS, AND HVAC EQUIPMENT.
15. CONDUIT SHALL BE USED IN RUNS TO AND FROM ALL CONNECTIONS.
16. LIGHT FIXTURES, WIRING DEVICES, AND EQUIPMENT SHALL BE LISTED AND LABELED BY A NRTL.
17. PROVIDE UL LISTED FIRE STOP SYSTEMS AT ALL PENETRATIONS THROUGH ROOF.
18. MARK JUNCTION BOX COVERS USING PERMANENT MARKING INDICATING THE BRANCH CIRCUIT NUMBER AND THE LOCATION OF THE JUNCTION BOX.
19. MARK SWITCH COVERS/PLATES USING APPROVED LABELS MARKING THE PANEL AND CIRCUIT NUMBER SERVING THE SWITCHES).
20. CIRCUIT IDENT. SIGNS, EMERGENCY SERVICING FIXTURES, AND EMERGENCY SIGNS TO NOTIFY OF ELECTRICAL SPACE AND CIRCUIT AHEAD OF CONTROL DEVICES.
21. PROVIDE FIBER OPTIC LIGHTS THROUGH PHOTOCELL/TIMECLOCK/BAZOOKA CONTROLLED LIGHTING CONTROL ARM.

CONTRACTOR SHALL ENGAGE A 3RD PARTY CERTIFIED COMMISSIONING AGENT TO COMPLETE THE TASKS BELOW TO VERIFY THE LIGHTING CONTROLS ARE OPERATIONAL AND THE LIGHTING SYSTEMS ARE MEETING THE PROJECT DOCUMENTS AND APPLICABLE CODES. WRITTEN DOCUMENTATION SHALL BE PROVIDED TO THE ARCHITECT AND THE COMMISSIONING AGENT. THE FOLLOWING INFORMATION FOR EACH TASK, DATE PERFORMED, AND THE RESULTS OF THE TASK, INITIALS, TESTINGS OBSERVED, AND FINAL SETTING UPON COMPLETION.

CONTRACTOR SHALL COMPLETE AND DOCUMENT THE FOLLOWING TASKS:

- A. LIGHT FIXTURES ARE INSTALLED AND OPERATIONAL.
- B. PERFORM OPERATIONAL TESTING OF EMERGENCY EXIT AND EGRESS LIGHTING SYSTEMS AND RECORD THE RESULTS OF THE TESTING.
- C. ENSURE OCCUPANCY SENSORS ARE INSTALLED AND OPERATIONAL.
- D. ENSURE DAYLIGHT PHOTOSENSORS ARE INSTALLED AND OPERATIONAL.
- E. VERIFY SENSORY DATA IS BEING COLLECTED AND REPORTED.
- F. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
- G. SENSITIVITY IS SET PER MANUFACTURER'S INSTRUCTIONS.
- H. C. FICTURES ARE SWITCHED OR DIMMED AS NOTICED IN THE DRAWINGS.
- I. TIME DELAYS ARE SET APPROPRIATELY, AND
- J. OUTSIDE OF THE SPACE DOES NOT CAUSE THE CAUSEOR TO OPERATE.

TESTING OF DAYLIGHT PHOTOSENSORS DESIRES SHALL ENSURE THE FOLLOWING:

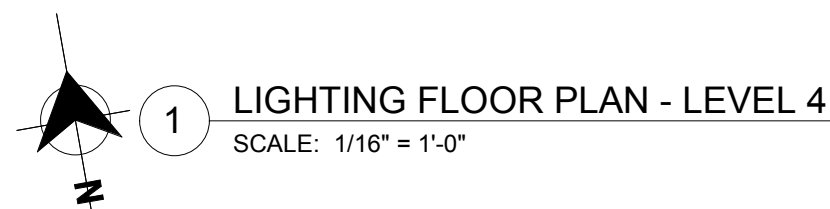
- A. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
- B. SENSITIVITY IS SET PER MANUFACTURER'S INSTRUCTIONS.
- C. FICTURES ARE DIMMED AS NOTICED IN THE DRAWINGS.
- D. SENSITIVITY AND RATIO ARE SET PER MANUFACTURER'S INSTRUCTIONS TO AVOID ABRUPT LIGHT LEVEL CHANGES.
- E. LIGHTING FROM ADJACENT SPACES WITHIN THE SPACE DOES NOT CAUSE UNNECESSARY OPERATION.

IN CORRIDOR, OCCUPANCY SENSOR CONTROL SHALL TURN LIGHTING ON TO PROVIDE OUTPUT LIGHT LEVELS TO THE OCCUPANT. ALL OTHER AREAS, OCCUPANCY SENSOR CONTROL SHALL TURN LIGHTING ON TO NOT PROVIDE OUTPUT LIGHT LEVELS TO THE OCCUPANT.

TEST SYSTEM WORK WHERE APPLICABLE FOR CORRECT OPERATION.

CONTRACTOR SHALL ENSURE THE STEPS ABOVE ARE COMPLETED PRIOR TO THE COMPLETION OF THE PROJECT. CONTRACTOR SHALL PROVIDE A CERTIFICATE OF OCCUPANCY SENSOR CONTROL SHALL PROVIDE ALL INFORMATION AS REQUIRED BY THE AIA TO SATISFY ALL PERMITTING REGULATIONS.

1 CONNECT ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGN IN GARAGE TO _____
KV INVERTER.

[illegible]

PROJECT NUMBER:	2018-27
DRAWN BY:	Author
APPROVED BY:	Approver
DATE:	09/25/18

CLIENT
CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENT

PROJECT NAME
SAN ANTONIO
ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3196

75%
CONSTRUCTION
DOCUMENTS

SHEET TITLE

LIGHTING
FLOOR PLAN
LEVEL 4

E1.04

GENERAL LIGHTING NOTES (THIS SHEET ONLY)

3. COMPLETE WORK IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND INTERPRETATIONS OF AHJ.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH TRADES AS REQUIRED TO PROVIDE COMPLETE SYSTEMS AND AVOID CONFLICTS.
5. MOUNT LIGHT SWITCHES AT 4'4" AFF, AS MEASURED FROM BOTTOM OF BOX. CONDUCTORS SHALL BE WORKED IN A MANNER THAT IS INDEPENDENT OF GRID BY A MINIMUM OF FOUR 9/8" GALVANIZED WIRES ATTACHED TO THE FIXTURE AT EACH CORNER.
6. CONDUCTOR INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR PLUMBING AND MECHANICAL EQUIPMENT, BOTH CURRENT AND FUTURE, KEEP CONDUITS TOP OF CEILING, OR RUN OUT THROUGH STRUCTURAL TRUSSES WHEREVER POSSIBLE.
7. SINGLE PHASE SYSTEMS ARE SHOWN FOR CIRCUIT IDENTIFICATION ONLY. CIRCUITS MAY BE GROUPED UP TO THREE (3) PHASE CONDUCTORS PER INSTALLED, UNLESS NOTED OTHERWISE.
8. ALL TRUNK (SHARED) NEUTRAL CONDUCTORS SHALL NOT BE RERUN. PROVIDE DEDICATED NEUTRAL CONDUCTORS FOR ALL SINGLE-PHASE BRANCH CIRCUITS.
9. MULTIPLE RUNS BEHIND JUNCTION BOXES SHALL BE MINIMUM OF 3/4" CONDUIT AND SHALL INCLUDE #10 MINIMUM CONDUCTORS AND INSULATED GREEN GROUNDING CONDUCTOR. SHALL CARRY EXTEND FROM OCPD TO A JUNCTION BOX IN THE AREA OF THE EQUIPMENT. PROVIDE IDENTIFICATION OF EQUIPMENT, DROPS TO INDIVIDUAL, 20-AMP WIRING DEVICES SHALL INCLUDE #12 MINIMUM CONDUCTORS.
10. VOLTAGE DROP TO LAST DEVICE ON BRANCH CIRCUITS SHALL NOT EXCEED 3% PER DEVICE. MAXIMUM INCREASE BRANCH CIRCUIT CONDUCTOR SIZES TO ACHIEVE 3% VOLTAGE DROP.
11. DO NOT LOCATE JUNCTION BOXES ABOVE HAND CEILINGS. ALL CONNECTIONS TO FIXTURES IN A HAND CEILING WILL COME FROM A JUNCTION BOX LOCATED BELOW THE AREA OF THE CEILING.
12. FIXTURES SHALL NOT BE DAISY CHAINED TOGETHER. EACH FIXTURE TYPE SHALL HAVE ONLY ONE FLEXIBLE CONDUIT CONNECTION FROM A JUNCTION BOX TO THE AREA OF THE CEILING, 10 FEET MAXIMUM.
13. FMC SHALL BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES, IN RUNS UP TO 10 FEET LONG.
14. FMC SHALL BE USED FOR CONNECTIONS TO VIBRATION PRODUCING EQUIPMENT, SUCH AS MOTORS, TRANSFORMERS AND HVAC EQUIPMENT. FMC SHALL BE USED IN RUNS TO VIBRATION PRODUCING EQUIPMENT.
15. LIGHT FIXTURES, WIRING DEVICES, AND EQUIPMENT SHALL BE LISTED AND LABELED BY A NRTL.
16. PROVIDE UL LISTED FIRE STOP SYSTEMS AT ALL PENETRATIONS THROUGH RAISED ACCESS FLOORS.
17. MARK JUNCTION BOX COVERS USING PERMANENT MARKER INDICATING THE PANEL AND CIRCUIT NUMBER OF EACH JUNCTION BOX.
18. MARK SWITCH COVERS USING PERMANENT MARKER INDICATING THE CIRCUIT AND CIRCUIT NUMBER SERVING THE SWITCHES).
19. DRAW EXIST SIGNS, EMERGENCY ESSING FIXTURES, AND EMERGENCY EXIT LIGHTING CIRCUITS, AND SPACE AND CIRCUIT AREA OF CIRCUIT DEVICES
20. EXTERIOR LIGHTS THROUGH PHOTOCELL/TIMELOCK/BASIS-CONTROLLED LIGHTING CONTROL

**LIGHTING FUNCTIONAL TESTING
AND COMMISSIONING PLAN:**

1. CONTRACTOR SHALL ENGAGE A THIRD PARTY CERTIFIED COMMISSIONING AGENCY TO COMPLETE THE TASKS BELOW TO VERIFY THE LIGHTING CONTROL SYSTEM OPERATIONS AND FUNCTIONING OF THE PROJECT. DOCUMENTS AND APPLICABLE CODES: WRITTEN DOCUMENTATION SHALL INCLUDE THE ARCHITECT'S REQUIREMENTS, MANUFACTURER'S INSTRUCTIONS, THE FOLLOWING INFORMATION FOR EACH TASK: DATE PERFORMED, PERSONNEL, TEST RESULTS, AND PHOTOGRAPHIC EVIDENCE, AND FINAL SETTING UPON COMPLETION.
2. CONTRACTOR SHALL COMPLETE AND DOCUMENT THE FOLLOWING TASKS:
 - A. VERIFY THE FUNCTIONING OF THE LIGHTING CONTROL SYSTEM.
 - B. PERFORM OPERATIONAL TESTING OF EMERGENCY EXIT AND EGRESS LIGHTING INDICATORS AND EXIT SIGNS.
 - C. ENSURE OCCUPANCY SENSORS ARE INSTALLED AND OPERATIONAL.
 - D. ENSURE DAYLIGHT PHOTOSENSORS ARE INSTALLED AND OPERATIONAL.
 - E. VERIFY THE FUNCTIONING OF THE LIGHTING CONTROL SYSTEM.
 - F. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
 - G. STATUS INDICATORS ARE SET TO THE FOLLOWING:
 1. C. FICTURES ARE SWITCHED OR DAMMED AS INDICATED IN THE DRAWINGS.
 2. TIME DELAYS ARE SET APPROPRIATELY.
 3. THE OUTSIDE OF THE SPACE DOES NOT CAUSE THE SENSOR TO OPERATE.
 - H. TEST EACH PHOTOSENSOR DEVICES SHALL ENSURE THE FOLLOWING:
 1. LOCATION AND AIMING ARE SET PER MANUFACTURER'S INSTRUCTIONS.
 2. STATUS INDICATORS ARE FUNCTIONING.
 3. FICTURES ARE DAMMED AS INDICATED IN THE DRAWINGS.
 4. TIME DELAYS AND RATE OF DIMMING ARE SET APPROPRIATELY TO AVOID AIRPURT LIGHT LEVEL CHANGES, AND
 5. THE OUTSIDE OF THE SPACE DOES NOT CAUSE THE SPACE SENSOR TO CAUSE UNNECESSARY OPERATION.
3. IN CORRIDOR, OCCUPANCY SENSOR CONTROL, SHALL TURN LIGHTING ON TO MATCH THE OUTPUT OF THE LIGHTING CONTROL SYSTEM OF CORRIDOR. ALL OTHER AREAS, OCCUPANCY SENSOR CONTROL, SHALL TURN LIGHTING ON TO NOT MORE THAN 50 PERCENT OF LIGHTING POWER OR MAXIMUM OF 50 WATT.
4. TEST EACH SYSTEM WITHIN THE LIGHTING CONTROL SYSTEM LOCATION.
5. CONTRACTOR SHALL DOCUMENT THE STEPS ABOVE ARE COMPLETED PRIOR TO THE COMPLETION OF THE PROJECT. THE DOCUMENTATION IN OBTAINING CERTIFICATE OF OCCUPANCY CONTROL SYSTEM, PROVIDE THE DOCUMENTATION AS REQUIRED BY THE AHJ TO SATISFY ALL PERMITTING AGENCIES.

KEYED NOTES (APPLIES TO THIS SHEET ONLY) ☐

- 1 CONNECT ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGN IN GARAGE TO _____
KV INVERTER.
- 2 ROUTE EXTERIOR LIGHTING CIRCUIT THRU LIGHTING CONTROL PANEL VIA #10
AWG WIRE MINIMUM.

1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2612 / F. 210.227.9457

GENERAL CONTRACTOR

8526 Vidor Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pape Dawson Engineers

2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studios

2425 Broadway, Suite 105
San Antonio, Tx 78215
P. 210.828.1155 / F. 210.828.1399

STRUCTURAL ENGINEER

Datum Engineers

5021 Broadway Street
San Antonio, Tx. 7820
P. 210.858.2880

MEP ENGINEER

Alderson Associates

7700 Torino, Suite 101
San Antonio, Tx. 7829
P. 210.614.1110

[illegible]

PROJECT NUMBER: 2018-27

DRAWN BY: Author

APPROVED BY: Approve

DATE: 09/25/18

CLIENT

CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENT

PROJECT NAME

SAN ANTONIO
ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3195

75%
CONSTRUCTION
DOCUMENTS

SHEET TITLE

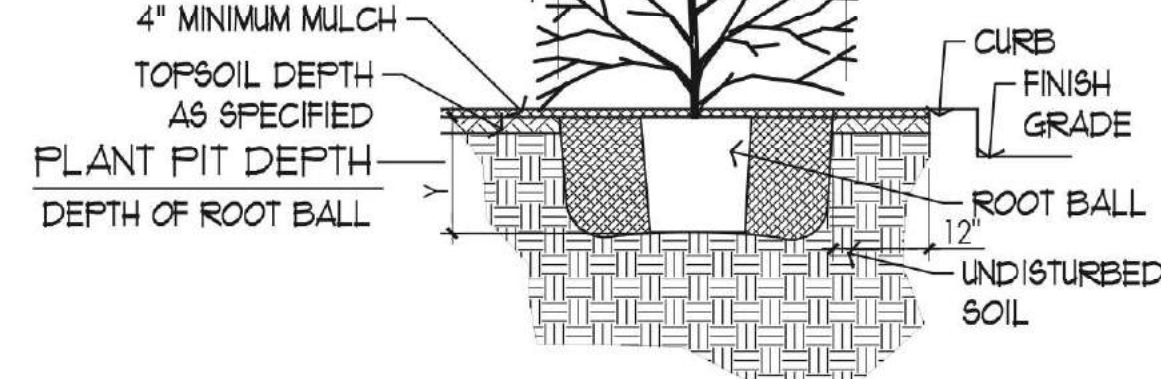
LIGHTING
FLOOR PLAN
LEVEL 5

E1.05

Lighting Fixture Schedule										
	Manufacturer	Catalog Number	Description	Lamp Qty	Lamp Type	Ballast Qty	Ballast Type	Mounting	Voltage	Wattage
B	SISTEMALUX	S 5233V UNV-XX, S 5200-14	7'-10" DAMPETER LED BEACON, WITH FIXING PLATE AND ANCHOR BOLDS. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	SURFACE	277 V	18 VA
C1E	LUMINAR LED	VPF84 50W-4000K-DIM-2227-07-XX-OCGFA	1' LED STRIP LIGHT, VANDAL RESISTANT, WITH OCCUPANCY SENSOR. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	CHAIN / SURFACE	277 V	50 VA
E	WILLIAMS	96-4 L6263D-COR-WET-DR1-120	4' LINEAR LED LIGHT, WET LOCATION, FROSTED	1	LED	1	LED DRIVER	WALL	120 V	65 VA
G1	ULSI	ENX-FLEDGE-17L-T5N-UNV-40-MS0M1-XXX-684706	18" FROSTED CANOPY, LED LIGHT, 9000S SENSOR AND BIRD GUARD PROVIDE RIG CONDUIT SYSTEM. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	PENDANT	277 V	44 VA
G1E	ULSI	ENX-FLEDGE-17-T5N-UNV-40-MS0M1-XXX-684706	SAME AS FIXTURE ABOVE, FIXTURE TO BE CIRCULATED THROUGHT FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	PENDANT	277 V	44 VA
GE	ULSI	ENX-FLEDGE-17L-T5N-UNV-40-MS0M1-XXX-684706	18" DAMPETER CANOPY, LED LIGHT, WITH 9000S SENSOR AND BIRD GUARD PROVIDE RIG CONDUIT SYSTEM. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	PENDANT	277 V	87 VA
P1	ULSI	XC24-FT-LED-10-40-0-UE-XXX, BK MPT B04	LED RECREATIVE LIGHT TWO FIXTURES PER POLE PROVIDE A SECOND POLE WITH HEAD MOUNTED 15' AFF. POLE TO BE ANCHOR BOLD, TO BRACKETED 18" SPALL MATCH LIGHT FIXTURE. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING. REFER TO POLE BASE DETAIL FOR ADDITIONAL INFORMATION. FIXTURE TO BE CIRCULATED THROUGHT INVERTER.	1	LED	1	LED DRIVER	POLE	277 V	550 VA
P1E	ULSI	XC24-FT-LED-10-40-0-UE-XXX, BK MPT B04	SAME AS FIXTURE ABOVE, FIXTURE TO BE CIRCULATED THROUGHT INVERTER. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	POLE	277 V	275 VA
R	ULSI	SD4-LL-LED-10-40-UNV-DIM1-40-BK0C03-USE 251075	8" SPALL MATCH LIGHT, FROSTED LENS, CONTRACTOR TO PROVIDE CHAIN HANGER WHERE REQUIRED. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	RECESSED	277 V	30 VA
S1	ULSI	XC24-FT-LED-10-40-0-UE-XXX	LED RECREATIVE LIGHT PROVIDE 4" EXTENDED 15' AFF. POLE 15' AFF. POLE PLUS CONCRETE BASE. POLE FINISH SHALL MATCH LIGHT FIXTURE. HEAD FINISH VERIFY EXACT FINISH WITH ARCHITECT PRIOR TO ORDERING. REFER TO POLE BASE DETAIL FOR ADDITIONAL INFORMATION. FIXTURE TO BE CIRCULATED THROUGHT INVERTER.	1	LED	1	LED DRIVER	POLE	277 V	75 VA
ST	ERCO	34730 023	ROUND LED STEPLIGHT, WET LOCATION	1	LED	1	LED DRIVER	STAIRS LIGHTING	277 V	6 VA
ORGATECH	ORGATECH	140-XX-1140-140-15-XX, AC-90WPR & AC-90WPR	1' LINEAR LED LIGHT, LONG ARM PER PLANS, WITH CUSTOM LENGTH EXTENDED ARM. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	WALL	277 V	90 VA
W1	ULSI	XXM-FT-LED-96L-40-UE-XXX	LED WALLPACK, FORWARD FROSTED LENS, WALL MOUNTED. VERIFY FINISH WITH ARCHITECT PRIOR TO ORDERING.	1	LED	1	LED DRIVER	WALL	277 V	105 VA
WE	MINALUX	30-5L-FT-UNV-DIM1-40-700R-XXX, 38213CLR	LED WALLPACK, FORWARD FROSTED LENS, WALL MOUNTED. VERIFY FINISH WITH ARCHITECT PRIOR TO BE MOUNTED AT 35'-0" AFF.	1	LED	1	LED DRIVER	WALL	277 V	24 VA
X1	ULSI	EW5-LED-RUN-WITH-R	LED EGGCEL EXIT SIGN, UNIVERSAL MOUNTING, RED LETTERS, FACED AND DIRECTIONAL. ARROWS AS INDICATED ON PLANS	1	LED	1	LED DRIVER	WALL/CeILING	277 V	3 VA

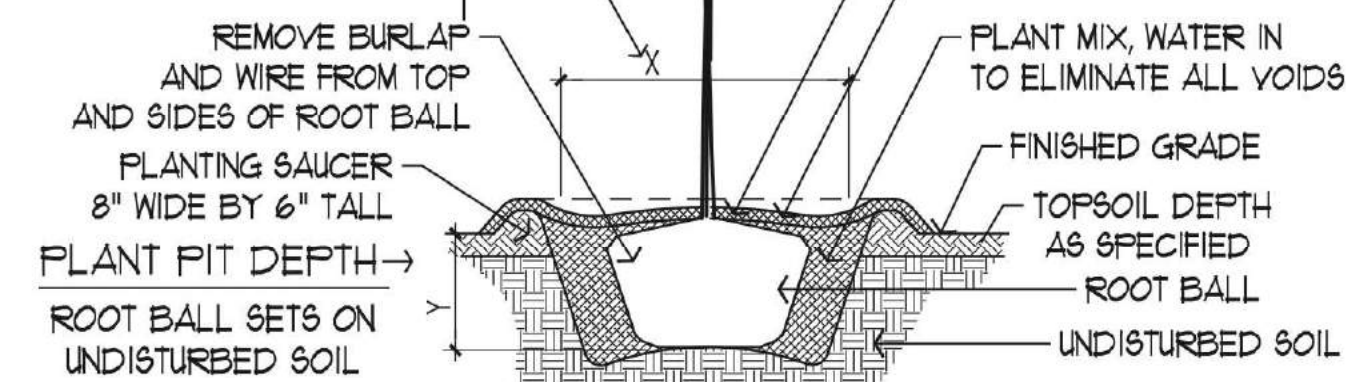
[illegible]

PLANT PIT DIAMETER
NO. 15 CONTAINERS
PIT DIA. = 18" GREATER THAN CONTAINER DIA.
NO. 5 CONTAINERS
PIT DIA. = 15" GREATER THAN CONTAINER DIA.
NO. 1 CONTAINERS
PIT DIA. = 12" GREATER THAN CONTAINER DIA.



1 SHRUB/GROUNDCOVER PLANTING
SCALE: NOT TO SCALE

PLANT PIT DIAMETER
TREES W/ BALL DIA. UP TO 2'
PIT DIA. = 2 TIMES BALL DIA.
TREES W/ BALL DIA. 2' TO 4'
PIT DIA. = 2' PLUS BALL DIA.
TREES W/ BALL DIA. 4' PLUS
PIT DIA. = 1.5 TIMES BALL DIA.

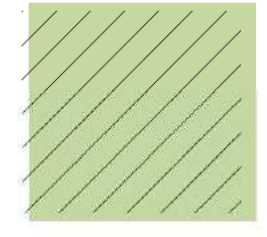


2 SECTION: TREE PLANTING
SCALE: NOT TO SCALE

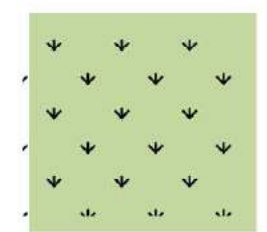
GENERAL LANDSCAPE NOTES:

1. ALL QUANTITIES SHOWN ON PLANS TO BE VERIFIED BY LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL LABELED PLANT MATERIAL ON PLANS (NOT TABULATION).
2. ALL PLANTS MUST COMPLY WITH THE AMERICAN STANDARDS FOR NURSERY STOCK, BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND MEET OR EXCEED HEIGHT AND SPREAD REQUIREMENTS LISTED ON THE PLANT SCHEDULE.
3. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT EXISTING UTILITIES AT ALL TIMES.

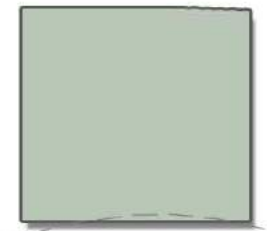
LEGEND



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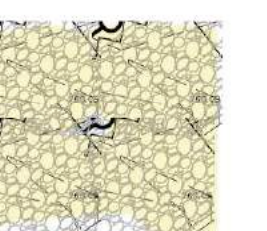
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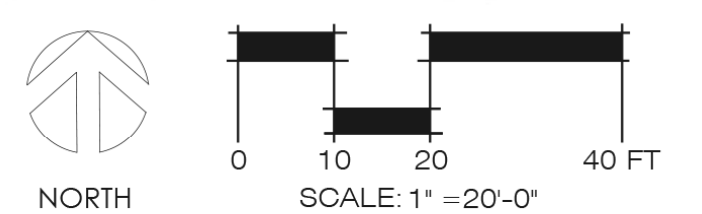
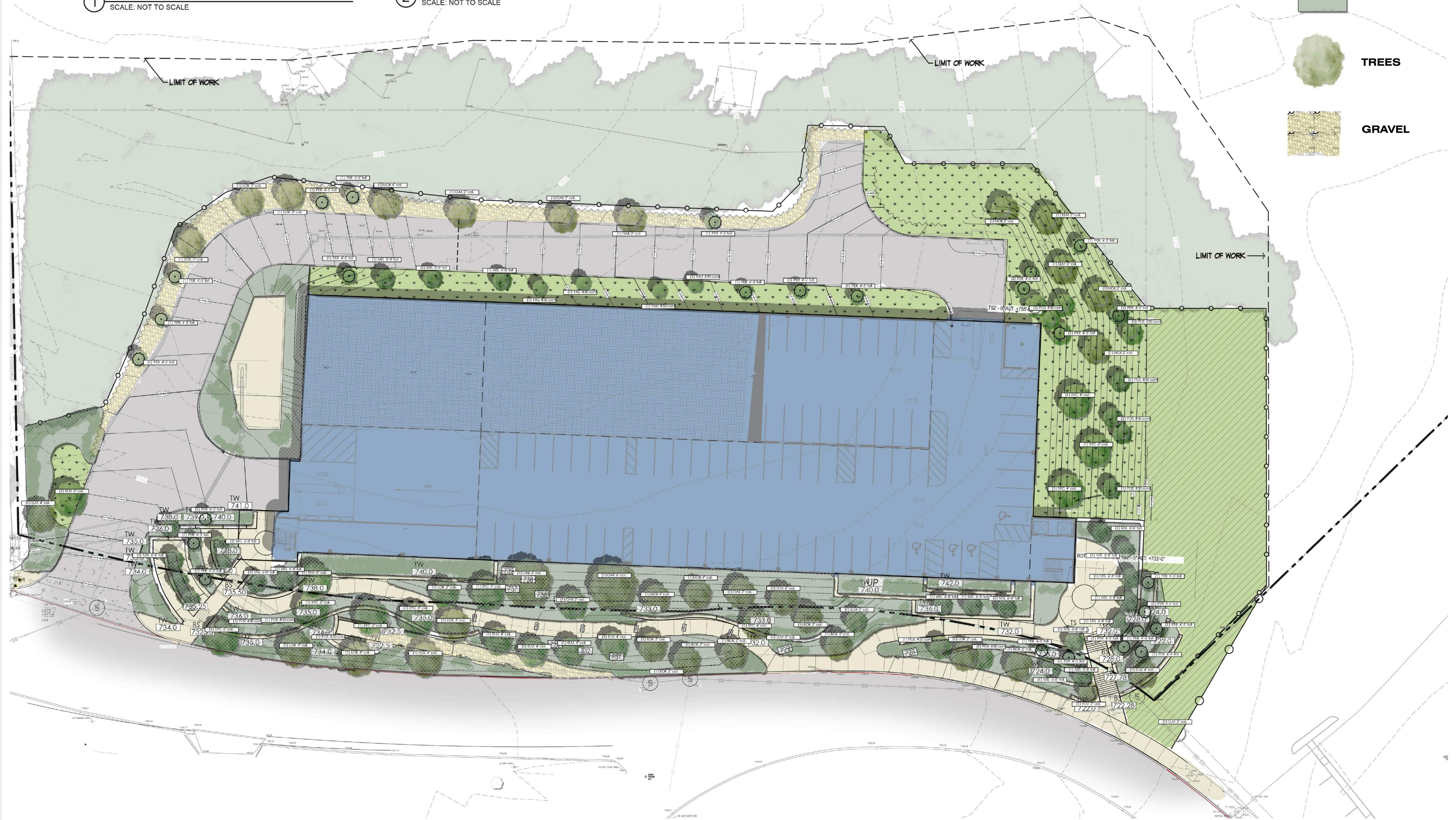
SHRUB PLANTING



TREES



GRAVEL



GENERAL CONTRACTOR

WIND CONSTRUCTION

6 Vidor Ave.
Antonio, Tx. 78216
10.344.8321 / F. 210.344.3469

ENGINEER

pe Dawson Engineers

0 NW Loop 410
Antonio, Tx. 78213-2251
10.375.9000 / F. 210.375.9010

SCAPE ARCHITECT

alto Studio

5 Broadway, Suite 105
 Antonio, Tx 78215
 10.828.1155 / F. 210.828.1399

STRUCTURAL ENGINEER

atum Engineers

1 Broadway Street
San Antonio, Tx. 78209
10.858.2880

ENGINEERS

Anderson Associates

0 Torino, Suite 101
Antonio, Tx 78229
10.614.1110

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PROJECT NUMBER: 2018-27

IN BY: SD

APPROVED BY: PH

10/19/2018

IT

CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENTS

PROJECT NAME

SAN ANTONIO
ZOO PARKING
GARAGE

4. St. Mary's St.
San Antonio, Tx. 78212-3199

INTERIM REVIEW
DOCUMENTS

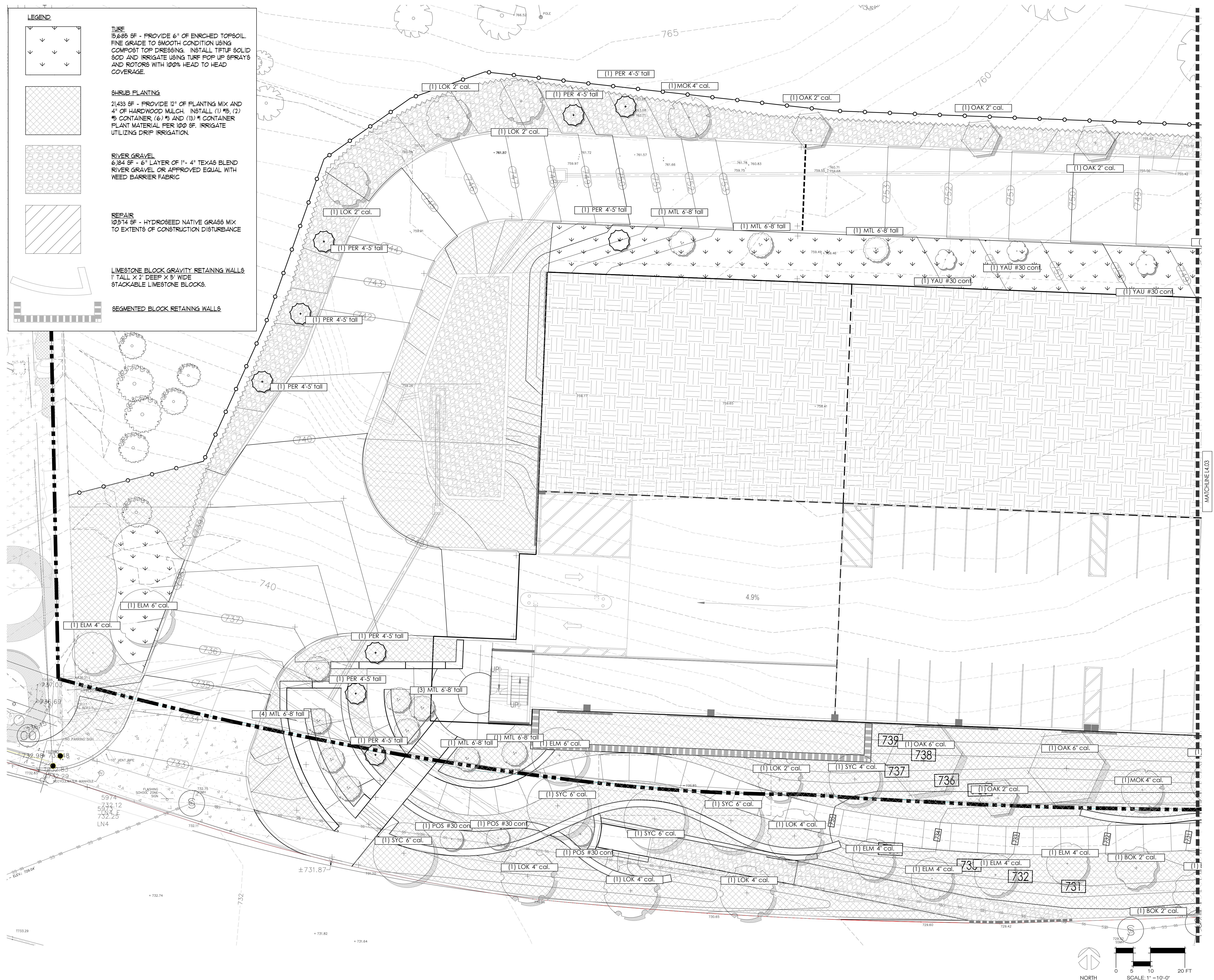
THE DESIGN DOCUMENTS
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INCOMPLETE AND MAY NOT
BE USED FOR REGULATORY
APPROVAL, PERMIT, OR
CONSTRUCTION.
ALTO STUDIO, INC.

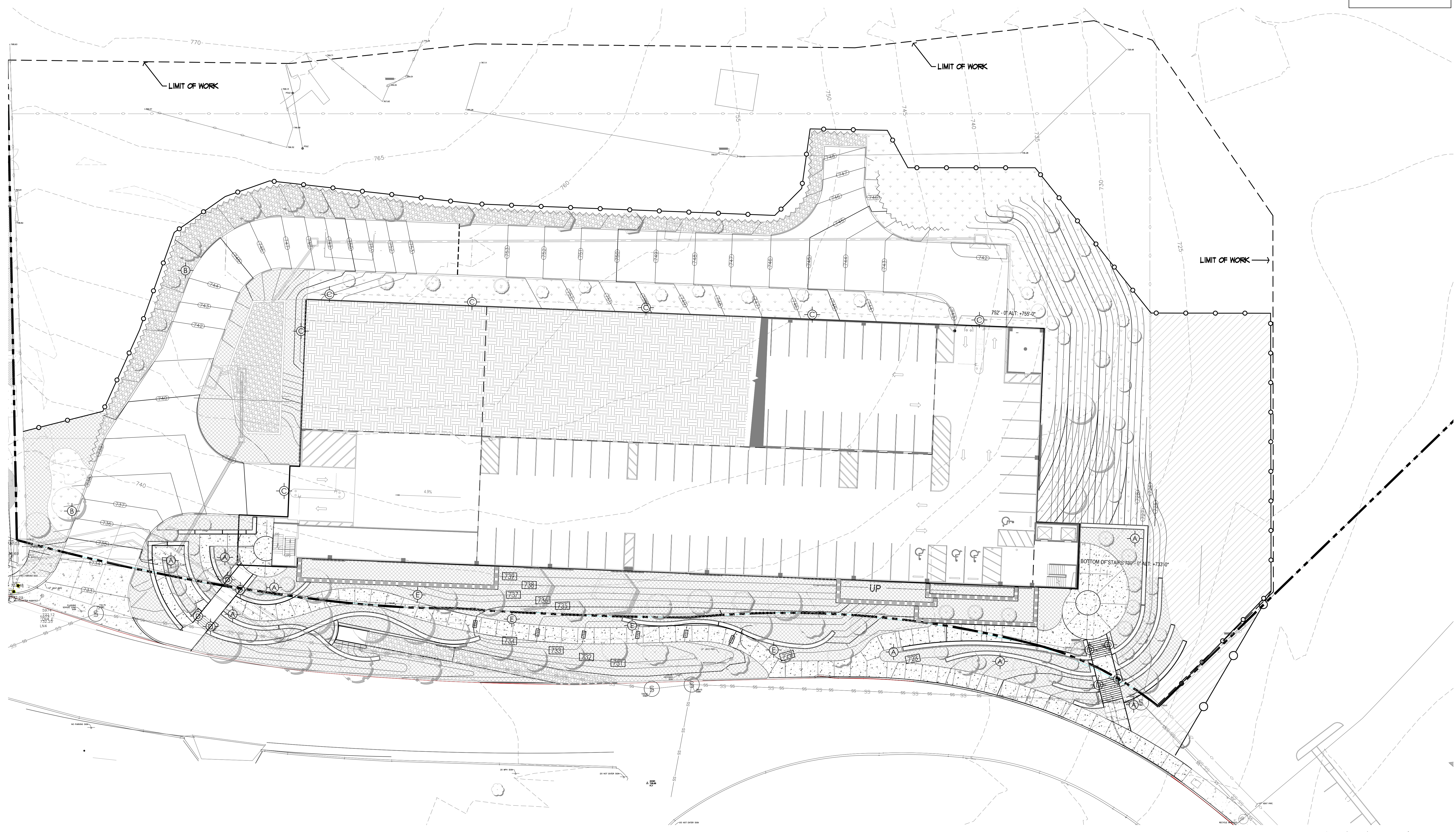
SITE GRADING PACKAGE

ST TITLE

LANDSCAPE PLANTING PLAN

4.02





LEGEND

- A PEDESTRIAN POLE LIGHT
- B STREET LIGHT POLE
- C WALL PACK
- D STEP LIGHT
- E ADD ALTERNATE LIGHT

NORTH

0 10 20 40 FT

SCALE: 1" = 20'-0"

1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2612 / F. 210.227.9457

GENERAL CONTRACTOR

GUIDO CONSTRUCTION

8526 Vidar Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pape Dawson Engineers

2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studio

2425 Broadway, Suite 105
San Antonio, Tx 78215
P. 210.828.1155 / F. 210.828.1399

STRUCTURAL ENGINEER

Datum Engineers

3921 Broadway Street
San Antonio, Tx. 78209
P. 210.858.2880

MEP ENGINEERS

Alderson Associates

7700 Torino, Suite 101
San Antonio, Tx 78229
P. 210.614.1110

ISSUE DESCRIPTION	
NUM.	DATE
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PROJECT NUMBER: 2018-27

DRAWN BY: SD

APPROVED BY: PH

DATE: 10/19/2018

CLIENT

CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENTS

PROJECT NAME

**SAN ANTONIO
ZOO PARKING
GARAGE**

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3199

INTERIM REVIEW
DOCUMENTS

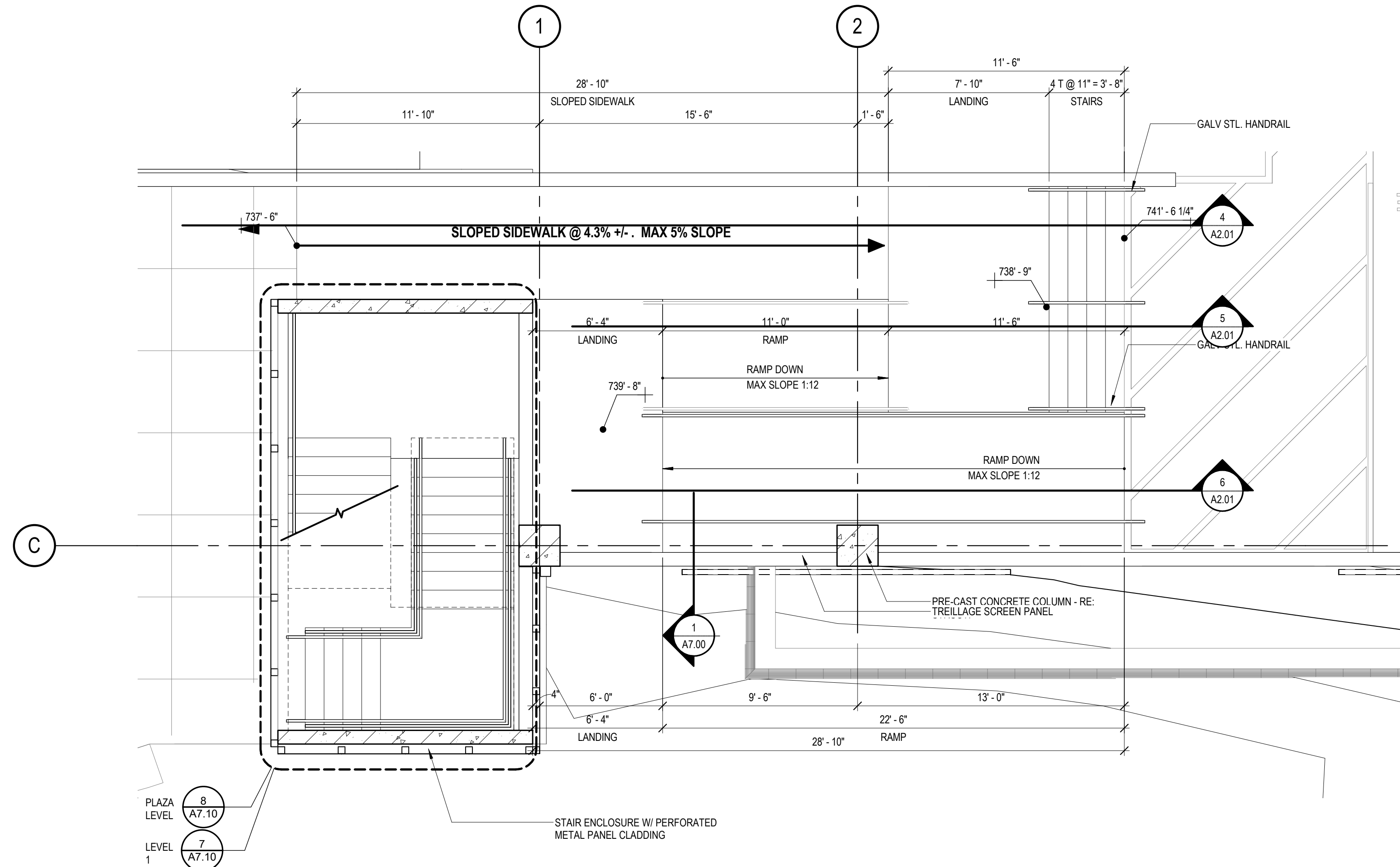
THE DESIGN DOCUMENTS
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RIALTO STUDIO, INC.

