SRa
ARCHITECTURE + INTERIORS

PROJECT NARRATIVE

September 14, 2022

Augusta Scottsdale Senior Living

Lot 14, One Scottsdale, Scottsdale, AZ

Sperides Reiners Architects, Inc.
6442 City West Parkway, Suite 300, Eden Prairie, MN 55344

Augusta Scottsdale Senior Living

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Augusta Scottsdale Senior Living

Lot 14, One Scottsdale, Scottsdale, AZ

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PROJECT SITE DATA

Parcel Basics

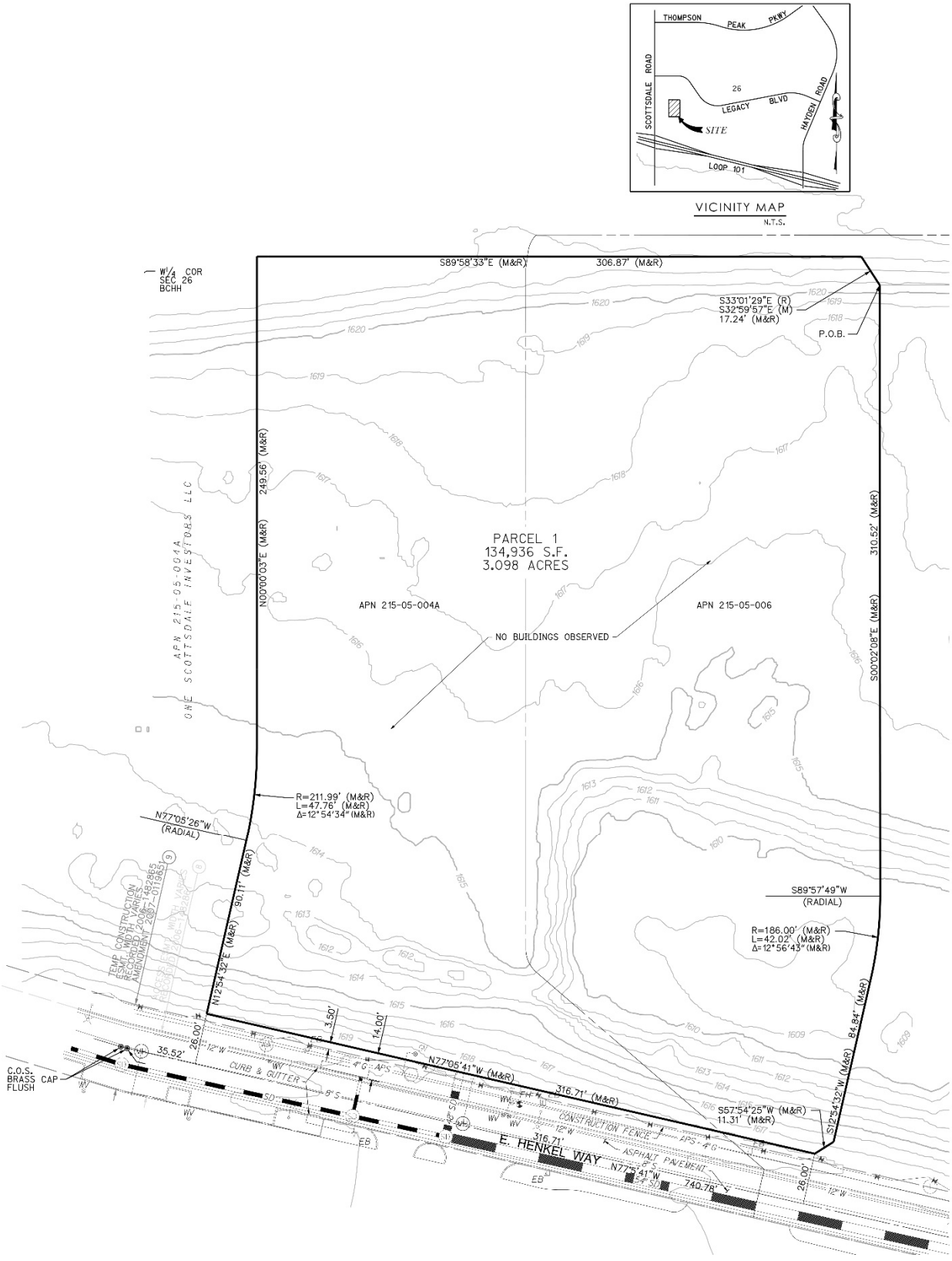
One Scottsdale
Proposed Lot 14

A portion of Parcel 2 and Parcel 4, One Scottsdale, recorded in Book 971, page 6, Maricopa County Records (MCR), lying within Section 26, Township 4 North, Range 4 East, of the Gila and Salt River Meridian, Maricopa County, Arizona, more particularly described as follows:

COMMENCING at the southeast corner of Legacy Boulevard, recorded in Book 1034, page 5, MCR, from which the southeast corner of said Parcel 2, bears South 00°02'11" East (basis of bearing), a distance of 1306.46 feet;
THENCE along the east line of said Parcel 2, South 00°02'11" East, a distance of 1028.28 feet;
THENCE leaving said east line, South 89°57'49" West, a distance of 415.99 feet;
THENCE South 00°02'08" East, a distance of 310.52 feet, to a point of intersection with a non-tangent curve;
THENCE southerly along said non-tangent curve to the right, having a radius of 186.00 feet, concave westerly, whose radius bears South 89°57'49" West, through a central angle of 12°56'43", a distance of 42.02 feet, to the curves end;
THENCE South 12°54'32" West, a distance of 84.84 feet;
THENCE South 57°54'25" West, a distance of 11.31 feet;
THENCE North 77°05'41" West, a distance of 316.71 feet;
THENCE North 12°54'32" East, a distance of 90.11 feet, to a point of intersection with a non-tangent curve;
THENCE northerly along said non-tangent curve to the left, having a radius of 211.99 feet, concave westerly, whose radius bears North 77°05'26" West, through a central angle of 12°54'34", a distance of 47.76 feet, to a point of intersection with a non-tangent line;
THENCE North 00°00'03" East, a distance of 249.56 feet;
THENCE South 89°58'33" East, a distance of 306.87 feet;
THENCE South 33°01'29" East, a distance of 17.24 feet, to the POINT OF BEGINNING.

Containing 134,936 square feet or 3.098 acres, subject to existing right-of-ways and easements.

This parcel description is based on the Final Plat of One Scottsdale, recorded in Book 971, page 6, MCR and other client provided information. This parcel description is located within an area surveyed by Wood, Patel & Associates, Inc. during the month of March, 2021. Any monumentation noted in this parcel description is within acceptable tolerance (as defined in Arizona Boundary Survey Minimum Standards dated 02/14/2002) of said positions based on said survey.



PARCEL SURVEY [PARTIAL – REFER TO FULL SUBMITTAL DOCUMENTS FOR COMPLETE DETAIL]

PROJECT DEVELOPMENT DATA

Ordinances, Master Plans, General Plan and Standards

This section of the narrative summarizes how the land use is designated within One Scottsdale, and how it's designation is consistent with the One Scottsdale Planned Community District planning, as well as the City of Scottsdale comparable use zoning designation.

1. Senior living units shall be counted against the land use budget's 'residential uses' for One Scottsdale, as supported in prior approvals dating back to 2002 and 2016.

2. The 2002 and 2016 zoning cases called the zoning for One Scottsdale as Planned Community District with comparable Planned Regional Center (PCD PRC) zoning. The P-C District is a stand-alone (not overlay) zoning district that uses 'comparable' zoning districts for uses and development standards. The P-C states:

   > *C. Property development standards. All land uses in a P-C district shall conform to the property development standards of the comparable zoning district. Modification of the comparable district's standards may be allowed as provided in the modification procedure below. The Zoning Administrator shall determine, primarily on the basis of proposed use and density, which of the districts of this Zoning Ordinance is most closely comparable to the proposed development*.

   Comparable PRC zoning and the 2016 case precedent permits residential health care facility as an allowed use in the PRC district.

3. Finally, One Scottsdale simplified the land uses that are comparable to the PRC list of allowed uses to 'residential, commercial/retail/office, automotive sales, and hotel.' This simplification of uses allows for residential and hotel as maximum unit counts and commercial/retail/office and automotive use as maximum square footage amounts. The proposed senior living facility would be designated as residential units.

General Plan

Augusta Scottsdale Senior Living is consistent with the wider development plan and land uses as described above, and set to build on the unique environment that is Scottdale, Arizona, and all of its diverse cultures and lifestyles. Many of characteristics that make the city of Scottsdale what it is will be assembled at Augusta Scottsdale Senior Living to create a truly unique part of One Scottsdale.

With the physical setting of the Sonoran Desert as a backdrop, Augusta Scottsdale Senior Living will be an integral part of the vibrant and walkable One Scottsdale planned district and will be sensibly linked to area businesses and industries, culture, and all the varied neighborhoods that line Scottsdale Boulevard, while delivering a needed program to the One Scottsdale area. Life at Augusta Scottsdale Senior Living will be just one part of the exceptional experience that is Scottsdale, and an extension of the variety of multi-generational lifestyle choices that are responsibly planned, connected, and supported with infrastructure and services for urban and suburban living across One Scottsdale.

Augusta Scottdale Senior Living references Scottsdale residential zoning standards as its comparable use baseline, and honors the One Scottsdale Multi-Family Residential Design Guidelines and its Master Environmental Design Concept Plan.

Site Ingress, Egress, On-Site Circulation and Parking

The site can be accessed from both the south end (Henkel Way), and from the east (Private Drive). The primary site access and main facility entry will be from the east. Site circulation will be two-way traffic with parking on one side only. This configuration maximizes parking around the available site perimeter while eliminating vehicle headlight wash into private dwellings on site. This also reduces to a minimum, potential areas of vehicle and pedestrian confluence, while maximizing the walkability of the site.

Parking

City ordinance for comparable uses requires varying ratios of parking quantity to units based on type and size of residential unit (number of bedrooms). Refer to the matrix below for a parking summary illustrating required and proposed parking. Augusta Scottsdale Senior Living will incorporate a requested reduction of total parking that is equivalent to 76% of total required by comparable land use zoning.

Parking	**Required**	**Proposed**
Independent Living - 41 units	8 efficiency x 1.25 per unit	8 (1 per unit)
	21 1-bed x 1.3 per unit	21 (1 per unit)
	12 2-bed x 1.7 per unit	24 (2 per unit)
Assisted Living (Minimal) – 63 units	1.25 per unit	56 (.9 per unit)
Memory Care (Specialized) – 16 units	.7 per unit	9 (.55 per unit)
TOTAL PARKING	155	118

The site will have a total of 43 total surface parking spaces, and 75 underground parking spaces for a total of 118 total parking spaces on site. Surface parking will be configured as a single parking field on the east and south sides of the residential facility and adjacent to the main building entrance. Surface parking stalls will incorporate auto shading structures with the available option of providing photo voltaic roof panels in the future (solar ready zone). The housing structure will also have an additional 75 underground parking spaces for resident and staff use bringing the total development parking to 118 spaces.

Data compiled from completed senior housing facilities in our portfolio of similar size and proposed occupancy ratios illustrates a regular parking utilization by residents of one (1) space per independent living apartment unit, one (1) space for every five (5) assisted living apartment units, and zero parking spaces for memory care and enhanced care suites. If the building's independent and assisted living unit ratio is maintained around 40% independent and 60% assisted occupancies, this would equate to approximately fifty (50) daily occupied parking spaces, plus an average of twelve (12) staff occupied parking spaces and up to nine (9) visitors at any given time for a total of seventy-one (71) parking spaces – well below the planned total of 118 parking spaces.

Additionally, Augusta Scottsdale Senior Living will have a dedicated community transportation van, operated by facility staff, and available daily to all residents, with both scheduled and reserved transportation routes to frequented locations such as shopping, grocery stores, pharmacies, and clinics as well as other resident-requested destinations.

The possibility still exists for heavy or peak parking utilization to exceed daily averages at Augusta Scottsdale Senior Living, especially on weekends, holidays, or evening family events. However, we anticipate that the average daily surplus of stalls, together with the well planned on-street parallel parking surrounding the site should provide ample supply to service these peak parking needs.

Once again, as stated above, on-site parking areas will be surrounded with landscape buffers, incorporate regular landscape islands, and will be under auto shading structures with the available option of adding photo voltaic roof panels on the shading structure roofs in the future (solar ready zone).

ARCHITECTURAL CHARACTER, LANDSCAPING & SITE DESIGN

Program

The site will be developed and finished to accommodate a 120-unit, senior housing structure (see unit outline below) whose primary focus will be to provide independent living, assisted living, and memory care suites to an age restricted population, together with a full continuum of care allowing the residents to comfortably age in place while supported by the full range of additional services provided by the facility operator. Independent and Assisted Living units will account for 104 of the 120 total units. The other sixteen units will be memory care suites, configured in a secure memory care wing. The site will also include a series of interior and exterior amenities for the residents as well. These amenities include community spaces, club room, café, chapel, restaurant-style dining, activity rooms, salon, fitness room, patios, shade gardens, outdoor pool, and walking paths.