SITE GRADING
PACKAGE

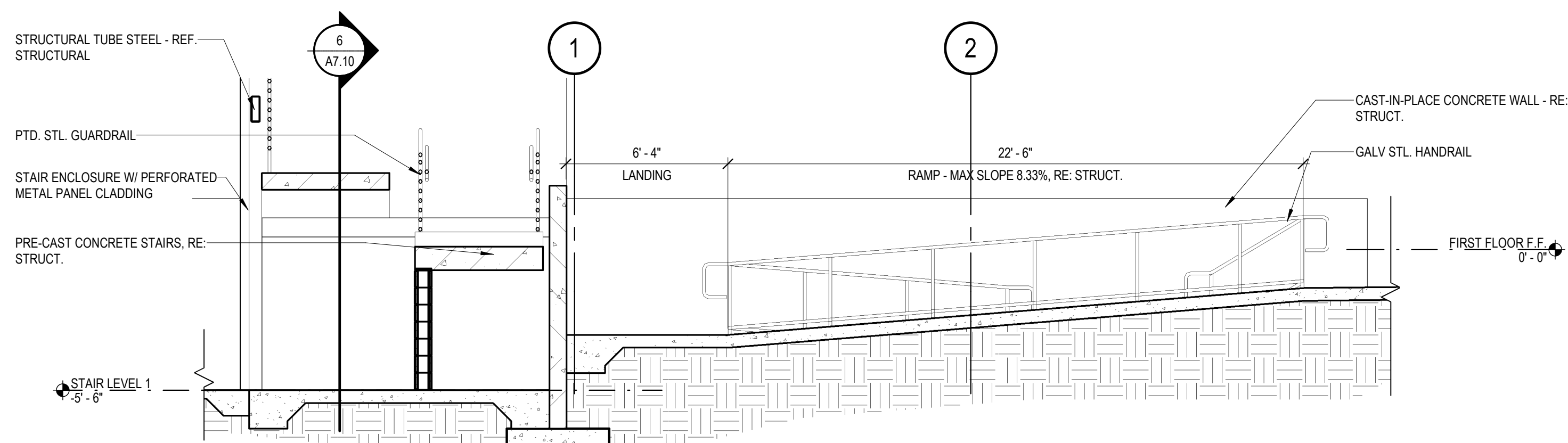
SHEET TITLE

LANDSCAPE
LIGHTING
PLAN

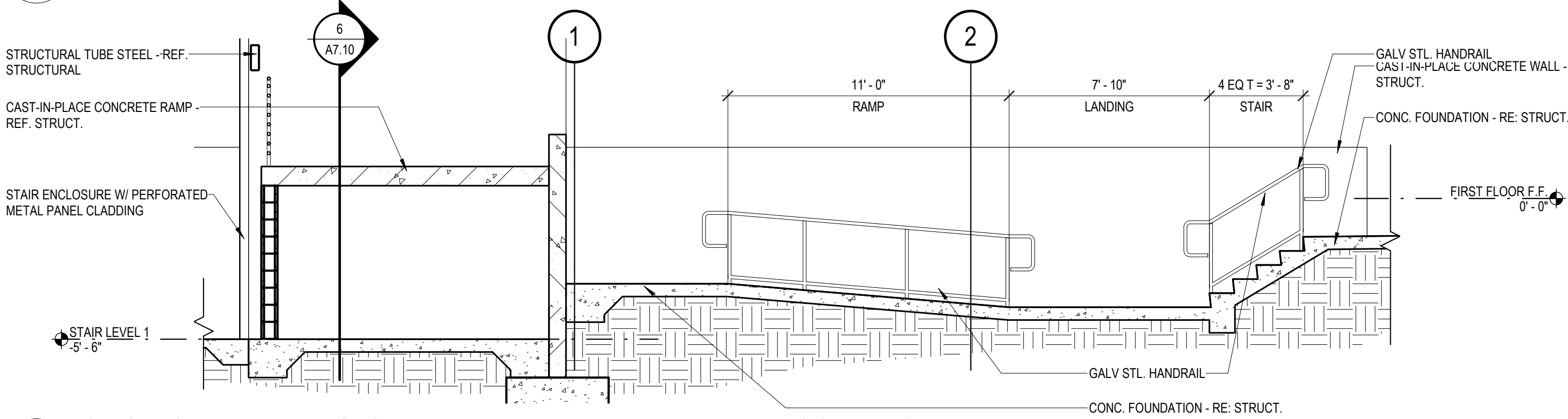
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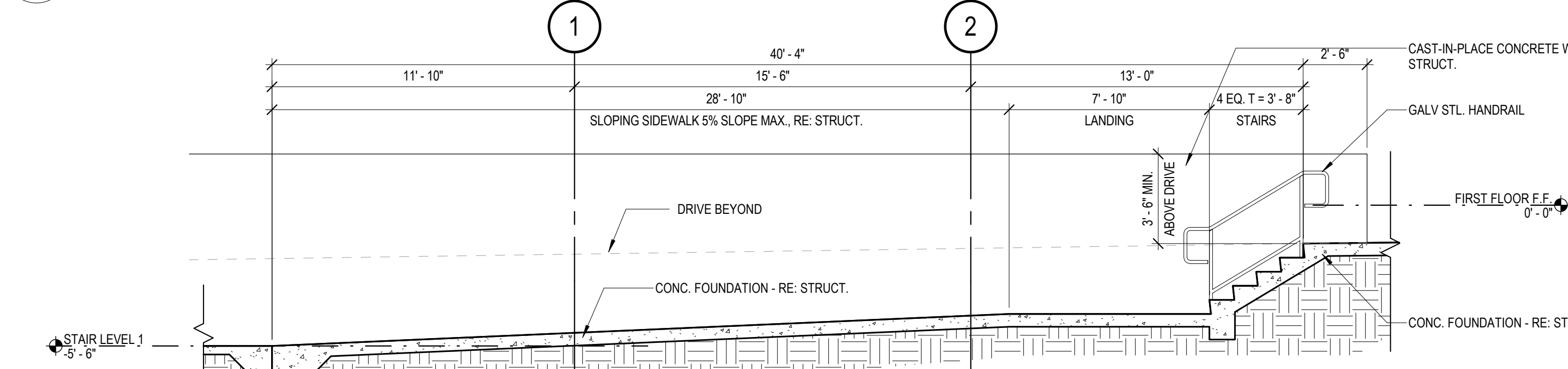
3 ENLARGED PLAN
1/4" = 1'-0"



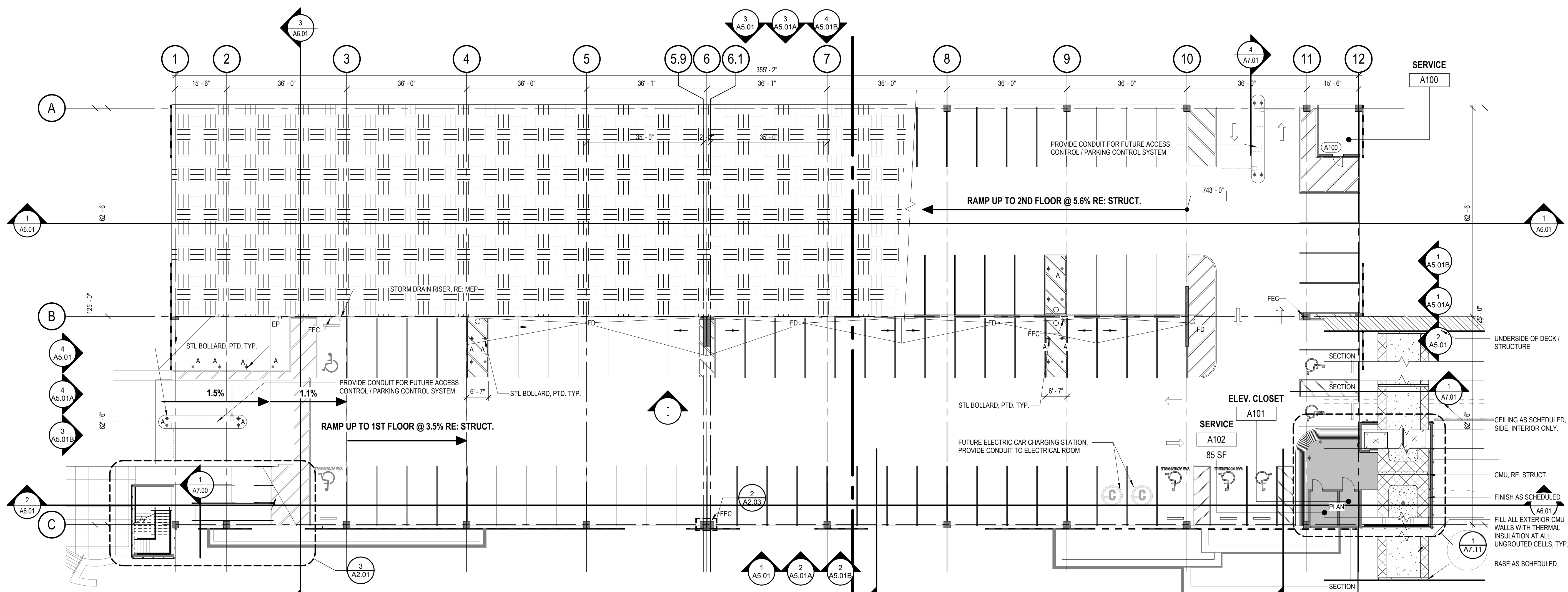
6 SECTION - RAMP @ SW ENTRY - TOP
1/4" = 1'-0"



5 SECTION - RAMP @ SW ENTRY - INTERMEDIATE W/ STAIRS
1/4" = 1'-0"



4 SECTION - RAMP @ SW ENTRY - BASE - SLOPING SIDEWALK
1/4" = 1'-0"



1 FIRST FLOOR FLOOR PLAN
1/16" = 1'-0"

GENERAL NOTES - FLOOR PLAN

- G1. DIMENSIONS ARE FROM COLUMN CENTERLINE, EDGE OF CONCRETE, FOR FACE OF GYPSUM BOARD WALLS, U.N.O.
- G2. CONTRACTOR TO PROVIDE TREATED WOOD BLOCKING AS NECESSARY FOR ANY WALL MOUNTED ITEMS OR ACCESSORIES.
- G3. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND PLAN DIMENSIONS PRIOR TO BEGINNING ANY CONSTRUCTION OR FABRICATION, AND NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES.
- G4. ALL DOORS TO BE 4" FROM FACE OF ADJACENT GYPSUM BOARD OF PERPENDICULAR WALL TO EDGE OF DOOR, U.N.O. IF A DIMENSION IS SHOWN, THIS WILL NOT INDICATE DISTANCE FROM FACE OF GYPSUM BOARD TO EDGE.
- G5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS TO ENSURE PROPER FIT PRIOR TO MANUFACTURING ANY MILLWORK OR ORDERING ANY SPECIALTY ITEMS OR EQUIPMENT.
- G6. REFER TO TEXAS ACCESSIBILITY STANDARDS (T.A.S.) FOR ALL MOUNTING HEIGHTS, DOOR CLEARANCES, ETC.
- G7. PROVIDE FIRE RATED EXTINGUISHER CABINET WHEN LOCATED IN RATED PARTITION.

LEGEND - FLOOR PLAN

- F.E.C. - FIRE EXTINGUISHER CABINET
- FD - FLOOR DRAIN, RE: MEP
- +A - STL. BOLLARD, PTD. TYP.
- +B - STL. SPRING LOADED BOLLARD, TYP. @ PRECAST
- HB - HOSEBIB, RE: MEP
- EP - EMERGENCY PHONE, RE: MEP
- C - FUTURE ELECTRIC VEHICLE CHARGING STATION, PROVIDE CONDUIT ONLY, RE: MEP
- DSP - DRY STANDPIPE RISER, RE: MEP

1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2612 / F. 210.227.9457

GENERAL CONTRACTOR
GUIDO CONSTRUCTION
8526 Vidor Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

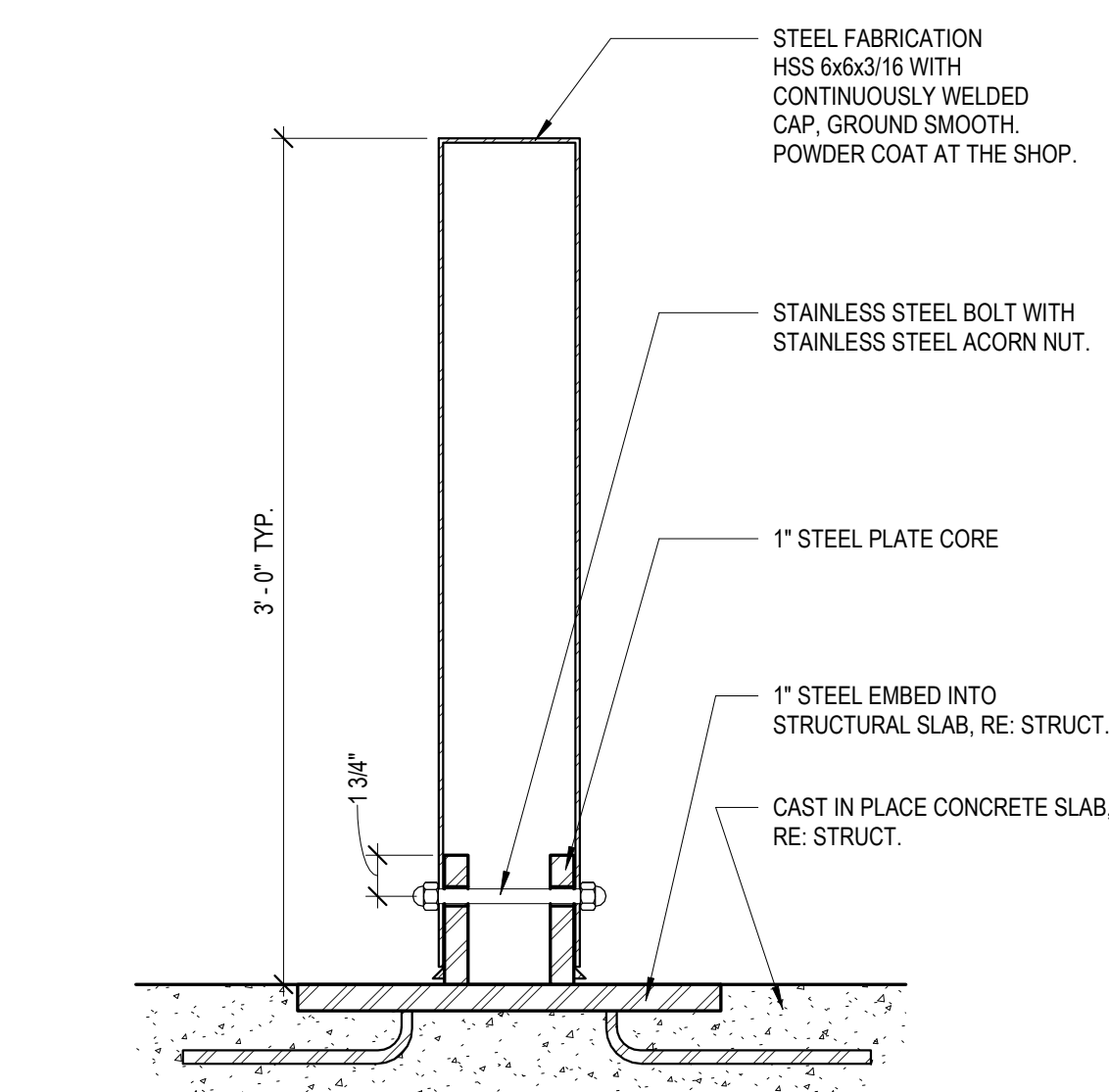
CIVIL ENGINEER
Pape Dawson Engineers
2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT
Rialto Studios
2425 Broadway, Suite 105
San Antonio, Tx. 78215
P. 210.828.1155 / F. 210.828.1399

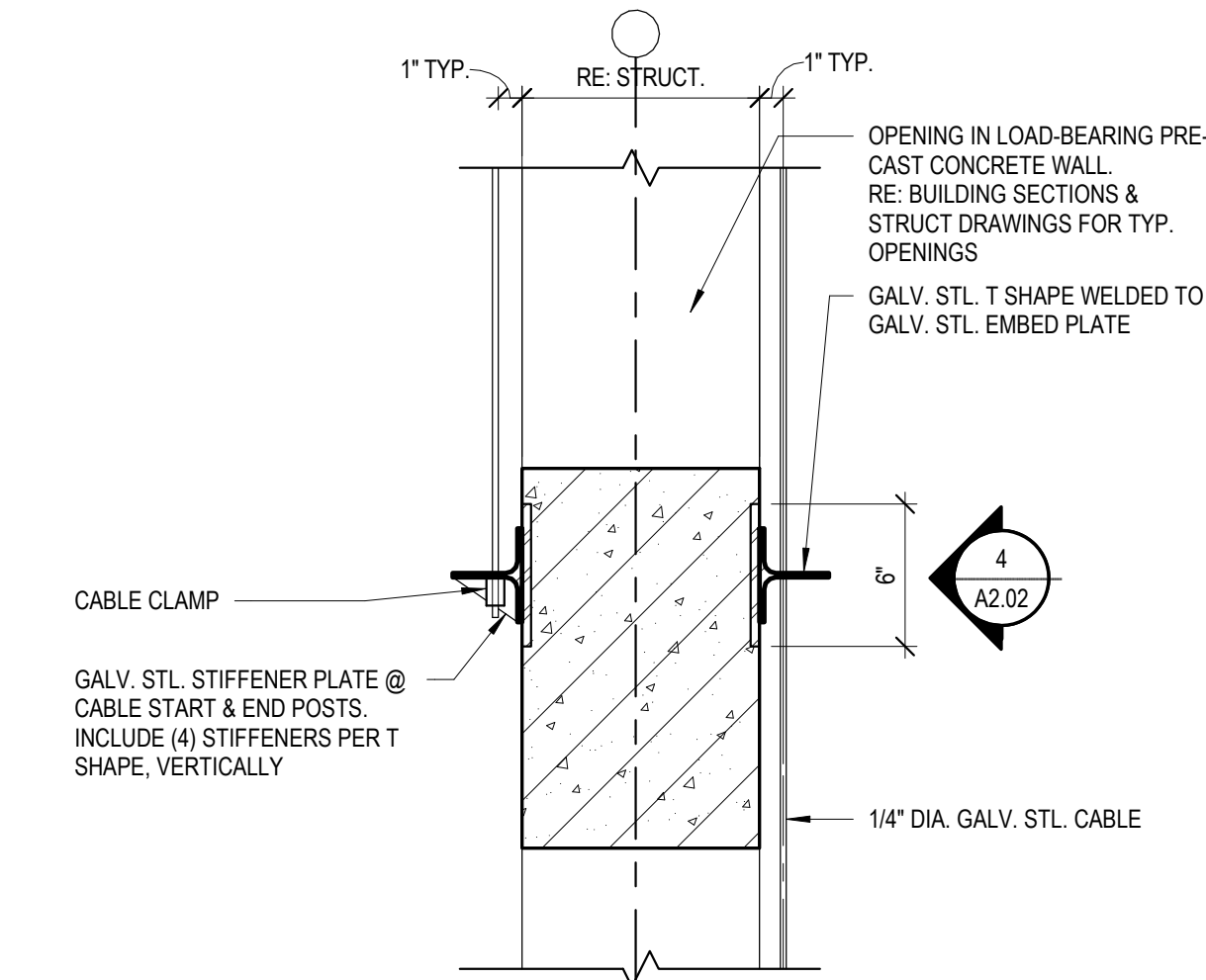
STRUCTURAL ENGINEER
Datum Engineers
5021 Broadway Street
San Antonio, Tx. 78209
P. 210.858.2880

MEP ENGINEERS
Alderson Associates
7700 Torino, Suite 101
San Antonio, Tx. 78229
P. 210.614.1110

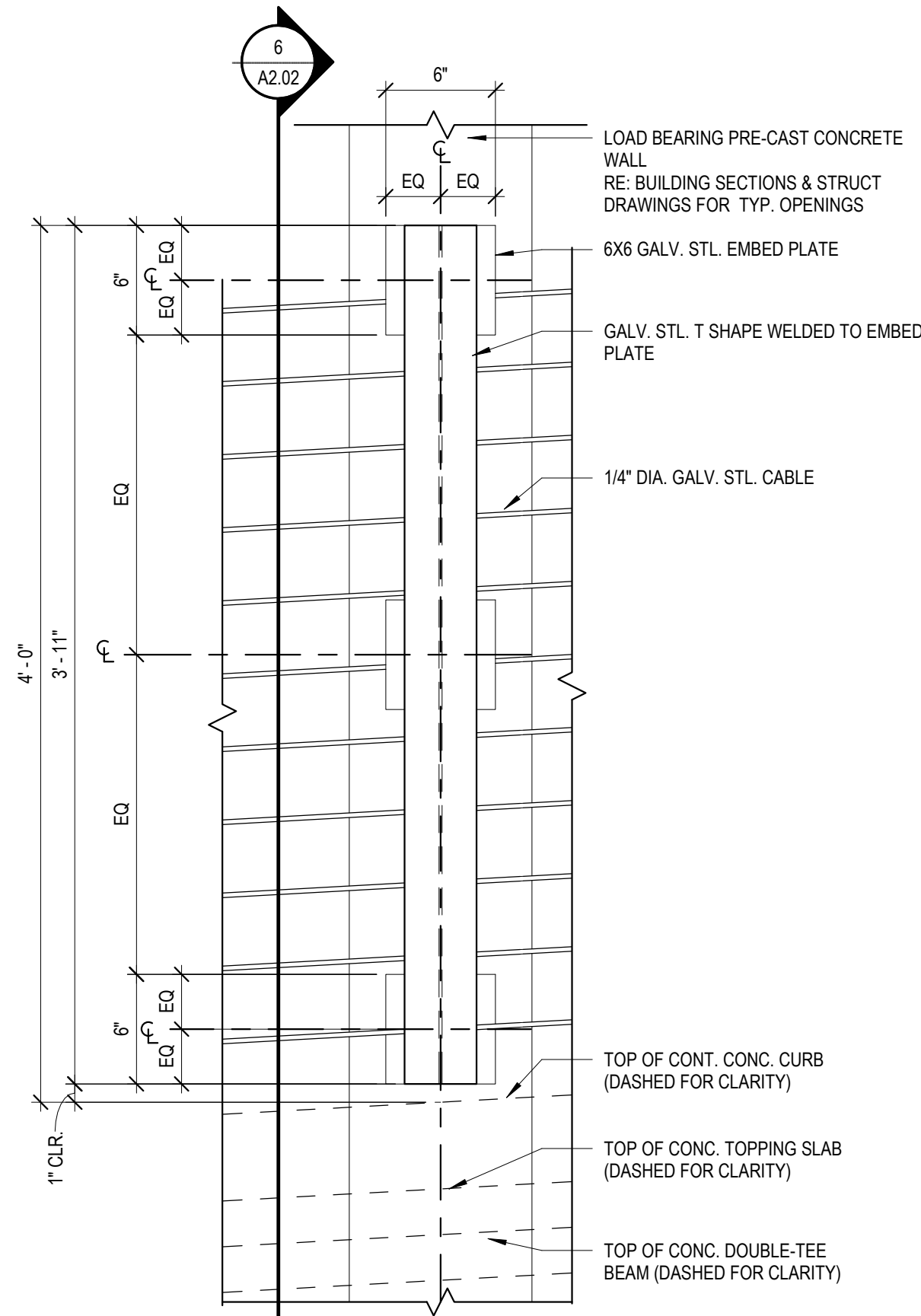
PROJECT NUMBER:	2018-27
DRAWN BY:	-
APPROVED BY:	-
DATE:	11/09/2018
CLIENT:	CITY OF SAN ANTONIO TRANSPORTATION & CAPITAL IMPROVEMENTS
PROJECT NAME:	SAN ANTONIO ZOO PARKING GARAGE 3903 N. St. Mary's St. San Antonio, Tx. 78212-3199
REGISTERED ARCHITECT	 11/09/2018
CONSTRUCTION DOCUMENTS	
SHEET TITLE	FLOOR PLAN - 1ST FLOOR - OVERALL
A2.01	



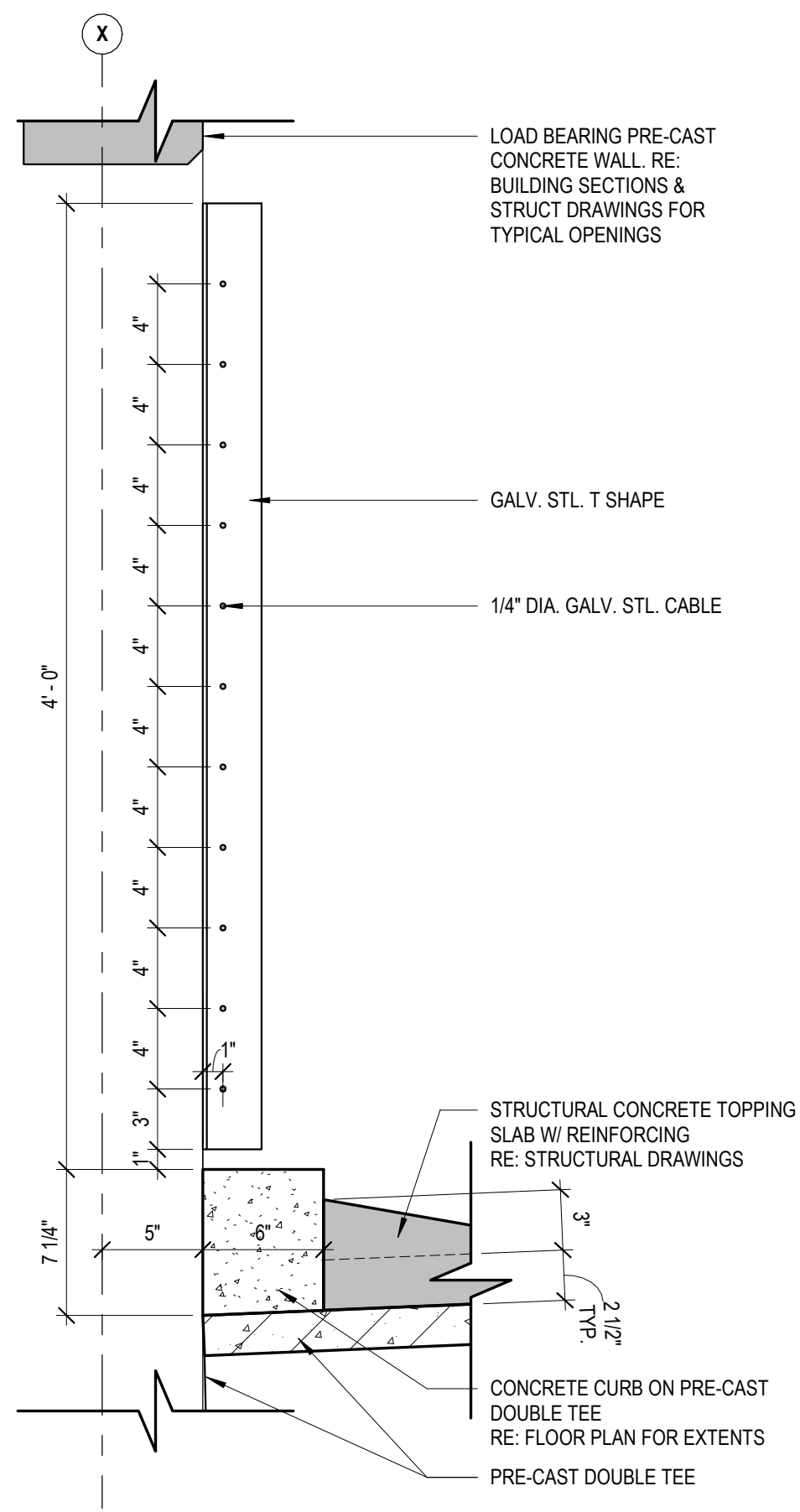
2 BOLLARD DETAIL
1 1/2" = 1'-0"



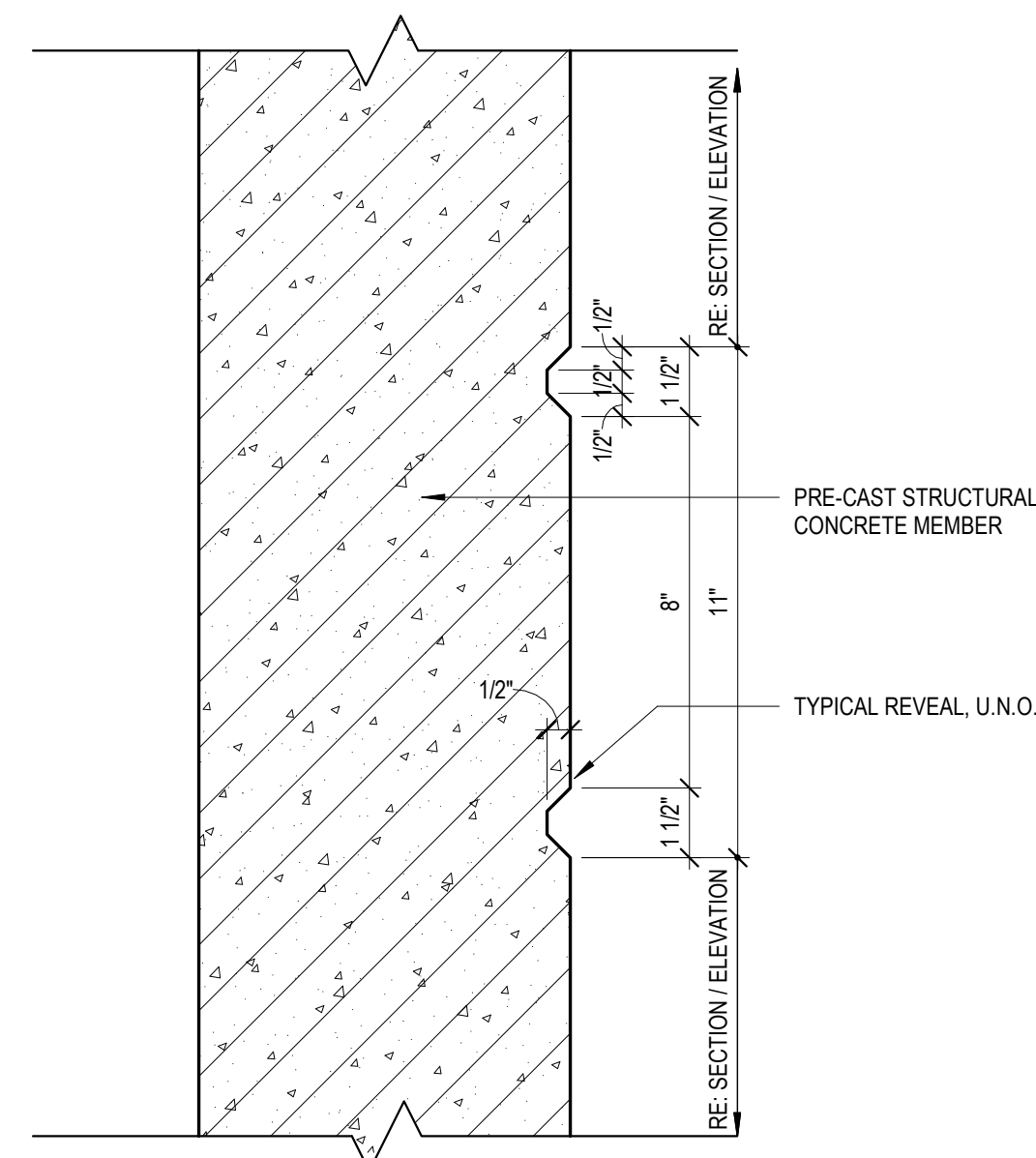
3 PLAN DETAIL - BARRIER CABLE
1 1/2" = 1'-0"



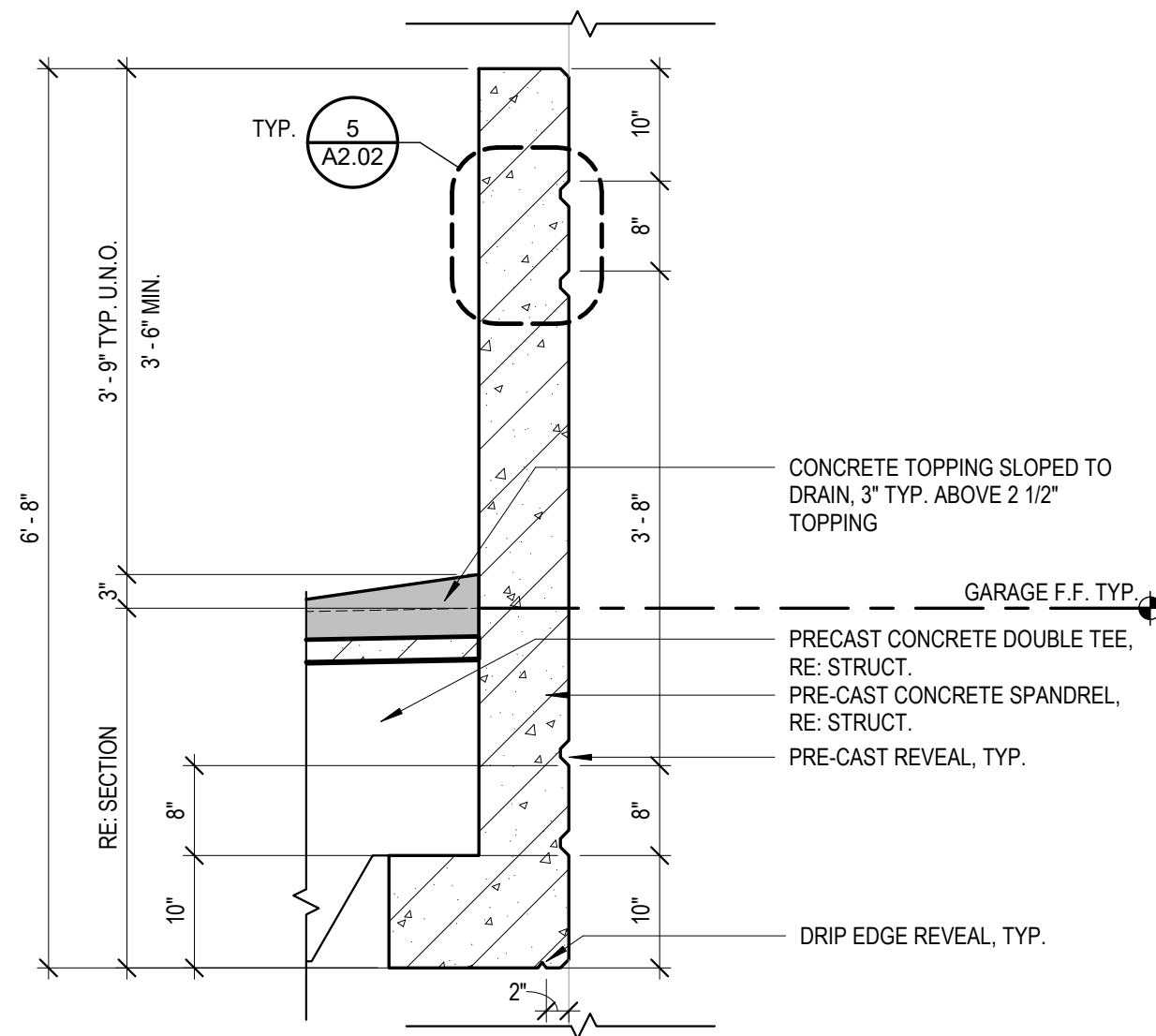
4 DETAIL - BARRIER CABLE
1 1/2" = 1'-0"



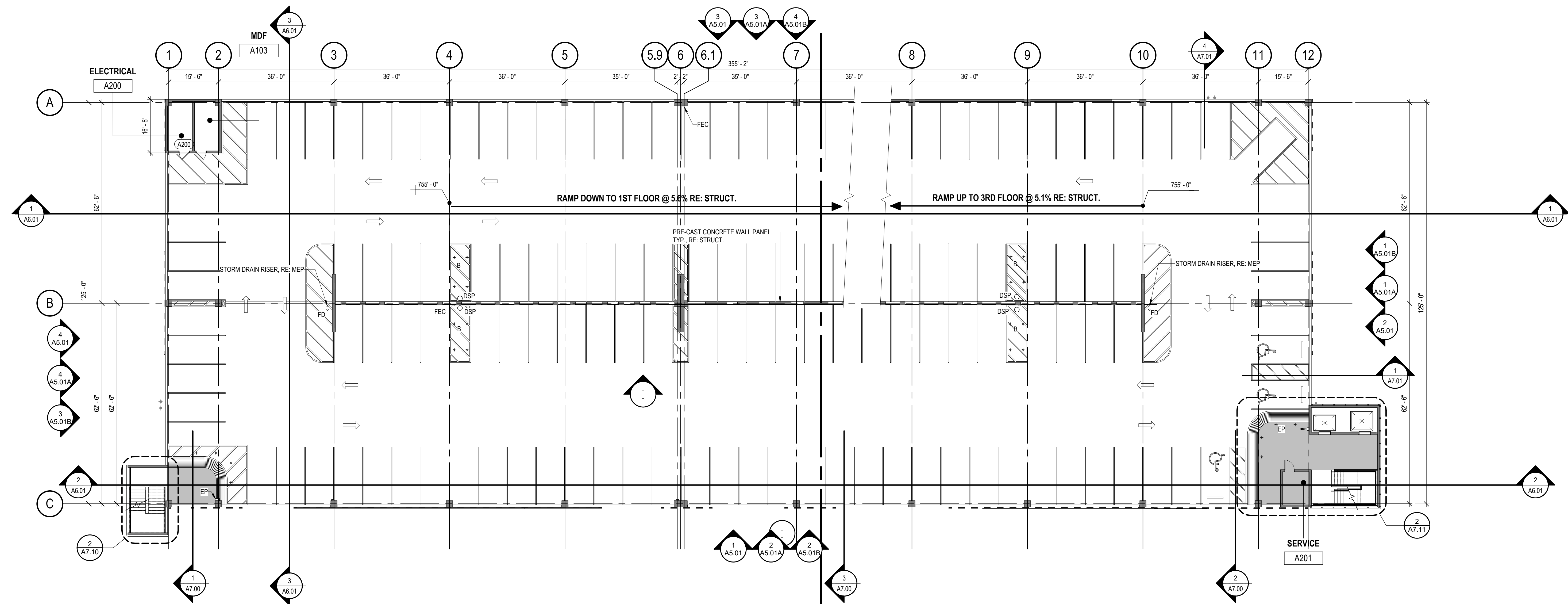
6 SECTION DETAIL - BARRIER CABLE
1 1/2" = 1'-0"



5 TYPICAL REVEAL
3" = 1'-0"



7 TYPICAL SPANDREL DETAIL
3/4" = 1'-0"



1 SECOND FLOOR FLOOR PLAN
1/16" = 1'-0"

GENERAL NOTES - FLOOR PLAN

G1. DIMENSIONS ARE FROM COLUMN CENTERLINE, EDGE OF CONCRETE, FOR FACE OF GYPSUM BOARD WALLS, U.N.O.

G2. CONTRACTOR TO PROVIDE TREATED WOOD BLOCKING AS NECESSARY FOR ANY WALL MOUNTED ITEMS OR ACCESSORIES.

G3. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND PLAN DIMENSIONS PRIOR TO BEGINNING ANY CONSTRUCTION OR FABRICATION, AND NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES.

G4. ALL DOORS TO BE 4" FROM FACE OF ADJACENT GYPSUM BOARD OF PERPENDICULAR WALL TO EDGE OF DOOR, U.N.O. IF A DIMENSION IS SHOWN, THIS WILL NOT INDICATE DISTANCE FROM FACE OF GYPSUM BOARD TO EDGE.

G5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS TO ENSURE PROPER FIT PRIOR TO MANUFACTURING ANY MILLWORK OR ORDERING ANY SPECIALTY ITEMS OR EQUIPMENT.

G6. REFER TO TEXAS ACCESSIBILITY STANDARDS (T.A.S.) FOR ALL MOUNTING HEIGHTS, DOOR CLEARANCES, ETC.

G7. PROVIDE FIRE RATED EXTINGUISHER CABINET WHEN LOCATED IN RATED PARTITION.

LEGEND - FLOOR PLAN

F.E.C. - FIRE EXTINGUISHER CABINET

FD - FLOOR DRAIN, RE: MEP

*A - STL. BOLLARD, PTD. TYP.

*B - STL. SPRING LOADED BOLLARD, TYP. @ PRECAST

HB - HOSEBIB, RE: MEP

SLOPE - INDICATES THE SLOPE TO DRAIN ACCOMPLISHED BY SLOPING THE DOUBLE TEES / AND/OR TOPPING SLAB

EP - EMERGENCY PHONE, RE: MEP

C - FUTURE ELECTRIC VEHICLE CHARGING STATION, PROVIDE CONDUIT ONLY, RE: MEP

DSP - DRY STANDPIPE RISER, RE: MEP



1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2512 / F. 210.227.9457

GENERAL CONTRACTOR

GUIDO CONSTRUCTION

8526 Vidor Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pape Dawson Engineers

2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studios

2425 Broadway, Suite 105
San Antonio, Tx. 78215
P. 210.828.1155 / F. 210.828.1399

STRUCTURAL ENGINEER

Datum Engineers

5021 Broadway Street
San Antonio, Tx. 78209
P. 210.858.2880

MEP ENGINEERS

Alderson Associates

7700 Torino, Suite 101
San Antonio, Tx. 78229
P. 210.614.1110

PROJECT NUMBER: 2018-27

DRAWN BY: --

APPROVED BY: --

DATE: 11/09/2018

CLIENT

CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENTS

PROJECT NAME

SAN ANTONIO
ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3199

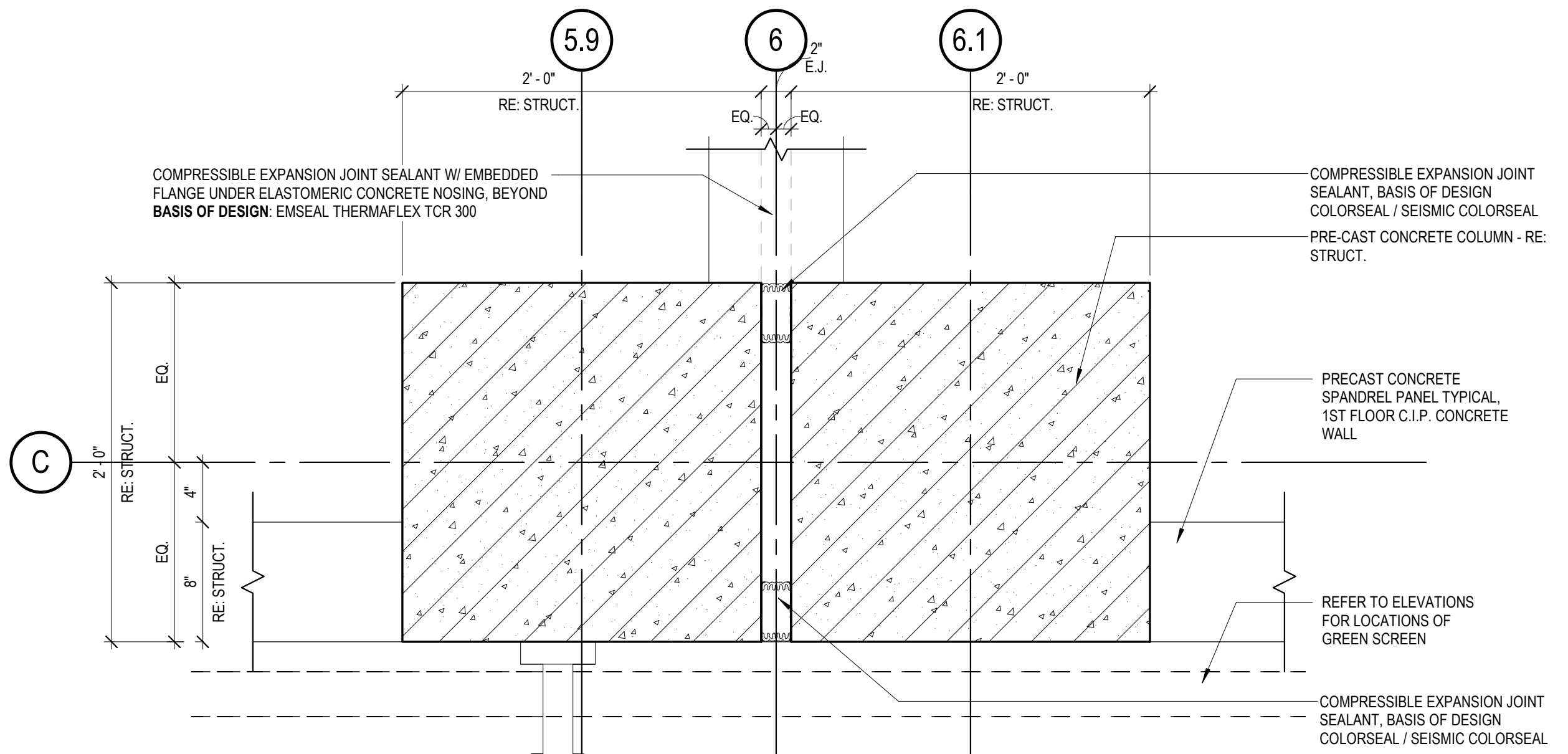


CONSTRUCTION DOCUMENTS

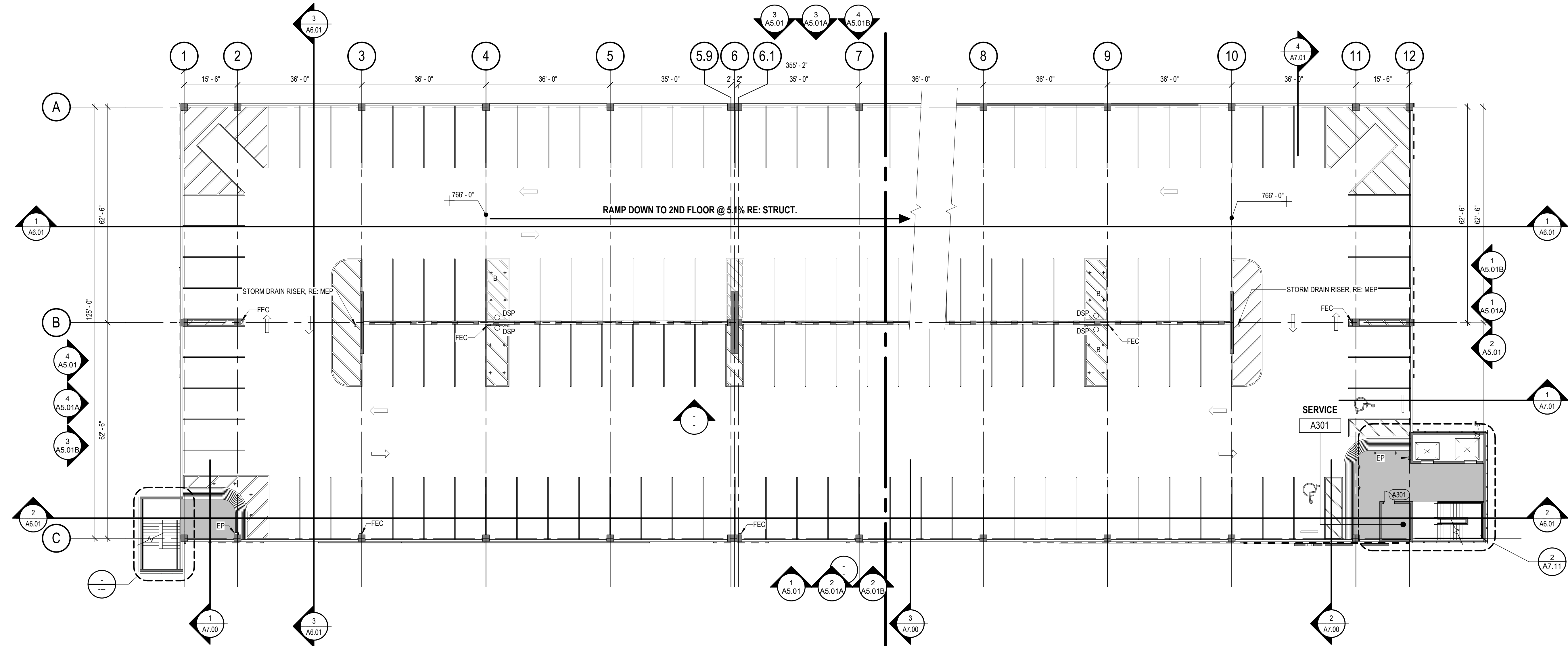
SHEET TITLE

FLOOR PLAN -
2ND FLOOR -
OVERALL

A2.02



2 PLAN DETAIL - TYPICAL EXPANSION JOINT
1 1/2" = 1'-0"



1 THIRD FLOOR FLOOR PLAN
1/16" = 1'-0"

GENERAL NOTES - FLOOR PLAN

G1. DIMENSIONS ARE FROM COLUMN CENTERLINE, EDGE OF CONCRETE, FOR FACE OF GYPSUM BOARD WALLS, U.N.O.

G2. CONTRACTOR TO PROVIDE TREATED WOOD BLOCKING AS NECESSARY FOR ANY WALL MOUNTED ITEMS OR ACCESSORIES.

G3. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND PLAN DIMENSIONS PRIOR TO BEGINNING ANY CONSTRUCTION OR FABRICATION, AND NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES.

G4. ALL DOORS TO BE 4" FROM FACE OF ADJACENT GYPSUM BOARD OF PERPENDICULAR WALL TO EDGE OF DOOR, U.N.O. IF A DIMENSION IS SHOWN, THIS WILL NOT INDICATE DISTANCE FROM FACE OF GYPSUM BOARD TO EDGE.

G5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS TO ENSURE PROPER FIT PRIOR TO MANUFACTURING ANY MILLWORK OR ORDERING ANY SPECIALTY ITEMS OR EQUIPMENT.

G6. REFER TO TEXAS ACCESSIBILITY STANDARDS (T.A.S.) FOR ALL MOUNTING HEIGHTS, DOOR CLEARANCES, ETC.

G7. PROVIDE FIRE RATED EXTINGUISHER CABINET WHEN LOCATED IN RATED PARTITION.

LEGEND - FLOOR PLAN

F.E.C. - FIRE EXTINGUISHER CABINET

FD - FLOOR DRAIN, RE: MEP

*A - STL. BOLLARD, PTD. TYP.

*B - STL. SPRING LOADED BOLLARD, TYP. @ PRECAST

HB - HOSEBIB, RE: MEP

INDICATES THE SLOPE TO DRAIN ACCOMPLISHED BY SLOPING THE DOUBLE TEES / AND/OR TOPPING SLAB

EP - EMERGENCY PHONE, RE: MEP

FUTURE ELECTRIC VEHICLE CHARGING STATION, PROVIDE CONDUIT ONLY, RE: MEP

DSP - DRY STANDPIPE RISER, RE: MEP



1512 South Flores Street
San Antonio, Texas 78204
P. 210.227.2512 / F. 210.227.9457

GENERAL CONTRACTOR

GUIDO CONSTRUCTION

8526 Vidor Ave.
San Antonio, Tx. 78216
P. 210.344.8321 / F. 210.344.3469

CIVIL ENGINEER

Pape Dawson Engineers

2000 NW Loop 410
San Antonio, Tx. 78213-2251
P. 210.375.9000 / F. 210.375.9010

LANDSCAPE ARCHITECT

Rialto Studios

2425 Broadway, Suite 105
San Antonio, Tx. 78215
P. 210.828.1155 / F. 210.828.1399

STRUCTURAL ENGINEER

Datum Engineers

5021 Broadway Street
San Antonio, Tx. 78209
P. 210.858.2880

MEP ENGINEERS

Alderson Associates

7700 Torino, Suite 101
San Antonio, Tx. 78229
P. 210.614.1110

PROJECT NUMBER: 2018-27

DRAWN BY: --

APPROVED BY: --

DATE: 11/09/2018

CLIENT

CITY OF SAN ANTONIO
TRANSPORTATION &
CAPITAL IMPROVEMENTS

PROJECT NAME

SAN ANTONIO
ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3199



CONSTRUCTION DOCUMENTS

SHEET TITLE

FLOOR PLAN -
3RD FLOOR -
OVERALL

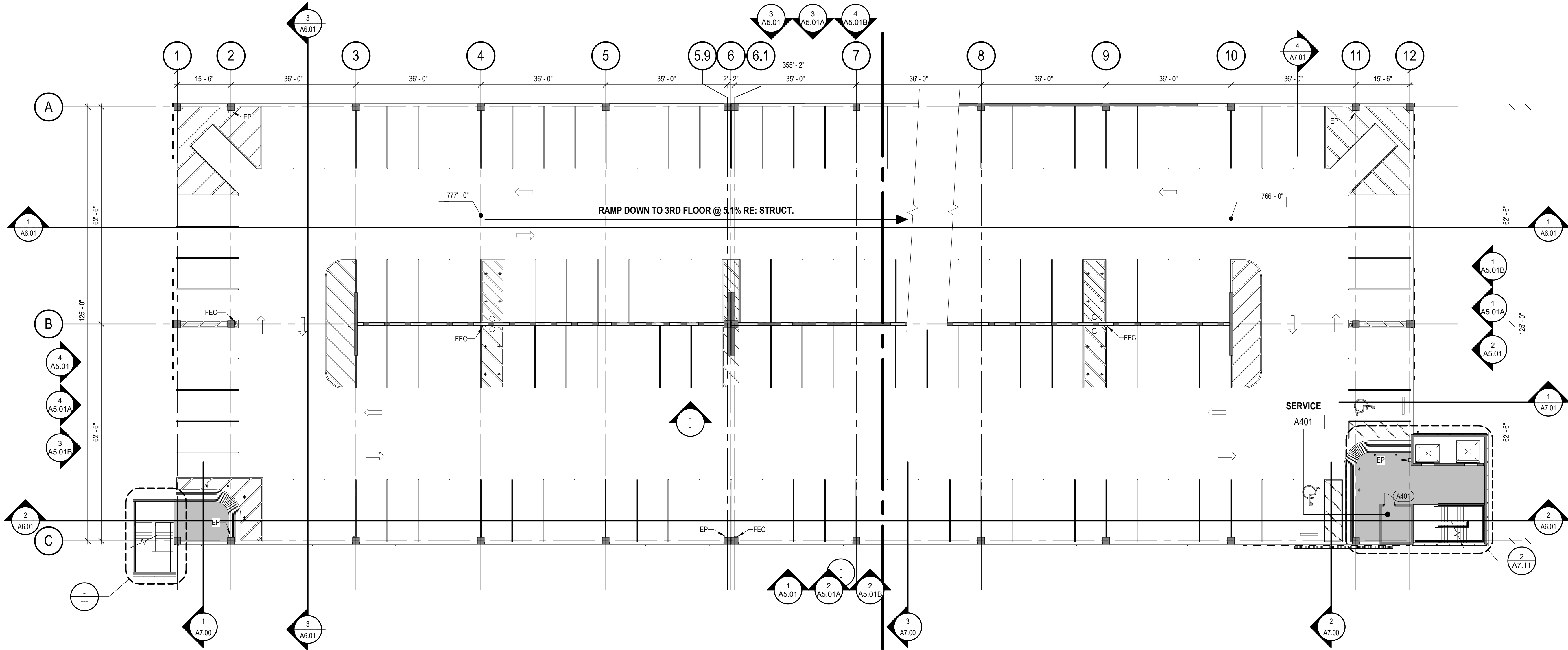
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FOURTH FLOOR FLOOR PLAN

1/16" = 1'-0"



GENERAL NOTES - FLOOR PLAN

G1. DIMENSIONS ARE FROM COLUMN CENTERLINE, EDGE OF CONCRETE, FOR FACE OF GYPSUM BOARD WALLS, U.N.O.

G2. CONTRACTOR TO PROVIDE TREATED WOOD BLOCKING AS NECESSARY FOR ANY WALL MOUNTED ITEMS OR ACCESSORIES.

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2425 Broadway, Suite 105
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P. 210.828.1155 / F. 210.828.1399

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5021 Broadway Street
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P. 210.858.2880

MEP ENGINEERS

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7700 Torino, Suite 101
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ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3199



CONSTRUCTION
DOCUMENTS

SHEET TITLE

FLOOR PLAN -
4TH FLOOR -
OVERALL

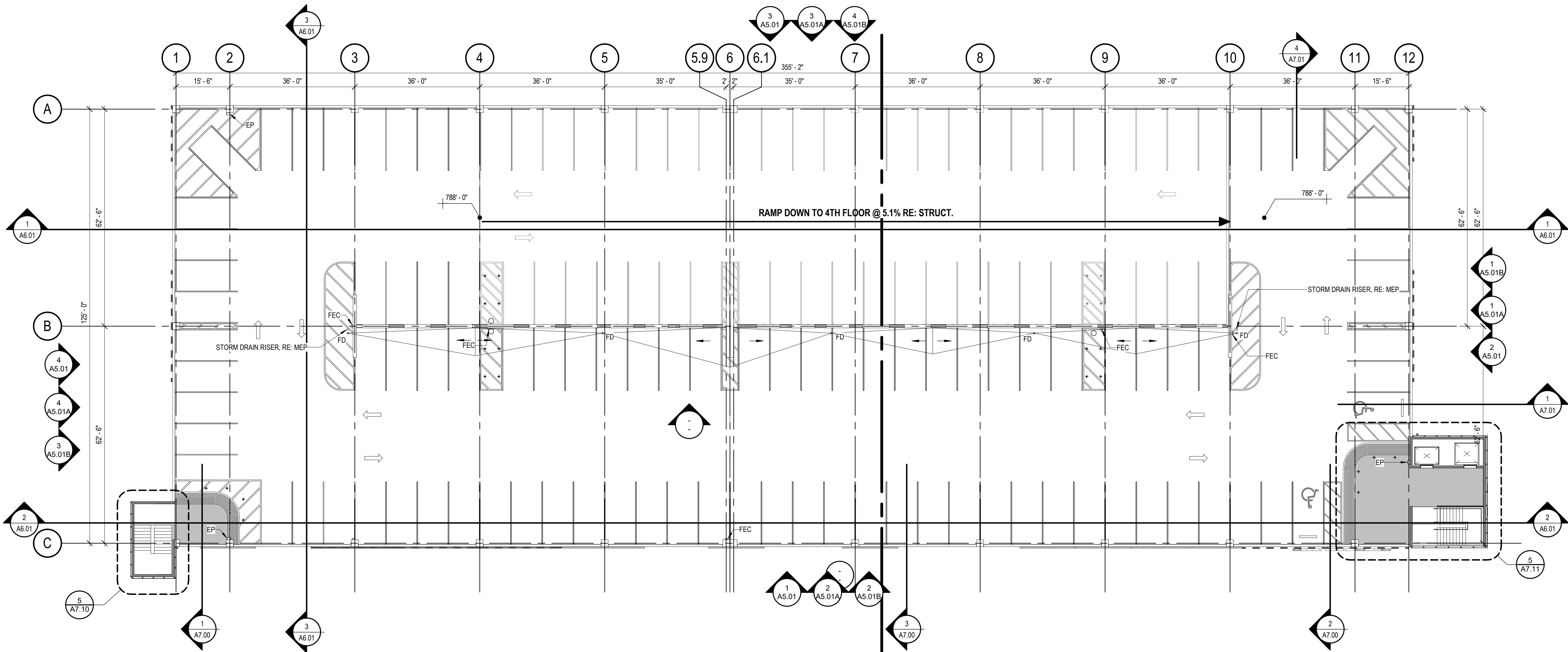
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FIFTH FLOOR FLOOR PLAN

1/16" = 1'-0"



GENERAL NOTES - FLOOR PLAN

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PROJECT NAME

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ZOO PARKING
GARAGE

3903 N. St. Mary's St.
San Antonio, Tx. 78212-3199



CONSTRUCTION DOCUMENTS

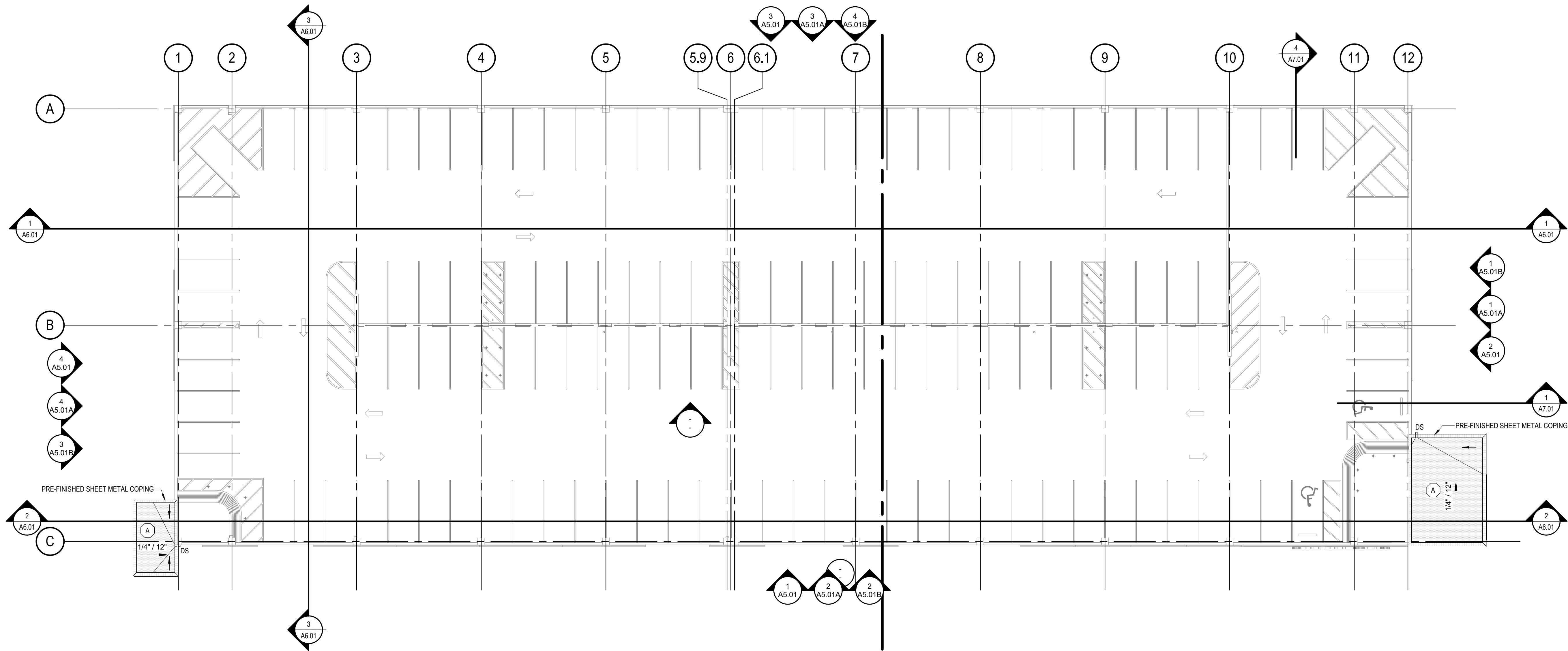
SHEET TITLE

FLOOR PLAN -
5TH FLOOR -
OVERALL

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1 FIFTH FLOOR FLOOR PLAN
1/16" = 1'-0"



GENERAL NOTES - ROOF PLAN

G1. ALL ROOFING DETAILS SHALL CONFORM WITH "SMACNA" AND "NRCA" REQUIREMENTS.

G2. ALL DIMENSIONS ARE TO FACE OF FINISH.

ROOF SYSTEM SCHEDULE

(A)	PRECAST STRUCTURAL CONCRETE ROOF SLOPED TO DRAIN (MIN. 1/4" / 12") W/ PMMA ROOFING MEMBRANE TYPICAL. GROUT ALL PRECAST JOINTS. RE-STRUCTURAL FORM CRICKETS MIN. 1/8" / 12" SLOPE WITH CONCRETE TOPPING TO DRAIN
(B)	NOT USED

ROOF PLAN LEGEND

DS - DOWNSPOUT

OF - OVERFLOW SCUPPER



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P. 210.344.8321 / F. 210.344.3469

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P. 210.375.9000 / F. 210.375.9010

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2425 Broadway, Suite 105
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5021 Broadway Street
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P. 210.858.2880

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P. 210.614.1110

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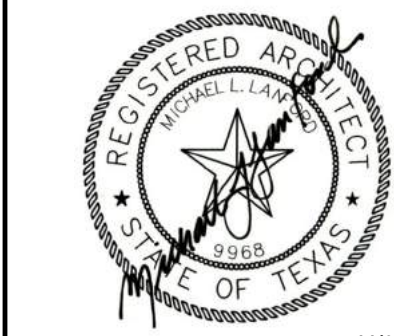
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CITY OF SAN ANTONIO
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ZOO PARKING
GARAGE

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San Antonio, Tx. 78212-3199



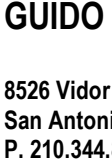

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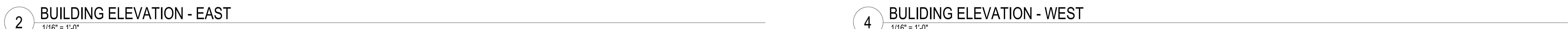
CONSTRUCTION
DOCUMENTS

SHEET TITLE

ROOF PLAN

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1512 South Flores Street San Antonio, Texas 78204 P. 210.227.2611 / F. 210.227.9457	
GENERAL CONTRACTOR GIDCO CONSTRUCTION 8526 Vidor Ave. San Antonio, TX 78216 P. 210.344.8321 / F. 210.344.3469	
CIVIL ENGINEER Pape Dawson Engineers 2000 NW Loop 410 San Antonio, TX 78213-2251 P. 210.375.9000 / F. 210.375.9010	
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PROJECT NUMBER: 2018-27 DRAWN BY: -- APPROVED BY: -- DATE: 11/09/2018	
CLIENT CITY OF SAN ANTONIO TRANSPORTATION & CAPITAL IMPROVEMENTS	
PROJECT NAME SAN ANTONIO ZOO PARKING GARAGE 3903 N. St. Mary's St. San Antonio, TX 78212-3199	
	
11/09/2018	
CONSTRUCTION DOCUMENTS	
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PERFORATED PANEL SCHEDULE (MAIN OPTION)				
Height	Width	Area	Count (Manual)	Total Area
Perforated Panel - New				
8" - 0"	3" - 6 1/2"	28.33 SF	6	170.00 SF
8" - 0"	3" - 7"	28.78 SF	6	172.67 SF
8" - 0"	3" - 11 1/2"	31.65 SF	6	189.88 SF
9" - 6"	3" - 0 1/2"	28.93 SF	3	86.79 SF
9" - 6"	3" - 1 1/2"	29.49 SF	4	117.96 SF
9" - 6"	3" - 7 1/2"	34.52 SF	6	207.12 SF
10" - 0"	3" - 6 1/2"	35.43 SF	6	212.58 SF
10" - 0"	3" - 7"	35.97 SF	6	215.83 SF
10" - 0"	3" - 11 1/2"	39.56 SF	8	316.46 SF
11" - 0"	3" - 0 1/2"	33.50 SF	5	167.50 SF
11" - 0"	3" - 1 1/2"	34.15 SF	20	682.92 SF
11" - 0"	3" - 6 1/2"	36.96 SF	30	1,108.75 SF
11" - 0"	3" - 7"	39.57 SF	30	1,187.28 SF
11" - 0"	3" - 7 1/2"	39.97 SF	30	1,199.11 SF
11" - 0"	3" - 11 1/2"	43.51 SF	40	1,740.52 SF
GRAND TOTAL			216	8,170.04 SF





Catalog # :

Project :

Prepared By :

Date :



LSI PROTECTOR™ LED WET LOCATION EXIT SIGN (EWS)



Features & Specifications

Electrical

- Standard Dual voltage (120/277 Vac) Input 60 Hz
- Optional Sealed, maintenance-free nickel-cadmium battery backup provides 90 minutes of emergency power
- Typical LED life >10 years
- Provided with Waterproof test switch and AC-On indicator
- Operating temperature: 10°C to 40°C (50°F to 104°F)
- 24hr Recharge
- UL 924 listed for Wet location
- Optional Remote-Capacity version offers up to an additional 3 Watts for 90 minutes
- Remote Capacity Unit will only power the Protector ERH Outdoor Remote Heads
- Optional RC versions utilizes maintenance-free nickel-metal hydride battery

Construction

- Exit letters measure 6" with a red or green diffuser.
- White Injection-molded high-impact rated Polycarbonate housing
- UV-stabilized, UL94 V-0 flame rated housing
- Field-selectable chevron directional indicator punch-outs
- Single pack shipping weight in carton: 4.5 lbs.
- Master carton quantity: 6pcs

Installation

- Top, back, J-box or end mounting through universal mounting plate and canopy
- Includes canopy and universal mounting plate.
- Conduit entry KO's located in top and side housing, with conduit fitting Included

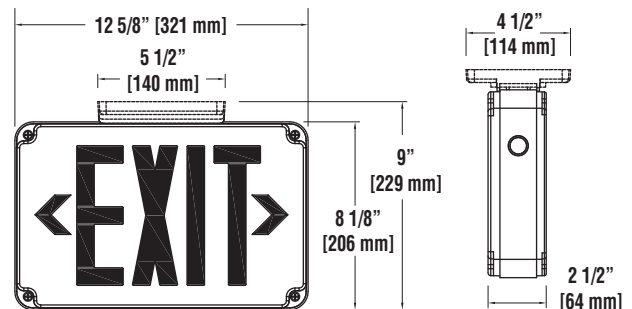
Warranty

- Five full year warranty on electronics/battery and unit.

Listings

- UL924 Listed for Wet Location
- NFPA 101
- NFPA 70-NEC
- CEC T20 Compliance
- OSHA

Product Dimensions



Ordering Guide

TYPICAL ORDER EXAMPLE: **EWS LED R UNV WHT**

Catalog Number	Description
EWS LED R UNV WHT	LED Wet Location Exit Sign, Red Face, Dual Voltage 120/277V, White
EWS LED R UNV BB WHT RC	LED Wet Location Exit Sign, Red Face, Dual Voltage 120/277V, Nickel-Cadmium Battery Backup, White, Remote Capacity 3W for 90Mins
EWS LED G UNV WHT	LED Wet Location Exit Sign, Green Face, Dual Voltage 120/277V, White
EWS LED G UNV BB WHT RC	LED Wet Location Exit Sign, Green Face, Dual Voltage 120/277V, Nickel-Cadmium Battery Backup, White, Remote Capacity 3W for 90Mins



Catalog # :

Project :

Prepared By :

Date :



Mirada Medium - MRM Outdoor LED Area Light

The Mirada's sleek design makes it perfectly-suited for architectural & commercial applications, while its cost-effective die-cast aluminum housing makes its acquisition cost very competitive. The Mirada offers high performance factory-rotatable silicone optics, 5 standard CCTs, 42,000+ delivered lumens, and is available with integral Airlink™ Wireless Controls.

Features & Specifications

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT and FTA.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, 3000K, and 2700K color temperatures per ANSI C78.377.
- Minimum CRI of 70. Optional 80 CRI available, consult factory for lead time.
- Integral Louver (IL) option available for improved back-light control without sacrificing street side performance. See page 5 for more details.

Electrical

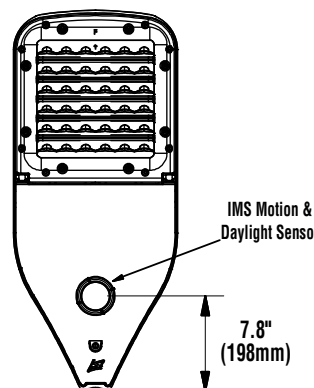
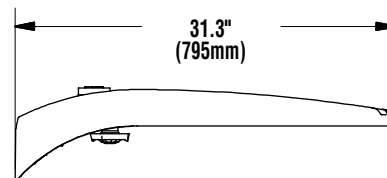
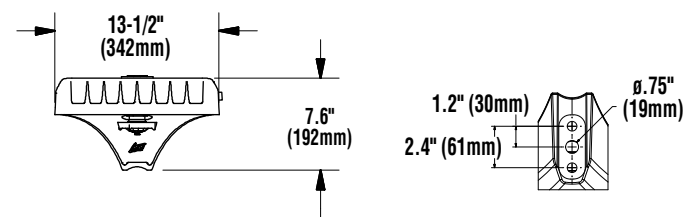
- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L lumen package rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Terminal block provided accepts up to 10ga wire.
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.



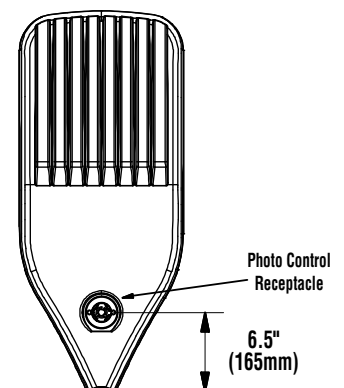
IP66

ARRA
Funding Compliant

Product Dimensions



Bottom View



Top View



Mirada Medium - MRM Outdoor LED Area Light

Features & Specifications (Cont.)

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square or round poles.
- Luminaire is proudly manufactured in the U.S. of U.S. and imported parts.
- IP66 rated luminaire protects integral components from harsh environments.
- 3G rated for ANSI C136.31 high vibration applications
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 30 lbs in carton.

Controls

Wireless Controls System

To make this fixture AirLink ready, simply order one of the following options:

- The integrated [Wireless Lighting Controller](#): ALSC or ALSCH (see ordering guide) as the controls option, or
- Integrated Wireless Controller option (above) with integrated motion sensor: ALSCS (ordering guide for mounting heights) or
- The 7-Pin Photoelectric Control Receptacle: CR7P as the controls option; and either the [5-Pin](#) or [7-Pin Twist Lock Controller](#): ALSC UNV TL5 or ALSC UNV TL7 as an accessory

To see how the components of AirLink system work together, reference the diagram in the controls section of this specs sheet. For more information on our AirLink products, visit our website: www.lsi-airlink.com/airlink-synapse/

Stand-Alone Controls

- The integral passive infrared motion sensor (IMS) activates switching of luminaire light levels (see the controls section for more details).
- The 7-pin ANSI C136.41-2013 photocontrol receptacle option (CR7P) is available for twist lock photocontrols or wireless control modules.
- The Button Type Photocells (PCI) are capable of switching luminaires ON/OFF in response to the amount of available daylight.

Installation

- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment for installing/servicing.
- Included terminal block provides quick and easy on-site wiring.
- Utilizes LSI's traditional 3" drill pattern for easy fastening of LSI products. (See drawing on page 1)

Warranty

- LSI LED Fixtures carry a 5-year warranty.

Listings

- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- American Recovery and Reinvestment Act Funding Compliant.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable For wet Locations.
- IP66 rated Luminaire. IP66 rated optical chamber.
- 3G rated for ANSI C136.31 high vibration applications
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Performance

ELECTRICAL DATA (AMPS)*

Lumens	Watts	120V	208V	240V	277V	347V	480V
7L	53	0.4A	0.3A	0.2A	0.2A	0.2A	0.1A
9L	69	0.6A	0.3A	0.3A	0.2A	0.2A	0.1A
12L	94	0.8A	0.5A	0.4A	0.3A	0.3A	0.2A
18L	150	1.2A	0.7A	0.6A	0.5A	0.4A	0.3A
24L	187	1.6A	0.9A	0.8A	0.7A	0.5A	0.4A
30L	247	2.1A	1.2A	1.0A	0.9A	0.7A	0.5A
36L	317	2.6A	1.5A	1.3A	1.1A	0.9A	0.7A
42L	390	3.2A	1.9A	1.6A	1.4A	1.1A	0.8A

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%

ELECTRICAL DATA - PHOSPHOR CONVERTED AMBER (AMPS)*

Lumens	Watts	120V	208V	240V	277V	347V	480V
9L	74.3	0.6A	0.4A	0.3A	0.3A	0.2A	0.2A
12L	102.9	0.9A	0.5A	0.4A	0.4A	0.3A	0.2A

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%

RECOMMENDED LUMEN MAINTENANCE¹(24-42L)

Ambient	Initial ²	25 hr ²	50 hr ²	75 hr ³	100 hr ³
0-40 C	100%	100%	97%	94%	92%

RECOMMENDED LUMEN MAINTENANCE¹(7-18L)

Ambient	Initial ²	25 hr ²	50 hr ²	75 hr ³	100 hr ³
0-50 C	100%	96%	92%	88%	84%

- 1- Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.
- 2- In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
- 3- In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing

DELIVERED LUMENS*

Lumen Package	Distribution	Phosphor Converted Amber			Wattage
		Delivered Lumens	Efficacy	BUG Rating	
9L	2	5848	80	B2-U0-G2	74
	2 - IL	3644	50	B0-U0-G1	
	3	6018	82	B1-U0-G2	
	3 - IL	4468	61	B0-U0-G2	
	5W	5471	74	B3-U0-G1	
	FT	5801	79	B1-U0-G2	
	FT - IL	3649	50	B0-U0-G1	
	FTA	5924	81	B1-U0-G1	
12L	FTA - IL	4243	58	B1-U0-G1	102
	2	7530	74	B2-U0-G2	
	2 - IL	4692	46	B0-U0-G1	
	3	7749	76	B1-U0-G2	
	3 - IL	5753	57	B0-U0-G2	
	5W	7045	69	B3-U0-G2	
	FT	7470	73	B2-U0-G2	
	FT - IL	4699	46	B0-U0-G2	
	FTA	7628	75	B2-U0-G2	
	FTA - IL	5464	54	B1-U0-G1	

*LED Chips are frequently updated therefore values are nominal

LUMINAIRE EPA CHART - MRM

Tilt Degree	0°	30°	45°	Tilt Degree	0°	30°	45°
Single	0.5	1.5	1.9	T90°	1.0	2.5	2.8
D180°	1.0	1.5	1.9	TN120°	1.0	3.3	3.9
D90°	0.8	1.9	2.3	Q90°	1.0	2.5	2.8

Specifications and dimensions subject to change without notice.



Mirada Medium - MRM Outdoor LED Area Light

DELIVERED LUMENS*															Wattage
Lumen Package	Distribution	CRI	2700K CCT			3000K CCT			4000K CCT			5000K CCT			
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
7L	2	70	6550	124	B2-U0-G1	6711	127	B2-U0-G1	7208	137	B2-U0-G2	7596	144	B2-U0-G2	53
	2 - IL	70	4068	77	B0-U0-G1	4167	79	B0-U0-G1	4476	85	B0-U0-G1	4717	89	B0-U0-G1	
	3	70	6724	127	B1-U0-G2	6889	130	B1-U0-G2	7400	140	B1-U0-G2	7798	148	B1-U0-G2	
	3 - IL	70	4929	93	B0-U0-G2	5050	96	B0-U0-G2	5424	103	B0-U0-G2	5716	108	B0-U0-G2	
	5W	70	6400	121	B3-U0-G1	6557	124	B3-U0-G1	7043	133	B3-U0-G2	7422	141	B3-U0-G2	
	FT	70	6540	124	B1-U0-G2	6701	127	B1-U0-G2	7197	136	B1-U0-G2	7584	144	B2-U0-G2	
	FT - IL	70	4231	80	B0-U0-G2	4334	82	B0-U0-G2	4656	88	B0-U0-G2	4906	93	B0-U0-G2	
	FTA	70	6636	126	B1-U0-G1	6799	129	B2-U0-G1	7303	138	B2-U0-G1	7696	146	B2-U0-G1	
FTA - IL	70	4864	92	B1-U0-G1	4984	94	B1-U0-G1	5353	101	B1-U0-G1	5641	107	B1-U0-G1		
9L	2	70	8349	122	B2-U0-G2	8576	125	B2-U0-G2	9396	137	B2-U0-G2	9784	143	B2-U0-G2	69
	2 IL	70	5185	76	B0-U0-G1	5326	78	B0-U0-G1	5835	85	B0-U0-G1	6076	89	B0-U0-G1	
	3	70	8571	125	B1-U0-G2	8804	129	B1-U0-G2	9646	141	B2-U0-G2	10044	147	B2-U0-G2	
	3 IL	70	6283	92	B0-U0-G2	6454	94	B0-U0-G2	7071	103	B0-U0-G2	7363	107	B0-U0-G2	
	5W	70	8158	119	B3-U0-G2	8380	122	B3-U0-G2	9181	134	B3-U0-G2	9560	140	B4-U0-G2	
	FT	70	8337	122	B2-U0-G2	8563	125	B2-U0-G2	9382	137	B2-U0-G2	9769	143	B2-U0-G2	
	FT IL	70	5393	79	B0-U0-G2	5540	81	B0-U0-G2	6069	89	B0-U0-G2	6320	92	B0-U0-G2	
	FTA	70	8459	123	B2-U0-G2	8689	127	B2-U0-G2	9520	139	B2-U0-G2	9913	145	B2-U0-G2	
FTA IL	70	6200	91	B1-U0-G1	6369	93	B1-U0-G1	6978	102	B1-U0-G1	7266	106	B1-U0-G1		
12L	2	70	11157	119	B2-U0-G2	11461	122	B2-U0-G2	12556	134	B3-U0-G2	13075	139	B3-U0-G2	94
	2 IL	70	6929	74	B1-U0-G1	7117	76	B1-U0-G2	7798	83	B1-U0-G2	8119	86	B1-U0-G2	
	3	70	11454	122	B2-U0-G2	11766	125	B2-U0-G2	12890	137	B2-U0-G2	13423	143	B2-U0-G2	
	3 IL	70	8396	89	B0-U0-G2	8625	92	B0-U0-G2	9449	101	B0-U0-G2	9839	105	B0-U0-G2	
	5W	70	10902	116	B4-U0-G2	11199	119	B4-U0-G2	12269	131	B4-U0-G2	12775	136	B4-U0-G2	
	FT	70	11141	119	B2-U0-G2	11444	122	B2-U0-G2	12538	133	B2-U0-G3	13055	139	B2-U0-G3	
	FT IL	70	7207	77	B0-U0-G2	7403	79	B0-U0-G2	8110	86	B0-U0-G2	8445	90	B0-U0-G2	
	FTA	70	11304	120	B2-U0-G2	11612	124	B2-U0-G2	12722	135	B2-U0-G2	13247	141	B2-U0-G2	
FTA IL	70	8286	88	B1-U0-G1	8511	91	B1-U0-G1	9325	99	B1-U0-G1	9710	103	B1-U0-G1		
18L	2	70	16714	112	B3-U0-G3	17168	115	B3-U0-G3	18809	126	B3-U0-G3	19586	131	B3-U0-G3	150
	2 IL	70	10379	69	B1-U0-G2	10662	71	B1-U0-G2	11681	78	B1-U0-G2	12163	81	B1-U0-G2	
	3	70	17158	115	B2-U0-G3	17625	118	B2-U0-G3	19310	129	B3-U0-G3	20107	134	B3-U0-G3	
	3 IL	70	12578	84	B1-U0-G3	12920	86	B1-U0-G3	14155	95	B1-U0-G3	14739	99	B1-U0-G3	
	5W	70	16331	109	B4-U0-G2	16776	112	B4-U0-G2	18379	123	B4-U0-G2	19138	128	B5-U0-G3	
	FT	70	16689	112	B3-U0-G3	17143	115	B3-U0-G3	18781	126	B3-U0-G4	19557	131	B3-U0-G4	
	FT IL	70	10795	72	B1-U0-G2	11089	74	B1-U0-G2	12149	81	B1-U0-G3	12651	85	B1-U0-G3	
	FTA	70	16934	113	B3-U0-G3	17395	116	B3-U0-G3	19058	127	B3-U0-G3	19844	133	B3-U0-G3	
FTA IL	70	12412	83	B1-U0-G1	12750	85	B1-U0-G2	13969	93	B1-U0-G2	14546	97	B1-U0-G2		
24L	2	70	20880	112	B3-U0-G3	22701	121	B4-U0-G3	24276	130	B4-U0-G3	24784	133	B4-U0-G3	187
	2 IL	70	13100	70	B1-U0-G2	14243	76	B1-U0-G2	15231	81	B1-U0-G2	15550	83	B1-U0-G2	
	3	70	21739	116	B3-U0-G3	23636	126	B3-U0-G4	25275	135	B3-U0-G4	25804	138	B3-U0-G4	
	3 IL	70	15828	85	B1-U0-G3	17209	92	B1-U0-G3	18403	98	B1-U0-G4	18788	100	B1-U0-G4	
	5W	70	20632	110	B5-U0-G3	22432	120	B5-U0-G3	23988	128	B5-U0-G3	24490	131	B5-U0-G3	
	FT	70	21611	116	B3-U0-G4	23496	126	B3-U0-G4	25126	134	B3-U0-G4	25652	137	B3-U0-G4	
	FT IL	70	13692	73	B1-U0-G3	14886	80	B1-U0-G3	15919	85	B1-U0-G3	16252	87	B1-U0-G3	
	FTA	70	21496	115	B3-U0-G3	23371	125	B3-U0-G3	24992	134	B3-U0-G3	25515	136	B3-U0-G3	
FTA IL	70	15226	81	B1-U0-G2	16555	89	B1-U0-G2	17703	95	B2-U0-G2	18073	97	B2-U0-G2		
30L	2	70	26581	108	B4-U0-G3	28900	117	B4-U0-G3	30905	125	B4-U0-G3	31551	128	B4-U0-G3	247
	2 IL	70	16677	68	B1-U0-G2	18132	73	B1-U0-G2	19390	79	B1-U0-G2	19796	80	B1-U0-G2	
	3	70	27675	112	B3-U0-G4	30089	122	B3-U0-G4	32176	130	B3-U0-G4	32850	133	B3-U0-G4	
	3 IL	70	20150	82	B1-U0-G4	21908	89	B1-U0-G4	23428	95	B1-U0-G4	23918	97	B1-U0-G4	
	5W	70	26266	106	B5-U0-G3	28557	116	B5-U0-G3	30538	124	B5-U0-G4	31177	126	B5-U0-G4	
	FT	70	27512	111	B3-U0-G4	29912	121	B3-U0-G4	31987	130	B3-U0-G4	32656	132	B3-U0-G5	
	FT IL	70	17430	71	B1-U0-G3	18951	77	B1-U0-G4	20266	82	B1-U0-G4	20690	84	B1-U0-G4	
	FTA	70	27365	111	B3-U0-G3	29752	120	B4-U0-G3	31816	129	B4-U0-G3	32482	132	B4-U0-G3	
FTA IL	70	19384	78	B2-U0-G2	21075	85	B2-U0-G2	22537	91	B2-U0-G2	23008	93	B2-U0-G2		
36L	2	70	32214	102	B4-U0-G3	35025	111	B4-U0-G3	37454	118	B4-U0-G3	38238	121	B4-U0-G4	317
	2 IL	70	20212	64	B1-U0-G2	21975	69	B1-U0-G3	23499	74	B2-U0-G3	23991	76	B2-U0-G3	
	3	70	33540	106	B3-U0-G4	36466	115	B3-U0-G5	38996	123	B3-U0-G5	39812	126	B3-U0-G5	
	3 IL	70	24421	77	B1-U0-G4	26551	84	B1-U0-G4	28393	90	B1-U0-G4	28987	92	B1-U0-G5	
	5W	70	31832	101	B5-U0-G4	34609	109	B5-U0-G4	37010	117	B5-U0-G4	37785	119	B5-U0-G4	
	FT	70	33342	105	B3-U0-G5	36251	114	B3-U0-G5	38766	122	B4-U0-G5	39577	125	B4-U0-G5	
	FT IL	70	21125	67	B1-U0-G4	22968	73	B1-U0-G4	24561	78	B1-U0-G4	25075	79	B1-U0-G4	
	FTA	70	33164	105	B4-U0-G3	36058	114	B4-U0-G4	38559	122	B4-U0-G4	39366	124	B4-U0-G3	
FTA IL	70	23492	74	B2-U0-G2	25541	81	B2-U0-G2	27313	86	B2-U0-G2	27885	88	B2-U0-G2		
42L	2	70	36785	94	B4-U0-G3	39994	103	B5-U0-G4	42768	110	B5-U0-G4	43663	112	B5-U0-G4	390
	2 IL	70	23079	59	B1-U0-G3	25093	64	B2-U0-G3	26833	69	B2-U0-G3	27395	70	B2-U0-G3	
	3	70	38299	98	B3-U0-G5	41640	107	B4-U0-G5	44528	114	B4-U0-G5	45460	117	B4-U0-G5	
	3 IL	70	27886	72	B1-U0-G4	30319	78	B1-U0-G5	32422	83	B1-U0-G5	33100	85	B1-U0-G5	
	5W	70	36349	93	B5-U0-G4	39520	101	B5-U0-G4	42261	108	B5-U0-G4	43145	111	B5-U0-G4	
	FT	70	38073	98	B4-U0-G5	41395	106	B4-U0-G5	44266	114	B4-U0-G5	45192	116	B4-U0-G5	
	FT IL	70	24122	62	B1-U0-G4	26226	67	B1-U0-G4	28045	72	B1-U0-G4	28632	73	B1-U0-G4	
	FTA	70	37870	97	B4-U0-G4	41174	106	B4-U0-G4	44030	113	B4-U0-G4	44951	115	B4-U0-G4	
FTA IL	70	26825	69	B2-U0-G2	29165	75	B2-U0-G2	31188	80	B2-U0-G2	31841	82	B2-U0-G2		

*LED Chips are frequently updated therefore values are nominal

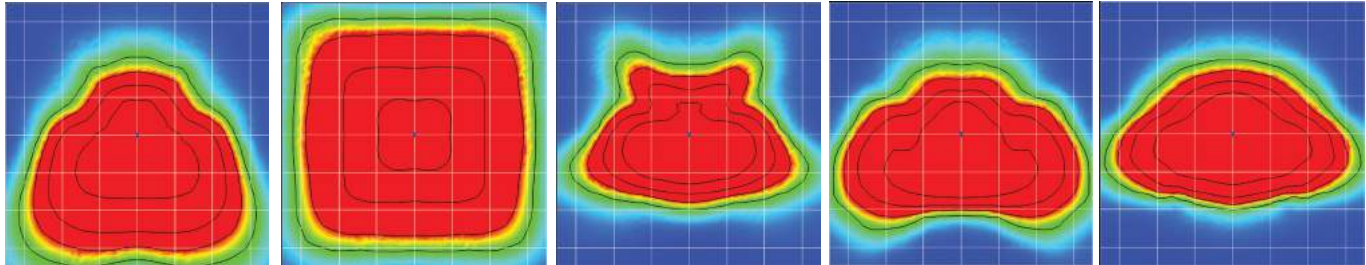
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Mirada Medium - MRM Outdoor LED Area Light

Performance (Cont.)