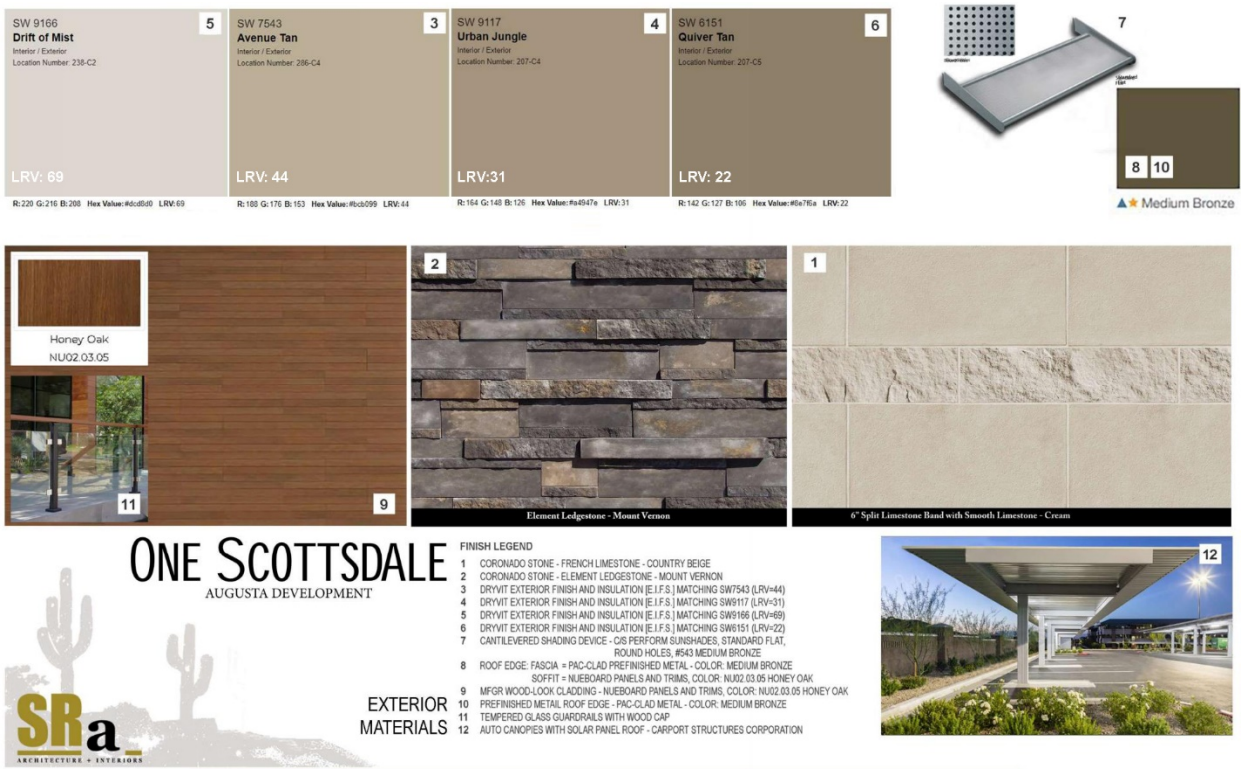
Building Design

The new building will be a three-story wood frame structure over a concrete and precast basement. The basement level will house utility, storage and inside parking for the residents. The structure will be capped by a flat roof, and total 44' to the highest point above entrance grade. The exterior of the building will be comprised of masonry veneer exteriors in combination with exterior finish and insulation systems, manufactured siding, panels, and trims together with large windows and enclosed balconies. The use of cantilevered shading devices and deep projecting roof edge details will provide sun shading to exterior windows. Total east, south and west facing window and patio door shading will be in excess of an aggregate 70% of window area at any given time between 10am on March 21 and 5pm on September 21. Additionally, the main facility entry on the east will be fully shaded by the large drive-under canopy.

SOUTHEAST BUILDING PERSPECTIVE AT ENTRY

The material and finish choices pull inspiration directly from the desert landscape surrounding the site and apply them in a thoughtful and unique way breaking down building mass, limiting light reflectance and settling into the fabric of One Scottsdale. Natural environments and the earth-tone colors and materials they embody offer high potential for human well-being, restoration and stress recovery. We've purposefully developed indoor-outdoor spaces blurring the lines of nature and built environment in color

and materiality in an effort to extend the harmonizing effect of nature, especially on physiological stress and daily routines for our residents. Through this approach, building and site design is able to achieve direct and positive effects for the residents, visitors and public.



EXTERIOR FINISHES

The facility will welcome residents and visitors through a covered main entrance and into a two-story lobby. This first level will also encompass the commercial kitchen and dining rooms, and access to the rest of the development amenities including the primary health care functions, guest suite, community rooms, activity spaces, fitness, club room, café, library and chapel. A closed 16-suite memory care wing, together with twenty-four of the 104 independent and assisted living apartment units will be on the first level.

Levels two and three will contain the balance of the resident apartments varying in size from 488 SF studios to 1,275 SF, two-bedroom, two-bath residences. Although ninety percent of residences are provided with private balconies consistent with private outdoor living requirements defined in the Scottsdale development standards, the focus for Augusta Scottsdale Senior Living is in the unit and building common area amenities as outlined in the paragraph above.

Ultimately, Augusta Scottsdale Senior Living, like all the best environments for senior living, will be developed and executed as a socially and environmentally responsible building that significantly improve the quality of life for our seniors, while creating desirable relationships with the site and surrounding buildings. This is achieved and embodied most directly by the interior environments we create for our residents, and the way these controlled environments are assembled and detailed to engage with the site and surroundings. We create inside-outside spaces, exterior amenities, and site features that encourage activity, socialization, and connect residents with the surrounding environment and wider neighborhood.

NORTHEAST BUILDING PERSPECTIVE AT NORTH BOUNDARY

Augusta Scottsdale will make an important contribution to the entire One Scottsdale district development and local fabric, setting a high standard for innovative ideas for senior living, and meaningful environments, including subtle use of pedestrian routes circumventing the site that will engage with pockets of landscape and public space, create guided views into and around the project, and utilize sensitive material and vegetation compositions and choices, all while influencing accountable design solutions that serve our residents and the broader area.

Shading and Sun Control

Landscape, trees and shrubs, will create shade and comfortable microclimates for the pedestrians, site users and residents in and around Augusta Scottsdale Senior Living.

PERGOLA OVER DINING PATIO

POOLSIDE PERGOLAS AND PLANTING

The building mass also incorporates shade elements expressed as strong horizontal elements, architectural enclosures around balconies, and overhangs to create relief, depth and shade that as incorporated into the overall building design. In addition to the building overhangs and enclosed balconies that extend the interior living spaces outside, the undulating building footprint also serves to effectively create inside corners, courtyards and shade areas around the entire site creating shade zones through all parts of the day, with the added benefit of varying views and exposures for the residents.

NORTHEAST BUILDING PERSPECTIVE AT ENTRY

In the private portions of the site dedicated to the residents of Augusta Scottsdale Senior Living, specifically around the pool and patios, additional shading pergolas and landscape massing will be utilized to extend living and activity spaces for the residents to the exterior, for healthful, year-round enjoyment.

Site Design

The landscape and site design for the Augusta Scottsdale Senior Living incorporates both regional planting environments and public / private gardens. The public realm for Augusta Scottsdale Senior Living consists of an entry courtyard drop off, an interior amenity courtyard, a memory care courtyard, perimeter planting and trails, and exterior foundation planting and walkways.

PUBLIC COURTYARD – NORTH SITE

The public courtyard on the north end of the site, not only available to the pedestrian public, but configured in a way that reaches out to engage them into this element. Additionally, the site will contain central gardens and patios, site activity zones and walking paths, outdoor pool, together with beautifully

landscaped and shade areas for its residents. The memory care wing will also have an outdoor courtyard for use exclusively by the memory care residents.

The intent of all landscape external to the housing project and public facing would have the character of the regional plant biomes reflective of xeriscape and hardy regional plants and trees. The one exception to this character would be the public courtyard along the north side of the development referenced above, that will be a blend of this regional character and a private garden. This space will also include seating elements, feature wall and water feature. The main entry drop off will have regional landscape and rock elements with accent plantings near the door. This space will also provide decorative paving at the entry and drop off and some fixed seating for residents and visitors alike.

The interior landscape of the private amenity spaces will be more lush plantings with massing of plant forming rooms and accenting the amenities areas. These amenities would include; an interior courtyard with an outdoor pool with fountain feature and cabana structures, a dining and gathering courtyard with overstory trees and pergola structures covering seating areas and a feature fireplace, a covered outdoor dining area off the interior dining space, an outdoor exercise space off the fitness center, an event courtyard with pergola structure over group dining adjacent a garden space and seating in front of a water feature.

Feature walls will contain the private pool courtyard and provide secure gate access. There will also be an interior memory care courtyard that will feature lush shade plantings, trees, a water feature and small group seating along a lineal plaza. The site will be fully irrigated for all landscape areas and will feature accent lighting to highlight the site and planting.

MEMORY CARE COURTYARD AND GARDEN

Refer to full submittal documentation drawings to review site and landscape plans.

Site Lighting

Lighting Design for this project provides appropriate lighting through multiple layers of design illumination benefitting the site and building design and the resident population, while being sensitive to the context and immediate surroundings.

MAIN ENTRY - NIGHT

AUTO COURT AND MAIN ENTRY - NIGHT

The scope and quality of lighting will be integrally designed as part of the built environment with recessed and fully shielded sources utilized wherever possible. Functional site lighting will be a combination of street standards and fixtures surrounding the site as a part of the One Scottsdale private drive plan, together with building-mounted recessed parking area lighting built into the auto canopies and completely shielded from passing pedestrian and autos. Additional layers of lighting is provided in pergola canopies, pedestrian levels, and ground planes to light circulation routes, paths and landscaping, and all are designed in a manner that is respectful of the surrounding context while maintaining safety for residents.

ENTRY AREA AT NIGHT

Landscape lighting is utilized to accent landscaping massing and decorative elements incorporated around the site and is pointed away from property lines. Fixtures contain extension shields to minimize glare, light trespass, and light source visibility. Residence patios are illuminated with recessed fixtures on the back side of patio facias that conceals the source from outside the site while providing a soft glow without conflict with street lighting. All lighting fixtures are incorporated to minimize glare and maximize energy conservation.

POOL AREA - DUSK

POOL AREA FROM DINING PATIO AT NIGHT

Miscellaneous Building Components – Mechanical and Utility Equipment

Rooftop mechanical screening as required by city ordinance is very limited as most of the mechanical systems are contained within the structure. Limited screening, where required, will be achieved by roof parapet extensions designed to augment the building architecture.

Site trash enclosure or compactor is not illustrated in the development plan and will not be used. Interior trash rooms are utilized in the facility plan, dumpsters will be rolled out on collection days through the south service overhead door, and back inside to trash rooms following pick up.

Site deliveries, move-in/move-out, and building service are all carefully scheduled, choreographed and achieved on the site interior to eliminate street congestion. These activities will be conducted via main level service doors or below grade adjacent to the underground garage access. Trash collection will be

completed through the lower level garage access area. These service entry points and access drive are remote from neighboring residents and away from all neighborhood traffic and views.

FACILITY OPERATIONS

Proposed Development Schedule

Sketch plan submittal to City of Scottsdale	May 19, 2022
Pre-application City Staff Review	June 2, 2022
DMB Development Review Submittal	August 19, 2022
Final City Submittal – Development Review and Final Plan Approval	September 14, 2022
Planning Commission Approval [Anticipated]	September 28, 2022
City Council Approval [Anticipated]	October 18, 2022
Permit Submittal	December 2, 2022
Groundbreaking and Construction Start	January 3, 2023

Augusta Development - Owner

Augusta Development LLC (AD) is a real estate development firm focused on senior living centers, market rate apartments and mixed-use developments. AD prides itself on partnering with industry leading architects, contractors and operators to build and operate top-line facilities for its clients and ownership partners. AD's team of partners have combined to develop over $1.0 Billion in projects the past 10 years, consisting of over 100 projects and 7700 living units.

Some highlighted Senior Living Projects include the Yorkshire of Edina (Minnesota, 100-unit IL,AL, MC Senior Housing), Havenwood of Richfield (Minnesota, 88-unit IL, AL, MC Senior Housing Project), Legends of Champlin (Minnesota, 184-unit IL Senior Housing), St. Therese of Woodbury (Minnesota, 216-unit IL, AL, MC, SC Senior Housing), Woodland Hills (Minnesota, 160-Unit IL, AL, MC, Senior Housing), and Havenwood of Minnetonka (Minnesota, 101-unit IL,AL, MC Senior Housing) just to name a few.

Augusta Development's team seeks and secures strong marketable sites for its projects that provides for successful development, completion and well desired interest from the marketplace. Augusta Development's continuous involvement from start to finish as well as significant ownership once completed ensures that all partners and owners receive impeccable service in each new project.

Augusta Scottsdale and Surrounding Area Benefits of Senior Housing

Augusta Scottsdale Senior Living community will benefit the public by providing senior housing for the area so that seniors who have spent their lives in the Scottsdale area and surrounding communities may remain in the area. Many seniors are attracted by the health benefits of a senior housing community as an attractive alternative to the isolation of living alone and the burden of maintaining a home. Augusta Scottsdale Senior Living will help to meet the current housing needs of seniors in the immediate area while also helping to meet the anticipated needs of unmet demand in the near future as projected by a recent independent market study.

Senior Housing is a great community partner – not only creating a place where people come to volunteer, but also housing people who are interested in contributing back to their surrounding community. Senior Housing residents participate in local churches, volunteer opportunities, and engage in the greater community. Senior Housing also supports local economic development since seniors typically prefer to

shop in their familiar community. In addition, these developments can bring high quality jobs to the communities in which they operate.

There is also no better neighbor than a senior citizen. They are light on the land, streets, infrastructure and park systems, yet senior communities create significant tax base without burdening infrastructure and school systems.