All published luminaire photometric testing performed to IESNA LM-79 standards. ISO footcandle plots below demonstrate the Mirada (MRM) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.



FT

5W

FTA

Type 3

Type 2

Ordering Guide

TYPICAL ORDER EXAMPLE: **MRM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Luminaire Prefix	Light Source	Lumen Package*	Light Output	Distribution	Orientation ¹	Voltage	Driver
MRM Mirada	LED	7L - 7,000 lms 9L - 9,000 lms 12L - 12,000 lms 18L - 18,000 lms 24L - 24,000 lms 30L - 30,000 lms 36L - 36,000 lms 42L - 42,000 lms *Consult factory for programmable wattages and lumen packages	SIL - Silicone	2 - Type 2 3 - Type 3 5W - Type 5 Wide FT - Forward Throw FTA - Forward Throw Automotive	(blank) - standard L - Optics rotated left 90 R - Optics rotated right 90	UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)	DIM - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Controls (Choose One)	Finish	Options
50 - 5,000 CCT 40 - 4,000 CCT 30 - 3,000 CCT ² 27 - 2,700 CCT ² AMB - Phosphor Converted Amber ^{2,3}	70CRI - 70 CRI 80CRI - 80 CRI ²	(Blank) - None Wireless Controls System ALSC - AirLink Synapse Control System ⁴ ALSCH - AirLink Synapse Control System Host / Satellite ^{4,5} ALSCS01 - AirLink Synapse Control System with 8-12' Motion Sensor ⁴ ALSCHS01 - AirLink Synapse Control System Host / Satellite with 8-12' Motion Sensor ^{4,5} ALSCS02 - AirLink Synapse Control System with 12-20' Motion Sensor ⁴ ALSCHS02 - AirLink Synapse Control System Host / Satellite with 12-20' Motion Sensor ^{4,5} ALSCS04 - AirLink Synapse Control System with 20-40' Motion Sensor ⁴ ALSCHS04 - AirLink Synapse Control System Host / Satellite with 20-40' Motion Sensor ^{4,5} Stand-Alone Controls EXT - 0-10v Dimming (from external signal) IMS0M1 - Integral Motion Sensor 8-12' 120-277V ^{4,6} IMS0M2 - Integral Motion Sensor 12-20' 120-277V ^{4,6} IMS0M4 - Integral Motion Sensor 20-40' 120-277V ^{4,6} IMS0M1HV - Integral Motion Sensor 8-12' 347-480V ^{6,12} IMS0M2HV - Integral Motion Sensor 12-20' 347-480V ^{6,12} IMS0M4HV - Integral Motion Sensor 20-40' 347-480V ^{6,12} CR7P - 7 Pin Control Receptacle ANSI C136.41 ⁷ Button Type Photocells PCI120 - 120V PCI208-277 - 208 - 277V PCI347 - 347V	BRZ - Bronze BLK - Black GPT - Graphite MSV - Metallic Silver WHT - White PLP - Platinum Plus SVG - Satin Verde Green	(Blank) - None IL - Integral Louver HSS ¹



Mirada Medium - MRM Outdoor LED Area Light

Accessory Ordering Information

Description	Order Number	Description	Order Number
PC120 Photocell for use with CR7P option (120V) ⁹	122514	Pole Quick Mount Bracket - Square Pole ¹¹	687073CLR
PC208-277 Photocell for use with CR7P option (208V, 240V, 277V) ⁹	122515	Pole Quick Mount Bracket - 4-5" Round Pole ¹¹	689903CLR
PC347 Photocell for use with CR7P option (347V) ⁹	122516	15° Tilt Pole Quick Mount Bracket - Square Pole ¹¹	688003CLR
PC480 Photocell for use with CR7P option (480V) ⁹	1225180	15° Tilt Pole Quick Mount Bracket - 4-5" Round Pole ¹¹	689905CLR
ALSC UNV TL5 - Airlink 5Pin Twist Lock Controller ^{4,9}	661409	BKS XBO WM * CLR Wall Mount Bracket ¹¹	382132CLR
ALSC UNV TL7 - Airlink 7Pin Twist Lock Controller ^{4,9}	661410	BKA-XMA-XALM-CLR	652761
PMOS24 - 24V Pole-Mount Occupancy Sensor (ALSC/H Compatible) ^{10,11}	663284CLR	FK120 Single Fusing (120V)	FK120 ¹³
IMS/PC Remote Configurator Tool	584929	FK277 Single Fusing (277V)	FK277 ¹³
IL - Integral Louver HSS	684812	DFK480 Double Fusing (480V)	DFK480 ¹³
Universal Mounting Bracket (UMB) ¹¹	684616CLR	FK347 Single Fusing (347V)	FK347 ¹³
Adjustable Slip Fitter (ASF) ¹¹	688138CLR		

FOOTNOTES:

- 1 - Not available on "Type V" distribution.
- 2 - Consult Factory for availability.
- 3 - Only available in 9L and 12L Lumen Packages
- 4 - Not available in HV.
- 5 - Consult Factory for Site Layout
- 6 - IMS is field adjustable, via a hand held Remote Configurator Tool, which must be ordered separately. See Accessory Ordering Information.

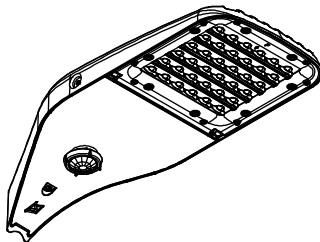
- 7 - Control device must be ordered separately. 7 pin standard. See Accessory Ordering Information.
- 8 - Accessories are shipped separately and field installed.
- 9 - Factory installed CR7P option required. See Options.
- 10 - Only available with ALSC* Controls
- 11 - "CLR" denotes finish. See Finish options.
- 12 - Not available in UNV.
- 13 - Fusing must be located in hand hole of pole.

Accessories/Options

Integral Louver (IL)

Accessory Integral Louver available for improved back-light control without sacrificing street side performance. LSI's Integral Louver (IL) option delivers backlight control that significantly reduces light spill behind the pole for applications with pole locations close to adjacent properties. The integrated louvers' design maximizes forward-reflected light while reducing glare, maintaining the optical distribution selected, and most importantly, eliminating light trespass. IL rotates with optical distribution.

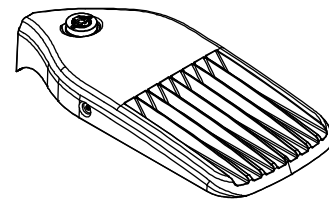
Luminaire Shown with Integral Louver (IL)



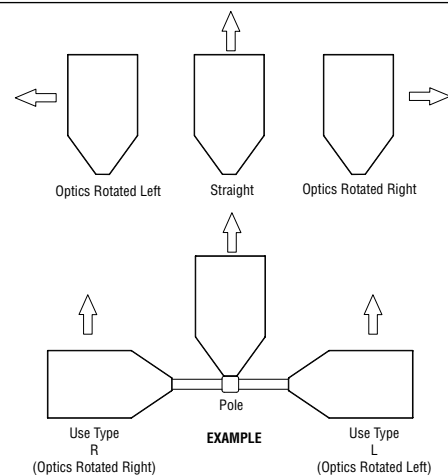
7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).

Fixture Shown with CR7P



Optics Rotation





Mirada Medium - MRM Outdoor LED Area Light

Stand-alone Controls: Occupancy Sensor (IMS)

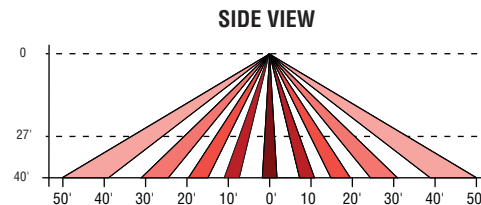
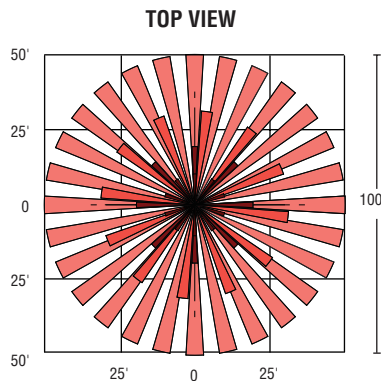
The integral passive infrared motion sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Lowlight level (10% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. See coverage diagram for detection cone.

The Remote Configurator Tool allows for easy and safe programming of each luminaire from ground level. See the [Remote Configurator User Guide](#) for programming instructions.

When ordering the Stand-alone Occupancy Sensor on the fixture, you must include IMS (see ordering guide for mounting height options) as the controls option in the fixture nomenclature.

To order as a motion sensor with the AirLink Wireless Control System, see ordering guide under "Wireless Controls System" and select the ALSCS controls option with the desired mounting height.

IMS Coverage Diagrams



Remote Configurator Tool



Luminaire Shown with IMS





Mirada Medium - MRM Outdoor LED Area Light



AirLink™
enabled by Synapse®

The AirLink enabled by Synapse Wireless Lighting Control System is the perfect solution for commercial, industrial and municipal applications, such as: auto dealerships, parking lots, garages, shopping complexes and warehouses.

AirLink utilizes robust wireless communication via 2.4 GHz Self-Healing Mesh Network which not only increases reliability and accuracy of system, but also eliminates single point of failure.

The flexibility of the system make it perfect for new construction and retrofit projects. The user-friendly AirLink web application is accessible through any device with an internet connection and allows for complete customization of the system's features.

Some capabilities of the system include: occupancy/vacancy sensing, daylight harvesting, scheduling, high-end trim, dimming, zone control, BMS integration and energy monitoring.

The AirLink System

Wireless controls & sensors



Wireless & Override Switches



Occupancy/Vacancy & Daylight Sensors



AirLink-integrated Fixtures



AirLink-compatible Fixtures



Circuit & Zone Controllers

Centralized control & integration



Site Manager Controller

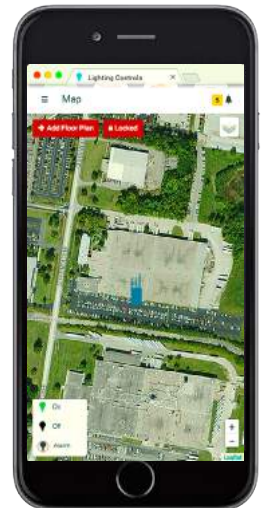


Gateway Module



WiFi, Cellular or Ethernet Connection

Simple-to-use software



AirLink Site Manager: Lighting control web app

Contact LSI Controls



Sales
controls.sales@lsi-industries.com



Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)



More information
For more information on AirLink, visit our website at www.lsi-airlink.com



Mirada Medium - MRM Outdoor LED Area Light

poles & Brackets

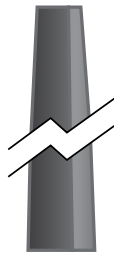
LSI offers a full line of poles and brackets to complete your lighting assembly. Our USA manufacturing facility has the same high quality standards for our poles and brackets as we do our lighting fixtures.



Steel
Square
Pole
14'-39'



Steel
Round
Pole
10'-30'



Steel
Tapered
Pole
20'-39'

BJA UMB CLR

The 3G rated Universal Mounting Bracket (UMB) allows for seamless integration of LSI Luminaires onto existing or new construction poles. The UMB bracket was designed specifically for square or round (tapered/straight) poles with (2) mounting hole spaces between 3.5"-5".



BJA-XMA-XALM-CLR



The Mirada Slip Fitter is a aesthetically pleasing 3G rated die cast aluminum adapter. Designed specifically to mount the MRM onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon. The Mirada Slip Fitter allows for leveling via integrated steps to adjust the luminaire +/- 3 Degrees.

BJA ASF CLR

The adjustable Slip Fitter is a 3G rated rugged die cast aluminum adapter to mount LSI luminaires onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon. The Adjustable Slip Fitter can be rotated 180° allowing for tilting LSI luminaires up to 45° and 90° when using a vertical tenon.



BKS PQMH CLR

The Pole Quick Mount Bracket allows for lightning fast installation of LSI luminaires onto existing and new construction poles with LSI's 3" or 5" standard bolt patterns.



BKS PQM15 CLR

The Pole Quick Mount Bracket allows for preset 15° uptilt of LSI luminaires for greater throw of light and increased vertical illumination as well as fast installation onto poles with LSI's 3" or 5" bolt pattern.

MIRADA WALL SCNCE (XWM)

TYPE W1



DOE LIGHTING FACTS

Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit www.lightingfacts.com for specific catalog strings.

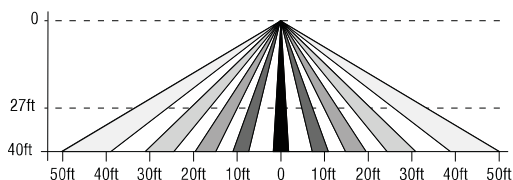
LIGHT OUTPUT - XWM - 3 5000K CCT

	Lumens	Wattage	LPW
03	3410	29	117
04	4417	40	111
06	6609	59	113
08	8610	82	105

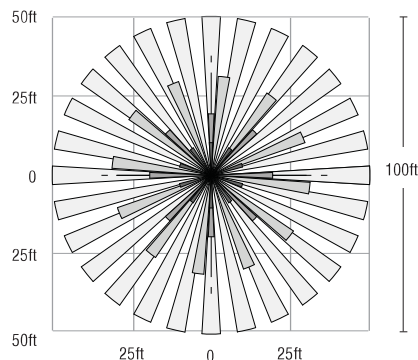
LED Chips are frequently updated therefore values may increase.

COVERAGE DIAGRAM

SIDE VIEW



TOP VIEW



US & Int'l. patents pending

SMARTTEC™ -LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature

ENERGY SAVING CONTROL OPTIONS - DIM - 0-10 volt dimming enabled with LSI wireless controls.

OPTIONAL INTEGRAL MOTION SENSOR - Passive infrared motion sensor activates switching of luminaire light levels. High level light is activated when passersby enter target zone and increased to full bright in 1-2 seconds. Low light level (30% of maximum drive current) is activated when target zone is absent of motion activity for 5 minutes and is gradually ramped down (10 seconds) to low level. Sensor detection range 110° horizontal x 93° vertical x 10 meters maximum distance.

LEDS - Available with 5000K, 4000K or 3000K color temperature, 70 CRI min.

OPTICS/DISTRIBUTIONS - Ultra-high efficiency reflectors provide three distributions. Choose from Type 2, Type 3 or Type FT.

HOUSING - Three-piece die-cast aluminum housing is smoothly contoured low-profile shape. Mounting hardware is stainless steel or electro-zinc plated steel. Housing and optical unit are sealed with extruded silicone gasket; supply conductors with molded EPDM bushing.

OPTICAL UNIT - Proprietary silicone refractor optics provide exceptional coverage and uniformity. Pressure stabilizing breather allows super-tight protection while preventing cycling from building up internal pressures and vacuums that can stress optical unit seals

WALL MOUNTING - Galvanized-steel universal wall mounting plate easily mounts directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position. Optional pole-mounting bracket permits mounting to standard poles (XPMa).

ELECTRICAL - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.

DRIVER - Drivers are dimming, standard. Components are fully encased in potting material for IP65 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed.

EMERGENCY OPTIONS - Optional integral emergency battery-back-up options are available. BB option operates in 0°C to 60°C ambient temperature and CWBB operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F)

FINISH - Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

SHIPPING WEIGHT (in carton) - 30 lbs./13.6Kg

LISTING - UL listed to ANSI/UL1598, UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position.

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



Project Name _____ Fixture Type W1
Catalog # _____

10/20/17

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LSI INDUSTRIES INC.

MIRADA WALL SCNCE (XWM)

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XWM FT LED 08L 50 UE WHT IMS**

Prefix	Distribution	Light Source	Output ⁸	Color Temperature	Input Voltage	Finish	Optional Controls	Optional Sensor/Options
XWM - Mirada Wall Sconce	2 - Type 2 3 - Type 3 (Wide Throw) FT - Type 4 (Forward Throw)	LED	03L - 3,400 Lumens 04L - 4,400 Lumens 06L - 6,600 Lumens 08L - 8,600 Lumens	50 - 5000K 40 - 4000K 30 - 3000K	UE - Universal Voltage (120-277) HV - 347-480	BLK - Black BRZ - Bronze GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus WHT - White	Wireless Control System ^{1,2} (blank) - None PCM - Platinum Control System GCM - Gold Control System DIM - 0-10 volt dimming (required for satellite fixtures) ALSC - AirLink Synapse Control System Stand-Alone Control (blank) - None DIM - 0-10 volt dimming ³ (from external signal)	Sensor IMS - Integral Motion Sensor ^{4,7} Options BB - Battery Back-up ⁵ CWBB - Cold Weather Battery Back-up ⁵ XPM - Pole Mounting Bracket

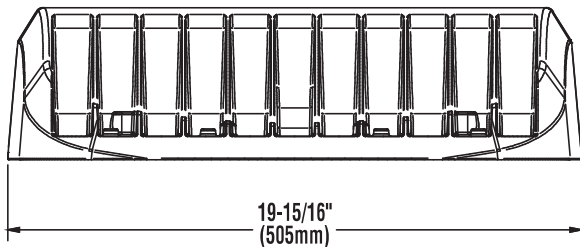
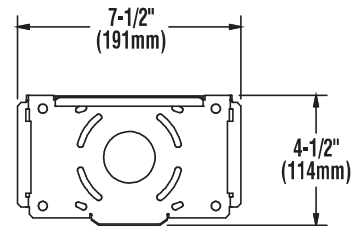
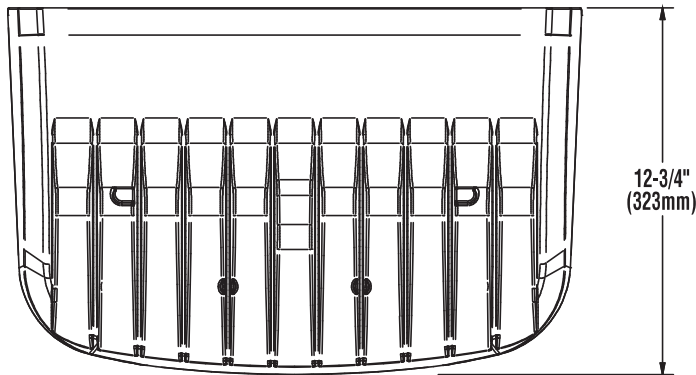
ACCESSORY ORDERING INFORMATION¹ (Accessories are field installed)

Description	Order Number	Description	Order Number
XWM SW BLK - Surface Wiring Box (Available in black only)	356915BLK	DFK208 - Double Fusing	DFK208
FK120 - Single Fusing	FK120	DFK240 - Double Fusing	DFK240
FK277 - Single Fusing	FK277	DFK480 - Double Fusing	DFK480
FK347 - Single Fusing	FK347	IMS/PC Remote Configurator Tool ⁷	584929

FOOTNOTES:

- 1 - For wireless controls information and accessories, see Controls Section.
- 2 - Requires a SiteManager and override switch. Not compatible with battery back-up, IMS or HL Option.
- 3 - Not compatible with IMS Option
- 4 - Not compatible with DIM or Wireless Control System
- 5 - Not compatible with Wireless Control System
- 6 - Not available with BB, CWBB, IMS Option or Wireless Control System
- 7 - IMS is the WattStopper Dual Sensor (Daylight & Motion) which is field adjustable, via a handheld remote configurator tool⁷
- 8 - Output based on type 3 optics in cool white color temperature, see IES files for exact delivered lumens

DIMENSIONS



Project Name _____ Fixture Type **W1**
Catalog # _____

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LSI INDUSTRIES INC.



AirLink™

enabled by Synapse®

Wireless Lighting Controller

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect up to two (2) sensors into the outdoor AirLink wireless lighting system.

Features

- 2% Utility Grade Power Monitoring
- Up to 80% Savings through smart dimming
- True On/Off functionality via switched relay
- Seamlessly integrates into the outdoor AirLink wireless lighting control solution & Self-healing Mesh Networking
- Relay closes on power loss
- Supports a wide range of LED drivers and fixtures
- Class 1 / Class 2 0-10V Dimming Control
- Direct Connect up to two (2) to 24V Occupancy Sensors and Photocells (consult sales for compatible list)
- Secure, over-the-air upgrades to support future enhancements
- Excellent RF Range — 1,000ft LoS between controllers
- Available in a metal cased version with quick connect terminal blocks
- Lights default to on for safety

Specifications

Regulatory Approvals

- FCC, IC, CE certified
- cULus Listed
- California Title 24 compliant

Power and Performance

- Operating environmental: -40°F to 131°F (-40°C to 55°C)
- Input power: 100–277 VAC +/- 10% (Max 305V) 47/64 Hz
- Switched output: Default ON; Zero Cross Switching
- Load rating: 5A @ 100V to 277V (+/- 10%)
- Dimming: 0–10V control; Output: Class 1/2 - 20mA Source Max / 50mA Sink Max
- Power monitoring: Utility grade - 2% accuracy
- Sensors inputs: 0–10V (photocell sensors), 0–24V (all other sensors); Sensor power supply: 24VDC @ 50mA

Other

- Dimensions: 8.2" L x 2.3" W x 1.3" H (209mm L x 59mm W x 33mm H) without antennas
- Radio: SNAP 2.4 GHz; 802.15.4; +20 dBm Transmit Power; -105 dBm Receive Sensitivity
- Warranty: 5 years

Contact LSI Controls



Sales
controls.sales@lsi-industries.com



Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)



More information
For more information on AirLink, visit our website at www.lsi-airlink.com/airlink



Architura 1400

Linear Wallwash LED

120/277VAC

Project

Type
W

Date

Using the latest highly energy efficient LED arrays, Architura creates the perfect replacement for T5 fluorescent linear luminaires. Providing pin-point accurate lighting distribution. Orgatech's four lensing options created for grazing, wallwashing, long throw wallwashing, and floodlighting. Careful positioning of accurately lensed LEDs within fixtures reduces glare, while using the power of LEDs to their greatest advantage.

Super bright LED fixtures should be aimed away from the casual visual field to avoid glare and visual discomfort.

Construction

Architectural extruded aluminum housing. Diecast endcaps. Polycarbonate lens. Swivel adjustment.

Warranty

5 year/50,000 hour limited warranty.

Mounting

Wall, ceiling or ground post mount. Sliding swivel or space saving brackets adjust along the fixture to allow for mounting condition changes.

Finish

Anodized or polyester powder coated. Silver, bronze, or white. Custom colors at added cost.

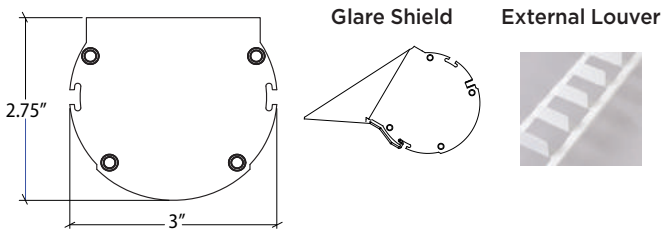
Environment

Dry, Damp or Wet Location - IP66.

Certifications

UL Listed. Certified to CSA Standard C22.2 No. 9. Tested in accordance with IESNA LM-79 and LM-80 Standards.

120VAC								
LED Output	LS				LH			
Length	2 ft	3 ft	4 ft	8 ft	2 ft	3 ft	4 ft	8 ft
Color	27k, 30k, 35k, & 40k							
Optics	45°, 120°							
Voltage	120VAC							
Watts/ft	4W/ft				8W/ft			
Wattage	8W	12W	16W	32W	16W	24W	32W	64W
Max Run	100 ft row max							
Lumen/ft	525 lm/ft				1050 lm/ft			
CRI	>90				>90			



ORDER GUIDE

1400		LH	40	U		15	SW		
Series	Length	LED Output	CCT	Voltage	Dimming	Optics	Mounting	Finish	Options
1400	2' Nom.	LS Standard (4.5W/ft; 361 lm/ft)	27 27k	U 120/277VAC	ND Non Dimming	15 15°	SW Swivel Mount	SO Silver	2 Natatorium
	3' Nom.		30 30k		D1 *0-10V Dimming (*DI not available in LS)	30 30°	LB L-Bracket Mount	BZ Bronze	N None
	4' Nom.	LH High (7W/ft; 462 lm/ft)	35 35k		D2 Wire Dimming	45 45°		WH White	
	8' Nom.		40 40k			120 120°		CU Custom	
	Rx Row Length (x=length specified)		50 50k					Finish Color Code:	
Note - 100' row max									

Example: 1400-4-LH-35-U-ND-45-SW-BZ-2

Accessories

Part No.	Description
1400xLEDGxx	Glare Shield
1400xBLEDxx	External Blade Louver
A4xxPWR & A4xx	4" Extended Arm (2ft fixture uses only 1 part # A4xx-PWR)
Ac-xxPWR & Ac-xx	Custom Length Extended Arm (2ft fixture uses only 1 part # Ac-xxPWR)
PERMAPOST & PERMAPOST-PWR	Permapost (2ft fixture uses only 1 part # PERMAPOST-PWR)

x = Length: 2, 3, 4, 8 c = Custom length (specify in inches) xx = Color (SO) Silver, (BZ) Bronze, (WH) White, (CU) Custom

Specifications are correct at the time of publishing, but may be modified or improved in accordance with current electrical, safety or manufacturing methods without notification.





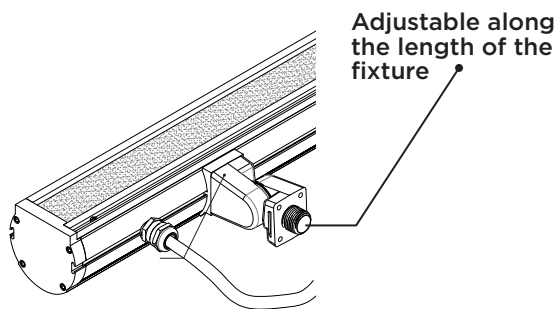
Architura 1400

Mounting Options

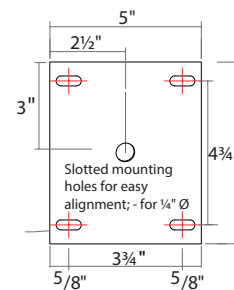
Note: Add 1/2" to each fixture length when using Swivel Mount Brackets with interconnected fixture rows.

SW - Swivel Mount

Heavy duty adjustable mounting arm bracket with 1/2" NPT. Fixture mounts to swivel mount arm bracket, field adjustable along the length of the fixture. Use for individual fixture or for multiple fixtures mounted in a row. The Standard Swivel Mount bracket (SW) arm extends approximately 3". Extended arms are available from 4" (A4) up to 24" (A24), see next page. 16" weatherproof cord exits 6" from the back right end of individual fixtures with the lens in the up position. All brackets can be installed at roughin, allowing the fixture to be attached and connected to power later.

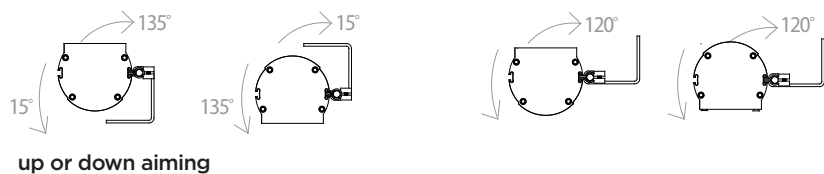
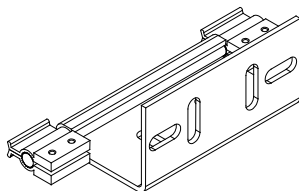


Available accessory - Mounting Bracket



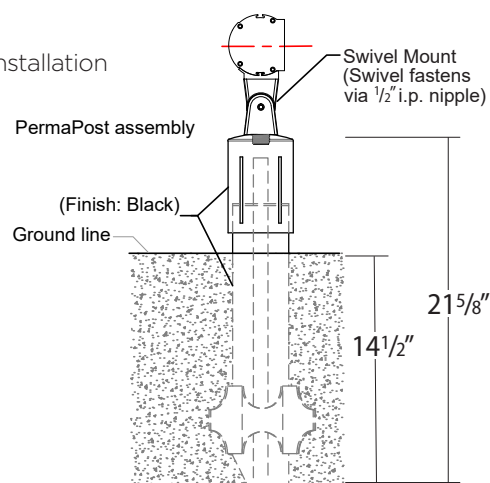
SB - Sliding Bracket (adjustable; enables close mounting)

Fixture mounts to the adjustable sliding bracket at any position along the length of the fixture. Mount bracket with 1/4" screws or bolts (not supplied). Use for individual fixture or for multiple fixtures mounted in a row. Individual fixtures up to 2' long can be supported by a single sliding bracket at the center of the fixture. Add 1/2" to each fixture length when using sliding brackets with interconnected fixture rows.



P - Permapost

Provide easy at-grade installation



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Architura 1400

Mounting Options

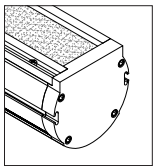
Row Mounting – SB, SW, A4-A24, PP (Sliding Bracket, Swivel Mount, A4-A24 Extended Arm)

Specifying Interconnecting fixtures

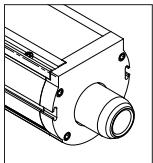
Tool-less, wire-thru, push fit hub connections allow individual fixture rotation during installation, solving the problem of aiming connected rows.

Row mounting

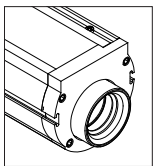
18" weatherproof cord exits 6" from the back left end of fixtures with the lens in the up position. When fixtures are inverted down aiming, the cord will be on the right. All fixtures are provided with capped liquid tight connectors allowing field modification.



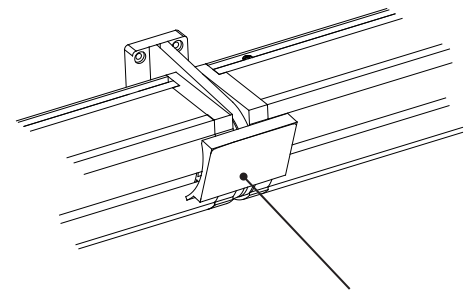
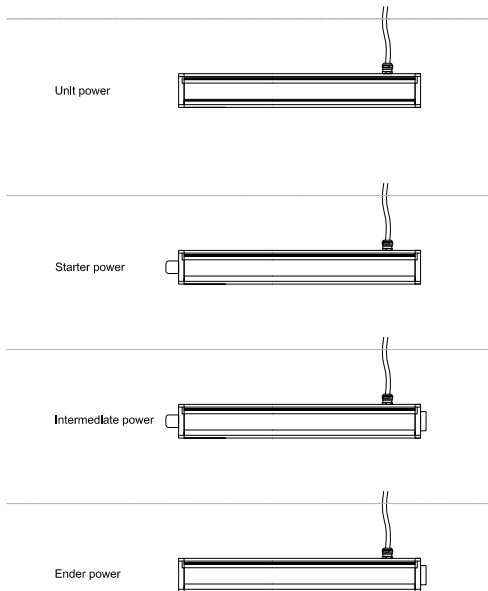
Unit powered



Starter connector



End connector



Optional locking bracket:
Secures fixtures at connecting points. 2 3/4" long slides into the channel and secures with two screws at the base.
For swivel mounting, locking bracket will be on the cord grip side of the fixture.



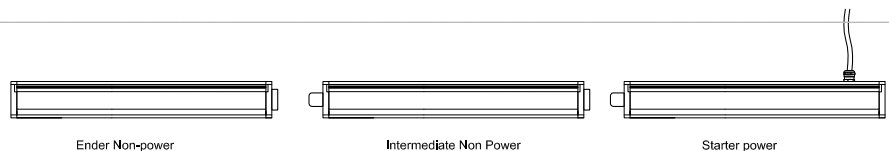
Row mounting

Supplied with 18" weatherproof cord 6" from the back right with the lens facing up. For down aiming, the power cord will be on the right. Field modifiable.



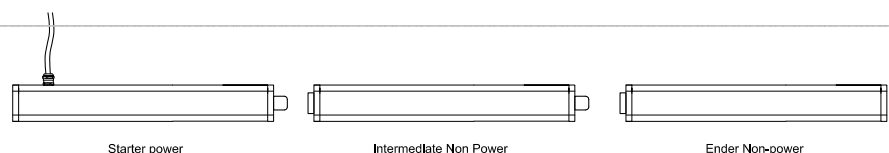
Row mounting: Architura shown as upright

Maximum row length: 150 ft.



Row mounting: Architura shown as downlight

Maximum row length: 150 ft.



Specifications are correct at the time of publishing, but may be modified or improved in accordance with current electrical, safety or manufacturing methods without notification.

Architura 1400

Row Configuration

Power Input - Row Fixtures facing up
Standard Wiring Configuration



Power Input - Row Fixtures facing down



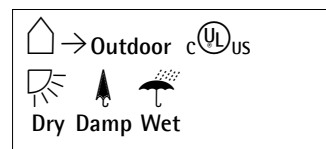
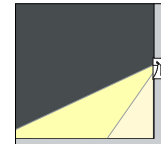
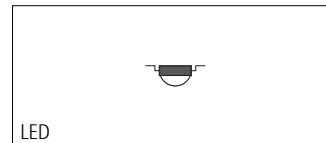
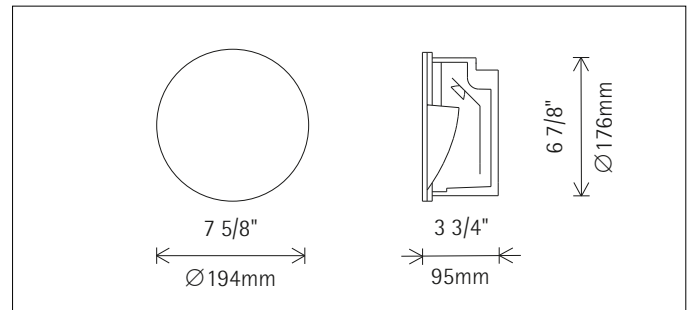
Rows are calculated with standard fixture dimensions and will leave a 1/2" gap between each fixture. Add an additional 3/4" on each end if using hub brackets. For exact lengths, request a custom run and specify the exact run length.

1400 Architura LED Individual Fixture Length					
Row	Mounts	Actual Fixture Length	HUB Mounts	Actual Fixture Length w/ HUB Mounts	
2ft	1	2' 1 5/8" (25 5/8")	2	2' 2 1/8" (27 1/8")	
3ft	2	3' 1 5/8" (37 5/8")	2	3' 3 1/8" (39 1/8")	
4ft	2	4' 1 5/8" (49 5/8")	2	4' 3 1/8" (51 1/8")	
8ft	2	8' 1 7/8" (97 7/8")	2	8' 3 3/8" (99 3/8")	

Architura-S LED Row Configuration (9ft - 50ft)														1/8	
Row	Qty.	Starter Fixture	Qty.	Int. Fixture	Qty.	Int. Fixture	Qty.	Int. Fixture	Qty.	Ender Fixture	Total Fix' s.	Swivel & Sliding Bracket	Overall Actual Length	HUB Bracket	Overall Actual Length w/ HUB Bracket
R9	1	4ft							1	4ft	2	4	8' 3¾" (99¾")	3	8' 1¼" (101¼")
R10	1	3ft	1	3ft					1	3ft	3	6	9' 5⅞" (113⅞")	4	9' 7⅜" (115⅜")
R11	1	8ft							1	2ft	2	3	10' 4" (124")	3	10' 5½" (125½")
R12	1	8ft							1	3ft	2	4	11' 4" (136")	3	11' 5½" (137½")
R13	1	8ft							1	4ft	2	4	12' 4" (148")	3	12' 5½" (149½")
R14	1	8ft	1	3ft					1	2ft	3	5	13' 6⅛" (162⅛")	4	13' 7⅝" (163⅝")
R15	1	8ft	1	3ft					1	3ft	3	6	14' 6⅛" (174⅛")	4	14' 7⅝" (175⅝")
R16	1	8ft	1	4ft					1	3ft	3	6	15' 6⅛" (186⅛")	4	15' 7⅝" (187⅝")
R17	1	8ft							1	8ft	2	4	16' 4¼" (196¼")	3	16' 5¾" (197¾")
R18	1	8ft	2	3ft					1	3ft	4	8	17' 8¼" (212¼")	5	17' 9¾" (213¾")
R19	1	8ft	1	2ft					1	8ft	3	5	18' 6⅜" (222⅜")	4	18' 7⅞" (223⅜")
R20	1	8ft	1	3ft					1	8ft	3	6	19' 6⅜" (234⅜")	4	19' 7⅞" (235⅜")
R21	1	8ft	1	4ft					1	8ft	3	6	20' 6⅜" (246⅜")	4	20' 7⅞" (247⅞")
R22	1	8ft	1	3ft	1	2ft			1	8ft	4	7	21' 8½" (260½")	5	21' 10" (262")
R23	1	8ft	1	4ft	1	2ft			1	8ft	4	7	22' 8½" (272½")	5	22' 10" (274")
R24	1	8ft	1	4ft	1	3ft			1	8ft	4	8	23' 8½" (284½")	5	23' 10" (286")
R25	1	8ft	2	4ft					1	8ft	4	8	24' 8½" (296½")	5	24' 10" (298")
R26	1	8ft	1	4ft	1	3ft	1	2ft	1	8ft	5	9	25' 10⅝" (310⅝")	6	26' ⅛" (312⅛")
R27	1	8ft	1	8ft	1	2ft			1	8ft	4	7	26' 8¾" (320¾")	5	26' 10¼" (322¼")
R28	1	8ft	1	8ft	1	3ft			1	8ft	4	8	27' 8¾" (332¾")	5	27' 10¼" (334¼")
R29	1	8ft	1	8ft	1	4ft			1	8ft	4	8	28' 8¾" (344¾")	5	28' 10¼" (346¼")
R30	1	8ft	1	8ft	1	3ft	1	2ft	1	8ft	5	9	29' 10⅞" (358⅞")	6	30' ⅜" (360⅜")
R31	1	8ft	1	8ft	1	3ft	1	2ft	1	8ft	5	9	30' 10⅞" (370⅞")	6	31' ⅜" (372⅜")
R32	1	8ft	1	8ft	1	4ft	1	3ft	1	8ft	5	10	31' 10⅞" (382⅞")	6	32' ⅜" (384⅜")
R33	1	8ft	2	8ft					1	8ft	4	8	32' 9" (393")	5	32' 10½" (394½")
R34	1	8ft	4	4ft					1	8ft	6	12	33' ¾" (396¾")	7	33' 2¼" (398¼")
R35	1	8ft	2	4ft	3	3ft			1	8ft	7	14	34' 2⅞" (410⅞")	8	34' 4⅜" (412⅜")
R36	1	8ft	4	4ft	1	2ft			1	8ft	7	13	35' 2⅞" (422⅞")	8	35' 4⅜" (424⅜")
R37	1	8ft	4	4ft	1	3ft			1	8ft	7	14	36' 2⅞" (434⅞")	8	36' 4⅜" (436⅜")
R38	1	8ft	2	8ft	1	4ft			1	8ft	5	10	36' 11⅞" (443⅞")	6	37' ⅝" (444⅝")
R39	1	8ft	2	8ft	1	3ft	1	2ft	1	8ft	6	11	38' 1¼" (457¼")	7	38' 2¾" (458¾")
R40	1	8ft	2	8ft	2	3ft			1	8ft	6	12	39' 1¼" (469¼")	7	39' 2¾" (470¾")
R41	1	8ft	2	8ft	1	4ft	1	3ft	1	8ft	6	12	40' 1¼" (481¼")	7	40' 2¾" (482¾")
R42	1	8ft	2	8ft	2	4ft			1	8ft	6	12	41' 1¼" (493¼")	7	41' 2¾" (494¾")
R43	1	8ft	2	8ft	3	3ft			1	8ft	7	14	42' 3⅜" (507⅜")	8	42' 4⅞" (508⅞")
R44	1	8ft	2	8ft	1	4ft	2	3ft	1	8ft	7	14	43' 3⅜" (519⅜")	8	43' 4⅞" (520⅞")
R45	1	8ft	2	8ft	2	4ft	1	3ft	1	8ft	7	14	44' 3⅜" (531⅜")	8	44' 4⅞" (532⅞")
R46	1	8ft	2	8ft	3	4ft			1	8ft	7	14	45' 3⅜" (543⅜")	8	45' 4⅞" (544⅞")
R47	1	8ft	3	8ft	1	3ft	1	2ft	1	8ft	7	13	46' 3⅝" (555⅝")	8	46' 5⅞" (557⅝")
R48	1	8ft	3	8ft	2	3ft			1	8ft	7	14	47' 3⅝" (567⅝")	8	47' 5⅞" (569⅝")
R49	1	8ft	3	8ft	1	4ft	1	3ft	1	8ft	7	14	48' 3⅝" (579⅝")	8	48' 5⅞" (581⅝")
R50	1	8ft	4	8ft					1	8ft	6	12	49' 1¾" (589¾")	7	49' 3 ¼" (591¼")

Specifications are correct at the time of publishing, but may be modified or improved in accordance with current electrical, safety or manufacturing methods without notification.

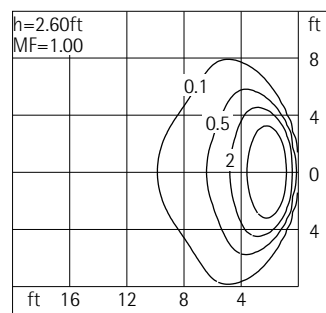


**34730.023**

LED 6W 825lm 4000K neutral white
Trailing edge dimmable
Version 2
Flush mounting detail
Spherulit lens, wide beam

Product description

Housing: polymer, black.
Housing for recessed mounting in brickwork and dry-wall partitions: stainless steel. Mounting bracket: metal, hot-dip galvanized. Clamp extension 1-30mm.
Control gear, 60Hz, 120V dimmable, 277V switchable. 1 cable entry. 3-pole terminal block.
LED module: high-power LEDs on metal-core PCB. Collimating lens made of optical polymer.
Cover with non-reflective safety glass: corrosion-resistant cast aluminum, No-Rinse surface treatment. Graphite m, double powder-coated.
Suitable for wet location (IP65): dust-proof and water jet-proof.
120V: Dimming with external dimmers possible (trailing edge).
Weight 3.97lbs / 1.80kg

**Technical data**

Luminous flux of the luminaire	429lm
Connected load	8W
Luminaire efficacy	54lm/W
Color deviation	2 SDCM
Color rendition index	CRI ≥80
Lumen maintenance (LM-80/TM-21)	L90/B10 ≤50000h
Lumen maintenance (LED manufacturer specifications)	L90 ≤100000h
LED failure rate	0.1% ≤50000h
LMF	E

For your regional contact in the ERCO
Sales network click here
www.erco.com/contact

Technical region: 120V/60Hz, 277V/
60Hz

We reserve the right to make technical
and design changes.

Edition: 09.11.2017

Current version under
www.erco.com/34730.023

Planning data

Cleaning (a)	1				2				3			
Ambient conditions	P	C	N	D	P	C	N	D	P	C	N	D
LMF	0.96	0.94	0.90	0.86	0.93	0.91	0.86	0.81	0.92	0.90	0.84	0.79
RSMF	0.97	0.95	0.91	0.86	0.97	0.94	0.90	0.86	0.97	0.94	0.90	0.86

Hours of operation (h)	1000	5000	10000	20000	30000	40000	50000
LLMF	1.00	0.99	0.98	0.96	0.94	0.92	0.90
LSF	1	1	1	1	1	1	1

MF	LMFxRSMFxLLMFxLSF
MF	Maintenance Factor
LMF	Luminaire Maintenance Factor
RSMF	Room Surface Maintenance Factor
LLMF	Lamp Lumens Maintenance Factor
LSF	Lamp Survival Factor
P	Room pure
C	Room clean
N	Room normal
D	Room dirty

Technical data based on international standards and directives

IEC 60598	Luminaires – Parts 1 + 2: General requirements, particular requirements and tests
IEC 62031	LED modules for general lighting – Safety specifications
IEC 62471	Photobiological safety of lamps and lamp systems
UL 1598	Luminaires
UL 1574	Standard for Track Lighting Systems
UL 8750	Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products
IES LM-79-08	Electrical and Photometric Measurements of Solid-State Lighting Products
IES LM-80-08	Measuring Lumen Maintenance of LED Light Sources
CIE 13	Method of measuring and specifying color rendering properties of light sources

All technical data are subject to industry standard tolerances.
See also www.erco.com/erco-led

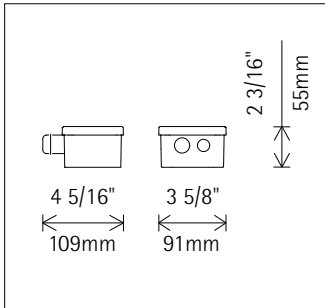
Accessories



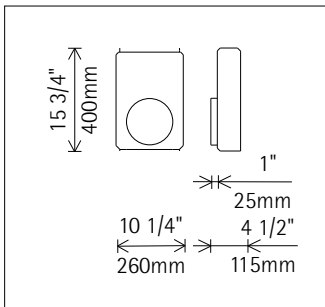
33852.000
 Junction box
 Polymer, black.
 2 screwed cable glands for cable diameters of 3/16"-9/16" / 5-14mm.
 Suitable for wet location (IP67): dust-proof and protected against immersion damage.
 Weight 0.22lbs / 0.10kg
 ⚡ ← Indoor ⚡ ⚡ ⚡
 Dry Damp Wet



33799.000
 Suction cup
 for removing the luminaire from the recessed housing, mounting frame or mounting ring.
 Rubber, black



33991.000
 Concrete housing
 Metal, hot-dip galvanised.
 Recommended aggregate grain size of the concrete is 0-5/16" / 0-8mm.
 Weight 6.17lbs / 2.80kg



33997.000
 Sealing plate
 Foamed polymer.
 To compensate unevenness between shuttering and concrete housing.
 Weight 0.10lbs / 0.04kg
 Only in conjunction with
 33991.000

Catalog # :

Project :

Prepared By :

Date :



Constitution - XCN4 LED Decorative Pedestrian & Area Light



This latest iteration of the LED Constitution decorative and pedestrian area light features LSI's innovative and high-performance silicone optics, as also featured in LSI's ground-breaking, patent-pending Mirada Series fixtures.

The Constitution is designed to illuminate pathways, walkway areas and campus sites. Its contemporary, sleek design complements architectural design elements well.

Features & Specifications

Optical System

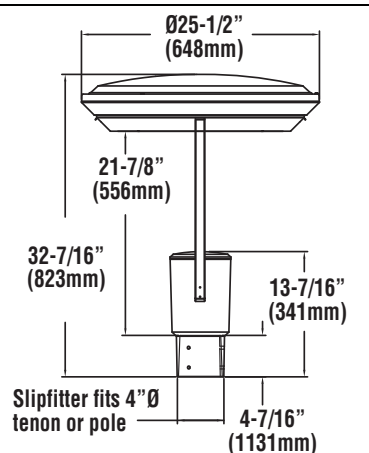
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W and FT.
- Silicone optical material does not yellow or crack with age and provides a minimum light transmittance of 93%.
- Optical distributions are field rotatable (in 90° increments).
- Available in 5000K, 4000K, and 3000K (+/- 275K) color temperatures.
- Minimum CRI of 70. Consult Factory for Higher CRI requirements.
- Integral Louver (IL) option available for improved back-light control without sacrificing street side performance. See page 4 for more details.

Electrical

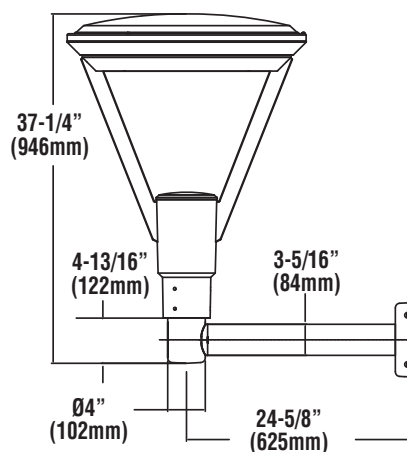
- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L70 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F)
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Terminal block provided accepts up to 10ga wire, however the luminaire is supplied with a 32' 3 conductor wire harness.
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.



Product Dimensions



**Post Top Single
Slipfits 4" Dia. Tenon (4N) or Pole**



Post Top with WM Accessory



Constitution - XCN4

LED Decorative Pedestrian & Area Light

Features & Specifications (Cont.)

Construction

- Rugged die-cast aluminum housing.
- Cast aluminum wiring access door located in lower hub/fitter.
- Rigid die-cast aluminum arms for consistency and strength.
- Precision die cast aluminum heatsink and optical frame.
- Removable spun aluminum cap/driver enclosure is retained by captive stainless steel fasteners and safety cables. Housing and top cap interface is sealed with a one-piece extruded silicone gasket. Tool-less entry option is available.
- All exposed fasteners are black oxide coated stainless steel. Internal fasteners are stainless steel or zinc electroplated steel.
- Luminaire is proudly made in the U.S.
- IP65 rated luminaire protects integral components from harsh environments.
- 1.5G rated for ANSI C136.31 high vibration applications
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 45 lbs in carton.

Controls

- Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels (see page 5 for more details).
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules.
- LSI's Gold and Platinum wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see page 5 for more details)

Installation

- Mounts to 4" O.D. pole or tenon.
- Secures to pole with 6 stainless steel set screws.
- 32' wire leads are provided bundled in the slip fitter hub for ease of wiring.

Warranty

- LSI LED Fixtures carry a 5-year warranty.

Listings

- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- State of California Title 24.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- American Recovery and Reinvestment Act Funding Compliant.
- Lighting Facts Approved.
- Suitable For wet Locations.
- IP65 rated Luminaire. IP66 rated optical chamber.
- 1.5G rated for ANSI C136.31 high vibration applications

Performance

ELECTRICAL DATA*

Lumens	120V	208V	240V	277V	347V	480V	Watts
10L	0.63	0.36A	0.31A	0.27A	0.22A	0.16A	75
18L	1.29A	0.75A	0.65A	0.56A	0.45A	0.32A	155
25L	1.98A	1.14A	.99A	.86A	0.68A	0.49A	237

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

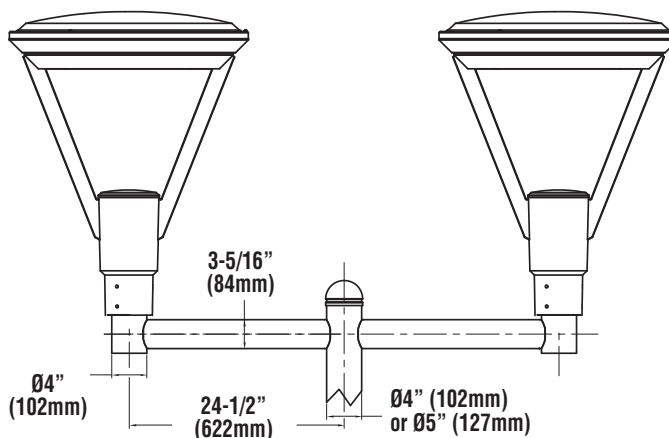
RECOMMENDED LUMEN MAINTENANCE¹

Ambient	Initial ²	25 hr ²	50 hr ²	75 hr ³	100 hr ³
0 C	1.06	1.05	1.05	1.05	1.04
10 C	1.04	1.02	1.02	1.02	1.01
20 C	1.01	1.00	0.99	0.99	0.99
25 C	1.00	0.98	0.97	0.97	0.96
30 C	0.99	0.97	0.96	0.96	0.95
40 C	0.97	0.92	0.89	0.86	0.83

1 - Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.

3 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.



Post Top with BK MPT BO (x2)
Mounts to 4" or 5" Dia. D180 Bolt-on Pole
(select 3" reduced drilling pattern)

LUMINAIRE EPA CHART - Constitution

	MOUNTING STYLE	EPA
■ PT Single	PT	1.0
■ PT D180° with BK MPT BO (2)	PT	2.0

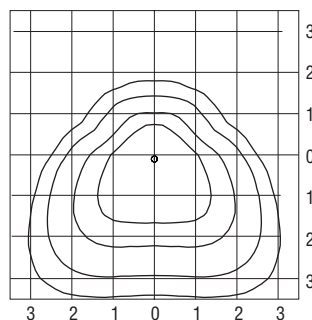


Constitution - XCN4

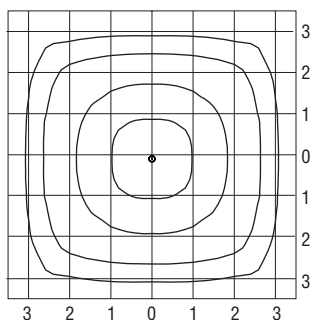
LED Decorative Pedestrian & Area Light

Performance (Cont.)

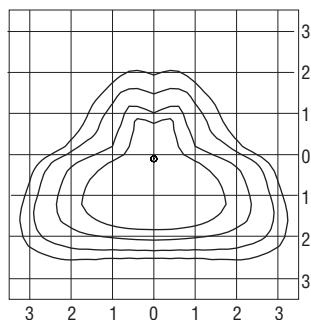
All published luminaire photometric testing performed to IESNA LM-79 standards by NVLAP, certified laboratory. ISO footcandle plots below demonstrate the Constitution (XCN4) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.



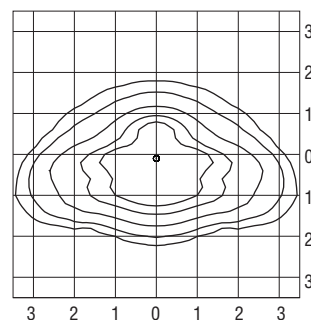
FT



5W



Type 3



Type 2

PERFORMANCE											
Lumens	Distribution Type	3000K			4000K			5000K			Wattage
		Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
10L	2	8,879	118	B3-U2-G3	9,578	128	B3-U2-G3	9,634	128	B3-U2-G3	75
	3	9,312	124	B2-U2-G3	10,045	134	B2-U2-G3	10,187	136	B2-U2-G3	75
	FT	9,066	121	B3-U2-G3	9,780	130	B3-U2-G3	9,847	131	B3-U2-G3	75
	5W	8,921	119	B4-U2-G2	9,624	128	B4-U2-G2	9,771	130	B4-U2-G2	75
18L	2	16,620	107	B3-U2-G3	17,929	114	B4-U2-G4	18,108	117	B4-U2-G4	155
	3	17,475	113	B3-U2-G3	18,851	122	B3-U2-G4	18,982	122	B3-U2-G3	155
	FT	17,042	110	B4-U2-G2	18,384	119	B3-U2-G4	18,738	121	B3-U2-G4	155
	5W	17,241	111	B3-U2-G3	18,599	120	B4-U2-G2	18,606	120	B3-U2-G3	155
25L	2	22,583	95	B4-U2-G3	24,361	103	B4-U2-G3	24,546	104	B4-U2-G3	237
	3	23,660	100	B3-U2-G4	25,523	108	B3-U2-G4	25,834	109	B3-U2-G4	237
	FT	23,217	98	B3-U2-G4	25,045	106	B3-U2-G4	25,449	107	B3-U2-G4	237
	5W	22,687	96	B5-U2-G3	24,474	103	B5-U2-G3	24,905	105	B5-U2-G4	237



Constitution - XCN4 LED Decorative Pedestrian & Area Light

Ordering Guide

TYPICAL ORDER EXAMPLE: **XCN4 PT LED 18L 50 UE BRZ IMS**

Luminaire Prefix	Distribution	Light Source	Lumens	Color Temp	Line Voltage	Finish	Optional Controls	Options
XCN4 - Constitution	2 - Type II 3 - Type III 5W - Type 5 Wide FT - Forward Throw (Type IV)	LED	10L - 10,000 Lumens 18L - 18,000 Lumens 25L - 25,000 Lumens	50 - 5000K 40 - 4000K 30 - 3000K	UE - Universal Voltage (120-277v) HV - High Voltage (347-480v)	BRZ - Bronze BLK - Black GPT - Graphite MSV - Metallic Silver WHT - White PLP - Platinum Plus SVG - Satin Verde Green	Stand-Alone Control (Blank) - None IMS - Integral Motion Sensor ⁶	PCR 7P - Photoelectric Control Receptacle ¹ IL - Integral Louver Shield TE - Toolless Access

ACCESSORY ORDERING INFORMATION (Accessories are field installed)			
Description	Order Number	Description	Order Number
BK MPT B04 - Bolt on Bracket (for PT 180) For 4" O.D. Round Poles	490025CLR ⁵	FK120 Single Fusing (120V)	FK120 ³
BK MPT B05 - Bolt on Bracket (for PT 180) For 5" O.D. Round Poles	490035CLR ⁵	FK277 Single Fusing (277V)	FK277 ³
IL - Integral Louver Shield (Black only)	654939	DFK208,240 Double Fusing (208V, 240V)	DFK208, 240 ³
PC120 Photocell for use with PCR option (120V)	122514 ^{2,4}	DFK480 Double Fusing (480V)	DFK480 ³
PC208-277 Photocell for use with PCR option (208V, 240V, 277V)	122515 ^{2,4}	FK347 Single Fusing (347V)	FK347 ³
PC347 Photocell for use with PCR option (347V)	122516 ^{2,4}	ALSC UNV TL5 - AirLink 5 Pin Twist Lock Controller	661409
PC480 Photocell for use with PCR option (480V)	1225180 ^{2,4}	ALSC UNV TL7 - AirLink 7 Pin Twist Lock Controller	661410
WM - Wall Mount Bracket (PT Only)	C/F		

FOOTNOTES:

- 1 - Photocell must be ordered separately. See Accessories.
- 2 - Factory installed PCR option required. See Options.
- 3 - Fusing must be located in hand hole of pole.
- 4 - These photocells provide Dusk/Dawn, on-off control only. Consult factory for alternate photocells providing additional functionality.

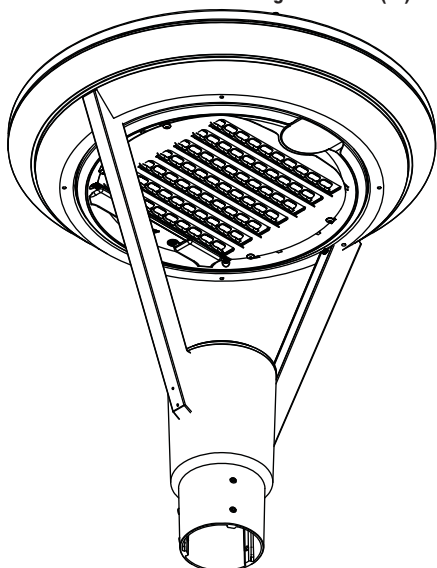
- 5 - Order poles with 3" reduced drilling pattern. For PT mounting configurations other than D180, consult factory. Order one bracket per fixture
- 6 - Consists of a daylight & motion dual sensor. Light levels are field adjustable via a handheld remote configurator tool. Not available PCR 7P.

Accessories/Options

Integral Louver (IL)

Optional Integral Louver available for improved back-light control without sacrificing street side performance.

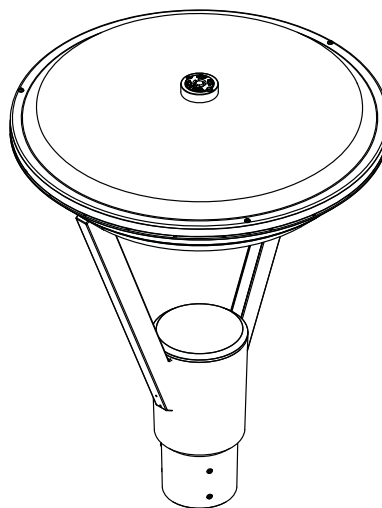
Fixture Shown with Integral Louver (IL)



7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).

Fixture Shown with PCR 7P





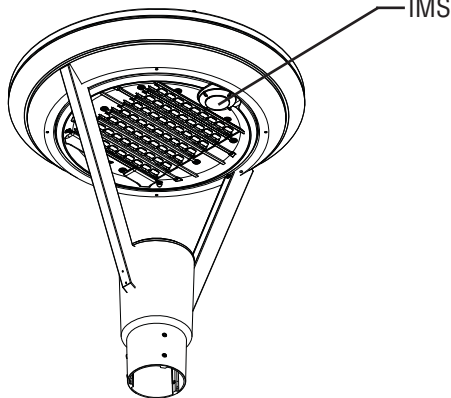
Constitution - XCN4 LED Decorative Pedestrian & Area Light

Controls

Occupancy Sensor / Daylight Sensor (IMS)

Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Low light level (30% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. Sensor has a detection cone of approximately 45°, see coverage diagram. Optional configurator tool allows for easy and safe programming of each luminaire from the ground level.

Fixture Shown with IMS

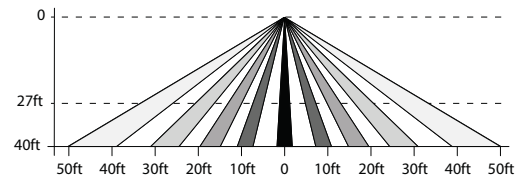


IMS/PC Remote Configurator Tool

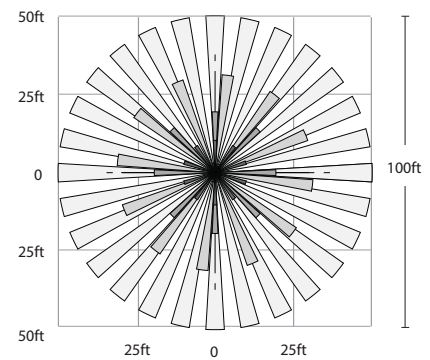


Optional IMS Coverage Diagram

SIDE VIEW



TOP VIEW





AirLink™
enabled by Synapse®



Wireless Lighting Controller 5 Pin & 7 Pin Twist Lock

The 5 Pin Twist Lock Controller (TL5) & The 7 Pin Twist Lock Controller (TL7) are intelligent wireless lighting controllers with exceptional fault tolerance & a multitude of features. Each TL5 & TL7 provides intelligent On/Off switching, dimming, control, highly accurate power metering, status monitoring of your lighting fixtures & digital sensor input (TL7 only).

Features

- Integrated Photocell
- ANSI C136.41 Dimming Receptacle Support
- Utility grade power monitoring
- Remote control and scheduling
- Flexible Dimming Controls
- Secure, over-the-air upgrades to support future enhancements
- Seamless integration into the AirLink Site Manager system
- Digital sensor input for motion sensing (TL7 only)

Power and Performance

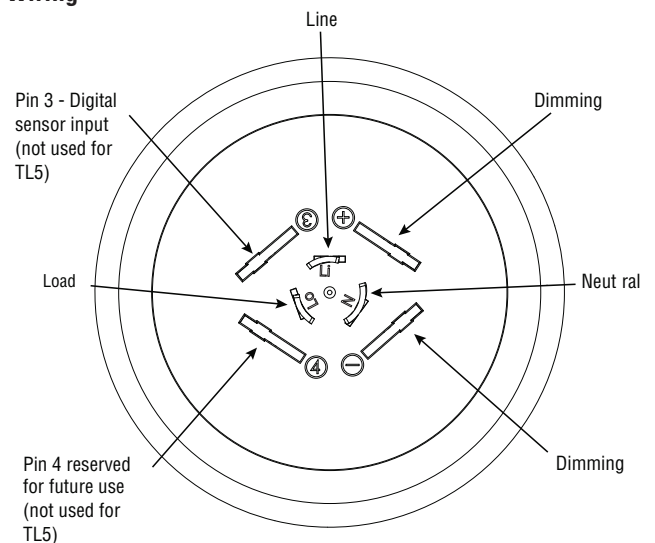
- Operating environmental: -40°F to 158°F (-40°C to 70°C); 20% to 90% RH non-condensing; IP66

- Input power: 100–277 VAC +/- 10% (Max 305V) 50/60 Hz
- Switched output: Default ON
- Load rating: 5A @ 100V to 277V (+/- 10%)
- Dimming control: 0–10V with short circuit protection
- Dimming output: maximum current 10mA
- Sensor input: One digital input that can be used for motion-based lighting controls (TL7 only)
- Power monitoring: Utility grade - 2% accuracy
- Power readings: Voltage, Watts

Other

- Dimensions: 4.53" W x 2.68" H (115mm W x 68mm H)
- Radio: SNAP 2.4 GHz; 802.15.4; +20 dBm Transmit Power; -104 dBm Receive Sensitivity
- Warranty: 5 years

Wiring



Contact LSI Controls



Sales
controls.sales@lsi-industries.com



Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)



More information
For more information on AirLink, visit our website at www.lsi-airlink.com/airlink

Catalog # :

Project :

Prepared By :

Date :



SDL4'

LED Strip Diffused Lens

The sleek architectural SDL is designed with toolless entry features saving time and money on installation. Optimizing industry leading LED technology, the SDL series delivers unparalleled performance and efficiency meeting stringent energy requirements. The frosted lens delivers high vertical illumination offering 3000K, 3500K, 4000K and 5000K color temperatures. Innovative programmable drivers offer expansive lumen packages and comes standard with 0-10V dimming down to 1%. Designed with uncompromised aesthetics, the high-performance luminaire is well suited for commercial, industrial, retail and residential applications.

Features & Specifications

Optical System

- High transmission custom extruded frosted acrylic radius lens eliminates bright spots from individual LED's and provides high vertical illumination and visual comfort.
- Use of closely spaced medium-power, high brightness chips minimizes pixilation and provides uniform lens luminance.
- Available in 5000K, 4000K, 3500K, and 3000K color temperatures per ANSI C78.377. Consult Factory for other color temperature requirements.
- Minimum CRI of 80.

Electrical

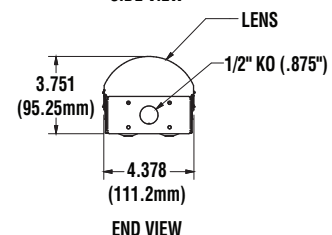
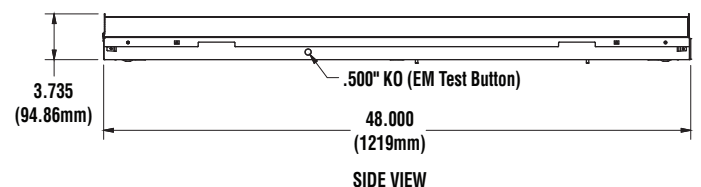
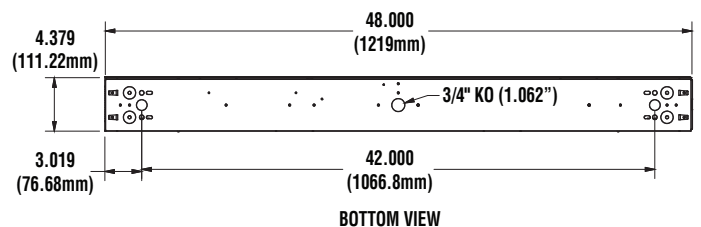
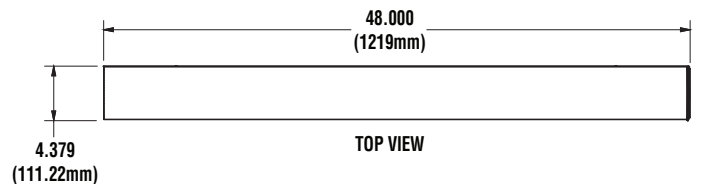
- Class 2 high-performance programmable driver features short circuit, open circuit protection for LED + and LED - and temperature foldback. Driver complies with FCC standards.
- 0-10 volt dimming (1% - 100%) standard.
- Standard Universal voltage (120-277 Vac) Input 50/60 Hz. Optional high Voltage 347 Vac Input available, consult factory for lead time and DLC® qualification information. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- L70 Calculated Life: >60k Hours @ 25°C per IESNA TM-21-11. (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Power factor: >.90
- Input power stays constant over life.
- Optional (120-277V) integral 10 watt battery backup is available. The 90-minute batteries provide constant power to the LED system. The fixture delivers 1300 lumens during emergency mode. A test switch/indicator button is installed in the housing for ease of maintenance.

Controls

- Optional Bolt-on integral passive infrared motion and/or daylight sensor activates switching of luminaire light levels (see page 5 for more details).
- Optional Step-level dimming driver allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

ARRA
Funding Compliant

Dimensions





SDL4' LED Strip Diffused Lens

Features & Specifications (cont.)

Construction

- Rigid housing is die-formed 22-gauge cold rolled steel for consistency and strength.
- Available for individual or continuous row mounting.
- Tool-less access by applying pressure/squeezing the ends of the electrical housing channel to remove the lens/light engine assembly to access the wireway chamber
- Luminaire is proudly manufactured in the U.S of U.S. and imported components.
- Luminaire is painted after fabrication following treatment with phosphate rust inhibitor. Finish coat of housing is high reflectance white (minimum 92%) polyester powder.
- Shipping weight: 9 lbs

Installation

- Suitable for surface, pendant, grid and chain mounting.
- Accepts optional plug-in wiring feature for continuous row installation.
- Alignment couplers furnished for continuous row installation.

Warranty

- LSI LED Fixtures carry a 5-year warranty.
- 1 Year warranty on optional Battery Backup. Test regularly in accordance with local codes.

Listing

- Listed to UL 1598 and UL 8750 for 25°C Ambient applications
- RoHS Compliant.
- State of California Title 24 compliant with OCSUE/DHSUE option.
- American Recovery and Reinvestment Act Funding Compliant.
- Suitable For Damp Locations.

Photometry

- See website for IES and photometric files

Performance

SDL4 ELECTRICAL DATA (Amps)*

Lumen Package	120V	208V	240V	277V
20L	0.13A	0.07A	0.06A	0.05A
30L	0.19A	0.11A	0.09A	0.08A
40L	0.25A	0.14A	0.13A	0.11A
50L	0.32A	0.18A	0.16A	0.14A
60L	0.37A	0.21A	0.18A	0.16A
70L	0.44A	0.25A	0.22A	0.19A
80L	0.51A	0.29A	0.26A	0.22A

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

Recommended Lumen Maintenance¹

LUMENS	AMBIENT TEMP C	INITIAL ²	25K HR ²	50K HR ²	75K HR ³	100K HR ³
40L	25C	99%	97%	95%	94%	92%
80L	25C	98%	96%	93%	91%	89%

Specifications and dimensions subject to change without notice.

- 1 - Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.
- 2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing
- 3 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing

*LED chips are frequently updated therefore values are subject to change.



SDL4'

LED Strip Diffused Lens

Performance (cont.)

SDL4 DELIVERED LUMENS*										
LUMEN PACKAGE	CRI	3000K CCT		3500K CCT		4000K CCT		5000K CCT		WATTAGE
		DELIVERED LUMENS	EFFICACY	DELIVERED LUMENS	EFFICACY	DELIVERED LUMENS	EFFICACY	DELIVERED LUMENS	EFFICACY	
20L	80	1947	120.3	2015	132.6	2009	132.2	2148	140.4	15.2
30L	80	2930	125.5	3041	134.6	3032	134.2	3242	143.4	22.6
40L	80	3879	128.9	4026	133.8	4014	133.4	4292	142.6	30.1
50L	80	4833	125.9	5017	130.6	5002	130.3	5348	139.3	38.4
60L	80	5815	132.5	6036	137.5	6018	137.1	6434	146.6	43.9
70L	80	6788	130.3	7046	135.2	7025	134.8	7511	144.2	52.1
80L	80	7776	127.1	8072	131.9	8048	131.5	8605	140.6	61.2

*LED chips are frequently updated therefore values are subject to change.



SDL4' LED Strip Diffused Lens

Luminaire Ordering Guide

TYPICAL ORDER EXAMPLE:

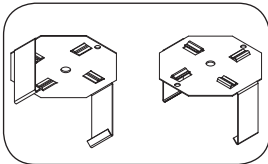
SDL4 LED 40L FL UNV DIM1 35 80CRI

Family Size	LED Gen	Lumen Package	Lens	Voltage	Driver	Color Temp	CRI	Controls	Options	Packaging
SDL4 - 4' Strip	LED	20L - 2000 30L - 3000 40L - 4000 50L - 5000 60L - 6000 70L - 7000 80L - 8000 *Consult factory for programmable wattages and lumen packages	FL Frosted Lens	UNV - 120-277v 347 - 347V ¹	DIM1 - Dims to 1%(0-10V) SD50 - Step dimming to 50% ²	30 - 3000K 35 - 3500K 40 - 4000K 50 - 5000K	80CRI - 80 CRI 90CRI - 90 CRI ¹	(Blank) - None OCSUE - Occupancy Sensor 120-277V ² DHSUE - Daylight harvesting/Occupancy Sensor 120-277V ²	(Blank) - None EM10 - 10W Battery Backup (1300 Lumens) ² PM1 - 5FT Pre-wired plug in assembly (standard) ² PM1LV - 5FT Pre-wired plug in assembly (0-10V Dimming) ² PM2 - 5FT Pre-wired plug in assembly (SD50 or EM10) ² PM2LV - 5FT Pre-wired plug in assembly (SD50 or EM10 with 0-10V Dimming) ²	(Blank) - Single Pack

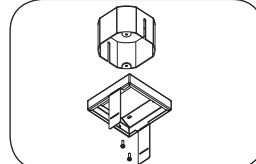
NOTES:

1. Consult factory for leadtime & DLC qualifications.
2. Not available with 347V

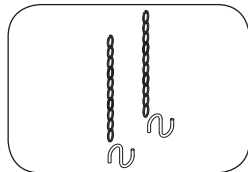
Accessory Ordering Information (Accessories are field installed)



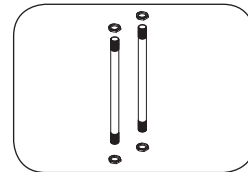
Description: T-Grid Hanger Kit
Order Number: (Qty 2) - 671560



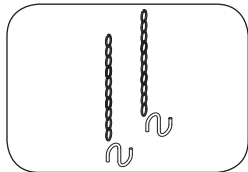
Description: T-Grid Collar (including junction box, wire collar & grid hanger)
Order Number: (Qty 1) - 558651



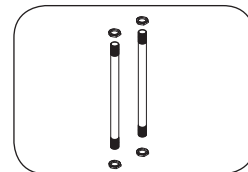
Description: Chain Hanger Set (36" length)
Order Number: (Qty 2) - M38258



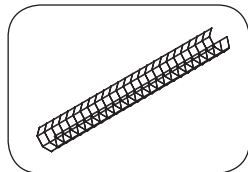
Description: 24" Pendant
Order Number: (Qty 1) - 687400



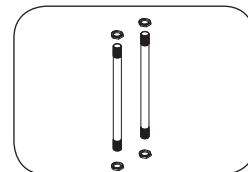
Description: Chain Hanger Set (60" length)
Order Number: (Qty 2) - 251057



Description: 36" Pendant
Order Number: (Qty 1) - 681509



Description: Wire Guard - 4 foot
Order Number: (Qty 1) - 549301



Description: 48" Pendant
Order Number: (Qty 1) - 687382

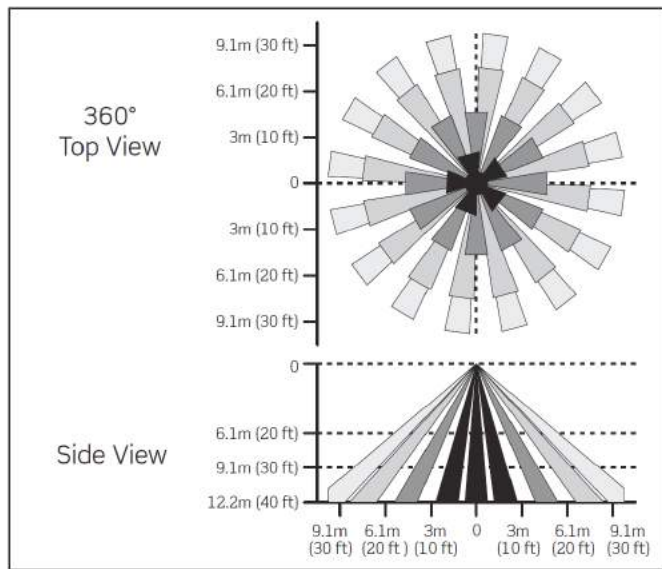


SDL4' LED Strip Diffused Lens

Controls

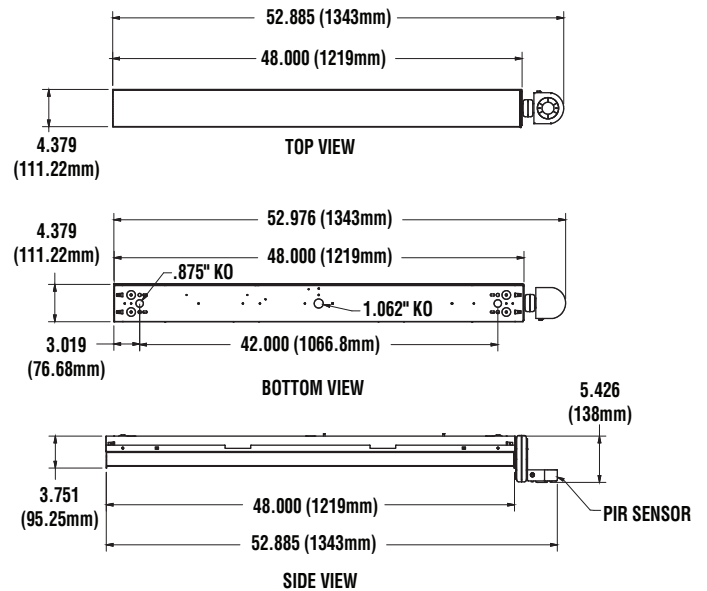
Occupancy Sensor (OCSUE)

- Optional integral passive infrared motion activates switching of luminaire on/off. Standard Factory settings: Luminaire is activated and increased to full bright upon detection of motion. Luminaire powers off when target zone is absent of motion activity for ~5 minutes. See coverage diagram for detection cone.



Occupancy Sensor / Daylight Sensor (DHSUE)

- Optional integral passive infrared motion and daylight sensor activates switching of luminaire on/off. Standard Factory settings: Luminaire is activated and increased to full bright upon detection of motion. Luminaire powers off when target zone is absent of motion activity for ~5 minutes. See coverage diagram for detection cone. Photocell turns off lights when sufficient amount of daylight is detected and turns lights on when additional lighting is required.



Catalog # :

Project :

Prepared By :

Date :



Constitution - XCN4 LED Decorative Pedestrian & Area Light



This latest iteration of the LED Constitution decorative and pedestrian area light features LSI's innovative and high-performance silicone optics, as also featured in LSI's ground-breaking, patent-pending Mirada Series fixtures.

The Constitution is designed to illuminate pathways, walkway areas and campus sites. Its contemporary, sleek design complements architectural design elements well.

Features & Specifications

Optical System

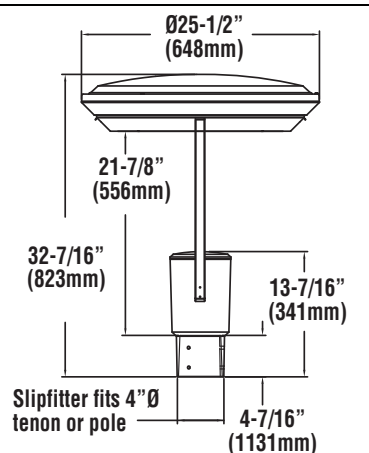
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W and FT.
- Silicone optical material does not yellow or crack with age and provides a minimum light transmittance of 93%.
- Optical distributions are field rotatable (in 90° increments).
- Available in 5000K, 4000K, and 3000K (+/- 275K) color temperatures.
- Minimum CRI of 70. Consult Factory for Higher CRI requirements.
- Integral Louver (IL) option available for improved back-light control without sacrificing street side performance. See page 4 for more details.

Electrical

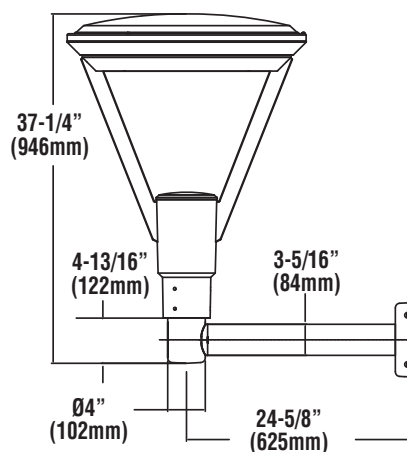
- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L70 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F)
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Terminal block provided accepts up to 10ga wire, however the luminaire is supplied with a 32' 3 conductor wire harness.
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.



Product Dimensions



Post Top Single
Slipfits 4" Dia. Tenon (4N) or Pole



Post Top with WM Accessory



Constitution - XCN4

LED Decorative Pedestrian & Area Light

Features & Specifications (Cont.)

Construction

- Rugged die-cast aluminum housing.
- Cast aluminum wiring access door located in lower hub/fitter.
- Rigid die-cast aluminum arms for consistency and strength.
- Precision die cast aluminum heatsink and optical frame.
- Removable spun aluminum cap/driver enclosure is retained by captive stainless steel fasteners and safety cables. Housing and top cap interface is sealed with a one-piece extruded silicone gasket. Tool-less entry option is available.
- All exposed fasteners are black oxide coated stainless steel. Internal fasteners are stainless steel or zinc electroplated steel.
- Luminaire is proudly made in the U.S.
- IP65 rated luminaire protects integral components from harsh environments.
- 1.5G rated for ANSI C136.31 high vibration applications
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 45 lbs in carton.

Controls

- Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels (see page 5 for more details).
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules.
- LSI's Gold and Platinum wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see page 5 for more details)

Installation

- Mounts to 4" O.D. pole or tenon.
- Secures to pole with 6 stainless steel set screws.
- 32' wire leads are provided bundled in the slip fitter hub for ease of wiring.

Warranty

- LSI LED Fixtures carry a 5-year warranty.

Listings

- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- State of California Title 24.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- American Recovery and Reinvestment Act Funding Compliant.
- Lighting Facts Approved.
- Suitable For wet Locations.
- IP65 rated Luminaire. IP66 rated optical chamber.
- 1.5G rated for ANSI C136.31 high vibration applications

Performance

ELECTRICAL DATA*

Lumens	120V	208V	240V	277V	347V	480V	Watts
10L	0.63	0.36A	0.31A	0.27A	0.22A	0.16A	75
18L	1.29A	0.75A	0.65A	0.56A	0.45A	0.32A	155
25L	1.98A	1.14A	.99A	.86A	0.68A	0.49A	237

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

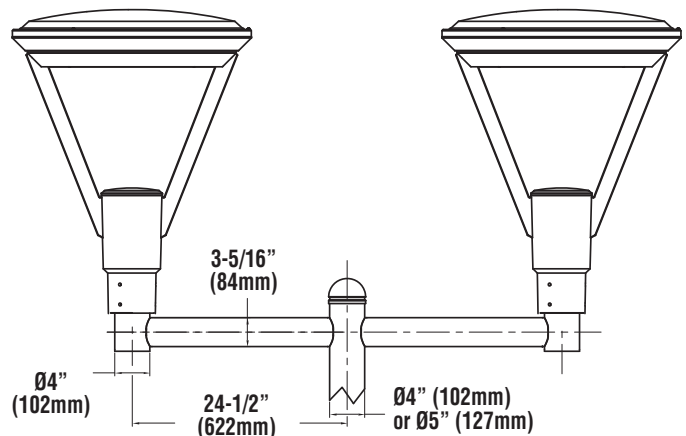
RECOMMENDED LUMEN MAINTENANCE¹

Ambient	Initial ²	25 hr ²	50 hr ²	75 hr ³	100 hr ³
0 C	1.06	1.05	1.05	1.05	1.04
10 C	1.04	1.02	1.02	1.02	1.01
20 C	1.01	1.00	0.99	0.99	0.99
25 C	1.00	0.98	0.97	0.97	0.96
30 C	0.99	0.97	0.96	0.96	0.95
40 C	0.97	0.92	0.89	0.86	0.83

1 - Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.