Larger senior housing communities, like this project proposed at One Scottsdale, also create operational efficiencies when compared to smaller ones. Some of the operating benefits of a larger building are listed below:

i. A larger facility can afford to offer a broader range of healthcare services, options, and amenities to Scottsdale seniors while limiting disruptive moves from one facility to another for additional care.
ii. Creating a larger pool of care staff helps to support stable services for the residents. More full-time care staffing can be offered to provide more consistent employment, rather than many part-time positions that are more difficult to fill with qualified care givers. This is expected to be increasingly important if the current shortage of qualified nurses continues while our population ages.
iii. A larger building allows for more competitive wages and benefits at all levels of staff which typically translates to better care for our residents.
iv. A larger facility offers more apartment options, which reduces the chance of families splitting up (i.e. one spouse needs Memory Care and the other can live in an Independent Unit, all under one roof)

On this specific site, the relatively low traffic and higher density offers the ideal transitional use between the surrounding corporate office structures, and the existing medium and higher density residential occupancies to the north and west.

SUMMARY

Conclusion

Augusta Scottsdale Senior Living will be both a vibrant and necessary addition to the One Scottsdale Planned Community District fulfilling a specific demand in the local demographic fabric and optimizing the delivery of necessary facilities and services, all within a beautiful design while honoring the One Scottsdale Multi-Family Residential Design Guidelines and its Master Environmental Design Concept Plan.

One Scottsdale is a community where residents and visitors will enjoy an enhanced standard and quality of life, surrounded by the available cultural amenities, retail shops, restaurants and dining options, and a and range of employment and other opportunities found in and around Scottsdale. The region's well-earned reputation as a premier destination and place to live, play and work will only be made better by Augusta Scottsdale Senior Living and wider One Scottsdale Planned Community District.

Augusta Scottsdale Senior Living is dedicated to investing in One Scottsdale by creating a senior living environment that will continue to build upon the exciting development character and elevated standard set forth in a vibrant and evolving mixed-use area.

NARRATIVE APPENDIX

APPENDIX SECTIONS

APPENDIX ONE – GEOTECHNICAL REPORT

APPENDIX TWO – LEGAL DESCRIPTION

APPENDIX THREE – SEWER REPORT

APPENDIX FOUR – WATER REPORT

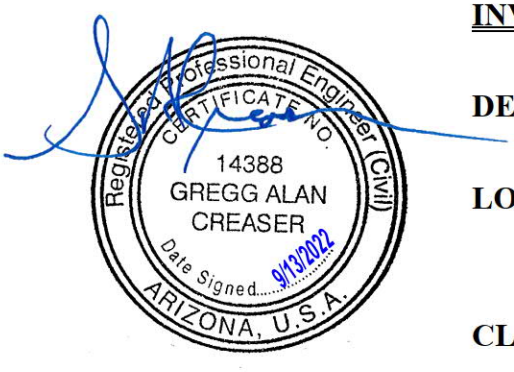
APPENDIX FIVE – LIGHT FIXTURE CUTSHEETS

APPENDIX SIX – FAA HEIGHT ANALYSIS

APPENDIX SEVEN – ONE SCOTTSDALE OPEN SPACE BUDGET TRACKER

APPENDIX EIGHT – EXTERIOR MATERIAL PALETTE

APPENDIX ONE – GEOTECHNICAL REPORT



REPORT ON GEOTECHNICAL INVESTIGATION

DESIGNATION: One Scottsdale – Lot 14

LOCATION: NWC Henkel Way & 74th Street Alignment
Scottsdale, Arizona

CLIENT: Augusta Development-Scottsdale, LLC

PROJECT NO: 221526SA

DATE: September 13, 2022

SPEEDIE AND ASSOCIATES
Geotechnical • Environmental • Materials Engineers

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1.0 INTRODUCTION

This report presents the results of a subsoil investigation carried out at the site of the proposed One Scottsdale – Lot 14 development to be located at the northwest corner of Henkel Way & 74th Street alignment, Arizona.

We understand that the design and construction will consist of an adult living and memory care facility on vacant undeveloped land. The buildings will be one to three stories with one level of underground parking. The building will be cast in place concrete construction for below grade and wood frame construction above grade. Structural loads are anticipated to be moderate with maximum column loads on the order of 400 kips. No special considerations regarding settlement tolerances are known at this time, although we assume that the industry standard of a maximum of 1-inch of total settlement will be allowed and used for design. Adjacent areas will be landscaped or paved to support light to moderate volumes of auto and truck traffic. An off-site master retention area will be used for storm water retention and disposal.

2.0 GENERAL SITE AND SOIL CONDITIONS

2.1 Site Conditions

The property is bounded on the north, east and west by vacant desert land, and on the south by Henkel Way. The site currently consists of native desert vegetation comprising of trees, desert grasses, and weeds. The site contains a large retention basin at the southeast corner of the property.

A cursory review of historical aerial photographs was conducted. The site was previously vacant native desert up until 2006. During this time the site contained numerous washes (natural drainage channels), which traversed the site from northeast to southwest. In 2006, some large tree removal was conducted resulting in pits being excavated and then the site was graded and used for construction staging and parking in 2007, this included a large stockpile of material. In 2009, it appears construction of the building to the south of Henkel Way had finished and the site was mostly cleared and left vacant. The retention basin in the southeast corner of the site was also put in around this time. The site has remained relatively unchanged since then.

Figure 2.1.1 Dated 1969

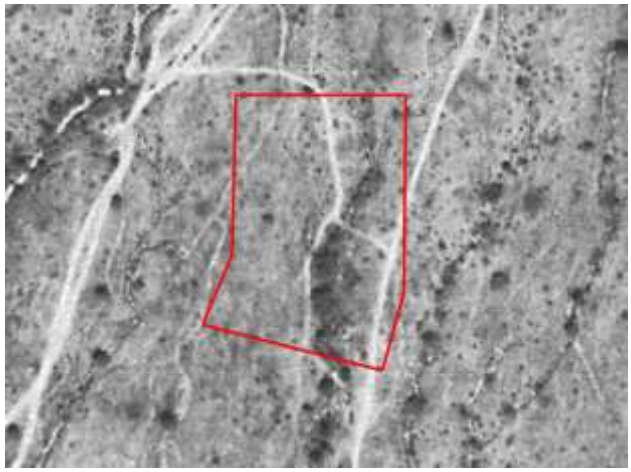


Figure 2.1.2 Dated 2004

Figure 2.1.3 Dated 2006

Figure 2.1.4 Dated 2007

Figure 2.1.5 Dated 2009

Figure 2.1.6 Dated 2020

"Historical Aerial Photography," *ArcGIS Web Application*. [Online]. Available: https://gis.maricopa.gov.

2.2 Geologic Conditions

The site is **located well outside known areas** that have undergone considerable subsidence due to groundwater removal. Areas of subsidence are known to produce earth fissuring, which has affected areas within several miles of the site. Subsidence is a basin wide phenomenon that would result in differential elevation changes over long distances, which would not affect the type of buildings proposed for this site. No evidence of earth fissures was observed on the site. Fissure gullies form over subsurface irregularities such as bedrock highs, which cause tensional stresses and differential subsidence. Where such anomalies are not present, subsidence tends to be uniform over a wide area, this having minimal effect on surficial structures. The closest known earth fissures are located east of the intersection of East Cactus Road and Frank Lloyd Wright Boulevard, several miles to the southeast of the site. Based on local experience, subsidence and earth fissures historically have **not** been a problem in this area.

2.3 Seismic Design Parameters

The project area is in a seismic zone that is considered to have low historical seismicity. The seismicity of the Phoenix area has had only two magnitude 3.0 events in over 100 years. Liquefaction is not considered a concern as groundwater exceeds 100 feet below ground surface.

Although borings were not advanced to 100 feet, based on the nature of the subsoils encountered in the borings and geology in the area, Site Class Definition, Class C may be used for design of the structures (based on IBC 2015 and ASCE7-16 (2018 IBC), utilizing the ATC Hazards by Location Tool):

Table 2.3.1 Seismic Parameters

Building Design Code:	IBC 2015	ASCE 7-16
MCE[1] spectral response acceleration for 0.2 second period, S_S:	0.210g	0.223g
MCE[1] spectral response acceleration for 1.0 second period, S_1:	0.065g	0.074g
Site coefficient, Fa:	1.2	1.3
Site coefficient, Fv:	1.7	1.5
MCE[1] spectral response acceleration adjusted for site class, S_{MS}:	0.252g	0.290g
MCE[1] spectral response acceleration adjusted for site class, S_{M1}:	0.111g	0.110g
5% Damped spectral response acceleration, S_{DS}:	0.168g	0.193g
5% Damped spectral response acceleration, S_{D1}:	0.074g	0.074g
NOTE 1: MCE = maximum considered earthquake		

2.4 General Subsurface Conditions

Native subsoil conditions at the site consist of sandy lean clay, clayey sand, and silty/clayey sand to the termination depths of 11.5 to 41.5 feet below existing grades. Subordinate amounts of gravel and weak degrees of calcareous cementation were noted throughout the soil profile. Although not indicated on the boring logs, shallow fill is likely present on portions of the site due to the previous construction grading, infill of old washes, previous tree removal, and other earthwork activity. Discerning a contact point between fill material and native soils is difficult to determine within the small diameter borehole. The Standard Penetration Test (SPT) results ranged from 6 to ±10+ blows per foot (bpf) in the upper 5 to 10 feet, generally increasing with depth to 50+ bpf. Very dense conditions were typically encountered starting at about 15 feet below existing grades. Groundwater was not encountered during the investigation. The upper soils were in a 'dry' to 'dry to moist' condition at the time of the investigation.

Laboratory testing indicates in-situ dry densities of the upper soils in the range of 91.3 to 118.4 pcf with water contents in the range of 1.7 to 12 percent at the time of investigation. Liquid limits were in the range of 22 to 37 percent with plasticity indices of 4 to 18 percent. The upper soils are expected to exhibit volume increase (**swell**) due to wetting of less than **1.0 percent** when compacted to moisture and density levels normally expected during construction. 'Undisturbed' samples displayed moderate (2.5 to 4.3%) compression under incremental loading to a maximum confining load of 3,200 & 6,400 psf and minor to moderate (1.7 to 5.8%) additional compression due to inundation (**hydro-collapse**). Direct shear testing resulted in a cohesion of 1470 psf with a friction angle of 34 degrees.

2.5 Soil Corrosion

Laboratory testing of the native soil concluded a pH of 7.8 and a laboratory minimum resistivity of 1000 ohm-cm. Chloride concentrations were on the order of 99 ppm. These results indicate a **severe** degree of corrosivity to direct buried metal. Accordingly, suitable pipe wall thickness and corrosion protection should be selected per the lifetime requirements of the project.

Sulfate concentrations were 87.4 ppm. This indicates a negligible degree of sulfate attack. Subsurface concrete should use Type I or II cement, which is readily available and used in the area.

3.0 ANALYSIS AND RECOMMENDATIONS

3.1 Analysis

Analysis of the field and laboratory data indicates that subsoils at the site are favorable for the support of the proposed structures on a shallow spread footing foundation (and partial basement level spread footings) along with concrete slab-on-grade floors subject to remedial earthwork. Some special site preparations will be required with respect to existing vegetation, natural washes, and previous site use.

Laboratory and field testing indicate that the primary geotechnical concern is the potential for additional compression, potentially significant and rapid, due to inundation (**hydro-collapse**). This can lead to excessive settlement under anticipated structural loads and could cause damage to overlying structures. Accordingly, for the any **detached at-grade structures**, recommendations are made to over-excavate and re-compact the bearing soils as engineered fill to provide a zone that extends beneath and beyond the footing edges to increase the density of the foundation soils, provide more uniform bearing conditions and reduce (**but not eliminate**) the potential for settlement. The over-excavated and re-compacted soil will mitigate, but not eliminate the potential for additional settlement if the deeper soils become wet. This will also ensure a uniform bearing condition for the new foundations. Attention must be paid to provide proper drainage to limit the potential for water infiltration of deeper soils.

It is understood that the building will have a partial basement level. Basement level foundation do not require over-excavation as the soils are dense and less likely to experience any significant moisture changes. For any portion of the structure which will be **partially** supported beyond the perimeter of the basement walls, consideration will need to be given to deepening footings or using drilled shafts (or other means) to transfer loads down to the same bearing media as the basement level. **Placement of footings bearing in wall backfill material is not recommended.** Any footings located in the **backfill zone** next to the basement wall should be **deepened** below the 'line of influence' to avoid surcharge on the wall. **Footings should be situated such that they are not located within any wall backfill zone** and that a 45-degree plane below an upper foundation does not intersect the walls of an adjacent structure. Special backfill considerations are recommended to mitigate potential settlement of slabs located over the backfill zone (see section 'Fill and Backfill').

Groundwater is not expected to be a factor in the design or construction of foundations and underground utilities. The following recommendations regarding below-grade, basement wall waterproofing and drainage assume that water infiltration from the surface will likely be relatively low-volume, short-term and should dissipate quickly and that the drainage from the podium deck will be directed to a piped drainage

system and not be allowed to discharge into the basement wall water-proofing system. The lower-level foundations will bear on the dense native soil. To handle low-volume nuisance surface water, it is recommended to include vertical strip or sheet geo-composite drains (i.e. Cetco Aquadrain, AWD Amerdrain) to prevent any hydrostatic build-up that could compromise the wall water-proofing system. Where drainage swales and/or retention basins are planned within 15 feet of basement walls, sheet geo-composite drains and waterproofing is recommended. While it is expected that the soils at foundation elevation to be relatively permeable, it is recommended to include a detail to bring wall drainage into the basement level above the footings directed to a sump pump system. This will reduce the potential for wall drainage to wet the bearing soils causing a loss of support and differential settlement.