3 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.



Post Top with BK MPT BO (x2)
Mounts to 4" or 5" Dia. D180 Bolt-on Pole
(select 3" reduced drilling pattern)

LUMINAIRE EPA CHART - Constitution

	MOUNTING STYLE	EPA
■ PT Single	PT	1.0
■ PT D180° with BK MPT BO (2)	PT	2.0

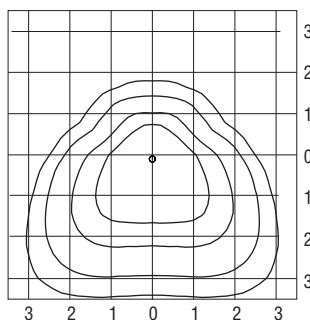


Constitution - XCN4

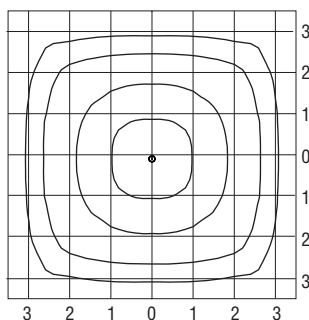
LED Decorative Pedestrian & Area Light

Performance (Cont.)

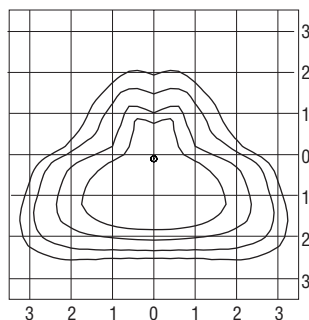
All published luminaire photometric testing performed to IESNA LM-79 standards by NVLAP, certified laboratory. ISO footcandle plots below demonstrate the Constitution (XCN4) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.



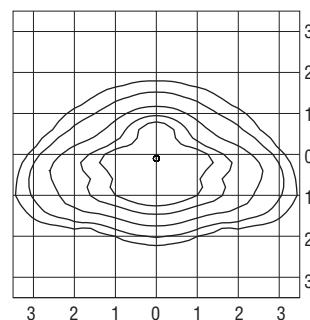
FT



5W



Type 3



Type 2

PERFORMANCE											
Lumens	Distribution Type	3000K			4000K			5000K			Wattage
		Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
10L	2	8,879	118	B3-U2-G3	9,578	128	B3-U2-G3	9,634	128	B3-U2-G3	75
	3	9,312	124	B2-U2-G3	10,045	134	B2-U2-G3	10,187	136	B2-U2-G3	75
	FT	9,066	121	B3-U2-G3	9,780	130	B3-U2-G3	9,847	131	B3-U2-G3	75
	5W	8,921	119	B4-U2-G2	9,624	128	B4-U2-G2	9,771	130	B4-U2-G2	75
18L	2	16,620	107	B3-U2-G3	17,929	114	B4-U2-G4	18,108	117	B4-U2-G4	155
	3	17,475	113	B3-U2-G3	18,851	122	B3-U2-G4	18,982	122	B3-U2-G3	155
	FT	17,042	110	B4-U2-G2	18,384	119	B3-U2-G4	18,738	121	B3-U2-G4	155
	5W	17,241	111	B3-U2-G3	18,599	120	B4-U2-G2	18,606	120	B3-U2-G3	155
25L	2	22,583	95	B4-U2-G3	24,361	103	B4-U2-G3	24,546	104	B4-U2-G3	237
	3	23,660	100	B3-U2-G4	25,523	108	B3-U2-G4	25,834	109	B3-U2-G4	237
	FT	23,217	98	B3-U2-G4	25,045	106	B3-U2-G4	25,449	107	B3-U2-G4	237
	5W	22,687	96	B5-U2-G3	24,474	103	B5-U2-G3	24,905	105	B5-U2-G4	237



Constitution - XCN4 LED Decorative Pedestrian & Area Light

Ordering Guide

TYPICAL ORDER EXAMPLE: **XCN4 PT LED 18L 50 UE BRZ IMS**

Luminaire Prefix	Distribution	Light Source	Lumens	Color Temp	Line Voltage	Finish	Optional Controls	Options
XCN4 - Constitution	2 - Type II 3 - Type III 5W - Type 5 Wide FT - Forward Throw (Type IV)	LED	10L - 10,000 Lumens 18L - 18,000 Lumens 25L - 25,000 Lumens	50 - 5000K 40 - 4000K 30 - 3000K	UE - Universal Voltage (120-277v) HV - High Voltage (347-480v)	BRZ - Bronze BLK - Black GPT - Graphite MSV - Metallic Silver WHT - White PLP - Platinum Plus SVG - Satin Verde Green	Stand-Alone Control (Blank) - None IMS - Integral Motion Sensor ⁶	PCR 7P - Photoelectric Control Receptacle ¹ IL - Integral Louver Shield TE - Toolless Access

ACCESSORY ORDERING INFORMATION (Accessories are field installed)			
Description	Order Number	Description	Order Number
BK MPT B04 - Bolt on Bracket (for PT 180) For 4" O.D. Round Poles	490025CLR ⁵	FK120 Single Fusing (120V)	FK120 ³
BK MPT B05 - Bolt on Bracket (for PT 180) For 5" O.D. Round Poles	490035CLR ⁵	FK277 Single Fusing (277V)	FK277 ³
IL - Integral Louver Shield (Black only)	654939	DFK208,240 Double Fusing (208V, 240V)	DFK208, 240 ³
PC120 Photocell for use with PCR option (120V)	122514 ^{2,4}	DFK480 Double Fusing (480V)	DFK480 ³
PC208-277 Photocell for use with PCR option (208V, 240V, 277V)	122515 ^{2,4}	FK347 Single Fusing (347V)	FK347 ³
PC347 Photocell for use with PCR option (347V)	122516 ^{2,4}	ALSC UNV TL5 - AirLink 5 Pin Twist Lock Controller	661409
PC480 Photocell for use with PCR option (480V)	1225180 ^{2,4}	ALSC UNV TL7 - AirLink 7 Pin Twist Lock Controller	661410
WM - Wall Mount Bracket (PT Only)	C/F		

FOOTNOTES:

- 1 - Photocell must be ordered separately. See Accessories.
- 2 - Factory installed PCR option required. See Options.
- 3 - Fusing must be located in hand hole of pole.
- 4 - These photocells provide Dusk/Dawn, on-off control only. Consult factory for alternate photocells providing additional functionality.

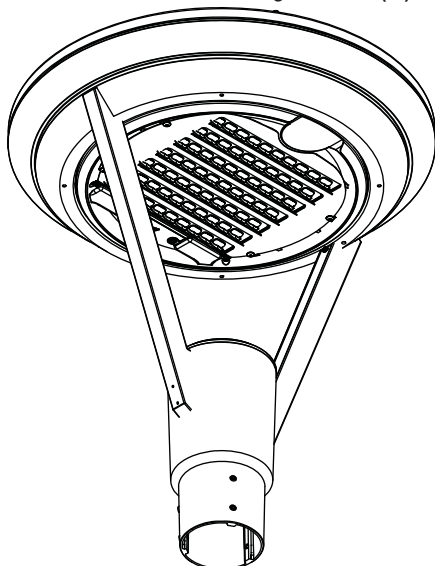
- 5 - Order poles with 3" reduced drilling pattern. For PT mounting configurations other than D180, consult factory. Order one bracket per fixture
- 6 - Consists of a daylight & motion dual sensor. Light levels are field adjustable via a handheld remote configurator tool. Not available PCR 7P.

Accessories/Options

Integral Louver (IL)

Optional Integral Louver available for improved back-light control without sacrificing street side performance.

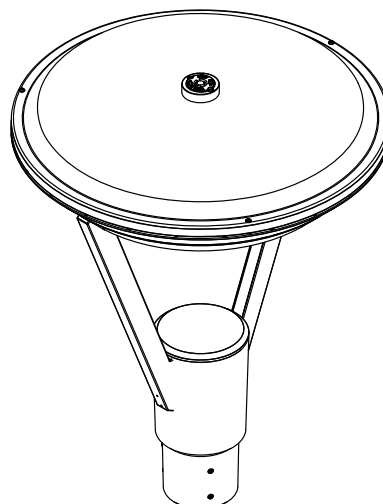
Fixture Shown with Integral Louver (IL)



7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).

Fixture Shown with PCR 7P





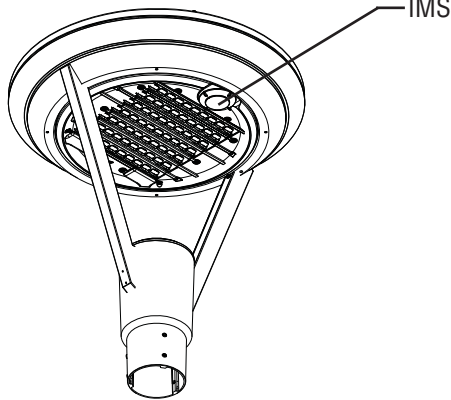
Constitution - XCN4 LED Decorative Pedestrian & Area Light

Controls

Occupancy Sensor / Daylight Sensor (IMS)

Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Low light level (30% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. Sensor has a detection cone of approximately 45°, see coverage diagram. Optional configurator tool allows for easy and safe programming of each luminaire from the ground level.

Fixture Shown with IMS

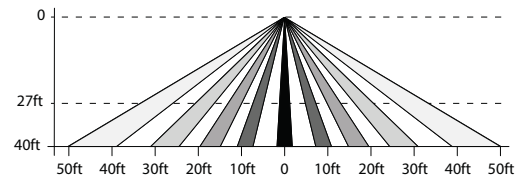


IMS/PC Remote Configurator Tool

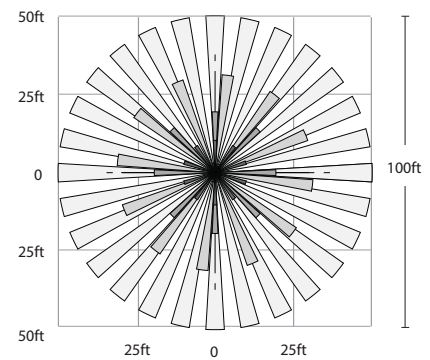


Optional IMS Coverage Diagram

SIDE VIEW



TOP VIEW





AirLink™
enabled by Synapse®



Wireless Lighting Controller 5 Pin & 7 Pin Twist Lock

The 5 Pin Twist Lock Controller (TL5) & The 7 Pin Twist Lock Controller (TL7) are intelligent wireless lighting controllers with exceptional fault tolerance & a multitude of features. Each TL5 & TL7 provides intelligent On/Off switching, dimming, control, highly accurate power metering, status monitoring of your lighting fixtures & digital sensor input (TL7 only).

Features

- Integrated Photocell
- ANSI C136.41 Dimming Receptacle Support
- Utility grade power monitoring
- Remote control and scheduling
- Flexible Dimming Controls
- Secure, over-the-air upgrades to support future enhancements
- Seamless integration into the AirLink Site Manager system
- Digital sensor input for motion sensing (TL7 only)

Power and Performance

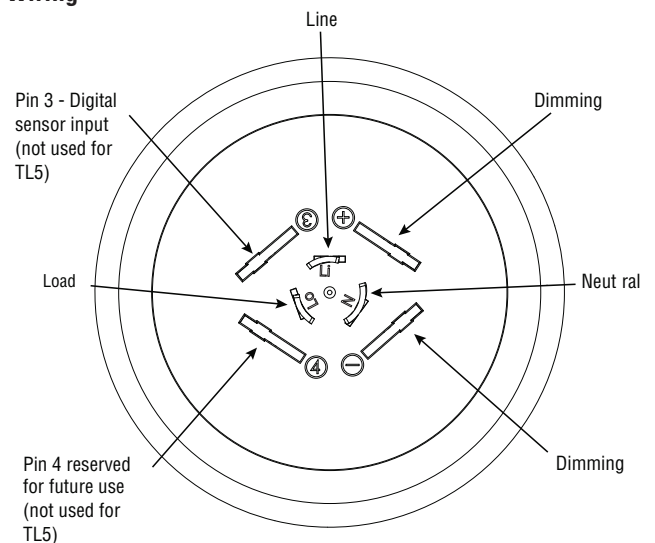
- Operating environmental: -40°F to 158°F (-40°C to 70°C); 20% to 90% RH non-condensing; IP66

- Input power: 100–277 VAC +/- 10% (Max 305V) 50/60 Hz
- Switched output: Default ON
- Load rating: 5A @ 100V to 277V (+/- 10%)
- Dimming control: 0–10V with short circuit protection
- Dimming output: maximum current 10mA
- Sensor input: One digital input that can be used for motion-based lighting controls (TL7 only)
- Power monitoring: Utility grade - 2% accuracy
- Power readings: Voltage, Watts

Other

- Dimensions: 4.53" W x 2.68" H (115mm W x 68mm H)
- Radio: SNAP 2.4 GHz; 802.15.4; +20 dBm Transmit Power; -104 dBm Receive Sensitivity
- Warranty: 5 years

Wiring



Contact LSI Controls



Sales
controls.sales@lsi-industries.com



Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)



More information
For more information on AirLink, visit our website at www.lsi-airlink.com/airlink

Catalog # :

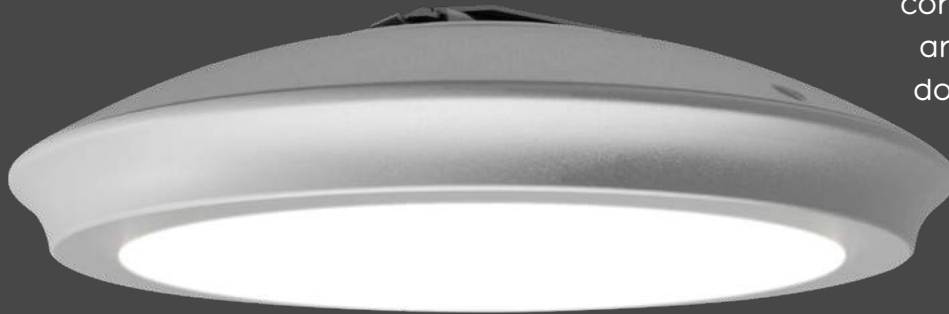
Project : TYPE G1 & G1E

Prepared By :

Date :



Excursion - EXN LED Parking Garage Luminaire



The EXN parking garage luminaire featuring edge-lit technology compliments any architectural setting and delivers energy efficient, uniform downlight for safety. This sleek fixture provides visual comfort with minimal glare and is ideal for parking garage, canopy and low bay applications. It is competitively priced, and easy to install.

Features & Specifications

Optical System

- Utilizes edge-lit technology providing best-in-class uniformity and excellent visual comfort with minimal glare.
- Optically clear acrylic light guide with tailored refractive distribution.
- Best in class high brightness LED's provide uniform light guide luminance with no dead spots.
- Choice of two high performance distributions: Type 5 Wide and Type 5 Narrow (a concentrated distribution for atrium and exit/egress applications).
- Available in 5000K and 4000K color temperatures per ANSI C78.377. 3000K & 2700K color temperatures available by request, consult factory for lead time and DLC qualification information.
- Minimum CRI of 70. 90 CRI available by request, consult factory for lead time and DLC qualification information.

Electrical

- High-performance driver features over-voltage, under voltage, short-circuit and over temperature protection.
- 0-10 volt dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz. Optional High Voltage 347/480Vac Input available.
- L70 Calculated Life: > 100k Hours (See Lumen Maintenance Chart)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F)
- Power factor: >.90
- Input power stays constant over life.
- High-efficacy LEDs with integrated circuit board mount directly to the housing to maximize heat dissipation and promote long life.
- Driver components are fully encased in potting material for moisture resistance. Driver complies with FCC standards.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- Optional 120v-277v integral emergency battery pack is available to meet critical life safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. Battery Backup not available on 10L and 11L lumen packages.



Dimmable

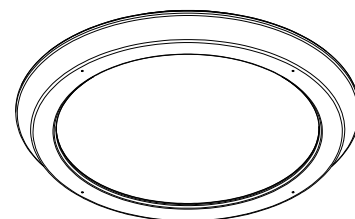
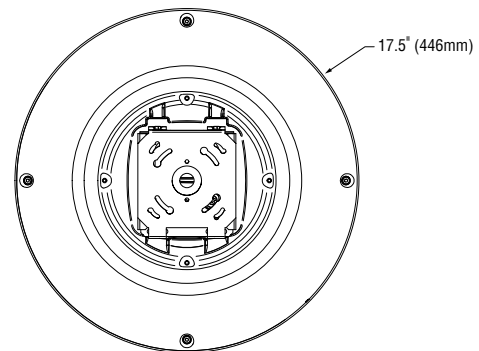
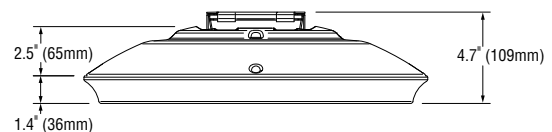
IP66
(pending)



ARRA
Funding Compliant



Product Dimensions



★ Assembled in USA by an American workforce of American and foreign parts using state-of-the-art equipment at our award-winning manufacturing facility in Ohio. Meets Buy American requirements within the ARRA.



Excursion - EXN LED Parking Garage Luminaire

Features & Specifications (Cont.)

Construction

- Precision die-cast aluminum housing and lens frame for durability and consistency.
- Architecturally pleasing with no visible electronics, hardware, or seams from ground level.
- Hinged 16ga Galvanized mounting bracket provided for ease of installation and maintenance.
- IP66 rated luminaire (pending) protects integral components from harsh environments.
- Luminaire is proudly manufactured in the U.S. of U.S. and imported parts.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- 3G rated for ANSI C136.31 high vibration applications.
- Shipping weight: 13.5 lbs in carton.

Controls

- Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels (see page 4 for more details).
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see page 5 for more details)

Installation

- Standard mounting is a rigid 3/4" pendant mount or direct surface mount to a 4" (102mm) octagon box (box by others).

Warranty

- LSI LED Fixtures carry a 5-year warranty.
- 1 Year warranty on optional Battery Back Up. Test regularly in accordance with local codes.

Listings

- Listed to ETL.
- RoHS Compliant.
- State of California Title 24.
- American Recovery and Reinvestment Act Funding Compliant.
- Lighting Facts Approved.
- Suitable For wet Locations.
- IP66 rated Luminaire (pending).
- 3G rated for ANSI C136.31 high vibration applications
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Performance

DELIVERED LUMENS*						
		4000K		5000K		
Lumen Level	Optic	Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	Avg. Watts
3L	T5W	3140	140	3140	140	22
	T5N	3200	143	3200	143	
5L	T5W	5240	142	5240	142	37
	T5N	5340	144	5340	144	
6L	T5W	6260	141	6260	141	44
	T5N	6380	144	6380	144	
8L	T5W	8230	137	8230	137	60
	T5N	8390	140	8390	140	
10L	T5W	10010	132	10010	132	76
	T5N	10200	134	10200	134	
11L	T5W	11130	128	11130	128	87
	T5N	11340	130	11340	130	

		2700K		3000K		
Lumen Level	Optic	Delivered Lumens	Efficacy	Delivered Lumens	Efficacy	Avg. Watts
3L	T5W	2917	130	2940	131	22
	T5N	2973	133	3000	134	
5L	T5W	4868	132	4960	134	37
	T5N	4961	134	5010	135	
6L	T5W	5816	131	5880	132	44
	T5N	5927	133	5990	135	
8L	T5W	7646	127	7730	129	60
	T5N	7794	130	7880	131	
10L	T5W	9299	122	9450	124	76
	T5N	9476	125	9580	126	
11L	T5W	10340	119	10630	122	87
	T5N	10535	121	10650	122	

*LED Chips are frequently updated therefore values are nominal.

Specifications and
dimensions subject to
change without notice.



Performance (Cont.)

ELECTRICAL DATA*							
Lumen Level	Watts	120V	208V	240V	277V	347V	480V
3L	T5W	0.19	0.11	0.09	0.08	0.06	0.05
	T5N	0.19	0.11	0.09	0.08	0.06	0.05
5L	T5W	0.31	0.18	0.15	0.13	0.11	0.08
	T5N	0.31	0.18	0.15	0.13	0.11	0.08
6L	T5W	0.37	0.21	0.19	0.16	0.13	0.09
	T5N	0.37	0.21	0.19	0.16	0.13	0.09
8L	T5W	0.50	0.29	0.25	0.22	0.17	0.13
	T5N	0.50	0.29	0.25	0.22	0.17	0.13
10L	T5W	0.63	0.37	0.32	0.27	0.22	0.16
	T5N	0.63	0.37	0.32	0.27	0.22	0.16
11L	T5W	0.73	0.42	0.36	0.31	0.25	0.18
	T5N	0.73	0.42	0.36	0.31	0.25	0.18

*Electrical data at 25°C (77°F). Actual wattage may differ by +/-10%.

RECOMMENDED LUMEN MAINTENANCE ¹					
Ambient Temperature	0 hrs. ²	25K hrs. ²	50K hrs. ²	75K hrs. ²	100K hrs. ²
0 C	100%	93%	86%	80%	74%
10 C	100%	93%	86%	80%	74%
20 C	100%	93%	86%	80%	74%
25 C	100%	94%	88%	83%	78%
30 C	100%	94%	88%	82%	77%
40 C	100%	93%	87%	80%	75%

1 - Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip).



Excursion - EXN LED Parking Garage Luminaire

Ordering Guide

TYPICAL ORDER EXAMPLE: **EXN D EGLED 8L T5W UNV DIM 40 70CRI ALSCS MSV**

Family	Mounting	LED Technology	Lumen Package*	Distribution	Voltage	Dimming	Color Temperature
EXN - Excursion Parking Garage Luminaire	D - Direct Mount P - Pendant Mount ¹	EGLED - Edge-Lit LED	3L - 3000 lms 5L - 5000 lms 6L - 6000 lms 8L - 8000 lms 10L - 10000 lms 11L - 11000 lms	T5W - Type V Wide T5N - Type V Narrow	UNV - Universal Electronic (120V-277V) HV - High Voltage (347V- 480V)	DIM - Dim to 10% (0-10V)	27 - 2700K ² 30 - 3000K ² 40 - 4000K 50 - 5000K

Color Rendering	Controls	EM	Finish	Packaging
70CRI - 70 Color Rendering Index 90CRI - 90 Color Rendering Index ²	Blank - No Controls ALSC - Airlink Synapse Wireless Digital Controller ³ ALSCS1 - Airlink Synapse Wireless Digital Controller with Sensor (mounting 8 to 12 feet) ^{3,4} ALSCS2 - Airlink Synapse Wireless Digital Controller with Sensor (mounting 12 to 20 feet) ^{3,4} IMSOM1 - Integral Motion / Daylight Sensor (mounting 8 to 12 feet) ⁴ IMSOM2 - Integral Motion / Daylight Sensor (mounting 12 to 20 feet) ⁴ Ext - 0-10V Dimming from External Source	Blank - No Option BB - Battery Backup ⁶ CWBB - Cold Weather Battery Backup ⁶	BLK - Black WHT - White MSV - Metallic Silver BRZ - Bronze	Blank - Single Pack JP - Job Pack (2 luminaires)

Accessory Ordering Information (Accessories are field installed)

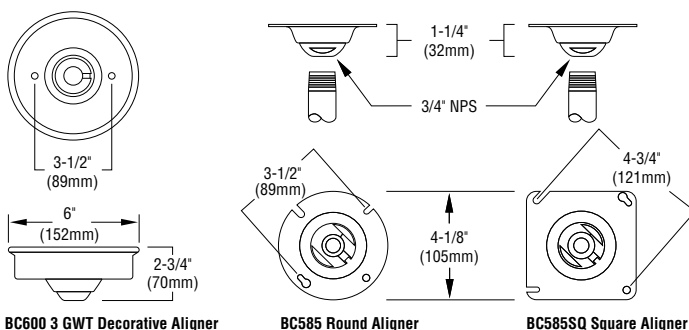
Description	Part Number
Slope Ceiling Aligner (decorative round, gloss white)	163112
Slope Ceiling Aligner (utility round, zinc plated)	100944
Slope Ceiling Aligner (utility square, zinc plated)	100902
IMS / IPC Remote Configurator Tool	584929
Tamper Resistant Hardware Kit	685007
Bird Guard (Available soon)	684706
House-Side Shield (Available soon)	684707

Footnotes:

* Lumen output can be adjusted at factory between 5000 and 11000 lumens. For specific lumen performance refer to Delivered Lumens chart.

- Pendant stems must be ordered separately (supplied by others). Cord length is five feet long. Consult factory for longer cord lengths and lead time.
- Consult factory for 90CRI lead time and DLC Qualification Information.
- Consult factory for HV with AirLink Synapse Wireless Digital Controller
- IMS is a dual sensor which includes daylight harvesting and motion.
- Sensitivity level of sensor is adjustable via a hand held remote; must be ordered separately.
- Battery Backup and Cold Weather Battery Backup available in UNV only; not available with external dimming or 10L and 11L. BB rated 50°C to 10°C. CWBB rated 50°C to -20°C.

SLOPE CEILING ALIGNER ACCESSORIES



BC600 3 GWT Decorative Aligner

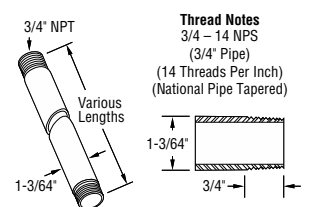
Gloss White finish is standard on decorative aligner. Other colors available.

BC585 Round Aligner

BC585SQ Square Aligner

ST TYPE STEM ACCESSORIES

- 3/4" NPT rigid aluminum conduit stem features gloss powder coat finish.
- White powder finish is standard; other colors available.



ST 6 3 GWT	3/4" x 6" Rigid Conduit Stem
ST 12 3 GWT	3/4" x 12" Rigid Conduit Stem
ST 18 3 GWT	3/4" x 18" Rigid Conduit Stem
ST 24 3 GWT	3/4" x 24" Rigid Conduit Stem
ST 36 3 GWT	3/4" x 36" Rigid Conduit Stem
ST 48 3 GWT	3/4" x 48" Rigid Conduit Stem
ST 60 3 GWT	3/4" x 60" Rigid Conduit Stem
ST 72 3 GWT	3/4" x 72" Rigid Conduit Stem
COP 3 GWT	3/4" Coupling for joining stem sections

Specifications and dimensions subject to change without notice.

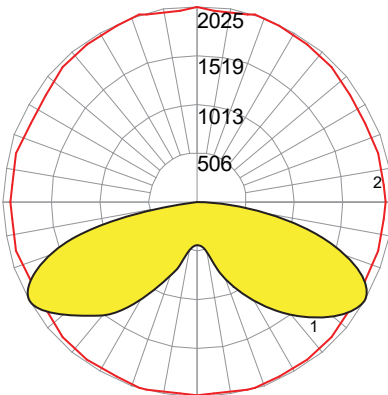


Excursion - EXN LED Parking Garage Luminaire

Photometry

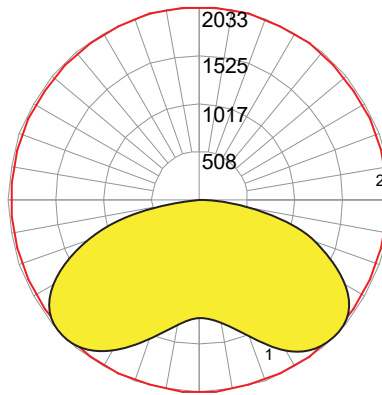
Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See <http://www.lsi-industries.com/products/led-lighting-solutions.aspx> for detailed photometric data.



Type V Wide

#1 - Vertical Plane Through Horizontal Angles (72.5 - 252.5)
#2 - Horizontal Cone Through Vertical Angle (60)



Type V Narrow

#1 - Vertical Plane Through Horizontal Angles (90 - 270)
#2 - Horizontal Cone Through Vertical Angle (45)

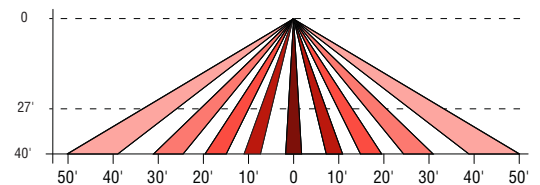
Controls

Occupancy Sensor / Daylight Sensor (IMS)

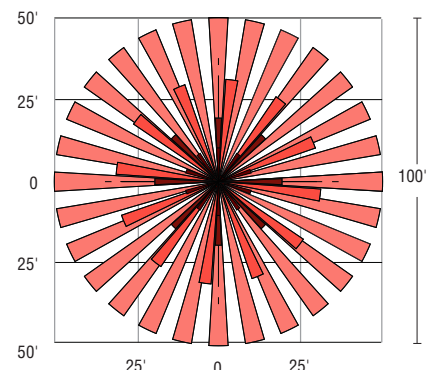
Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Low light level (30% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. Sensor has a detection cone of approximately 45°, see coverage diagram. Optional configurator tool allows for easy and safe programming of each luminaire from the ground level.

Optional IMS Coverage Diagram

SIDE VIEW



TOP VIEW



IMS/PC Remote Configurator Tool

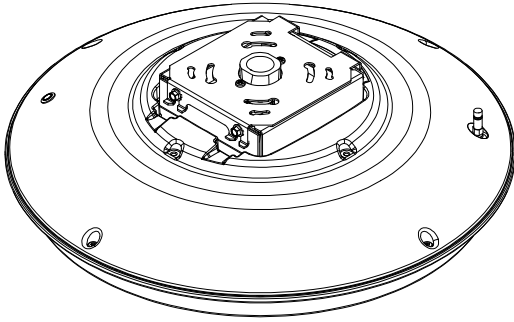


Specifications and dimensions subject to change without notice.



Excursion - EXN LED Parking Garage Luminaire

AirLink™
enabled by Synapse®



Wireless Lighting Controller

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect up to two (2) sensors into the outdoor AirLink wireless lighting system.

The wireless integrated controller is compatible with this fixture.

Features

- 2% Utility Grade Power Monitoring
- Up to 80% Savings through smart dimming
- True On/Off functionality via switched relay
- Seamlessly integrates into the outdoor AirLink wireless lighting control solution & Self-healing Mesh Networking
- Relay closes on power loss
- Supports a wide range of LED drivers and fixtures
- Class 1 / Class 2 0-10V Dimming Control
- Direct Connect up to two (2) to 24V Occupancy Sensors and Photocells (consult sales for compatible list)

- Secure, over-the-air upgrades to support future enhancements
- RF Range for Excursion is TBD — Synapse is capable of 1,000ft LoS between controllers
- Available in a metal cased version with quick connect terminal blocks
- Lights default to on for safety

Specifications

Regulatory Approvals

- FCC, IC, CE certified
- cULus Listed
- California Title 24 compliant

Power and Performance

- Operating environmental: -40°F to 131°F (-40°C to 55°C)
- Input power: 100–277 VAC +/- 10% (Max 305V) 47/64 Hz
- Switched output: Default ON; Zero Cross Switching
- Load rating: 5A @ 100V to 277V (+/- 10%)
- Dimming: 0–10V control; Output: Class 1/2 - 20mA Source Max / 50mA Sink Max
- Power monitoring: Utility grade - 2% accuracy
- Sensors inputs: 0–10V (photocell sensors), 0–24V (all other sensors); Sensor power supply: 24VDC @ 50mA

Other

- Dimensions: 8.2" L x 2.3" W x 1.3" H (209mm L x 59mm W x 33mm H) without antennas
- Radio: SNAP 2.4 GHz; 802.15.4; +20 dBm Transmit Power; -105 dBm Receive Sensitivity
- Warranty: 5 years

Contact LSI Controls



Sales
controls.sales@lsi-industries.com



Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)



More information
For more information on AirLink, visit our website at www.lsi-airlink.com/airlink

Catalog # :

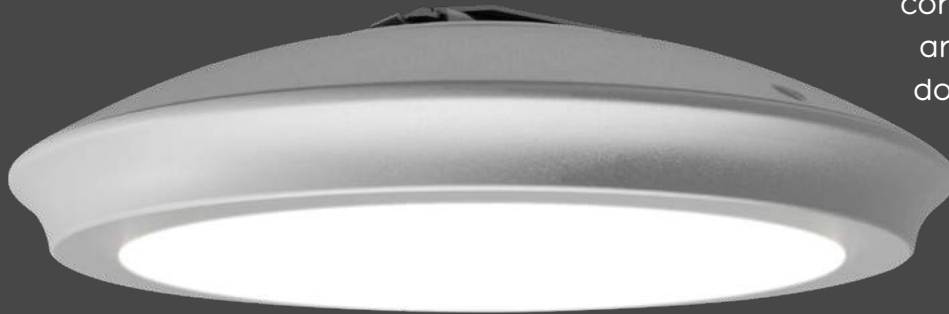
Project : TYPE G &GE

Prepared By :

Date :



Excursion - EXN LED Parking Garage Luminaire



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- Optically clear acrylic light guide with tailored refractive distribution.
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- Choice of two high performance distributions: Type 5 Wide and Type 5 Narrow (a concentrated distribution for atrium and exit/egress applications).
- Available in 5000K and 4000K color temperatures per ANSI C78.377. 3000K & 2700K color temperatures available by request, consult factory for lead time and DLC qualification information.
- Minimum CRI of 70. 90 CRI available by request, consult factory for lead time and DLC qualification information.

Electrical

- High-performance driver features over-voltage, under voltage, short-circuit and over temperature protection.
- 0-10 volt dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz. Optional High Voltage 347/480Vac Input available.
- L70 Calculated Life: > 100k Hours (See Lumen Maintenance Chart)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F)
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- High-efficacy LEDs with integrated circuit board mount directly to the housing to maximize heat dissipation and promote long life.
- Driver components are fully encased in potting material for moisture resistance. Driver complies with FCC standards.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
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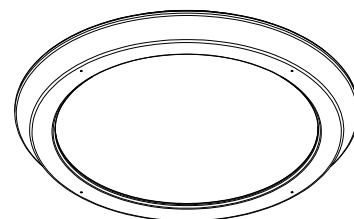
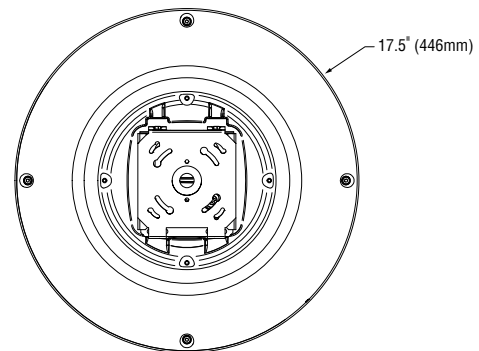
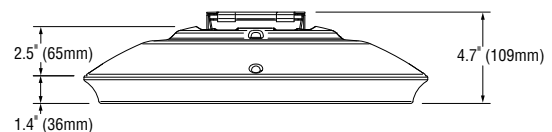
IP66
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ARRA
Funding Compliant



Product Dimensions



★ Assembled in USA by an American workforce of American and foreign parts using state-of-the-art equipment at our award-winning manufacturing facility in Ohio. Meets Buy American requirements within the ARRA.



Excursion - EXN LED Parking Garage Luminaire

Features & Specifications (Cont.)

Construction

- Precision die-cast aluminum housing and lens frame for durability and consistency.
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Installation

- Standard mounting is a rigid 3/4" pendant mount or direct surface mount to a 4" (102mm) octagon box (box by others).

Warranty

- LSI LED Fixtures carry a 5-year warranty.
- 1 Year warranty on optional Battery Back Up. Test regularly in accordance with local codes.

Listings

- Listed to ETL.
- RoHS Compliant.
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		2700K		3000K		
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	T5N	5927	133	5990	135	
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	T5N	7794	130	7880	131	
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11L	T5W	10340	119	10630	122	87
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*LED Chips are frequently updated therefore values are nominal.

Specifications and dimensions subject to change without notice.



Performance (Cont.)

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5L	T5W	0.31	0.18	0.15	0.13	0.11	0.08
	T5N	0.31	0.18	0.15	0.13	0.11	0.08
6L	T5W	0.37	0.21	0.19	0.16	0.13	0.09
	T5N	0.37	0.21	0.19	0.16	0.13	0.09
8L	T5W	0.50	0.29	0.25	0.22	0.17	0.13
	T5N	0.50	0.29	0.25	0.22	0.17	0.13
10L	T5W	0.63	0.37	0.32	0.27	0.22	0.16
	T5N	0.63	0.37	0.32	0.27	0.22	0.16
11L	T5W	0.73	0.42	0.36	0.31	0.25	0.18
	T5N	0.73	0.42	0.36	0.31	0.25	0.18

*Electrical data at 25°C (77°F). Actual wattage may differ by +/-10%.

RECOMMENDED LUMEN MAINTENANCE ¹					
Ambient Temperature	0 hrs. ²	25K hrs. ²	50K hrs. ²	75K hrs. ²	100K hrs. ²
0 C	100%	93%	86%	80%	74%
10 C	100%	93%	86%	80%	74%
20 C	100%	93%	86%	80%	74%
25 C	100%	94%	88%	83%	78%
30 C	100%	94%	88%	82%	77%
40 C	100%	93%	87%	80%	75%

1 - Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (DUT) i.e. the packaged LED chip).



Excursion - EXN LED Parking Garage Luminaire

Ordering Guide

TYPICAL ORDER EXAMPLE: **EXN D EGLED 8L T5W UNV DIM 40 70CRI ALSCS MSV**

Family	Mounting	LED Technology	Lumen Package*	Distribution	Voltage	Dimming	Color Temperature
EXN - Excursion Parking Garage Luminaire	D - Direct Mount P - Pendant Mount ¹	EGLED - Edge-Lit LED	3L - 3000 lms 5L - 5000 lms 6L - 6000 lms 8L - 8000 lms 10L - 10000 lms 11L - 11000 lms	T5W - Type V Wide T5N - Type V Narrow	UNV - Universal Electronic (120V-277V) HV - High Voltage (347V- 480V)	DIM - Dim to 10% (0-10V)	27 - 2700K ² 30 - 3000K ² 40 - 4000K 50 - 5000K

Color Rendering	Controls	EM	Finish	Packaging
70CRI - 70 Color Rendering Index 90CRI - 90 Color Rendering Index ²	Blank - No Controls ALSC - Airlink Synapse Wireless Digital Controller ³ ALSCS1 - Airlink Synapse Wireless Digital Controller with Sensor (mounting 8 to 12 feet) ^{3,4} ALSCS2 - Airlink Synapse Wireless Digital Controller with Sensor (mounting 12 to 20 feet) ^{3,4} IMSOM1 - Integral Motion / Daylight Sensor (mounting 8 to 12 feet) ⁴ IMSOM2 - Integral Motion / Daylight Sensor (mounting 12 to 20 feet) ⁴ Ext - 0-10V Dimming from External Source	Blank - No Option BB - Battery Backup ⁶ CWBB - Cold Weather Battery Backup ⁶	BLK - Black WHT - White MSV - Metallic Silver BRZ - Bronze	Blank - Single Pack JP - Job Pack (2 luminaires)

Accessory Ordering Information (Accessories are field installed)

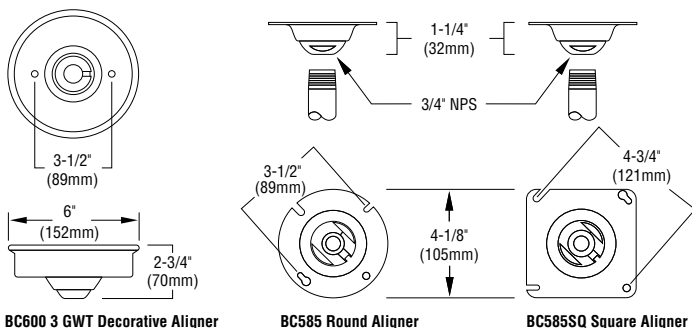
Description	Part Number
Slope Ceiling Aligner (decorative round, gloss white)	163112
Slope Ceiling Aligner (utility round, zinc plated)	100944
Slope Ceiling Aligner (utility square, zinc plated)	100902
IMS / IPC Remote Configurator Tool	584929
Tamper Resistant Hardware Kit	685007
Bird Guard (Available soon)	684706
House-Side Shield (Available soon)	684707

Footnotes:

* Lumen output can be adjusted at factory between 5000 and 11000 lumens. For specific lumen performance refer to Delivered Lumens chart.

- Pendant stems must be ordered separately (supplied by others). Cord length is five feet long. Consult factory for longer cord lengths and lead time.
- Consult factory for 90CRI lead time and DLC Qualification Information.
- Consult factory for HV with Airlink Synapse Wireless Digital Controller
- IMS is a dual sensor which includes daylight harvesting and motion.
- Sensitivity level of sensor is adjustable via a hand held remote; must be ordered separately.
- Battery Backup and Cold Weather Battery Backup available in UNV only; not available with external dimming or 10L and 11L. BB rated 50°C to 10°C. CWBB rated 50°C to -20°C.

SLOPE CEILING ALIGNER ACCESSORIES



BC600 3 GWT Decorative Aligner

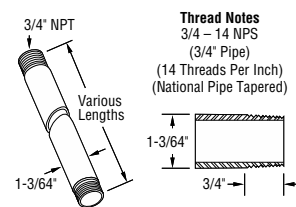
Gloss White finish is standard on decorative aligner. Other colors available.

BC585 Round Aligner

BC585SQ Square Aligner

ST TYPE STEM ACCESSORIES

- 3/4" NPT rigid aluminum conduit stem features gloss powder coat finish.
- White powder finish is standard; other colors available.



ST 6 3 GWT	3/4" x 6" Rigid Conduit Stem
ST 12 3 GWT	3/4" x 12" Rigid Conduit Stem
ST 18 3 GWT	3/4" x 18" Rigid Conduit Stem
ST 24 3 GWT	3/4" x 24" Rigid Conduit Stem
ST 36 3 GWT	3/4" x 36" Rigid Conduit Stem
ST 48 3 GWT	3/4" x 48" Rigid Conduit Stem
ST 60 3 GWT	3/4" x 60" Rigid Conduit Stem
ST 72 3 GWT	3/4" x 72" Rigid Conduit Stem
COP 3 GWT	3/4" Coupling for joining stem sections

Specifications and dimensions subject to change without notice.

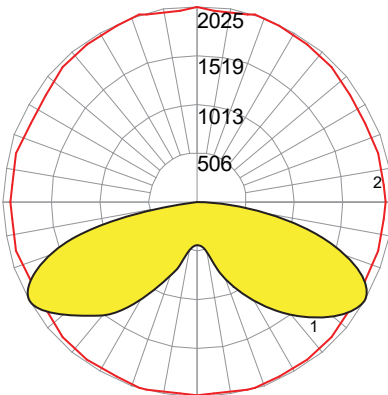


Excursion - EXN LED Parking Garage Luminaire

Photometry

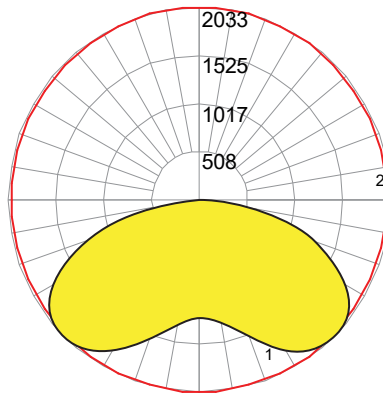
Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See <http://www.lsi-industries.com/products/led-lighting-solutions.aspx> for detailed photometric data.



Type V Wide

#1 - Vertical Plane Through Horizontal Angles (72.5 - 252.5)
#2 - Horizontal Cone Through Vertical Angle (60)



Type V Narrow

#1 - Vertical Plane Through Horizontal Angles (90 - 270)
#2 - Horizontal Cone Through Vertical Angle (45)

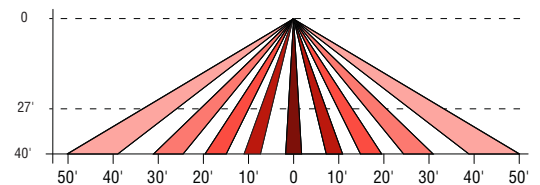
Controls

Occupancy Sensor / Daylight Sensor (IMS)

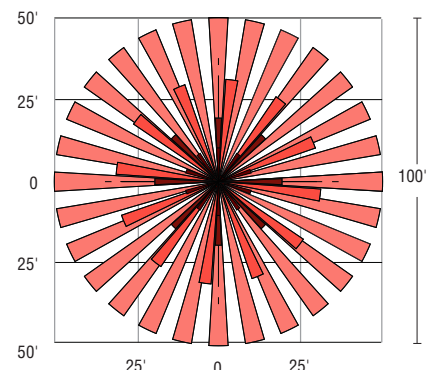
Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Low light level (30% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. Sensor has a detection cone of approximately 45°, see coverage diagram. Optional configurator tool allows for easy and safe programming of each luminaire from the ground level.

Optional IMS Coverage Diagram

SIDE VIEW



TOP VIEW



IMS/PC Remote Configurator Tool

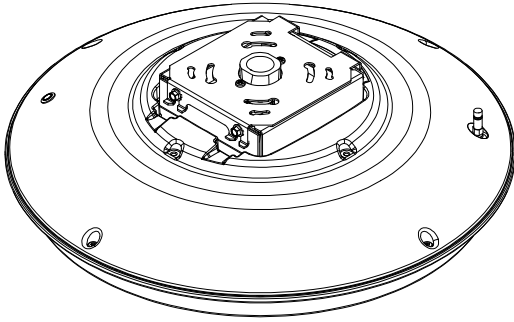


Specifications and dimensions subject to change without notice.



Excursion - EXN LED Parking Garage Luminaire

AirLink™
enabled by Synapse®



Wireless Lighting Controller

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect up to two (2) sensors into the outdoor AirLink wireless lighting system.

The wireless integrated controller is compatible with this fixture.

Features

- 2% Utility Grade Power Monitoring
- Up to 80% Savings through smart dimming
- True On/Off functionality via switched relay
- Seamlessly integrates into the outdoor AirLink wireless lighting control solution & Self-healing Mesh Networking
- Relay closes on power loss
- Supports a wide range of LED drivers and fixtures
- Class 1 / Class 2 0-10V Dimming Control
- Direct Connect up to two (2) to 24V Occupancy Sensors and Photocells (consult sales for compatible list)

- Secure, over-the-air upgrades to support future enhancements
- RF Range for Excursion is TBD — Synapse is capable of 1,000ft LoS between controllers
- Available in a metal cased version with quick connect terminal blocks
- Lights default to on for safety

Specifications

Regulatory Approvals

- FCC, IC, CE certified
- cULus Listed
- California Title 24 compliant

Power and Performance

- Operating environmental: -40°F to 131°F (-40°C to 55°C)
- Input power: 100–277 VAC +/- 10% (Max 305V) 47/64 Hz
- Switched output: Default ON; Zero Cross Switching
- Load rating: 5A @ 100V to 277V (+/- 10%)
- Dimming: 0–10V control; Output: Class 1/2 - 20mA Source Max / 50mA Sink Max
- Power monitoring: Utility grade - 2% accuracy
- Sensors inputs: 0–10V (photocell sensors), 0–24V (all other sensors); Sensor power supply: 24VDC @ 50mA

Other

- Dimensions: 8.2" L x 2.3" W x 1.3" H (209mm L x 59mm W x 33mm H) without antennas
- Radio: SNAP 2.4 GHz; 802.15.4; +20 dBm Transmit Power; -105 dBm Receive Sensitivity
- Warranty: 5 years

Contact LSI Controls



Sales
controls.sales@lsi-industries.com



Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)



More information
For more information on AirLink, visit our website at www.lsi-airlink.com/airlink

FULLY ENCLOSED & GASKETED INDUSTRIAL

96

LED

CATALOG #:

TYPE:

PROJECT:

NOTES:

EXAMPLE

96

- 4 -

L62/830

- HIAFR

- OPTIONS

- DRV

- UNV

SERIES

NOMINAL LENGTH

LUMEN PACKAGE

CRI & CCT

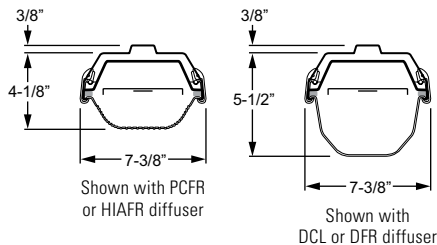
SHIELDING

OPTIONS/ACCESSORIES

DRIVER

VOLTAGE

CROSS SECTION



ORDERING INFORMATION

SERIES

96

Fully Enclosed & Gasketed Industrial

NOMINAL LENGTH

2

2'

4

4'

8

8' (acrylic diffusers only)

LED PACKAGE

NOTE: Nominal lumens based on HIAFR shielding.

EXAMPLE: L62/830				AVERAGE SYSTEM WATTAGE
LUMEN PACKAGE	NOMINAL LUMENS		MINIMUM CRI & CCT	
	HIAFR	PCFR		
2'				
L21	2,100	1,900		18
L29	2,900	2,600		25
4'				
L40	4,000	3,900		30
L62	6,400	5,800	830 = 82 CRI, 3000K	48
L81	8,100	7,400	835 = 82 CRI, 3500K	65
L110	11,100	10,100	840 = 82 CRI, 4000K	88
8'				
L80	8,000	-	850 = 82 CRI, 5000K	61
L130	13,000	-		95
L160	16,000	-		123
L220	22,000	-		166

See back for lumen maintenance details.

SHIELDING

HIAFR

Frosted, ribbed, impact-resistant acrylic

PCFR

Frosted, ribbed, UV stabilized polycarbonate (not available in 8' units)

DFR

Drop, frosted, impact-resistant acrylic

DCL

Drop, clear, impact-resistant acrylic with frosted ends

OPTIONS/ACCESSORIES

Cord and receptacle options available, see back for details.

(L)

Additional lower lumen packages in 100 nominal lumen increments available. Option must be specified with next higher lumen package.

Example: 4,100 nominal lumens = 96-4-L62/840-HIAFR-(L41).

OPTIONS/ACCESSORIES (Continued)

EM/10W

10-watt emergency battery (120-277V only; not available with L110 or L220 lumen packages; 4' or 8' only) see page 2 for temperature restrictions

LA40

-40°C minimum operating temperature

WET/1

(1) 1/2" watertight hub (factory-installed in end of housing)

WET/2

(2) 1/2" watertight hubs (factory-installed in ends of housing; not available with occupancy sensor option)

SSCMB

Stainless steel chain mounting brackets (2 per fixture)

TP

Tamper-resistant polycarbonate latches (Requires a tamper-resistant tool. Must be ordered separately. Please specify quantity required per project.

SS LATCH

Stainless steel latches

TP/SS LATCH

Tamper-resistant stainless steel latches (Requires a tamper-resistant tool. Must be ordered separately. Please specify quantity required per project.

WMB

Stainless steel 45° wall mount bracket (2 per fixture). See back for details.

OCCUPANCY SENSORS

Specify from the following options (must specify 120 or 277V; IP65 certified when specified with occupancy sensor):

OCCWS HB350W-L3W

OCCWS FSP-211B-L

Factory-installed occupancy and daylight control, must specify lens, see page 3 for details. Optional FSIR-100 remote controller available, ordered separately.

FSIR-100

Remote controller for occupancy sensor, please specify quantity required per project, ships separately, see page 3 for details

DRIVER

Additional dimming drivers available, see [Technical Info](#).

DRV

Driver prewired for non-dimming applications

DIM

10% dimming driver prewired for 0-10V low voltage applications

VOLTAGE

Must specify 120V or 277V when using occupancy sensor.

120

120V

277

277V

UNV

120-277V

FEATURES

- Fully gasketed fixture resists dust, bugs, and moisture.
- Polycarbonate toggle latches (standard) ensure a tight seal and provide easy access to electrical components.
- Optional stainless steel, tamper-resistant stainless steel, or tamper-resistant polycarbonate latches available.
- Closed-cell polyurethane gasket poured and formed in place to ensure tight seal—does not absorb water or support fungal growth.
- NSF/ANSI Standard 2—Splash Zone certified.
- IP65, IP66, and IP67 certified.
- Rated for -20°C to 40°C maximum ambient operating temperature (restrictions apply, see page 2 for details). -40°C minimum operating temperature with LA40 option.
- Multiple dimming protocols available.
- This fixture is proudly made in the USA.



H.E. Williams, Inc. ■ Carthage, Missouri ■ www.hew.com ■ 417-358-4065



H.E. WILLIAMS, INC.

Industrial
Page 1 of 3

SPECIFICATIONS

Enclosure – Outer housing consists of 5VA (f1) fiberglass, rated for flame and weather resistance.

Internal Housing – .050" aluminum.

Latching – Injection-molded polycarbonate latches.

Reflector – 92% minimum average reflective white polyester powder coat bonded to phosphate-free, multi-stage pretreated metal.

Shielding – Frosted, ribbed, impact-resistant acrylic.

Electrical – High quality mid-power LED board. L70 >50,000 hours. -20°C to 40°C maximum ambient operating temperature (restrictions apply, see Performance Data for details). -40°C minimum operating temperature with LA40 option.

Mounting – Surface or suspended. Stainless steel ceiling mount brackets included.

Listings –

- cETLus conforms to UL STD 1598 and UL STD 8750. Certified to CAN/CSA STD C22.2 No. 250.0. Suitable for dry or damp locations.
- DesignLights Consortium qualified product. Not all versions of this product may be DLC qualified, see the DLC Qualified Products List at www.designlights.org/QPL.
- cETLus listed as suitable for wet locations when specified with watertight hub, STOW or SOOW cord, or mini-male receptacle option.
- NSF/ANSI Standard 2–Splash Zone certified, IP65, IP66, and IP67 certified, and rated for NEMA 4X.

Warranty – 5-year limited fixture warranty, see hew.com/warranty.

IMPORTANT:

Electrostatic sensitive unit. Observe precautions when handling.

CORD OPTIONS

EXAMPLE: 5WMRC6		
NUMBER OF CONDUCTORS	POWER CONNECTION – NON-DIMMING	CORD LENGTH
3 = 3-wire 4 = 4-wire	WMR = Mini-male receptacle only	N/A
	WC = STOW cord	6 = 6' 20 = 20'
	WMRC = Mini-male receptacle with STOW cord	
POWER CONNECTION – DIMMING		
5 = 5-wire 6 = 6-wire	WMR = Mini-male receptacle only	N/A
	WC = SOOW cord	6 = 6' 20 = 20'
	WMRC = Mini-male receptacle with SOOW cord	

Wet location cord sets are yellow.

FIXTURE PERFORMANCE DATA

LED PACKAGE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)	MAXIMUM TEMPERATURE (°C)	
				STANDARD	EMERGENCY
2'					
L21	2201	18.0	120.5	40	—
L29	3028	25.0	118.4	40	—
4'					
L40	4086	30.0	137.4	40	40
L62	6434	48.0	133.1	40	30
L81	8121	65.0	125.0	30	25
L110	11075	88.0	126.2	30	—
8'					
L80	8018	61.0	132.8	40	40
L130	13026	95.0	138.0	40	30
L160	16188	123.0	133.3	30	25
L220	22056	166.0	135.7	30	—

CCT MULTIPLIER TABLE

SHIELDING	CONVERSION FACTOR
HIAFR	1.000
PCFR	0.913
DFR	1.052
DCL	1.062 ¹

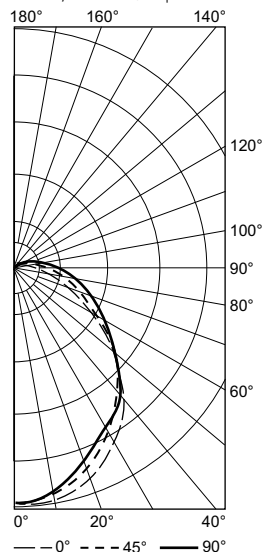
¹ Due to lens being clear, striations in the light distribution will be visible.

- Lumens based on HIAFR shielding.
- Photometrics tested in accordance with IESNA LM-79
- Results shown are based on 25°C ambient temperature and FR shielding
- Wattage shown is average for 120V through 277V input
- Results scaled based on relative CCT output

PHOTOMETRY

96-4-L62/830-HIAFR-DRV Report #: 20008.0; 08/15/17 | Total Luminaire Output: 6434 lumens; 48.3 Watts

Efficacy: 133.1 lm/W | 83.6 CRI; 4041K CCT | IES Spacing Criteria: End: 1.1, Across: 1.1, Diagonal: 1.1

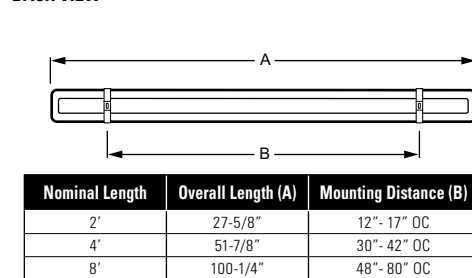


Vertical Angle	Horizontal Angle			Zonal Lumens
	0°	45°	90°	
0	2318	2318	2318	
5	2352	2298	2283	219.8
15	2259	2169	2120	616.7
25	2066	1943	1865	899.3
35	1780	1666	1704	1065.3
45	1370	1379	1389	1055.1
55	943	1007	1062	900.6
65	546	695	828	690.8
75	231	449	599	456.6
85	38	251	361	251.9
90	15	185	272	
95	14	150	217	143.2
105	8	84	138	79.4
115	4	39	85	39.0
125	0	8	42	13.7
135	0	0	9	1.8
145	0	0	2	0.6
155	0	0	0	0.0
165	0	0	0	0.0
175	0	0	0	0.0
180	0	0	0	

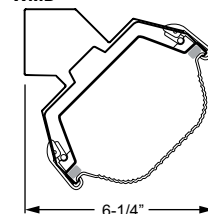
	Zone	Lumens	% Fixture
LUMEN SUMMARY	0 - 30	1736	27.0
	0 - 40	2801	43.5
	0 - 60	4757	73.9
	0 - 90	6156	95.7
	90 - 120	262	4.1
	90 - 150	275	4.3
	90 - 180	278	4.3
	0 - 180	6434	100.0

FIXTURE DETAILS

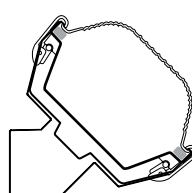
BACK VIEW



WMB

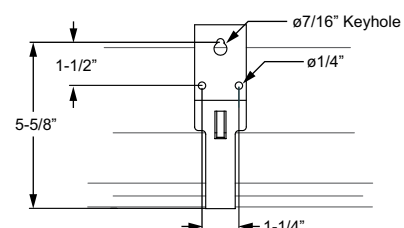
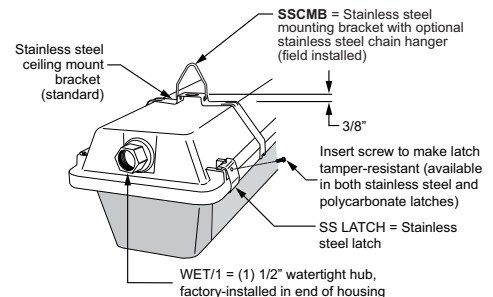


Wet location listed with fixture lens facing down



Dry or damp location only with fixture lens facing up

MOUNTING



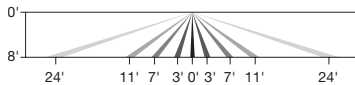
OCCUPANCY SENSOR

EXAMPLE

OCCWS FSP-211B - L2OCCUPANCY
SENSOR

LENS

- Fully adjustable high and low dimmed light levels.
- Designed for LED fixtures; rated for extreme temperatures and up to 200,000 on/off cycles.
- Hold-off setpoint with automatic calibration option for convenience and added energy savings.
- Adjustable via handheld wireless configuration tool (ordered separately, see Accessory Details).
- IP66 rated with choice of lenses for wet and outdoor locations, and mounting heights from 8' to 20'.
- Adjustable time delay and cutoff delay.
- Factory set to 10% dimming at 5 minutes, cutoff at 1 hour.
- Multi-level control based on motion and/or daylight contribution.



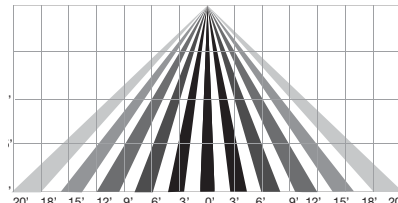
L2 Lens

ORDERING INFORMATION

OCCWS FSP-211B-__ Factory-installed occupancy sensor, must specify lens (120V or 277V only)

LENS

- L2** Coverage at 8' mounting height: ø48'
- L3** Coverage at 20' mounting height: ø40'



L3 Lens

ACCESSORY DETAILS

FSIR-100 – Occupancy Sensor Remote

Initial setup and subsequent sensor adjustments are made using a handheld configuration tool (FSIR-100). The wireless tool stores up to five sensor parameter profiles to speed configuration of multiple sensors. Please specify quantity required per project.

Visit www.wattstopper.com for more information.





WALL / CEILING/
PENDANT MOUNT
LED

Fixture Type

Date

Job Name

Approved By

Catalog Number

SPECIFICATIONS

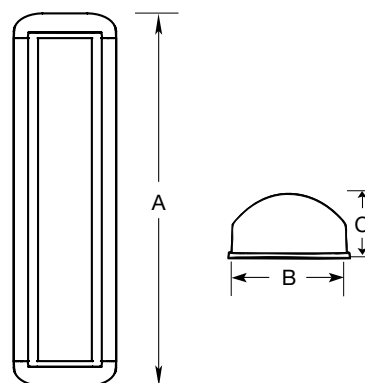
ADA Compliant

- Description** The Vision 8 series features an all aluminum, ligature resistant construction and optional wet location listing which allows it to be used in nearly any environmental condition. Designed in conjunction with an ophthalmologist, the polycarbonate lens provides complete control of glare and LED image while maintaining the high efficiency of clear optical material. The Vision 8 series can be row mounted to any length. Natatorium finish is standard for all versions of this fixture.
- Housing** Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat.
- Lens** Extruded UV stabilized opal polycarbonate with integral prisms. Maximum wall thickness 0.160". Secured to housing with die cast aluminum clamps and stainless steel TORX® head screws.
- End Caps** Die-cast marine grade aluminum with conduit knockouts that are visible from interior of end cap.
- Drivers** Constant current driver at 700mA, 120-277V, 347V optional.
- LED** Samsung LM561B+ series @ 2700K, 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L₇₀ projected life of over 130,000 hours at 50°C. Ten year warranty on LED boards against operational defects. Tested in accordance with LM-80.
- Listings** U.L., C.U.L., Damp Standard, Wet optional.
- Lifetime Warranty** Luminaire LED Incorporated will repair or replace any fixture damaged due to vandalism for the lifetime of the installation.



DIMENSIONAL DATA

	A	B	C
VPF82	27.64	8.75	3.96
VPF83	37.87	8.75	3.96
VPF84	49.68	8.75	3.96



ORDERING INFORMATION

SERIES	LED	CCT	DRIVER	VOLTS	LENS	COLOR	OPTIONS		TX/SD
VPF 82	15W	2700K	CC	120-277	CP	BLK	DIM	OCCFA	
	25W	3000K	DIM	347	OP	WHT	PC	OCC50	
	50W	3500K	PRD			BRZ	GLR	EMB310	
VPF 83	20W	4000K				GRY	WET	EMB310ST	
	40W	5000K				SIL	NSF	EMB722	
VPF 84	25W					CUST	COR	EMB722C	
	50W						JB	EMB125R	
	70W						LEDNL	EMB250R	
	100W						2B	PNDKT	
							OCC	ST/SC	

CC = Constant Current (Standard)
 DIM = 0-10V Dimming, 10% at lowest level
 PRD = Programmable driver. Specify Lumens or Watts. Consult factory.



OPTIONS

LENS	CP = Clear Prismatic Standard	OP = Opal Optional				
COLORS	BLK = Black	WHT = White	BRZ = Bronze	GRY = Gray	SIL = Silver	CUST = Custom Color (Consult Factory)
DIM	0-10V dimming driver, 10% at lowest level.					
PC	Photoelectric switch.					
GLR	Fuse and fuse holder.					
WET	Silicone and neoprene gasketing for wet location. Surface mount only.					
NSF	National Sanitation Foundation rated. White finish only.					
COR	Corner mounted back box. Constructed from 16 gauge cold rolled zinc coated steel. Finished with white powder coat. Damp only.					
JB	Die cast joiner band for continuous row mount. Consult factory for row information.					
LEDNL	LED Night Light.					
2B	(2) LED drivers for independent LED board operation.					
OCC	Microwave occupancy sensor mounted behind the lens. All LED boards sensed on/off. Consult factory for availability in select models.					
OCC50	Microwave occupancy sensor mounted behind the lens. 50% of LED's constantly on and 50% sensed. 2 ft. and 4 ft. fixtures only.					
OCCFA	Microwave occupancy sensor mounted behind the lens. All LED board sensed to dim to 50%, 30%, 20%, or 10%, field selectable low levels. Factory standard preset of 50% dimming level and 20 minute time out.					
EMB310	1200 lumen self-contained 90 minute emergency battery pack for 15W minimum operation. 0°C (32°F) to 55°C (131°F). Not available in 347V. Meets CA Title 20 Standards.					
EMB310ST	1000 lumen self-testing, self-contained, 90 minute emergency battery pack. Not available for 24". 0°C (32°F) to 55°C (131°F). Not available in 347V. Meets CA Title 20 Standards.					
EMB722	2600 lumen self contained 90 minute emergency battery pack for 25W minimum operation. 0°C (32°F) to 60°C (140°F). Not available in 347V.					
EMB722C	Cold weather, 2600 lumen self contained 90 minute emergency battery pack for 25W minimum operation. -20°C (-4°F) to 60°C (140°F). Not available in 347V.					
EMB125R	Remote mounted inverter that will operate a 125W maximum load for 90 minutes. 20°C (68°F) to 30°C (86°F). Not available in 347V.					
EMB250R	Stand-alone inverter that will operate a 250W maximum load for 90 minutes. 20°C(68°F) to 30°C (86°F). Not available in 347V.					
PNDKT	Rigid stem pendant kit. Specify length. Consult factory for availability.					
ST/SC	Phillips head screws instead of TORX® head.					
TX/SD	TORX® head bit.					



PHOTOMETRIC DATA

Model	Watts	Input Watts	Delivered Lumens		Delivered Lumens		Delivered Lumens		Delivered Lumens		Delivered Lumens	
			Clear	Opal	Clear	Opal	Clear	Opal	Clear	Opal	Clear	Opal
			2700K		3000K		3500K		4000K		5000K	
VPF82	15W	13.0W	1325	1227	1339	1240	1367	1266	1410	1306	1452	1345
VPF82	25W	26.6W	2879	2668	2910	2697	2971	2754	3063	2839	3155	2924
VPF82	50W	56.0W	5059	4689	5115	4742	5220	4839	5382	4989	5543	5138
VPF83	20W	19.5W	1988	1842	2010	1864	2052	1901	2115	1960	2178	2018
VPF83	40W	38.9W	3967	3677	4012	3718	4094	3795	4221	3912	4348	4030
VPF84	25W	26.6W	2879	2668	2910	2697	2971	2754	3063	2839	3155	2924
VPF84	50W	53.3W	5560	5154	5621	5211	5736	5317	5915	5483	6092	5647
VPF84	70W	74.0W	7783	7214	7869	7295	8030	7444	8280	7675	8528	7905
VPF84	100W	114.6W	10357	9601	10473	9709	10687	9906	11019	10214	11349	10520
VPF8x	PRD		Programmable Driver. Specify Wattage or Delivered Lumens in Ordering Information.									



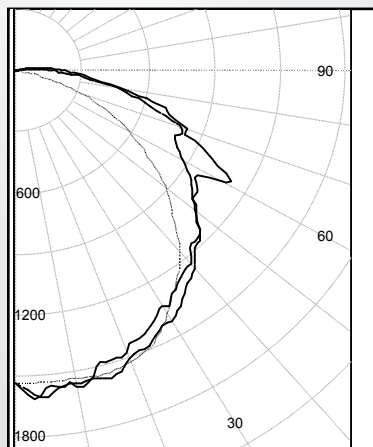
PHOTOMETRIC DATA

MODEL VPF84-50W-4000K CP

Delivered Lumens: 5,477 Lumens

Total Power: 54.0W

Testing was performed in accordance with IES LM-79-08



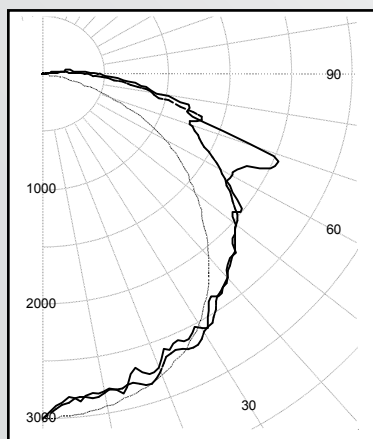
Zone	Lumens	% Lamps
0 - 30	1256	22.9
0 - 40	2072	37.8
0 - 60	3781	69.0
60 - 90	1557	28.4
0 - 90	5339	97.5
90 - 180	138	2.5
0 - 180	5477	100.0

MODEL VPF84-100W-4000K CP

Delivered Lumens: 10,203 Lumens

Total Power: 114.6W

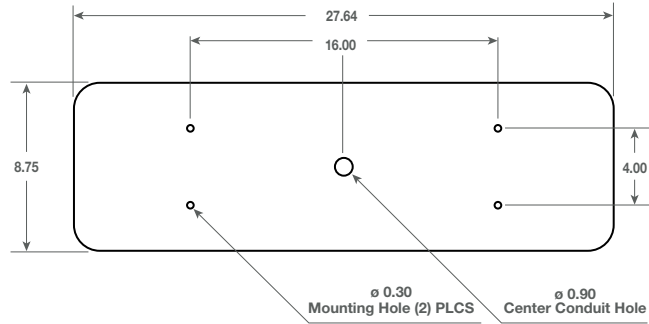
Testing was performed in accordance with IES LM-79-08



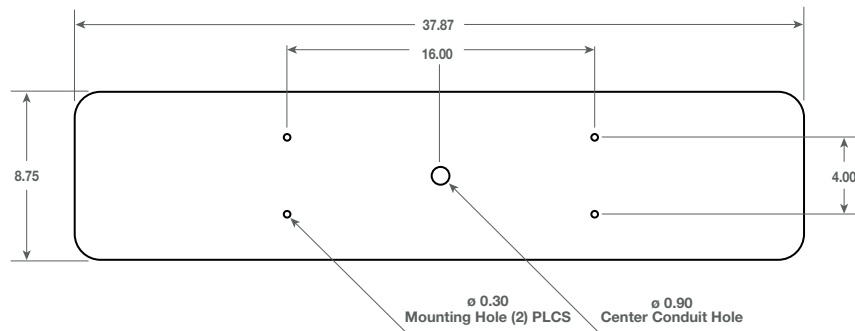
Zone	Lumens	% Lamps
0 - 30	2290	22.4
0 - 40	3796	37.2
0 - 60	6958	68.2
60 - 90	2963	29.0
0 - 90	9922	97.2
90 - 180	281	2.8
0 - 180	10203	100.0

MOUNTING PLATE DETAILS

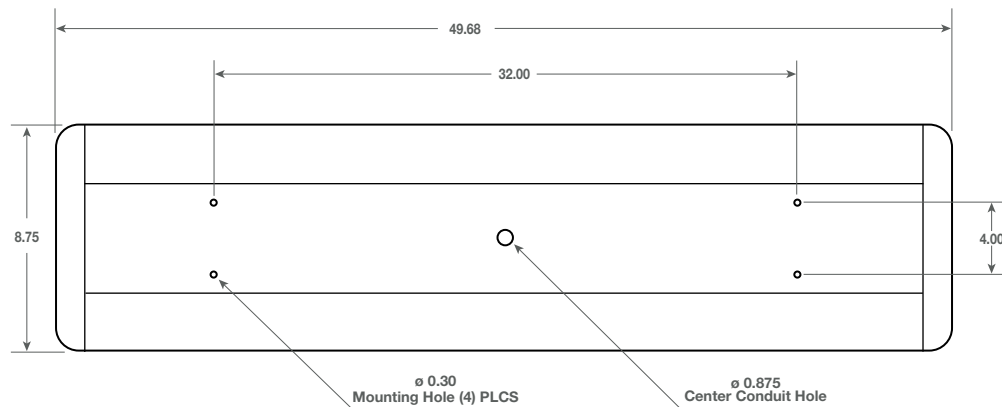
VPF82



VPF83



VPF84



MINIREEF

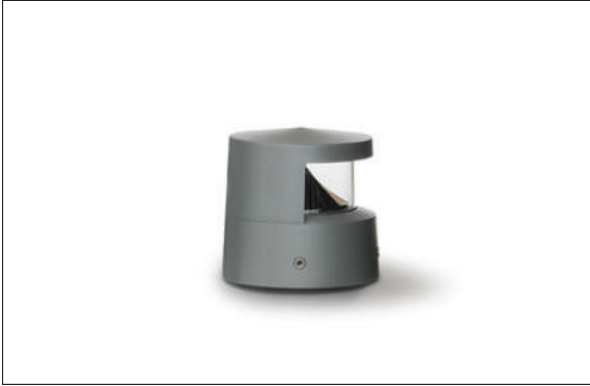
180° LED

SPECIFICATION SHEET

PAGE: 1 OF 2

Project name: _____

Type: _____



General information

Luminaire characteristics:

Power input: 18W

Lumens: 635lm

Luminaire efficacy: 35lm/W

Source: White LED (LM-80 tested).

3000K: 90CRI

4000K: 90CRI

Lumen maintenance: 70% of initial lumens at 50 000 hours (L70)
LM-79 tested.

Optics: 180° window.

Material:

Body: Die-cast aluminum

Lens: Clear polycarbonate.

Reflector: Pure anodized aluminum.

Hardware: Stainless steel screws.

Electrical: Universal high efficiency electronic power supply,
rated at 50 000 hours, 120-277V.

Mounting: Installs on a standard 4" junction box or with flange or
stake accessories for ground installation.

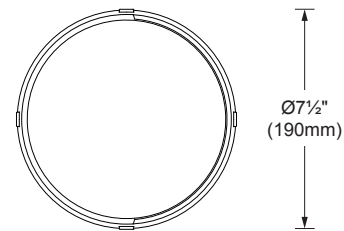
Finish: Aluminum gray or Bronze.

Weight: 5.8lbs (2.6kg)

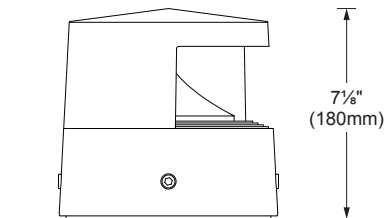
Warranty: 5 year limited warranty.

Certification: cULus listed for wet location.

Ratings: IP65, IK10.



TOP VIEW



SIDE VIEW

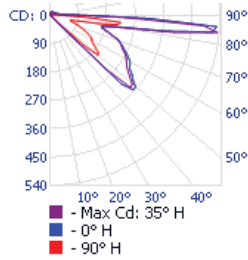
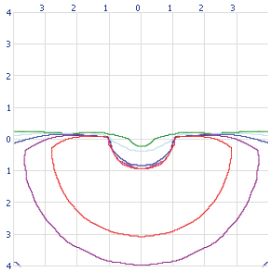
Project name: _____

Type: _____

TECHNICAL DATA



Nominal data shown. Visit sistemalux.com for complete photometric data.

LOAD (W)	CCT (K)	CRI	OPTIC	LUMENS (lm)	EFFICACY (lm / w)	MAX CANDELA (cd)	MODEL
18W	3000K	90	180° beam	635	35	530	S.5233W



3000K - 90 CRI - 180° BEAM

ACCESSORIES (TO BE ORDERED SEPARATELY)

- ☐ **S.5200-14** - Fixing plate with anchor bolts
Ø7½" (190mm) x h: 8⅞" (225mm) 
- ☐ **S.3554-09** - Black Stake
h: 16½" (420mm)
(The upper 3½" (90mm) must stay out of the ground) 

ORDERING INFO

MODEL	VOLTAGE	FINISH
<input type="radio"/> S.5233W - 3000K	<input type="radio"/> UNV - 120-277V	<input type="radio"/> 14 - Aluminum gray
<input type="radio"/> S.5233N - 4000K		<input type="radio"/> 20 - Bronze

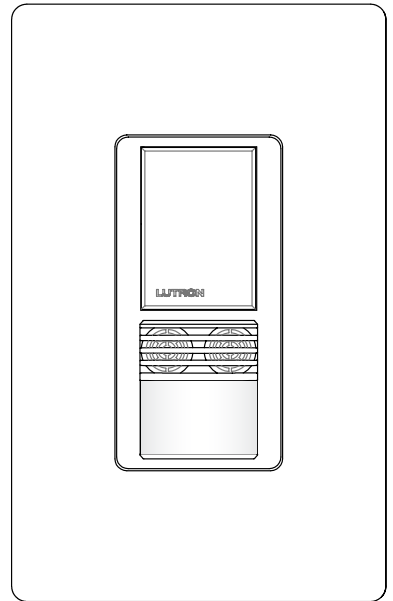
Maestro® Dual Technology Sensor Switch

The Maestro® Dual Technology (Dual Tech) Occupancy Sensor Switch applies our exclusive XCT™ Technology to the ultrasonic as well as the passive infrared technology in this sensor to create a product that can detect very fine motion, such as typing. This product also includes all of the great features found in the rest of the Maestro® sensor family, including: adaptive relay switching, smart ambient light detection, and simple button presses for changing settings. The Maestro® Dual Tech Occupancy Sensor Switch is available in single-circuit and dual-circuit versions.

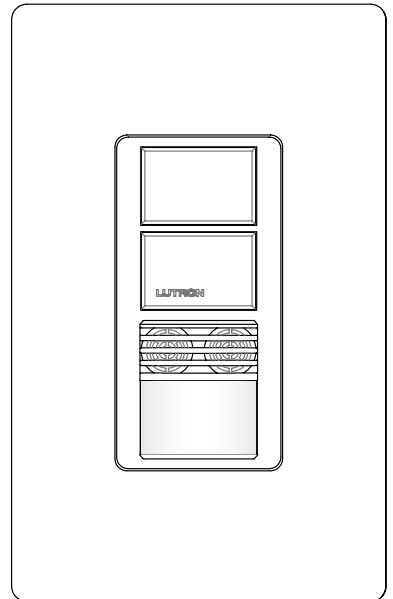
The single-circuit versions (MS-A102, MS-B102) can be used to meet many of the Title 20/24, ASHRAE 90.1, and IECC code requirements such as “automatic shutoff”. The dual-circuit versions (MS-A202, MS-B202) can be used to meet many of the Title 20/24, ASHRAE 90.1, and IECC code requirements such as “automatic shutoff” and “multi-level lighting control”. To find some examples of code-specific applications, visit www.lutron.com/energycodes

Features

- XCT™ Technology for major, minor, fine, and very fine motion detection
- 180° sensor field-of-view
- Tamper-resistant PIR lens
- Up to 900 ft² (81 m²) major motion coverage and 400 ft² (36 m²) minor motion coverage
- Two Ambient Light Detect (ALD) options:
 - Learning ALD Mode:
Uses adaptive algorithm.
Sensor learns user's preferred light level over time.
 - Fixed ALD mode:
Four selectable light level thresholds: Hi, Med, Low, Min
- Occupancy models (MS-A102-XX, MS-B102-XX, MS-A202-XX, MS-B202-XX) can be set to Auto-ON/Auto-OFF or Manual-ON/Auto-OFF per circuit
- Dual-circuit models (MS-A202, MS-B202) meet Title 24 requirements for multi-level lighting control.
- Single-circuit “Vacancy” models (MS-A102-V-XX, MS-B102-V-XX) available to meet Title 24/Title 20 requirements for vacancy sensors.
- Adjustable timeout for each circuit (1, 5, 15, or 30 minutes)
- Sensitivity adjustment
 - PIR (Hi, Med, Low, Min)
 - Ultrasonic (Hi, Med, Low, Off)
- Switches all lighting loads: incandescent, halogen, ELV, MLV, CFL, LED, magnetic fluorescent, electronic fluorescent
- Switches fan loads at 120 V~
- MS-B102, MS-B102-V work with Maestro® accessory switches in multi-location applications
- MS-A models DO NOT require neutral wiring, while the MS-B models DO require neutral wiring.



MS-A102-XX (Occupancy model)
MS-A102-V-XX (Vacancy model)
MS-B102-XX (Occupancy model)
MS-B102-V-XX (Vacancy model)



MS-A202-XX (Occupancy model)
MS-B202-XX (Occupancy model)

Notes:

- “XX” in the model number represents color/finish code. See **Colors and Finishes** at end of document.
- Wallplate not included.

LUTRON® SPECIFICATION SUBMITTAL

Page

Job Name:	Model Numbers:
Job Number:	

Specifications

Regulatory Approvals

- UL® Listed to U.S. and Canadian safety requirements (applies only to MS-B102, MS-B102-V, MS-B202)
- NOM certified
- Title 20/24 certified lighting control device
 - Complies with Title 20 and Title 24 section 110.9

Power/Load Control

- 120–277 V~ 50/60 Hz

Key Design Features

- Dual Sensing Technology
- Switches all lighting loads
- 6 A of lighting load per circuit at 120–277 V~
- 4.4 A (1/6 HP) of fan load per circuit at 120 V~
- Crush/tamper resistant lens
- Smart Ambient Light Detection (ALD)
- Fixed Ambient Light Detection
- Adaptive zero-cross switching algorithm for extended relay life (patent pending)
- XCT™ Technology for major, minor, fine, and very fine motion detection
- Programmable Circuit Swapping eliminates need for rewiring to reassign circuits after installation of a dual-circuit product. (patent pending)
- Product ground current does not exceed 0.5 mA

Environment

- Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C), 0%–90% humidity, non-condensing. Indoor use only.

Warranty

- 5-Year Limited Warranty. For additional Warranty information, please visit www.lutron.com/TechnicalDocumentLibrary/Sensor_Warranty.pdf

Sensor Detection

Lutron® Dual Tech sensors operate by triggering initial occupancy using PIR technology, and maintain occupancy using both ultrasonic and PIR technology.

Advanced Features

Switching

- Adaptive zero-cross switching—maximizes relay life by switching at the point of minimum energy on the AC power curve (patent pending). Actively adapts to variations in relay timing.

Additional Information on Sensors

- For single-circuit PIR Maestro® Occupancy Sensor Switch models, please see Lutron® P/N 369666
- For Maestro® Occupancy Sensor C•L® Dimmer models, please see Lutron® P/N 369748
- For dual-circuit PIR Maestro Occupancy Sensor Switch, please see Lutron® P/N 369758
- For more information, please see www.lutron.com/occvacsensors
- Lutron Technical Hotline: 1.800.523.9466.

Job Name:	Model Numbers:
Job Number:	

Custom Settings

Default settings shown in bold

- Timeout

- 30 min
- **15 min**
- 5 min
- 1 min

Mode - **Sensor Modes**

Lights automatically turn off in all sensor modes

- **Occ -Occupancy mode (No ALD)**^{1,2,3}
- Lrn - Occupancy with learning ALD mode
- Fixd - Occupancy with fixed ALD mode
- Vac - Vacancy mode (No ALD)^{2,3}

¹ MS-A102-XX, MS-B102-XX default is Occ

² MS-A102-V-XX, MS-B102-V-XX is locked as Vac

³ MS-A202-XX, MS-B202-XX defaults are: Circuit 1 - Occ, Circuit 2 - Vac

- Ultrasonic Sensitivity

- High
- **Med**
- Low
- Off

PIR - Passive Infrared Sensitivity

- **High**
- Med
- Low
- Min

Additional Settings

Fixed ALD Light Level

- Hi
- Med
- **Low***
- Min

* "Low" is the default setting for any sensor that is set by the user to: Occupancy with fixed ALD mode

Off-While-Occupied

- **Enabled**
- Disabled

Walk-Thru Mode

- Enabled
- **Disabled**

Custom Settings - Details

Ambient Light Detection (ALD) mode

Lights turn on only when natural light in the room is below the set threshold.

- **Learning:** The ambient light threshold adjusts to the user's preference via manual interaction with the sensor switch.
- **Fixed:** Choose a fixed ALD light level from four pre-set options:
High, Medium, Low, and Minimum

Manual Off-While-Occupied Options

ENABLED (default setting)

- When the sensor switch is manually turned off, the sensor switch will not turn the lights back on automatically while the room is occupied.
- Once the room is vacated, the Auto-On feature returns to normal operation after the timeout period has expired.
- This may be the preference in conference rooms or classrooms while viewing presentations. This feature requires motions to keep the lights off.

DISABLED

- When the sensor switch is manually turned off, the Auto-On feature will return to normal operation after 25 seconds.
- This may be the preference in a restroom if the user always wants the lights to turn on upon entering and the lights to turn off when the room is vacant.

Walk-Thru Mode

ENABLED¹

- If motion is not detected within 3 minutes after initial occupancy, the lights will turn off after 3 minutes, instead of the current timeout.
- This setting may be the preference in commercial applications where personnel may briefly trigger sensors during non-working hours.

DISABLED (default setting)

- When motion is detected, the lights will ALWAYS remain on for the entire timeout duration, regardless of the duration of occupancy detection.

¹ 1 minute timeout would be overridden if walk-thru mode is also ENABLED

Job Name:	Model Numbers:
Job Number:	

Load Type and Capacity

Control	Neutral Connection Required	Vacancy Only	Number of Circuits	Voltage / Load Type / Maximum Load (Anywhere in Gang) ¹	Minimum Load	3-Way with Mechanical Switch	Multi-Location with Accessory Switch
MS-A102			1	120 - 277 V~ Lighting 6 A ² 120 V~ Fan 4.4 A (1/6 HP) ³	0 A		
MS-A102-V		✓	1		0 A		
MS-A202			2		0 A		
MS-B102	✓		1		0 A	✓	✓
MS-B102-V	✓	✓	1		0 A	✓	✓
MS-B202	✓		2		0 A	✓	

¹ Ratings shown are per circuit.

² Sensor Switch Load Type: Designed for use with permanently installed incandescent, halogen, MLV, ELV, CFL, LED, magnetic fluorescent, and electronic fluorescent lighting loads.