'Wet utilities' and/or settlement sensitive utilities should not be placed within the backfill zone of basement walls (except where service connections are required). If there are settlement concerns at connections we recommendation using flexible connections or designing deep support systems. It is also recommended to design structural support for any slab at-grade portion of the building (if any) on a grade beam designed to span the basement backfill zone. This includes all critical surface improvement such as entries, sidewalks, and driveways etc. Special backfill considerations are recommended to mitigate potential settlement of slabs located over the backfill zone (see section 'Fill and Backfill').

For standard spread footings to perform as expected, attention must be paid to provide proper drainage to limit the potential for water infiltration of deeper soils. It is assumed that the adjacent exterior areas will most likely consist of hardscape or pavement. If installed, the landscape plan should use mostly low water use or "green" desert type plants (xeriscape). It is preferred to keep irrigated plants at least 5 feet away from structures and slabs on grade with irrigation schedules set and maintained to run intermittingly. **Unpaved planter areas should be sloped at least 5 percent for a distance of at least 10 feet away from the building.** It is understood that this may not be possible due to ADA maximum slope requirements for the adjacent sidewalks and patios. The slope may be reduced to 2 percent provided extra care is taken to ensure sidewalks and other hardscape features do not create a "dam" that prevents positive drainage away from the buildings, creating a "pond" adjacent to the building. Roof drainage should also be directed away from the building in paved scuppers. Pre-cast loose splash blocks should not be used as they can be dislodged and/or eroded. Roof drains should not be allowed to discharge into planters adjacent to the structure; especially vault/pit wall backfill (if any). It is preferred that they be directed to discharge to pavement (per photo example), retention basins or discharge points located at least 10 feet away from the building.

It is reiterated that shallow spread footings are recommended for the exterior walls and other light interior columns since this is the most economical system available and if loading conditions allow.

However, this shallow system relies on the dry strength of the unsaturated native soils. A limited depth of re-compaction is recommended to increase density of the near surface soils that are more likely to encounter seasonal moisture changes, or deeper foundations. The deeper native soils are moisture sensitive and could experience differential settlement if subjected to significant surface water infiltration. Recognizing the need to minimize significant water penetration adjacent to the building perimeter that could detrimentally impact the building foundation, the following additional recommendations are made to protect foundations:

1. Take extra precaution to backfill and compact native soil fill to 95 percent in all exterior wall locations.
2. Avoid utility trenches passing through retention basins leading to the building. If unavoidable, backfill the trench with MAG Section 728 ½-sack CLSM to cut off preferred drainage paths.
3. Avoid placing retention basins or underground storage tanks (USTs) next to building foundations. A distance of at least 10 feet should be maintained between structures and the location of any retention basin maximum fill level and 15 feet from any USTs.
4. Create and maintain positive drainage away from the exterior wall for a minimum of 10 feet.
5. Avoid sidewalks, curbs or other elements that create a dam that could cause water to pond within 5 feet of the perimeter wall.
6. Include no irrigated landscape materials in the first 3 feet next to the building.
7. Between 3 feet and 5 feet, include only landscape materials that can be irrigated with a maximum of 1 gallon per hour emitter heads. Set and maintain irrigation controllers to prevent 24/7 flows.
8. Any landscape materials requiring greater than 1 gallon per hour irrigation, including turf, shall be at least 5 feet from the outside face of the building.
9. All irrigation feeder lines, other than those that supply individual emitters, shall not be placed closer than 5 feet to the building.

Excavation operations should be relatively straightforward although sloughing will likely occur in the looser, upper sandy soils and deeper excavations may encounter very dense, moderate cemented soils which may impede progress and possibly require the use of heavier equipment.

For exterior slabs-on-grade, frequent jointing is recommended to control cracking and reduce tripping hazards should differential movement occur. It is also recommended to pin the landing slab to the garage floor/stem wall. This will reduce the potential for the exterior slab lifting and blocking the operation of out-swinging doors. Pinning typically consists of 24-inch-long No. 4 reinforcing steel dowels placed at 12-inch centers.

3.2 Site Preparation

It is assumed that the basement level excavation will remove all surface features within the basement excavation limits including vegetation, debris, previously filled in depressions from natural stream channels (washes), and loose surface soils. For other areas outside of the basement excavation (if any), the entire area to be occupied by the proposed construction should be stripped of all vegetation, debris, and obviously loose surface soils. Tree removal must include the entire root balls of the trees and any soil disturbed during this activity.

Basement level footings subgrade must be clean, dry and free of loose and deleterious material. The footings must extend down into the dense to hard clayey sand/sandy clay soil layer. After rough excavation to proposed bottom of footing and/or slab elevation, examine exposed grade for evidence of deeper loose soils. Remove any minor variations, such as 'pockets' of loose sand and/or deleterious material (if any, at bearing depth). A representative of the geotechnical engineer should examine the footing subgrade to verify adequate cleaning and suitable bearing stratum. Inadvertent footing over-excavation in structures with below-grade levels supported on spread footing foundations should be backfilled with a '2-sack' slurry mix (CLSM per M.A.G. Standard Specification section 728) and **not** engineered soil fill. If loose soils are encountered at the bottom of the excavation, they should be over-excavated down to dense soils and backfilled with a slurry mix in a similar manor.

For 'at-grade' (detached) structures outside the basement backfill zone (if any) supported on shallow spread footings (lightly loaded structures), subsoils directly beneath shallow foundation elements should be over-excavated to a depth of at least 3-feet below proposed footing bottom elevation, or existing grade, whichever is deeper, extending at least 5-feet beyond footing edges. The entire building pad does not require over-excavation provided footing lines can be accurately located during grading operations. It may be more feasible to over-excavate the entire building pad if the building footprint is relatively small or if there are numerous and closely spaced footings. A representative of the Geotechnical Engineer should examine the subgrade once sub-excavation is complete and prior to backfilling to ensure removal of deleterious materials. Fill placement and quality should be as defined in the "Fill and Backfill" section of this report.

For 'at-grade' structures (if any) prior to placing any structural fill below footing bottom elevation, the exposed grade should be scarified to a depth of 8-inches, moisture conditioned to optimum (±2 percent) and compacted to at least 95-percent of maximum dry density as determined by ASTM D-698. Pavement areas should be scarified; moisture conditioned and compacted in a similar manner.

For 'at-grade' structures, all cut areas and areas above footing bottom elevation that are to receive slab-on-grade (or sidewalk) fill should be scarified 8 inches, moisture conditioned to at least optimum to 3 percent above optimum and lightly but uniformly compacted to 90 but not more than 95 percent of maximum dry density as determined by ASTM D-698.

3.3 Excavation and Temporary Cut Slopes

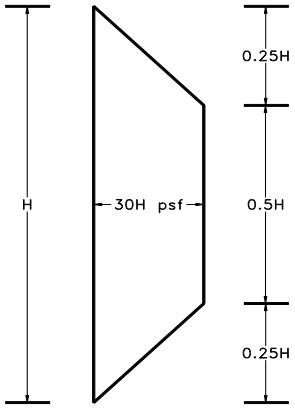
Care should be taken during excavation not to endanger nearby existing structures, roadways, utilities, drainage channels, etc. Depending on proximity, existing structures (including utilities) may require shoring, bracing, or underpinning to provide structural stability and protect personnel working in the excavation.

All excavations must comply with current governmental regulations including the current OSHA Excavation and Trench Safety Standards. Preliminary indications are that the upper 10 feet of fine-grained clayey soils would be classified as Type C. Side slopes for open-cut excavation should be cut back at 1½:1 (horizontal to vertical). In the deeper cemented soils, Type B soils would be exposed allowing steeper 1:1 slopes. The slopes should be protected from erosion due to run-off or long-term surcharge at the slope crest. Construction equipment, building materials, excavated soil and vehicular traffic should not be allowed within 10 feet or one-third the slope height, whichever is greater, from the top of slope. All cut slopes should be observed by the Soils Engineer or contractors qualified person during excavation. **Adjustments to the recommended slopes may be necessary due to wet zones, loose strata and other conditions not observed in the borings**. Localized shoring may also be required. Shotcrete or soil stabilizer on the slope face may be useful in preventing erosion due to run-off and/or drying of the slope. Shotcrete protection is recommended for slopes that will remain open for extended periods of time (more than a week). Provision should be made for drainage (such as weep holes) to mitigate potential build-up of hydrostatic pressure below the shotcrete. If seepage from the slopes is encountered during construction, Speedie should be notified so that these recommendations can be reviewed.

3.4 Shoring

In areas where open-cut excavation is not feasible, consideration must be given to a shoring system. A standard system made up of steel soldier piles, lagging and tiebacks (or interior bracing), depending on depth and loading is one option. This system typically requires pre-drilling and installing heavy steel shoulder beams spaced on 8 to 10-foot centers and backfilled with lean grout. As the excavation progresses, wood lagging can be installed, and tieback anchors installed and tensioned. Cantilever systems may not be possible in the deeper cut areas. For the relatively short periods of time required to install lagging and tiebacks,

excavations should stand at vertical. **Sloughing soils may be encountered and require special procedures**. For preliminary design of braced temporary shoring systems, we recommend the following conservative pressure diagram.



H=Depth of Excavation
γ=Unit Wet Soil Weight=110 pcf

If shoring is required, it may be incorporated into the below-grade wall system whether the wall is cast-in-place or constructed of gunite in top-down construction.

Locally, excavations have been braced using the Soil Nail technology. Several firms have experience in the immediate area. This system generally consists of excavating the cut face in increments on the order of 5 feet, installing passive tie back soil nails (anchors) and constructing a reinforced concrete (Shotcrete) face. Consideration may be given to using this system due to the local success, speed of installation and apparent economical cost. Due to the adjacent properties, soil nails may not be acceptable as the soil nails would need to be drilled into the adjacent property. Specialized contractors should make their own evaluations. Tieback installations are expected to encroach on other private/public property. The owner and/or contractor will have to obtain permission as required prior to tieback installation.

3.5 Foundation Design

If site preparation is carried out as set forth herein, the following bearing capacities can be utilized for design. **No 'at-grade' spread footings for occupied structures should be allowed within the basement wall backfill zone due to potential for post construction settlement.** Footings for low screen walls and other hardscape features are acceptable only if settlement risk can be tolerated. See additional discussion in the Section "Fill and Backfill". Shallow spread are recommended for basement level structures.

Table 3.5.1 Foundation Bearing Capacities

Structure	Foundation Type	Foundation Depth(1)	Bearing Medium	Bearing Capacity	Comments
Minor Structures	Spread	1.5 ft.	Compacted Subgrade	1,500 psf	2
Main at-grade Structures	Spread	2.0 ft.	Min. 3 feet Engineered Fill	2,500 psf	3
Basement Structures	Spread	3.0 ft.	Undisturbed Native Soils	8,000 psf	4
At-Grade Adjacent to Basement	Drilled Shaft	15.0 ft.	Undisturbed Native Soils	8,000 psf	5

Comments:

1. Foundation Depth refers to minimum depth below slab level or finished exterior grade within 5 feet of the building, (finish basement floor elevation) whichever is deeper.

2. Minor structures such as screen walls, small utility buildings, etc. the bottom of footing excavation should be scarified to a depth of 8 inches, moisture-conditioned to optimum (±2 percent) and compacted to at least 95 percent of maximum dry density as determined by ASTM D-698.

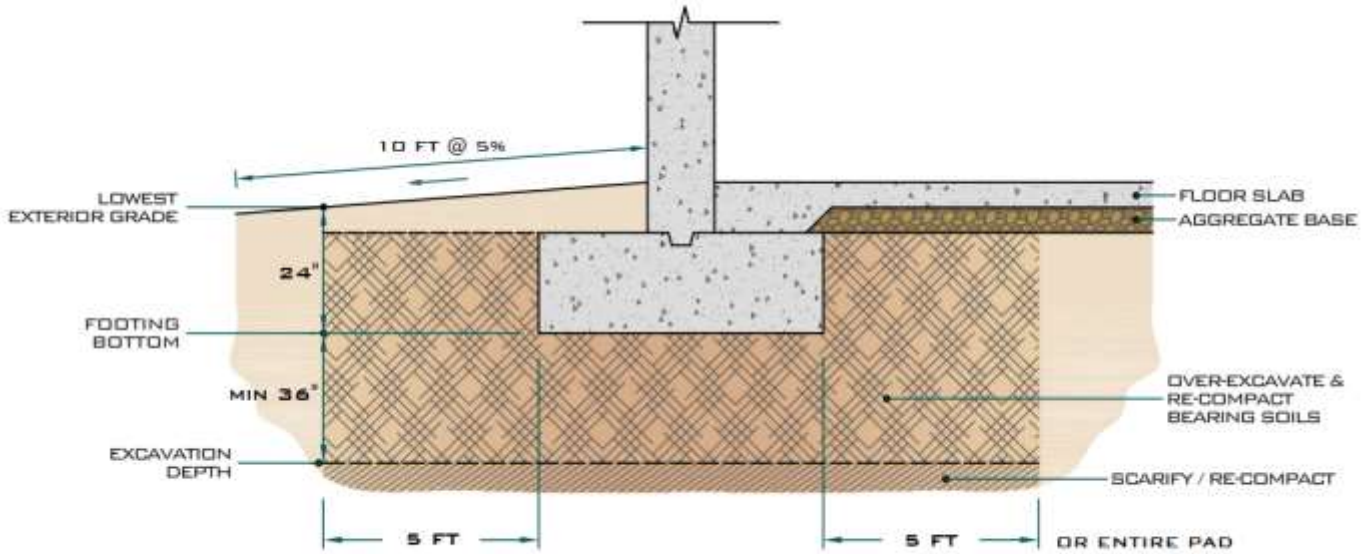
3. Shallow spread footings bearing on ***minimum*** of 3 feet of engineered fill plus 8 inches pre-compacted subgrade extending at least 5 feet beyond the footing edges. Please refer to the following detail Figure 3.3.1.

4. Shallow spread footings bearing a minimum of 3 feet below finished basement floor elevation with a bearing capacity of 8,000 psf on undisturbed dense/hard native soils. Continuous and square footings **should not exceed 5 feet and 10 feet, respectively, to stay within settlement tolerances.** Basement levels are assumed to be a minimum of 12 feet below finished grade. Remove any loose soils exposed and replace with 2 sack CLSM (lean concrete) grout or structural concrete.

5. At grade portions next to basement level structures should use grade beams and drilled shaft caissons to transfer the loads down to the same bearing material to reduce the risk of differential settlement. Depending on the loads Helical Piers may also be designed with grade beams footings.

These bearing capacities refer to the total of all loads, dead and live, and are net pressures. They may be increased one-third for wind, seismic or other loads of short duration. All footing excavations should be level and cleaned of all loose or disturbed materials. Positive drainage away from the proposed buildings **must** always be maintained.

Figure 3.5.1 Foundation Detail – Bearing on Engineered Fill



Caissons (drilled shafts) should consist of drilled shaft foundations bearing in the hard/very dense zone. A minimum caisson (drilled shaft) length of 15 feet is recommended. Design and construction should assume straight shaft caissons (drilled shafts). All caissons (drilled shafts) should be examined by a representative of the geotechnical engineer to verify cleaning, depth, dimensions, and proper bearing strata. Straight shaft caissons (drilled shafts) may be "machine cleaned" provided the contractor can show the ability to adequately remove loose material. Up to 3-inches of disturbed coarse material may remain. Adjacent caisson base (tip) elevations should not vary by more than 45 degrees.

A minimum allowable distance of 3 caisson diameters, center-to-center, is recommended between caissons (drilled shafts) for reasons of construction safety and to reduce **axial** group action. This limitation ensures that newly placed caissons (drilled shafts) are not damaged during the subsequent placement of adjacent caissons (drilled shafts). This distance may be reduced to 2 diameters if one of the caissons (drilled shafts) has been in place for enough time (24 hours minimum) to allow concrete to set and cure. A load bearing reduction factor of 0.7 should be applied to individual caissons (drilled shafts) within a proximity of two diameters, center-to-center, of each other. If adjacent caissons (drilled shafts) are of different diameters, an average of the diameters should be used for determining spacing. A separate set of group reduction factors should be applied for **lateral load** conditions. These can be provided on request. Alternatively, Speedie and Associates can provide lateral load analysis for selected cases using L-Pile+ (Version 5.0, by Ensoft) on request.

Elastic settlements under design loads are on the order of ½ to 1 inch for shallow spread footings, virtually, all of which will occur during construction. Post-construction differential settlements of spread foundations will be on the order of ½ total settlement under existing and compacted moisture contents. Additional localized settlements of the same or larger magnitude could occur if native supporting soils were to experience a significant increase in moisture content. Positive drainage away from structures, and controlled routing of roof runoff **must** be provided to prevent ponding adjacent to perimeter walls. Planters requiring heavy watering should be considered with caution. Care should be taken in design and construction to ensure that domestic and interior storm drain water is contained to prevent seepage.

Continuous footings and stem walls should be reinforced to distribute stresses arising from small differential movements, and long walls should be provided with control joints to accommodate these movements. Reinforcement and control joints are suggested to allow slight movement and prevent minor floor slab cracking.

3.6 Lateral Pressures

The following lateral pressure values may be utilized for the proposed construction:

Active Pressures	
Unrestrained Walls	35 pcf
At-Rest Pressures	
Restrained Walls	60 pcf
Passive Pressures	
Continuous Footings	300 pcf
Spread Footings	350 pcf
Coefficient of Friction (w/ passive pressure)	0.35
Coefficient of Friction (w/out passive pressure)	0.45

All backfill must be compacted to not less than 95 percent (ASTM D-698) to mobilize these passive values at low strain. These values do not include a factor of safety and they assume a drained condition. Expansive soils should not be used as retaining wall backfill. The expansive pressures could greatly increase active pressures.

3.7 Fill and Backfill

Native soils are considered suitable for use in general grading fills and engineered fills proved any oversized material is screened out. The fine sand soils may be sensitive to excessive moisture content and will become unstable at elevated moisture content. Accordingly, it may be necessary to compact soils on the dry side of optimum, especially in asphalt pavement areas. The reduced moisture content under slabs-on-grade should only be used upon approval of the engineer in the field.

Successful backfill of below-grade walls (such as the anticipated basement walls) can be difficult to achieve given the sometimes-tight access. A well-graded granular import should be specified for backfill of below grade walls. Placement and compaction must be carefully controlled to minimize the potential for post construction settlement should the backfill zone be subjected to water infiltration. Even the most well controlled fills could experience additional settlement on the order of 1 inch if subjected to significant moisture increases. Accordingly, it is recommended to design and construct a structural slab over the backfill zone in the most critical areas such as interior slabs or reinforce and pin the landing/entry slabs to the building stem wall to span over the backfill zone. This will reduce the potential for the exterior slab dropping and creating a tripping hazard. Critical areas can be considered to include not only concrete walkways and slabs, but also concrete and asphaltic concrete paving. Paving over wall backfill zones should be detailed to minimize the effects of backfill settlement. Utility lines (especially gravity sewer lines), except for direct building service connections, should be avoided in this zone.

There may be cases where there is a narrow (5± foot) backfill zone between shoring and cast in place basement walls. If it is not possible to compact well graded granular fill, the use of washed crushed rock (pea gravel or ASTM C33 No. 56 or 57 rock or other approved uniform graded rock) is allowable. Contrary to popular belief that this material "falls" into place at maximum relative density when dumped, it is recommended to vibrate this material in place in 4-foot maximum lifts. This will allow the material to settle into a maximum relative density condition and reduce the potential for post construction settlement. This material should be brought up to grade under any hardscape surface. In any areas where fine grained soils are used to complete the surface, a filter fabric (Mirafi 140N or equal) should be placed between the coarse rock and surface fines to prevent fined from filtering down into the open graded rock.

In areas where it is not possible to fill and properly compact with stone due to interference from utilities, etc., it is recommended to use 1-sack slurry per MAG Section 728 Controlled Low Strength Material.

A pre-construction meeting should be held prior to starting the basement wall backfill to discuss the staging process and the procedures used for backfilling, to help minimize the potential for basement wall backfill settlement.

If imported common fill for use in site grading is required, it should be examined by a Soils Engineer to ensure that it is of low swell potential and free of organic or otherwise deleterious material. In general, the fill should have 100 percent passing the 3-inch sieve and no more than 50 percent passing the #200 sieve. For the fine fraction (passing the 40 sieve), the liquid limit and plasticity index should not exceed 30 percent and 10 percent, respectively. It should exhibit less than 1.5 percent swell potential when compacted to 95 percent of maximum dry density (ASTM D-698) at a moisture content of 2 percent below optimum, confined under a 100 psf surcharge, and inundated.

Fill should be placed on subgrade which has been properly prepared and approved by a Soils Engineer. Fill must be wetted and thoroughly mixed to achieve optimum moisture content, ±2 percent. Fill should be placed in horizontal lifts of 8-inch thickness (or as dictated by compaction equipment) and compacted to the percent of maximum dry density per ASTM D-698 set forth as follows:

A.	Building Areas	
	1. Below footing level	95 (Slurry at Lower Level)
	2. Below slabs-on-grade (non-expansive soils)	95
B.	Pavement Subgrade or Fill	95
C.	Utility Trench Backfill	95
D.	Aggregate Base Course	
	1. Below floor slabs	95
	2. Below asphalt paving	100
E.	Landscape Areas	90

3.8 Utilities Installation

Trench excavations for shallow utilities can be accomplished by conventional trenching equipment although cemented soils may impede progress and require the use of heavier equipment. Trench walls **may** stand near vertical for the short periods of time required to install shallow utilities although sloughing will likely occur in looser and/or sandier soils requiring laying back of side slopes and/or temporary shoring. Adequate precautions must be taken to protect workmen in accordance with all current governmental regulations.

Backfill of narrow utility trenches above bedding and initial backfill zones may be carried out with native excavated material, screened of oversized material. This material should be moisture-conditioned, placed in 8-inch lifts and mechanically compacted. Water settling is not recommended. Compaction requirements are summarized in the "Fill and Backfill" section of this report. Native soils do not meet the typical granular bedding and initial backfill requirements of large diameter CMP tanks. These materials need to meet MAG Standard Specification Section 601 or the drainage engineers design and manufacture recommendations.

3.9 Slabs-on-Grade

To facilitate fine grading operations and aid in concrete curing, a 4-inch-thick layer of granular material conforming to the gradation for aggregate base (A.B.) as per M.A.G. Specification Section 702 should be utilized beneath the conventional slabs. Dried subgrade soils **must** be re-moistened prior to placing the aggregate base if allowed to dry out, especially if fine-grained soils are used in the top 12-inches of the pad.

The native soils can store a significant amount of moisture, which could increase the natural vapor drive through the slab. Accordingly, if moisture sensitive flooring and/or adhesive are planned, the use of a vapor barrier **directly below the concrete** is recommended. Vapor barriers should be a minimum 15-mil thick polyolefin (or equivalent), which meets ASTM E 1745 Class A specifications. Vapor barriers do increase the potential for slab curling and water entrapment under the slab. Accordingly, if a vapor barrier is used, additional precautions such as low slump concrete, frequent jointing and proper curing will be required to reduce curling potential and detailed to prevent the entrapment of outside water sources.

3.10 Asphalt Concrete Pavement

If earthwork in paved areas is carried out to finish subgrade elevation as set forth herein, the subgrade will provide adequate support for new pavements. The location designation is for reference only. **The designer/owner should choose the appropriate sections to meet the anticipated traffic volume and life expectancy.** The section capacity is reported as daily ESALs, Equivalent 18-kip Single Axle Loads. Typical heavy trucks impart 1.0 to 2.5 ESALs per truck depending on load. It takes approximately 1200 passenger cars to impart 1 ESAL.

<u>Pavement Design Parameters</u>:

Assume:	One 18-kip Equivalent Single Axle Load (ESAL)/Truck
Life:	20 years

Subgrade Soil Profile:

% Passing #200 sieve:	47%
Plasticity Index:	10%
k:	150 pci (assumed)
R value:	38 (per ADOT tables)
M_R:	23,000 (per AASHTO design)

Table 3.10.1 - Pavement Sections

Area of Placement	Flexible (AC Pavement)			Rigid (PCC Pavement)	
	Thickness		Daily 18-kip ESALs	Thickness	Daily 18-kip ESALs
	AC (0.39)	ABC (0.12)		PCCP	
Auto Parking	2.0"	4.0"	4	5.0"	8
Truck Parking, Main Drives, & Fire Lanes	3.0"	4.0"	19	6.0"	21
	3.0"	6.0"	43	7.0"	46

Notes:

1. Designs are based on AASHTO design equations and ADOT correlated R-Values.
2. The PCCP thickness is increased to provide better load transfer and reduce potential for joint & edge failures. Design PCCP per current ACI 330R.
3. Full depth asphalt or increased asphalt thickness can be increased by adding 1.0-inch asphalt for each 3 inches of base course replaced.

These designs assume that all subgrades are prepared in accordance with the recommendations contained in the "Site Preparation" and "Fill and Backfill" sections of this report, and paving operations carried out in a proper manner. If pavement subgrade preparation is not carried out immediately prior to paving, the entire area should be proof-rolled at that time with a heavy pneumatic-tired roller to identify locally unstable areas for repair.

Pavement base course material should be aggregate base per M.A.G. Section 702 Specifications. Asphalt concrete materials and mix design should conform to M.A.G. 710. It is recommended that a ½ inch or ¾ inch mix designation be used for the pavements. While a ¾ inch mix may have a somewhat rougher texture, it offers more stability and resistance to scuffing, particularly in truck turning areas. Pavement installation should be carried out under applicable portions of M.A.G. Section 321 and municipality standards. The asphalt supplier should be informed of the pavement use and required to provide a mix that will provide stability and be aesthetically acceptable. Some of the newer M.A.G. mixes are very coarse and could cause placing and finish problems. A mix design should be submitted for review to determine if it will be acceptable for the intended use.

For sidewalks and other areas not subjective to vehicular traffic a 4-inch section of concrete will be enough. For trash and dumpster enclosures a thicker section of 6 inches of concrete is recommended.

Portland Cement Concrete Pavement must have a minimum 28-day flexural strength 550 psi (compressive strength of approximately 3,700 psi). It may be cast directly on the prepared subgrade with proper compaction (reduced) and the elevated moisture content as recommended in the report. Lacking an aggregate base course, attention must be paid to using low slump concrete and proper curing, especially on the thinner sections. No reinforcing is necessary. Joint design and spacing should be in accordance with ACI recommendations. Construction joints should contain dowels or be tongue and grooved to provide load transfer. Tie bars are recommended on the joints adjacent to unsupported edges. Maximum joint spacing in feet should not exceed 2 to 3 times the thickness in inches. Joint sealing with a quality silicone sealer is recommended to prevent water from entering the subgrade allowing pumping and loss of support.

Proper subgrade preparation and joint sealing will reduce (but not eliminate) the potential for slab movements (thus cracking) on the expansive native soils. Frequent jointing will reduce uncontrolled cracking and increase the efficiency of aggregate interlock joint transfer.