³ When controlling light and fan loads simultaneously on a single-circuit, maximum load capacity per circuit is 4.4 A at 120 V~.

Sensor Switch Placement

- The sensor switch performs better with an unobstructed view of room occupants.
- Hot objects and moving air currents can affect the performance of the sensor switch. The sensor switch performs best when located 6 ft (1.8 m) or more away from hot objects or moving air currents.
- The PIR performance depends on a temperature differential between the ambient room temperature and that of room occupants. Warmer rooms may reduce the ability of the sensor switch to detect occupants.
- The ultrasonic performance can be affected by air currents and moving objects. Consider the effects of fans, HVAC vents, open windows, or moving objects when installing the sensor switch.
- If the sensor sees a specific area that is not desired (e.g., hallway), Lutron offers a lens mask kit (Lutron® P/N 50013614) that can be ordered through Tech Support (1.800.523.9466). Alternatively, selectively placing opaque tape (e.g., painter's tape, electrical tape, masking tape) over certain parts of the lens can limit its field of vision to block undesired detection areas. Masking the lens may effect ALD performance, but DOES NOT block ultrasonic frequencies.

Definitions

Major motion: movement of a person entering or passing through an area.

Minor motion: movement of a person occupying an area and engaging in small activities (e.g., reaching for a telephone, turning the pages of a book, opening a file folder, picking up a coffee cup).

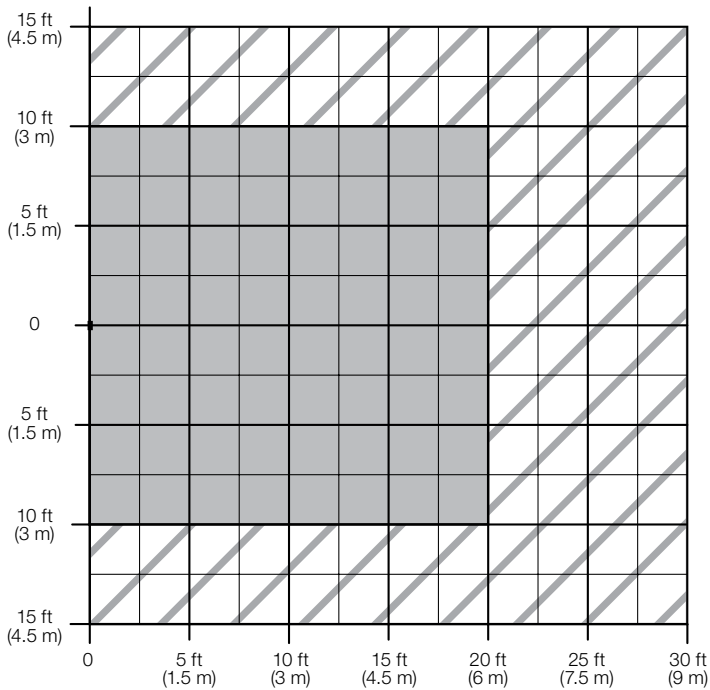
Fine Motion: movement of a person occupying an area and engaging in very small activities (e.g., reading a magazine).

Very Fine Motion: movement of a person occupying an area and engaging in very small activities (e.g., typing on a keyboard).

Job Name:	Model Numbers:
Job Number:	

Sensor Switch Placement *(continued)*

NEMA WD7 Coverage

Major motion coverage: 900 ft² (81 m²)Minor motion coverage: 400 ft² (36 m²)

Test Room Dimensions: 37 ft x 38 ft (11.28 m x 11.6 m)

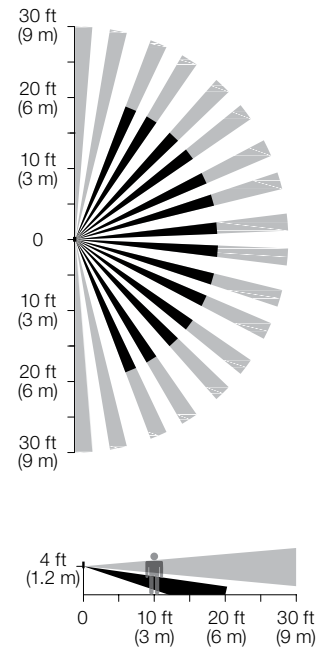
Test Floor Surface Material: Carpet

Sensor Coverage Angle: 180 °

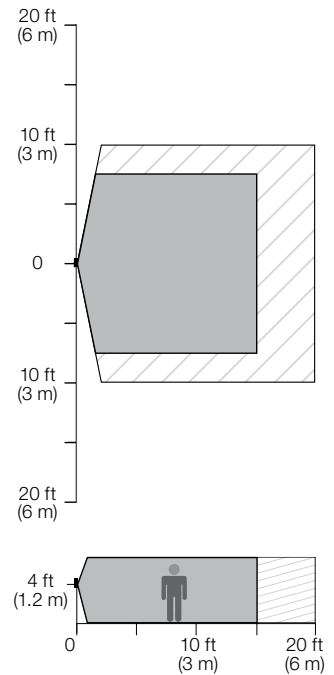
Major motion coverage: Initial trigger motion detection

Minor motion coverage: Maintained motion detection

Passive Infrared Beam Diagram (For Reference Only)



Ultrasonic Coverage (For Reference Only)



Ultrasonic Frequency: 40 kHz

Job Name:

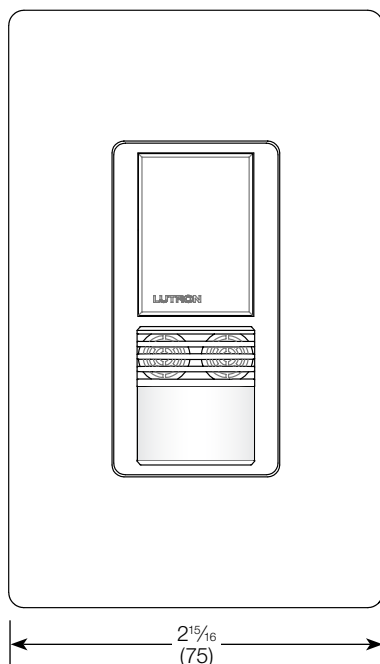
Model Numbers:

Job Number:

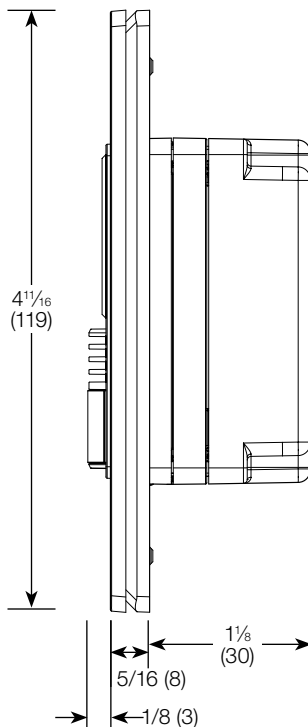
Dimensions - Single-Circuit MS-A102, MS-A102-V, MS-B102, MS-B102-V

Measurements shown as: in (mm).

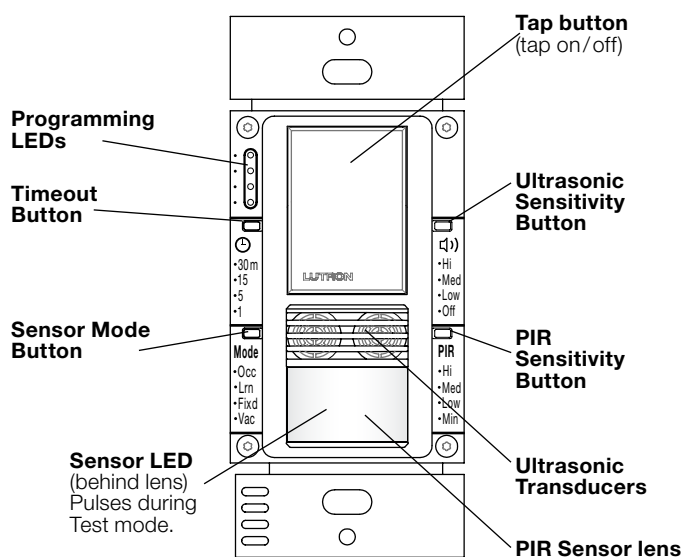
Front View



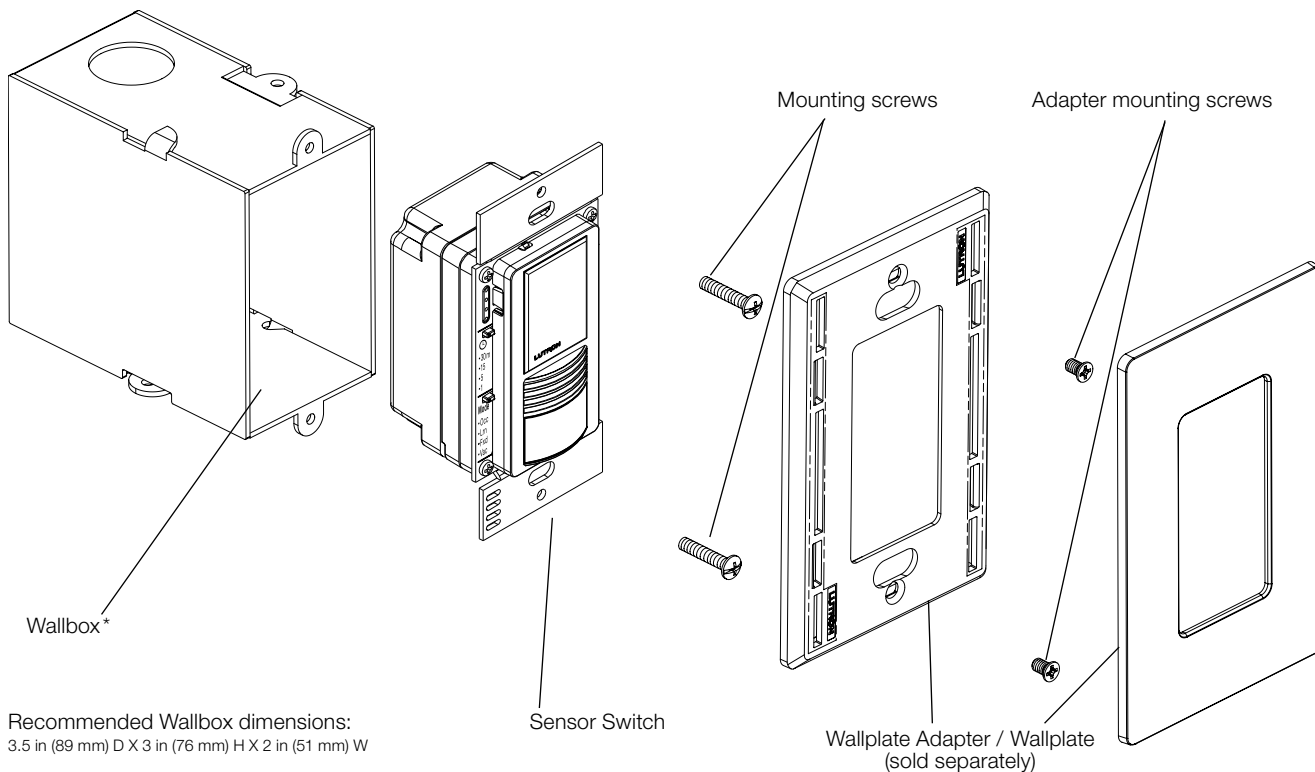
Side View



Operation



Mounting



* Recommended Wallbox dimensions:
3.5 in (89 mm) D X 3 in (76 mm) H X 2 in (51 mm) W

LUTRON® SPECIFICATION SUBMITTAL

Page

Job Name:

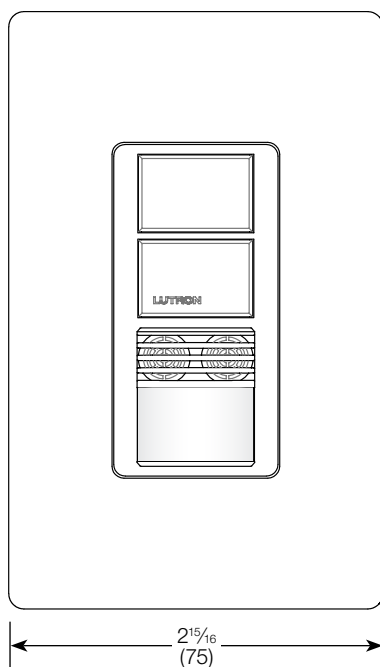
Model Numbers:

Job Number:

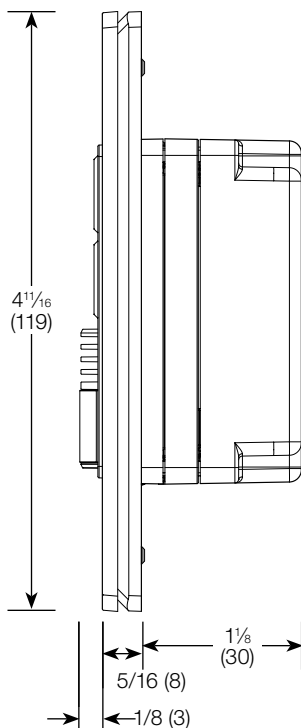
Dimensions - Dual-Circuit MS-A202, MS-B202

Measurements shown as: in (mm).

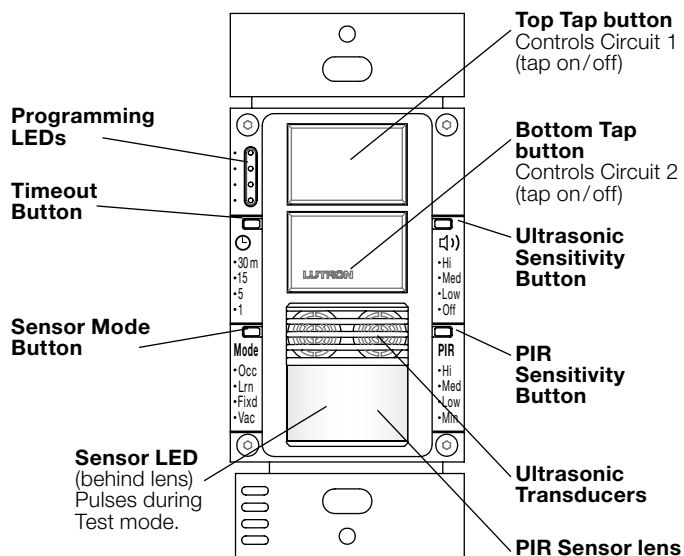
Front View



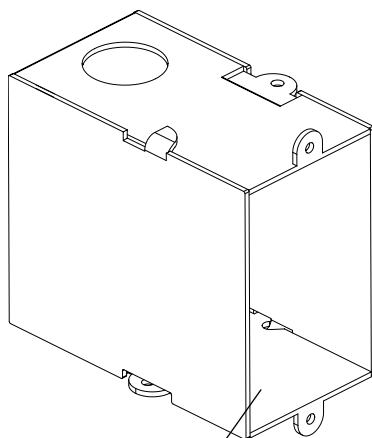
Side View



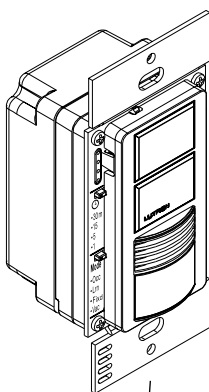
Operation



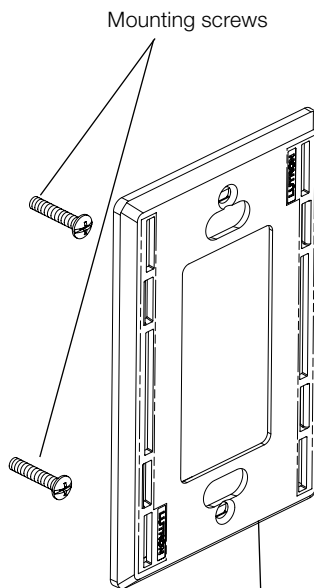
Mounting



Wallbox*

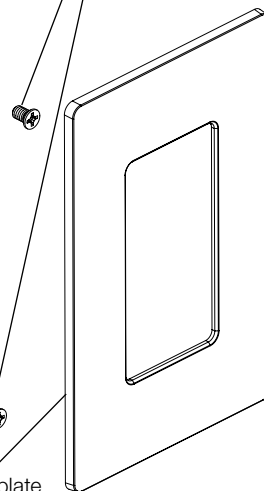


Sensor Switch



Wallplate Adapter / Wallplate
(sold separately)

Adapter mounting screws



* Recommended Wallbox dimensions:
3.5 in (89 mm) D X 3 in (76 mm) H X 2 in (51 mm) W

Job Name:

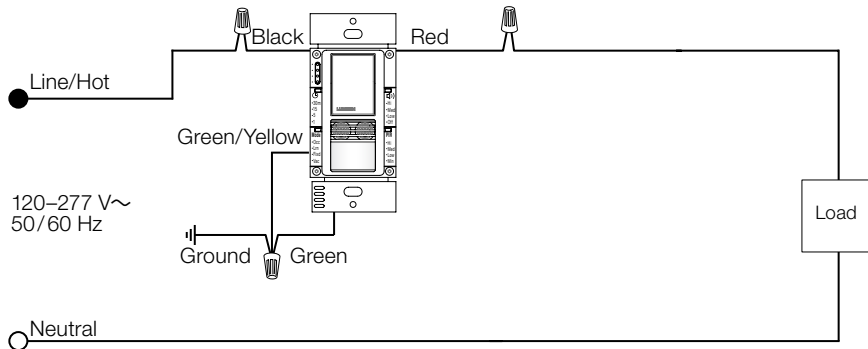
Model Numbers:

Job Number:

Wiring Diagrams - Single-Circuit

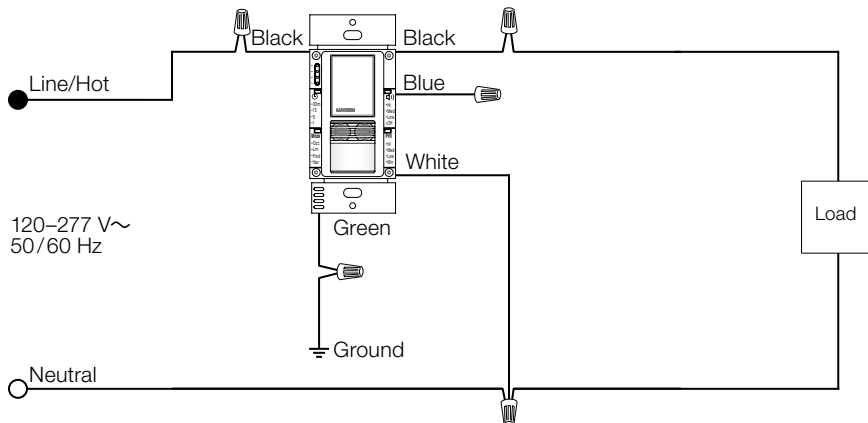
Wiring Diagram 1

Single Pole Wiring - Single-Circuit (MS-A102, MS-A102-V)



Wiring Diagram 2

Single Pole Wiring - Single-Circuit (MS-B102, MS-B102-V)



continued on next page...

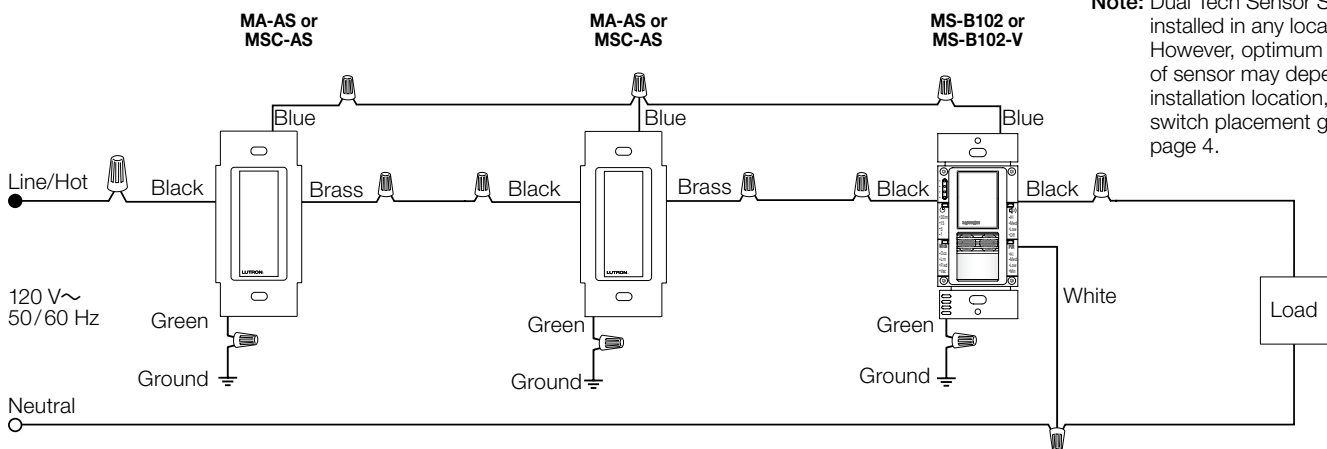
Job Name:

Model Numbers:

Job Number:

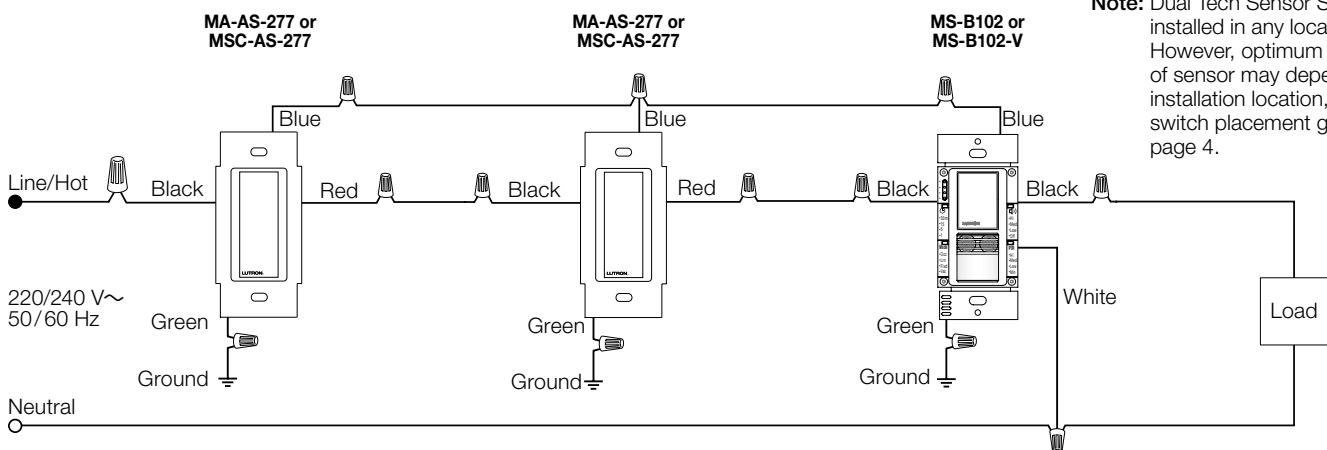
Wiring Diagram 3

120 V~ Multi-Location Installation with Maestro® Accessory Switches (MS-B102, MSB102-V)



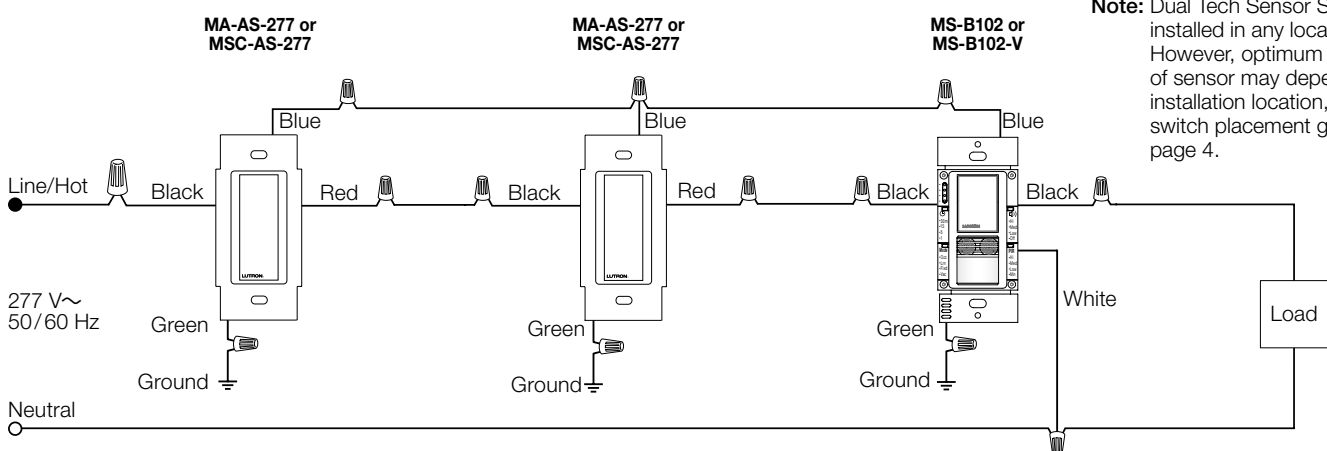
Wiring Diagram 4

220/240 V~ Multi-Location Installation with Maestro® Accessory Switches (MS-B102, MSB102-V)



Wiring Diagram 5

277 V~ Multi-Location Installation with Maestro® Accessory Switches (MS-B102, MSB102-V)



Job Name:

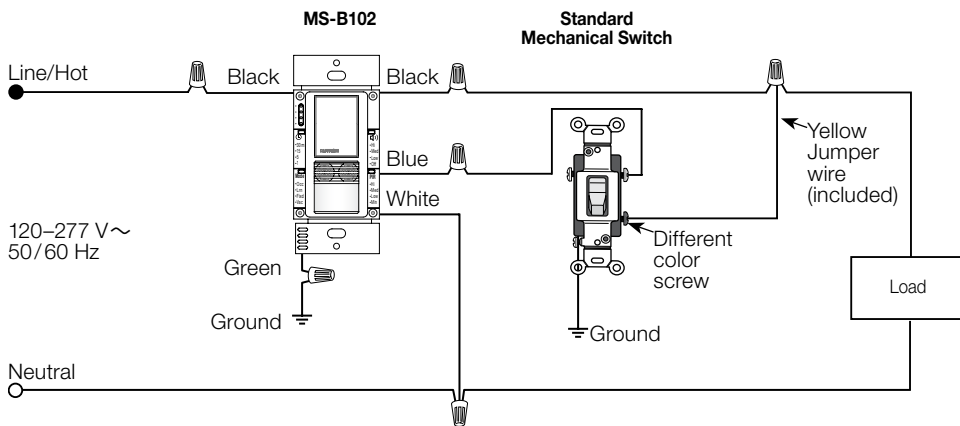
Model Numbers:

Job Number:

Wiring Diagrams - Single-Circuit *(continued)*

Wiring Diagram 6

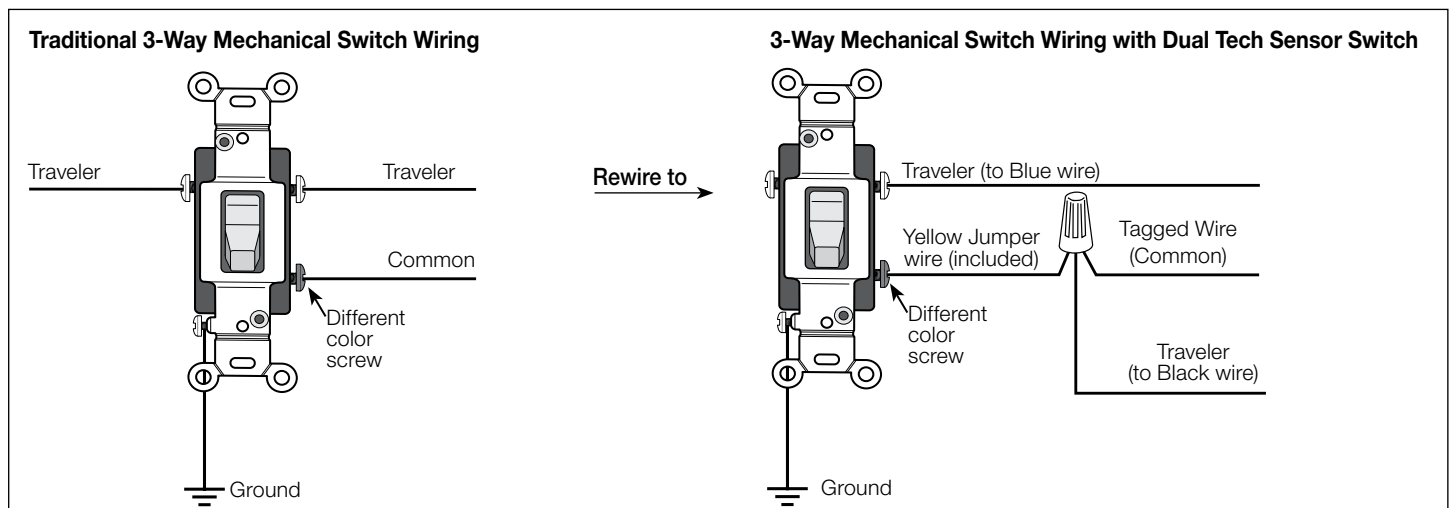
3-Way Installation - Single-Circuit (MS-B102, MS-B102-V)



3-Way Installation

For retrofit 3-way installations the mechanical switch needs to be rewired as shown in the diagram below after wiring the Dual Tech Sensor Switch. Otherwise the 3-way installation will not work as expected. Single Pole mechanical switches may also be used in a 3-way installation with MS-B102, MS-B102-V and MS-B202 models.

1. Connect Ground: Ensure the bare copper or green ground wire from the wallbox is connected to the green ground screw of the mechanical switch.
2. Tag circuit Common: Your 3-way mechanical switch should have three screw terminals, two of the same color, and one of a different color. Tag the wire that is connected to the screw terminal of a different color.
3. Identify the wire that matches the color of the wire you connected to the blue wire of the Maestro® Dual Technology Occupancy Sensor Switch. Connect this wire to one of the two terminals of the same color.
4. Combine the tagged wire, the remaining wire and yellow jumper wire (included) using a wire connector. Connect the other end of jumper wire to the different color screw.



Job Name:

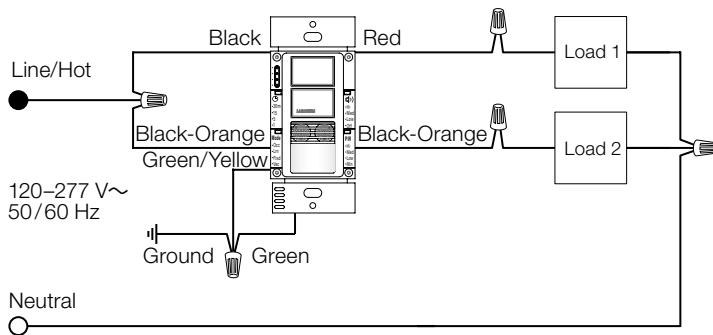
Model Numbers:

Job Number:

Wiring Diagrams - Dual-Circuit

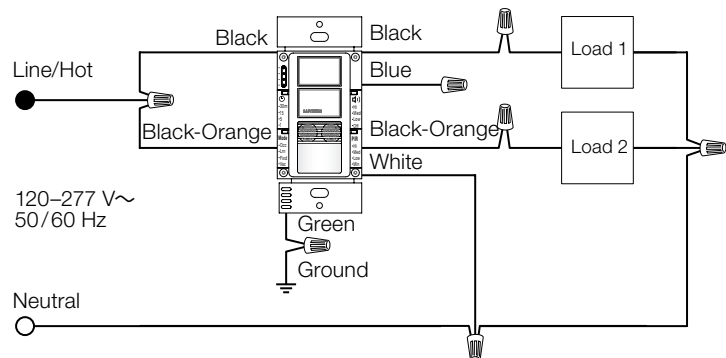
Wiring Diagram 1

Single Pole, Single Breaker Feed Wiring -
Dual-Circuit (MS-A202)



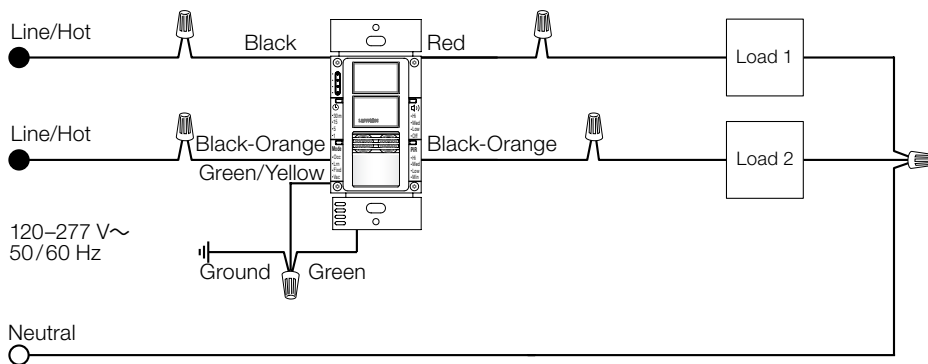
Wiring Diagram 2

Single Pole, Single Breaker Feed Wiring -
Dual-Circuit (MS-B202)



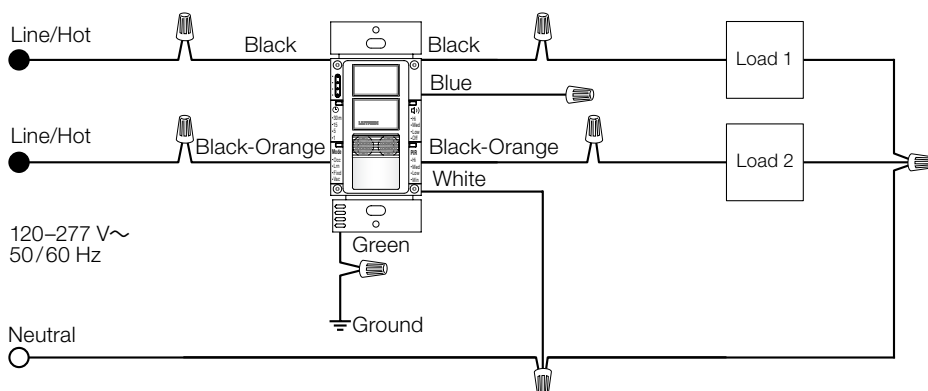
Wiring Diagram 3

Single Pole, Two Breaker Feed Wiring: Dual-Circuit (MS-A202)



Wiring Diagram 4

Single Pole, Two Breaker Feed Wiring: Dual-Circuit (MS-B202)



Wiring must comply with NEC® code for wiring multiple branch circuits. Where two or more branch circuits supply devices or equipment on the same yoke, a means to simultaneously disconnect the ungrounded conductors supplying those devices shall be provided at the point at which the branch circuits originate.

continued on next page...

Job Name:

Model Numbers:

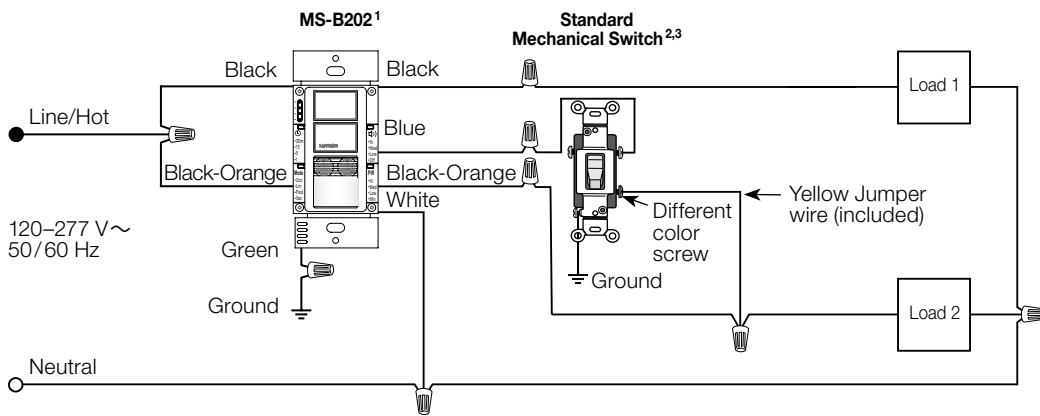
Job Number:

Wiring Diagrams - Dual-Circuit (continued)

Wiring Diagram 5

3-Way Installation, Single Breaker Feed Wiring: Dual-Circuit (MS-B202)

NOTE: Do not use Maestro® accessory switches with MS-B202.

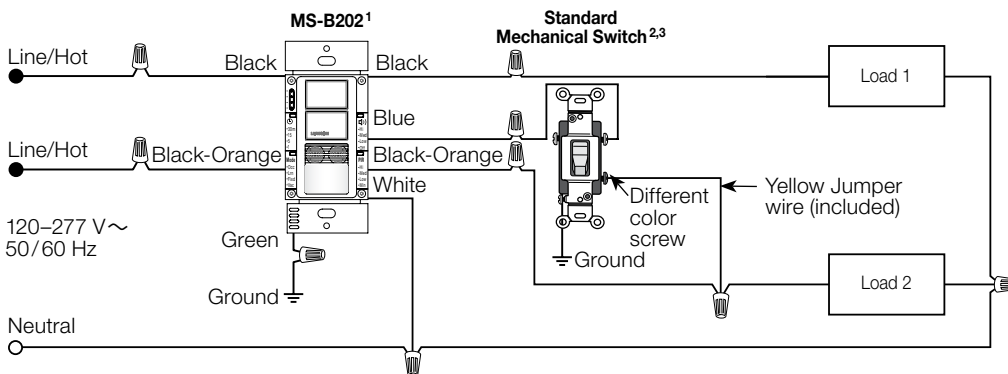


Note: Optimum performance of sensor may depend upon installation location, see sensor switch placement guidelines on page 4.

Wiring Diagram 6

3-Way Installation, Two Breaker Feed Wiring: Dual-Circuit (MS-B202)

Wiring must comply with NEC® code for wiring multiple branch circuits. Where two or more branch circuits supply devices or equipment on the same yoke, a means to simultaneously disconnect the ungrounded conductors supplying those devices shall be provided at the point at which the branch circuits originate.



Note: Do not use Maestro® accessory switches with MS-B202.

Note: Optimum performance of sensor may depend upon installation location, see sensor switch placement guidelines on page 4.

¹ Dual Tech Sensor Switch can be installed in any location.

² Mechanical switch may be wired to **either** circuit, and will control both. **Do NOT** wire mechanical switch to **both** circuits.

³ You may use no more than one mechanical switch with a dual-circuit Dual Tech Sensor Switch.

Job Name:

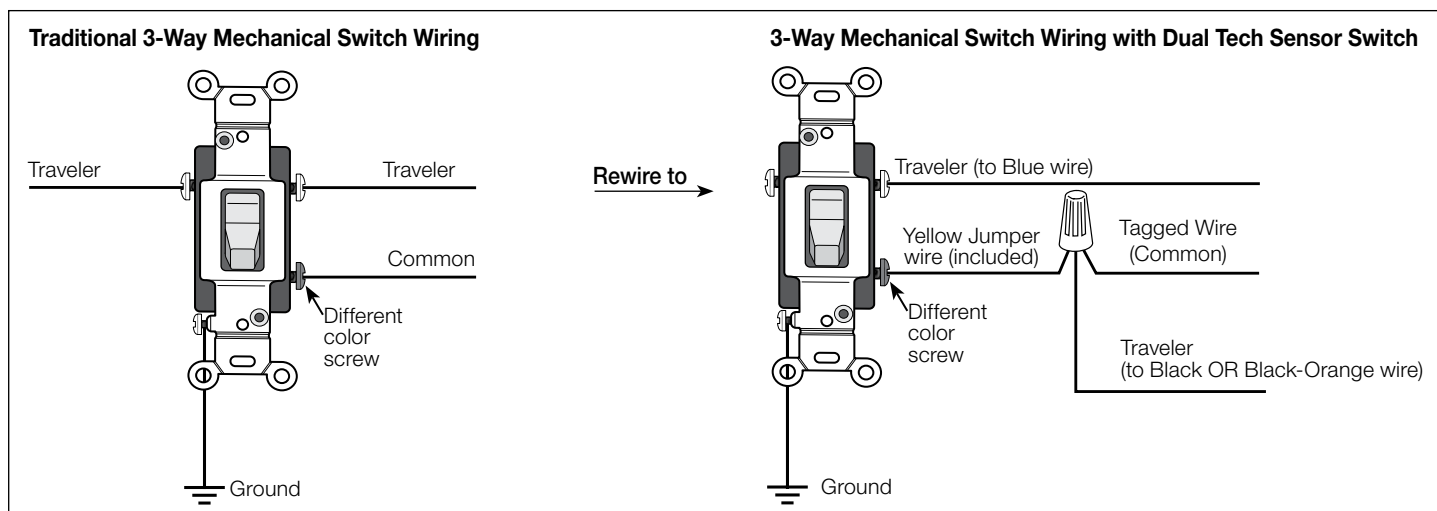
Model Numbers:

Job Number:

3-Way Installation

For retrofit 3-way installations the mechanical switch needs to be rewired as shown in the diagram below after wiring the Dual Tech Sensor Switch. Otherwise the 3-way installation will not work as expected. Single-Pole mechanical switches may also be used in a 3-way with MS-B102, MS-B102-V and MS-B202 models.

1. Connect Ground: Ensure the bare copper or green ground wire from the wallbox is connected to the green ground screw of the mechanical switch.
2. Tag circuit Common: Your 3-way mechanical switch should have three screw terminals, two of the same color, and one of a different color. Tag the wire that is connected to the screw terminal of a different color.
3. Identify the wire that matches the color of the wire you connected to the blue wire of the Maestro® Dual Technology Occupancy Sensor Switch. Connect this wire to one of the two terminals of the same color.
4. Combine the tagged wire, the remaining wire and yellow jumper wire (included) using a wire connector. Connect the other end of jumper wire to the different color screw.

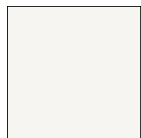


How Loads Operate in 3-Way with Dual-Circuit Sensor Switch (MS-B202)

	Initial Load State		After flipping 3-way mechanical switch	
	Circuit 1	Circuit 2	Circuit 1	Circuit 2
When All Lights are OFF	Off	Off	On	On
When All Lights are ON	On	On	Off	Off
When One Circuit is ON	On	Off	Off	Off
	Off	On	Off	Off

Colors and Finishes

Gloss Finishes



White
WH



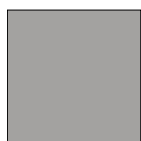
Ivory
IV



Almond
AL



Light Almond
LA



Gray
GR



Brown
BR



Black
BL

Satin Finishes



Hot
HT



Merlot
MR



Plum
PL



Turquoise
TQ



Taupe
TP



Eggshell
ES



Biscuit
BI



Snow
SW



Palladium
PD



Midnight
MN



Sienna
SI



Terracotta
TC



Greenbriar
GB



Bluestone
BG



Mocha Stone
MS



Goldstone
GS



Desert Stone
DS



Stone
ST



Limestone
LS



Sea Glass
SG

- Due to printing limitations, colors and finishes shown cannot be guaranteed to match actual product colors perfectly.
- Color chip keychains are available for more precise color matching:
Gloss Finishes: DG-CK-1
Satin Finishes: SC-CK-1

Job Name:	Model Numbers:
Job Number:	