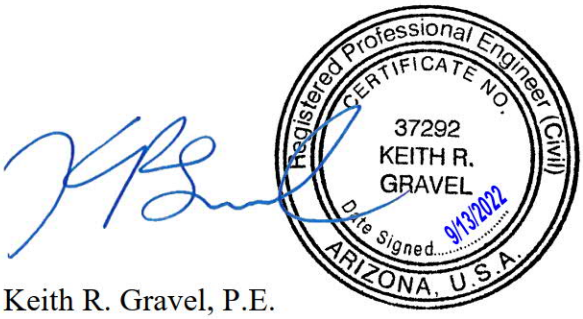
4.0 GENERAL

The scope of this investigation and report includes only regional published considerations for seismic activity and ground fissures resulting from subsidence due to groundwater withdrawal, not any site-specific studies. The scope does not include any considerations of hazardous releases or toxic contamination of any type.

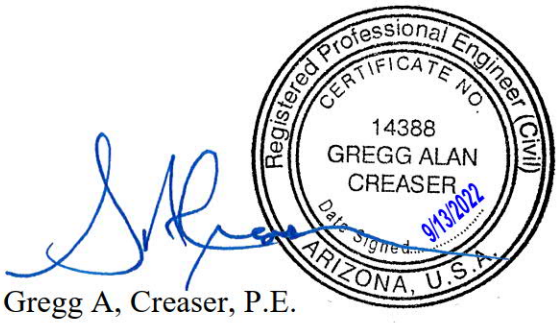
Our analysis of data and the recommendations presented herein assume that soil conditions do not vary significantly from those found at specific sample locations. Our work has been performed in accordance with generally accepted engineering principles and practice; this warranty is in lieu of all other warranties expressed or implied.

We recommend that a representative of the Geotechnical Engineer observe and test the earthwork and foundation portions of this project to ensure compliance to project specifications and the field applicability of subsurface conditions which are the basis of the recommendations presented in this report. If any significant changes are made in the scope of work or type of construction that was assumed in this report, we must review such revised conditions to confirm our findings if the conclusions and recommendations presented herein are to apply.

Respectfully submitted,
SPEEDIE & ASSOCIATES, INC.



Keith R. Gravel, P.E.



Gregg A, Creaser, P.E.

SPEEDIE AND ASSOCIATES
Geotechnical • Environmental • Materials Engineers

APPENDIX

FIELD AND LABORATORY INVESTIGATION

SOIL BORING LOCATION PLAN

SOIL LEGEND

LOG OF TEST BORINGS

TABULATION OF TEST DATA

CONSOLIDATION TEST

MOISTURE-DENSITY RELATIONS

SWELL TEST DATA

CORROSION TEST DATA

SPEEDIE AND ASSOCIATES
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FIELD AND LABORATORY INVESTIGATION

On July 20th & August 1st, 2022, soil test borings were drilled at the approximate locations shown on the attached Soil Boring Location Plan. All exploration work was carried out under the full-time supervision of our field engineer, who recorded subsurface conditions and obtained samples for laboratory testing. The soil borings were advanced with a truck-mounted CME-75 drill rig utilizing 7-inch diameter hollow stem flight augers. Detailed information regarding the borings and samples obtained can be found on an individual Log of Test Boring prepared for each drilling location.

Laboratory testing consisted of moisture content, dry density, grain-size distribution, and plasticity (Atterberg Limits) tests for classification and pavement design parameters. Remolded swell tests were performed on samples compacted to densities and moisture contents expected during construction. Compression tests were performed on a selected ring samples to estimate settlements and determine effects of inundation. All field and laboratory data are presented in this appendix.

⊕ - APPROXIMATE SOIL BORING LOCATIONS

DR: JS	CHK: XXX	DATE: 07/19/22	PROJECT NO.: 221526SA	SHEET: 1 OF 1

SOIL BORING LOCATION PLAN

ONE SCOTTSDALE - LOT 14
NWC HENKEL WAY & 74TH STREET ALIGNMENT
SCOTTSDALE, ARIZONA

SPEEDIE AND ASSOCIATES
GEOTECHNICAL/ENVIRONMENTAL/MATERIALS ENGINEERS
3331 E. WOOD ST. PHOENIX, ARIZONA 85040 (602) 997-6391

SOIL LEGEND

SAMPLE DESIGNATION		DESCRIPTION	
	AS	**Auger Sample**	A grab sample taken directly from auger flights.
	BS	**Large Bulk Sample**	A grab sample taken from auger spoils or from bucket of backhoe.
	S	**Spoon Sample**	Standard Penetration Test (ASTM D-1586) Driving a 2.0 inch outside diameter split spoon sampler into undisturbed soil for three successive 6-inch increments by means of a 140 lb. weight free falling through a distance of 30 inches. The cumulative number of blows for the final 12 inches of penetration is the Standard Penetration Resistance.
	RS	**Ring Sample**	Driving a 3.0 inch outside diameter spoon equipped with a series of 2.42-inch inside diameter, 1-inch long brass rings, into undisturbed soil for one 12-inch increment by the same means of the Spoon Sample. The blows required for the 12 inches of penetration are recorded.
	LS	**Liner Sample**	Standard Penetration Test driving a 2.0-inch outside diameter split spoon equipped with two 3-inch long, 3/8-inch inside diameter brass liners, separated by a 1-inch long spacer, into undisturbed soil by the same means of the Spoon Sample.
	ST	**Shelby Tube**	A 3.0-inch outside diameter thin-walled tube continuously pushed into the undisturbed soil by a rapid motion, without impact or twisting (ASTM D-1587).
	--	**Continuous Penetration Resistance**	Driving a 2.0-inch outside diameter "Bullnose Penetrometer" continuously into undisturbed soil by the same means of the spoon sample. The blows for each successive 12-inch increment are recorded.

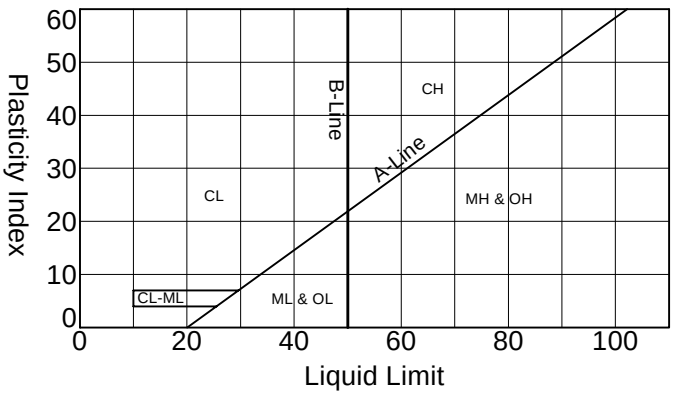
CONSISTENCY			RELATIVE DENSITY	
Clays & Silts	Blows/Foot	Strength (tons/sq ft)	Sands & Gravels	Blows/Foot
Very Soft	0 - 2	0 - 0.25	Very Loose	0 - 4
Soft	2 - 4	0.25 - 0.5	Loose	5 - 10
Firm	5 - 8	0.5 - 1.0	Medium Dense	11 - 30
Stiff	9 - 15	1 - 2	Dense	31 - 50
Very Stiff	16 - 30	2 - 4	Very Dense	> 50
Hard	> 30	> 4		

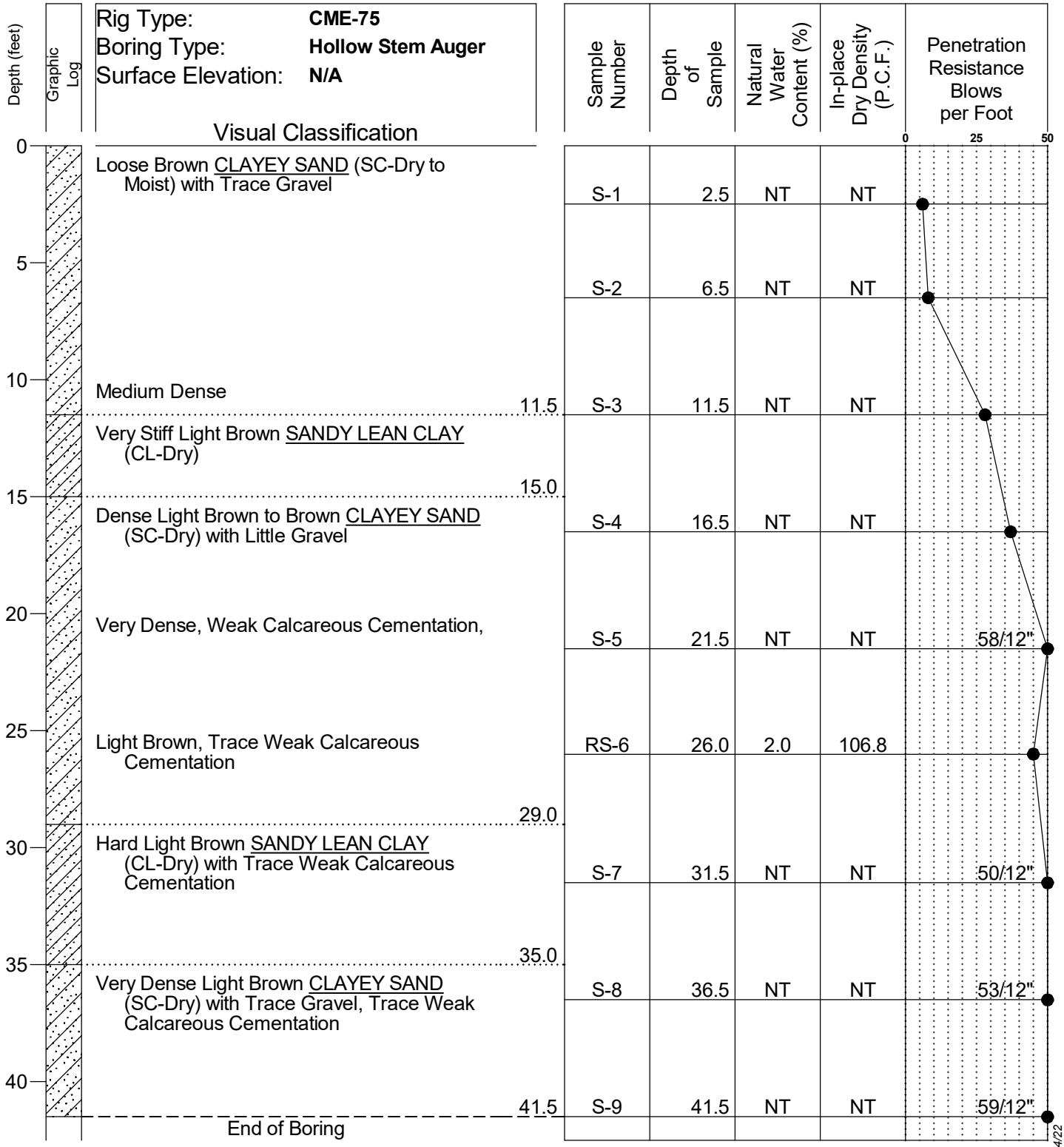
MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE)	GRAVEL AND GRAVELLY SOILS (MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE)	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS (MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE)	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE)	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL OR MODIFIED SYMBOLS MAY BE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS OR TO PROVIDE A BETTER GRAPHICAL PRESENTATION OF THE SOIL

MATERIAL SIZE	PARTICLE SIZE			
	Lower Limit		Upper Limit	
	mm	Sieve Size ◆	mm	Sieve Size ◆
SANDS				
Fine	0.075	#200	0.42	#40
Medium	0.420	#40	2.00	#10
Coarse	2.000	#10	4.75	#4
GRAVELS				
Fine	4.75	#4	19	0.75" ×
Coarse	19	0.75" ×	75	3" ×
COBBLES	75	3" ×	300	12" ×
BOULDERS	300	12" ×	900	36" ×

◆U.S. Standard ×Clear Square Openings





Boring Date: **7-20-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 1**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Loose Brown SILTY, CLAYEY SAND (SC/SM-Dry) with Little Gravel	S-1	2.5	NT	NT	
		BS-2	5.0	NT	NT	
5		S-3	6.5	NT	NT	
10	Medium Dense	S-4	11.5	NT	NT	
	11.0 Very Stiff Light Brown SANDY LEAN CLAY (CL-Dry)					
15	15.0 Very Dense Light Brown CLAYEY SAND (SC-Dry) with Trace Gravel	S-5	16.5	NT	NT	56/12"
20	Brown to Light Brown, Little Gravel	RS-6	21.0	1.7	114.5	55/12"
25	Trace Gravel, Weak Calcareous Cementation	S-7	26.5	NT	NT	54/12"
30	30.9 End of Boring	S-8	30.9	NT	NT	50/5"
35						
40						

Penetration Resistance Blows per Foot: 0, 25, 50

Boring Date: **7-20-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 2**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Stiff Brown SANDY LEAN CLAY (CL-Dry) with Trace Gravel	RS-1	2.0	12.0	102.9	
5	5.0					
	Loose Brown CLAYEY SAND (SC-Dry) with Trace Gravel	S-2	6.5	NT	NT	
	9.0					
10	Hard Brown SANDY LEAN CLAY (CL-Dry) with Trace Weak Calcareous Cementation	S-3	11.5	NT	NT	
	12.0					
	Very Dense Brown CLAYEY SAND (SC-Dry) with Little Gravel, Trace Weak Calcareous Cementation					
15	Whitish Brown, Weak Calcareous Cementation	S-4	16.5	NT	NT	77/12"
20	21.5	S-5	21.5	NT	NT	57/12"
	End of Boring					
25						
30						
35						
40						

Penetration Resistance Blows per Foot: 0 25 50

Boring Date: **7-20-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 3**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Loose Brown CLAYEY SAND (SC-Dry to Moist) with Trace Gravel	S-1	2.5	NT	NT	
5		S-2	6.5	NT	NT	
10	10.0 Very Stiff Light Brown SANDY LEAN CLAY (CL-Dry) with Trace Gravel	S-3	11.5	NT	NT	
15	15.0 Very Dense Light Brown CLAYEY SAND (SC-Dry) with Little Gravel	S-4	16.5	NT	NT	55/12"
20	Brown, Dry to Moist	S-5	21.5	NT	NT	67/12"
25	Light Brown, Weak Calcareous Cementation	RS-6	25.4	5.7	91.3	50/5"
30	31.3 End of Boring	S-7	31.3	NT	NT	94/10"
35						
40						

Penetration Resistance Blows per Foot: 0, 25, 50

Boring Date: **8-1-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 4**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Loose Brown CLAYEY SAND (SC-Dry) with Trace Gravel	S-1	2.5	NT	NT	
5	5.5	S-2	6.5	NT	NT	
	Very Stiff Brown SANDY LEAN CLAY (CL-Dry) with Trace Weak Calcareous Cementation					
10	10.0	RS-3	11.0	NT	NT	56/12"
	Very Dense Light Brown CLAYEY SAND (SC-Dry) with Little Gravel, Weak Calcareous Cementation					
15		S-4	16.5	NT	NT	62/12"
20	Brown, Trace Weak Calcareous Cementation	S-5	21.5	NT	NT	77/12"
25	Light Brown, Weak Calcareous Cementation	RS-6	25.9	1.9	118.1	82/11"
30	No Cementation 30.9 End of Boring	S-7	30.9	NT	NT	50/5"
35						
40						

Penetration Resistance Blows per Foot: 0, 25, 50

Boring Date: **7-20-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 5**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Loose Brown CLAYEY SAND (SC-Dry to Moist) with Trace Gravel	S-1	2.5	NT	NT	
5	5.0	RS-2	6.0	3.2	92.2	
	Stiff Brown SANDY SILTY CLAY (CL/ML-Dry) with Trace Gravel					
	8.0					
10	Medium Dense Brown to Light Brown CLAYEY SAND (SC-Dry) with Little Gravel	S-3	11.5	NT	NT	
15	Dense	S-4	16.5	NT	NT	
20	Very Dense, Light Brown, Weak Calcareous Cementation	21.4 S-5	21.4	NT	NT	89/11"
	End of Boring					
25						
30						
35						
40						

Penetration Resistance Blows per Foot: 0, 25, 50

Boring Date: **8-1-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 6**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Loose Brown CLAYEY SAND (SC-Dry to Moist) with Trace Gravel	S-1	2.5	NT	NT	
5		S-2	6.5	NT	NT	
7.0	Hard Light Brown SANDY LEAN CLAY (CL-Dry) with Trace Gravel					
10		S-3	11.5	NT	NT	
10.0	Dense Light Brown CLAYEY SAND (SC-Dry) with Little Gravel, Weak Calcareous Cementation					
15		S-4	16.5	NT	NT	
20		RS-5	21.0	4.7	92.0	
25	Very Dense, Light Brown	S-6	26.5	NT	NT	86/12"
30		S-7	30.8	NT	NT	50/4"
30.8	End of Boring					
35						
40						

Penetration Resistance Blows per Foot: 0, 25, 50

Boring Date: **8-1-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 7**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Loose Brown CLAYEY SAND (SC-Dry to Moist) with Trace Gravel	S-1	2.5	NT	NT	
5	Very Dense, Light Brown to Brown, Dry	S-2	6.5	NT	NT	74/12"
10	Dense, Brown to Light Brown, Little Gravel, Weak Calcareous Cementation	S-3	11.5	NT	NT	
15	Very Dense, Brown	S-4	16.5	NT	NT	51/12"
20	Little Gravel, Trace Weak Calcareous Cementation	RS-5	21.0	2.8	118.4	53/12"
25	Light Brown to Brown, Trace Gravel	S-6	26.5	NT	NT	55/12"
30	31.0	S-7	31.5	NT	NT	60/12"
	Hard Light Brown SANDY LEAN CLAY (CL-Dry) Weak Calcareous Cementation					
35	Brown	S-8	36.5	NT	NT	58/12"
	36.5 End of Boring					
40						

Penetration Resistance Blows per Foot: 0, 25, 50

Boring Date: **8-1-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 8**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Medium Dense Brown CLAYEY SAND (SC-Dry to Moist) with Little Gravel	RS-1	2.0	1.9	115.7	
5	Loose, Trace Gravel	S-2	6.5	NT	NT	
9.0						
10	Hard Light Brown SANDY LEAN CLAY (CL-Dry) with Trace Gravel	S-3	11.5	NT	NT	58/12"
14.0						
15	Medium Dense Light Brown to Brown CLAYEY SAND (SC-Dry) with Little Gravel	S-4	16.5	NT	NT	
20	Very Dense, Trace Weak Calcareous Cementation	S-5	20.8	NT	NT	50/5"
20.9	End of Boring					
25						
30						
35						
40						

Penetration Resistance Blows per Foot: 0, 25, 50

Boring Date: **8-1-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B- 9**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

Rig Type: **CME-75**
Boring Type: **Hollow Stem Auger**
Surface Elevation: **N/A**

Depth (feet)	Visual Classification	Sample Number	Depth of Sample	Natural Water Content (%)	In-place Dry Density (P.C.F.)	Penetration Resistance Blows per Foot
0	Medium Dense Brown to Light Brown CLAYEY SAND (SC-Dry) with Trace Gravel	S-1	2.5	NT	NT	
5	Dense	S-2	6.5	NT	NT	
10	Light Brown, Little Gravel	S-3	11.5	NT	NT	
15	Very Dense, Brown to Light Brown, Trace Gravel, Trace Weak Calcareous Cementation	S-4	15.9	NT	NT	50/5"
20	21.5 End of Boring	S-5	21.5	NT	NT	57/12"
25						
30						
35						
40						

Penetration Resistance Blows per Foot: 0, 25, 50

Boring Date: **8-1-22**
Field Engineer/Technician: **J. Stransky**
Driller: **O. Mariscal**
Contractor: **Resilient Drilling**

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-10**

One Scottsdale - Lot 14

NWC Henkel Way & 74th Street Alignment

Scottsdale, Arizona

Project No.: **221526SA**

_SPEEDIE 221526SA.GPJ GENGEO.GDT 8/24/22

TABULATION OF TEST DATA

SOIL BORING or TEST PIT NUMBER	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE INTERVAL (ft)	NATURAL WATER CONTENT (Percent of Dry Weight)	IN-PLACE DRY DENSITY (Pounds Per Cubic Foot)	PARTICLE SIZE DISTRIBUTION (Percent Finer)					ATTERBERG LIMITS			UNIFIED SOIL CLASSIFICATION	SPECIMEN DESCRIPTION
						#200 SIEVE	#40 SIEVE	#10 SIEVE	#4 SIEVE	3" SIEVE	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
B- 1	RS-6	RING	25.0 - 26.0	2.0	106.8	24.5	40	69	84	100	32	18	14	SC	CLAYEY SAND with GRAVEL
B- 2	BS-2	BULK	0.0 - 5.0	NT	NT	27.6	42	63	85	NT	22	18	4	SC-SM	SILTY, CLAYEY SAND with GRAVEL
B- 2	RS-6	RING	20.0 - 21.0	1.7	114.5	23.5	36	60	84	100	33	16	17	SC	CLAYEY SAND with GRAVEL
B- 3	RS-1	RING	1.0 - 2.0	12.0	102.9	56.4	73	86	92	100	37	19	18	CL	SANDY LEAN CLAY
B- 4	RS-6	RING	25.0 - 25.4	5.7	91.3	NT	NT	NT	NT	NT	NT	NT	NT		
B- 5	RS-6	RING	25.0 - 25.9	1.9	118.1	NT	NT	NT	NT	NT	NT	NT	NT		
B- 6	RS-2	RING	5.0 - 6.0	3.2	92.2	57.6	72	82	90	100	22	17	5	CL-ML	SANDY SILTY CLAY
B- 7	RS-5	RING	20.0 - 21.0	4.7	92.0	13.7	29	55	81	100	37	24	13	SC	CLAYEY SAND with GRAVEL
B- 8	RS-5	RING	20.0 - 21.0	2.8	118.4	NT	NT	NT	NT	NT	NT	NT	NT		
B- 9	RS-1	RING	1.0 - 2.0	1.9	115.7	NT	NT	NT	NT	NT	NT	NT	NT		

Sieve analysis results do not include material greater than 3". Refer to the actual boring logs for the possibility of cobble and boulder sized materials.

NT=Not Tested

One Scottsdale - Lot 14
NWC Henkel Way & 74th Street Alignment
Scottsdale, Arizona
Project No. 221526SA

SPEEDIE AND ASSOCIATES

CONSOLIDATION TEST

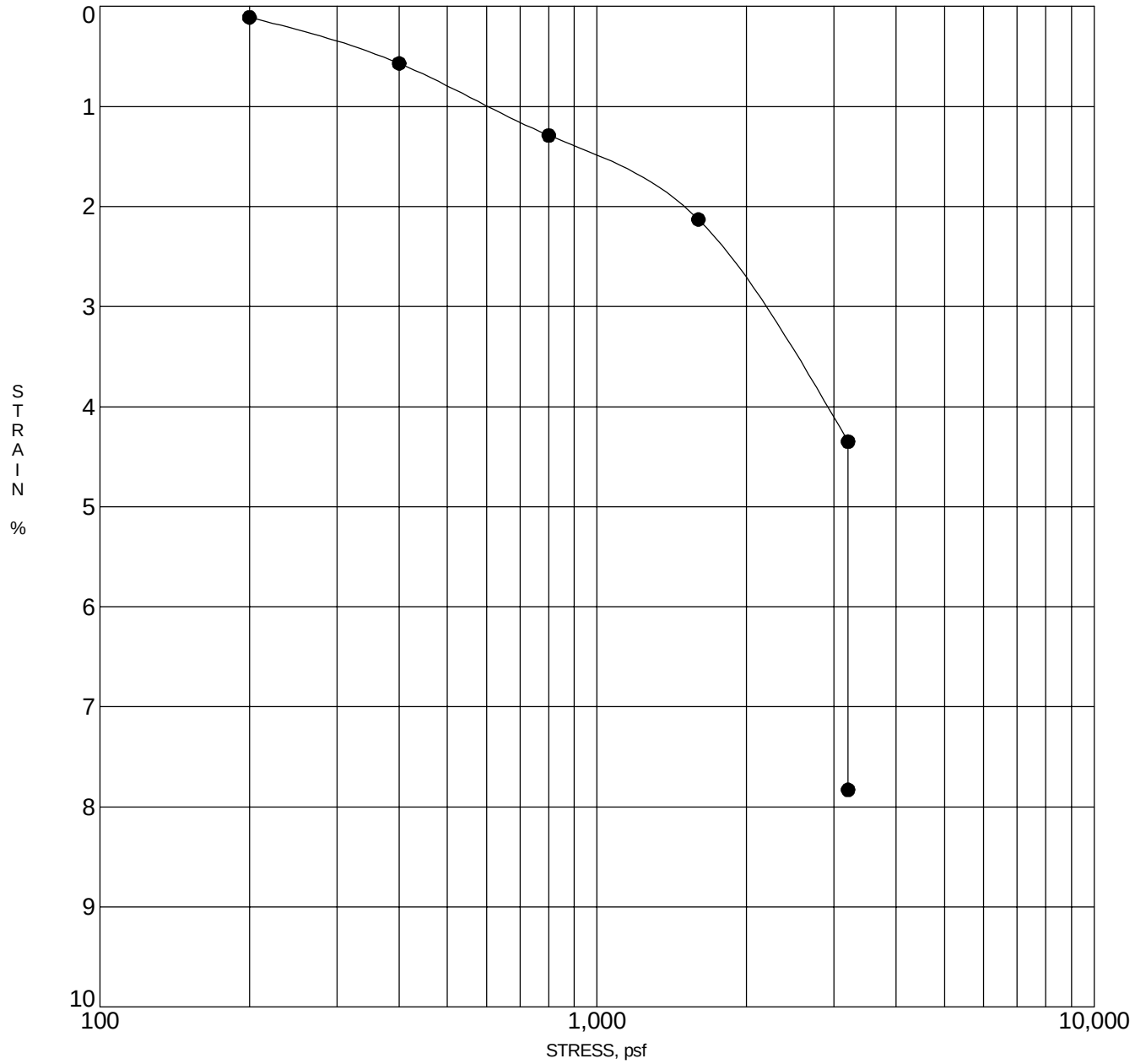
PROJECT: One Scottsdale - Lot 14 **PROJECT NO.: 221526SA**

LOCATION: NWC Henkel Way & 74th Street Alignment **DATE: 7/20/22**

BORING NO.: B- 1 **SAMPLE NO.: RS-6** **SAMPLE DEPTH: 25 to 26** **LABORATORY NO.:**

LIQUID LIMIT: 32 **PLASTIC LIMIT:** 18 **PLASTICITY INDEX:** 14

CLASSIFICATION: SC **ASTM SOIL DESCRIPTION:** CLAYEY SAND with GRAVEL



Sample inundated at end of test at 3200 psf

SPEEDIE AND ASSOCIATES

GEOTECH CONSOLIDATION 221526SA.GPJ GENGEO.GDT 8/24/22

CONSOLIDATION TEST

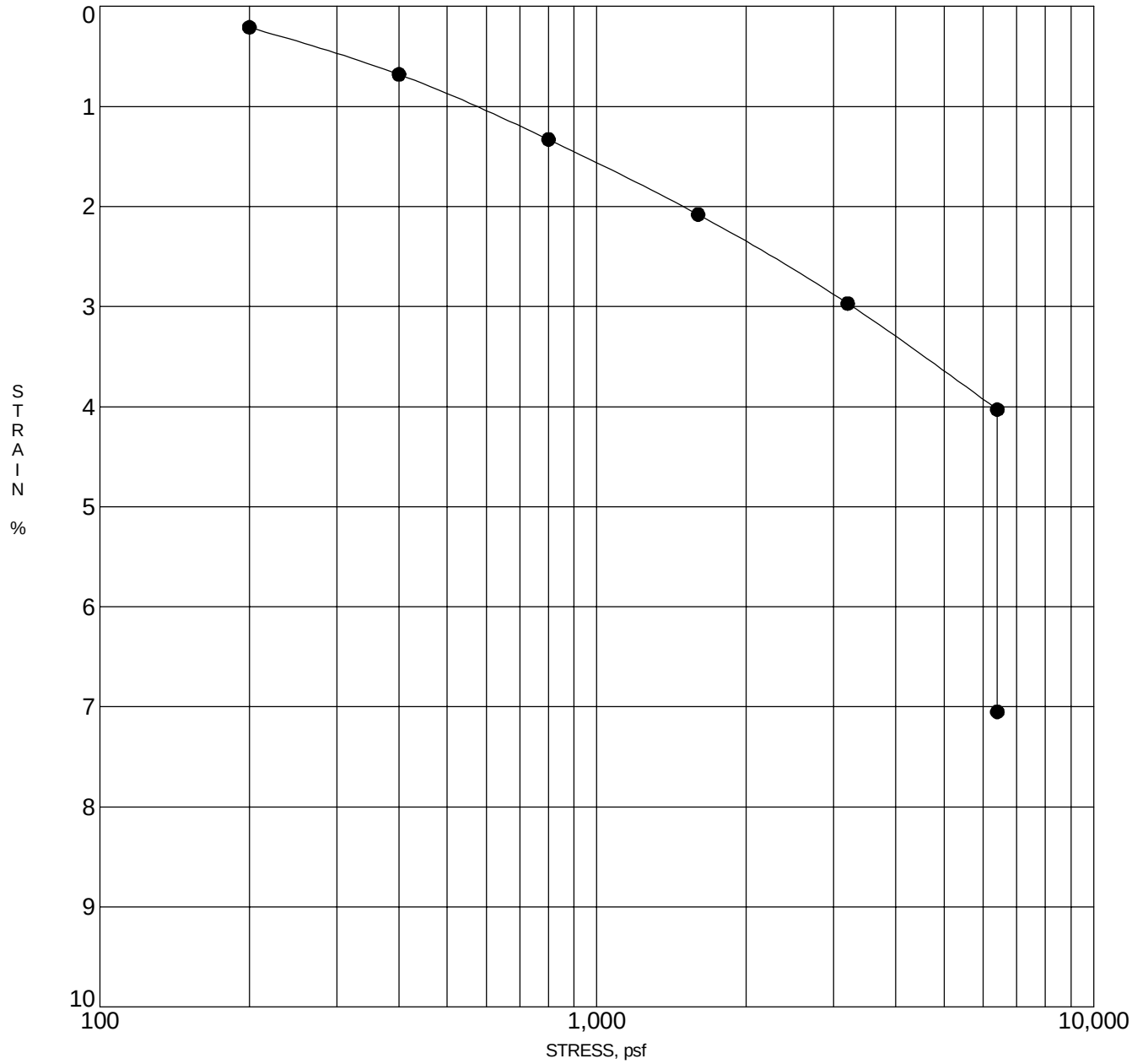
PROJECT: One Scottsdale - Lot 14 **PROJECT NO.: 221526SA**

LOCATION: NWC Henkel Way & 74th Street Alignment **DATE: 7/20/22**

BORING NO.: B- 2 **SAMPLE NO.: RS-6** **SAMPLE DEPTH: 20 to 21** **LABORATORY NO.:**

LIQUID LIMIT: 33 **PLASTIC LIMIT:** 16 **PLASTICITY INDEX:** 17

CLASSIFICATION: SC **ASTM SOIL DESCRIPTION:** CLAYEY SAND with GRAVEL



Sample inundated at end of test at 6400 psf

SPEEDIE AND ASSOCIATES

GEOTECH CONSOLIDATION 221526SA.GPJ GENGEO.GDT 8/24/22

CONSOLIDATION TEST

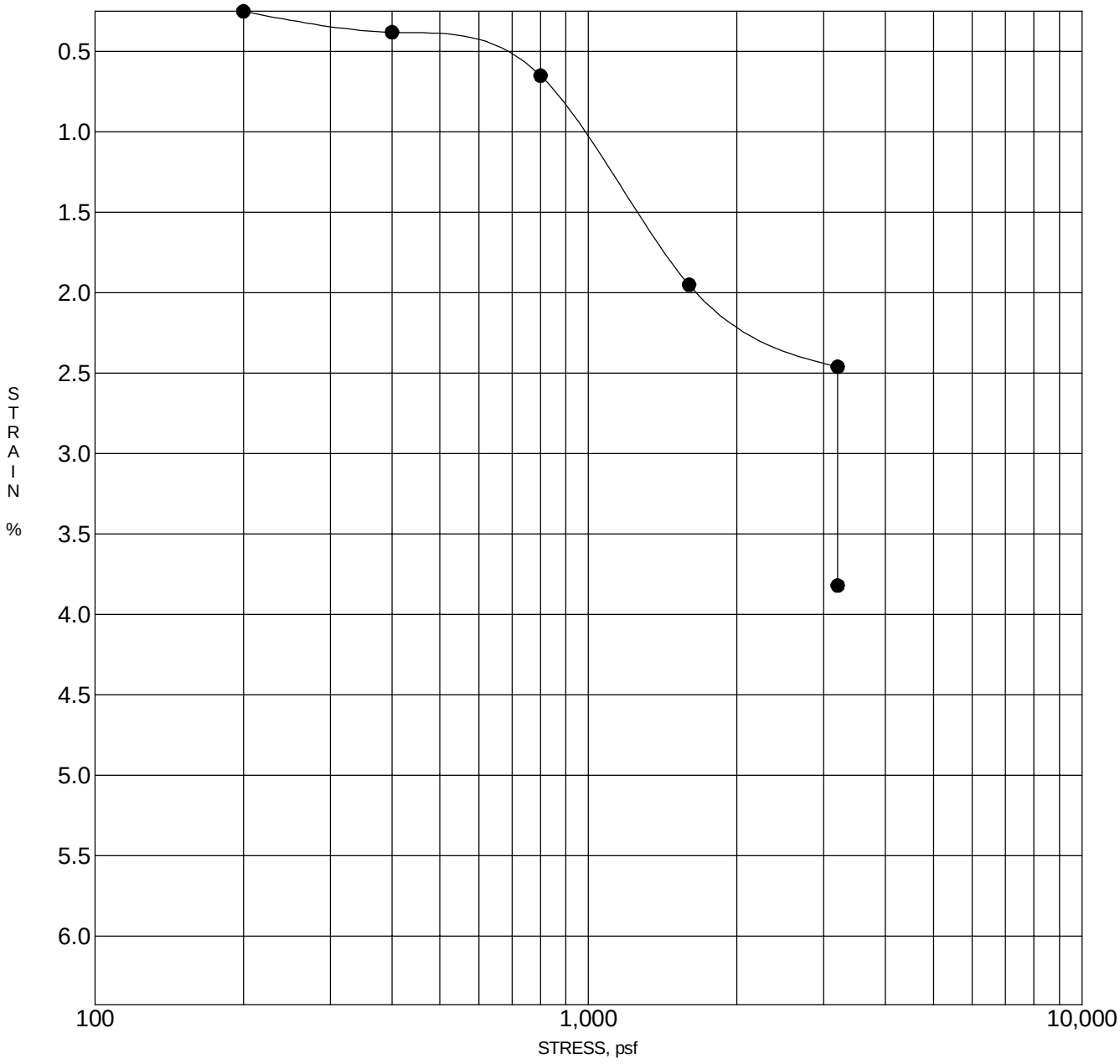
PROJECT: One Scottsdale - Lot 14 **PROJECT NO.: 221526SA**

LOCATION: NWC Henkel Way & 74th Street Alignment **DATE: 7/20/22**

BORING NO.: B- 3 **SAMPLE NO.: RS-1** **SAMPLE DEPTH: 1 to 2** **LABORATORY NO.:**

LIQUID LIMIT: 37 **PLASTIC LIMIT:** 19 **PLASTICITY INDEX:** 18

CLASSIFICATION: CL **ASTM SOIL DESCRIPTION:** SANDY LEAN CLAY



Sample inundated at end of test at 3200 psf

SPEEDIE AND ASSOCIATES

GEOTECH CONSOLIDATION 221526SA.GPJ GENGEO.GDT 8/24/22

CONSOLIDATION TEST

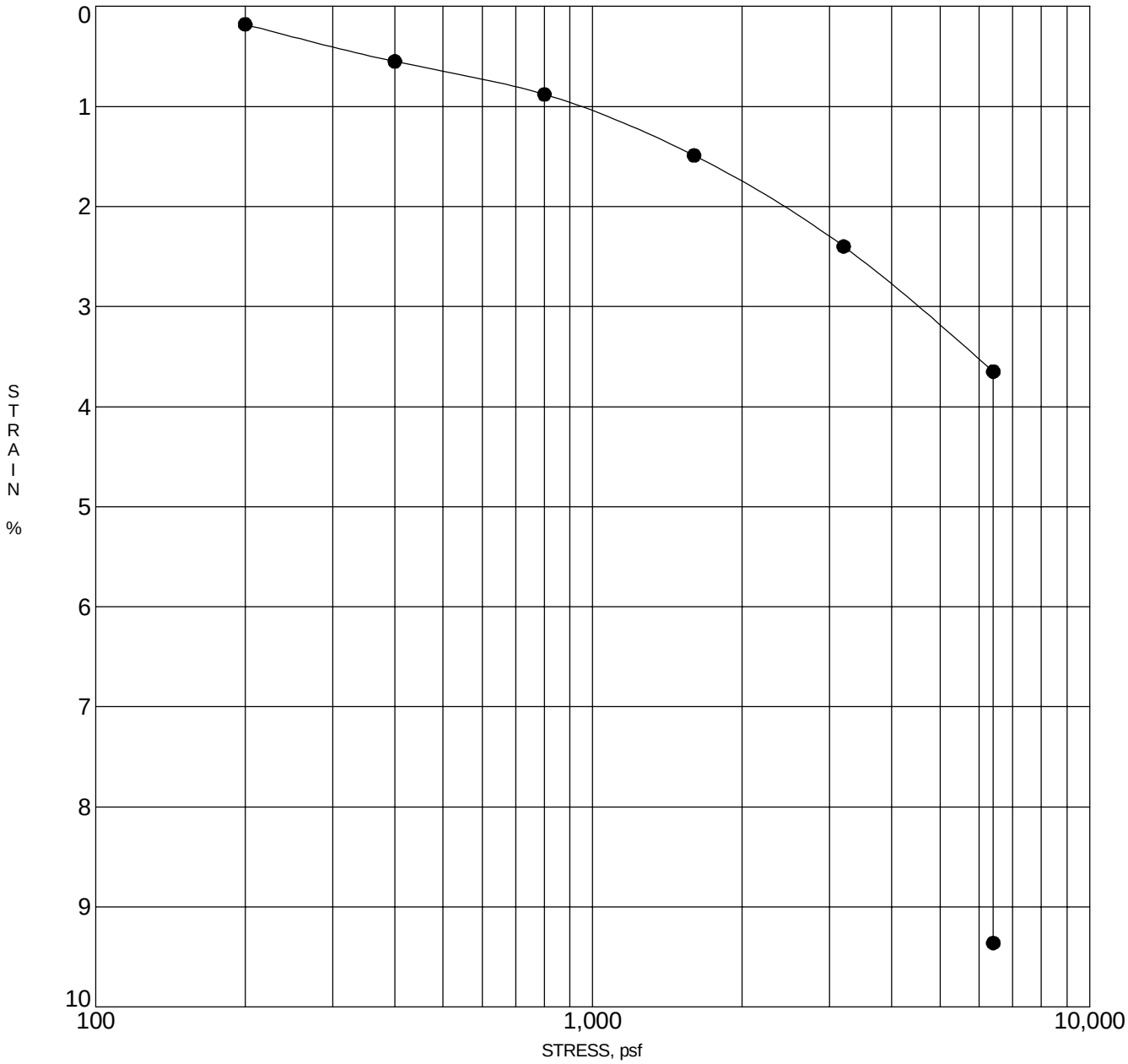
PROJECT: One Scottsdale - Lot 14 **PROJECT NO.: 221526SA**

LOCATION: NWC Henkel Way & 74th Street Alignment **DATE: 8/1/22**

BORING NO.: B- 7 **SAMPLE NO.: RS-5** **SAMPLE DEPTH: 20 to 21** **LABORATORY NO.:**

LIQUID LIMIT: 37 **PLASTIC LIMIT:** 24 **PLASTICITY INDEX:** 13

CLASSIFICATION: SC **ASTM SOIL DESCRIPTION:** CLAYEY SAND with GRAVEL



Sample inundated at end of test at 6400 psf

SPEEDIE AND ASSOCIATES

GEOTECH CONSOLIDATION 221526SA.GPJ GENGEO.GDT 8/24/22

MOISTURE-DENSITY RELATIONS

PROJECT: One Scottsdale - Lot 14 **PROJECT NO.: 221526SA**

LOCATION: NWC Henkel Way & 74th Street Alignment **DATE: 7/20/22**

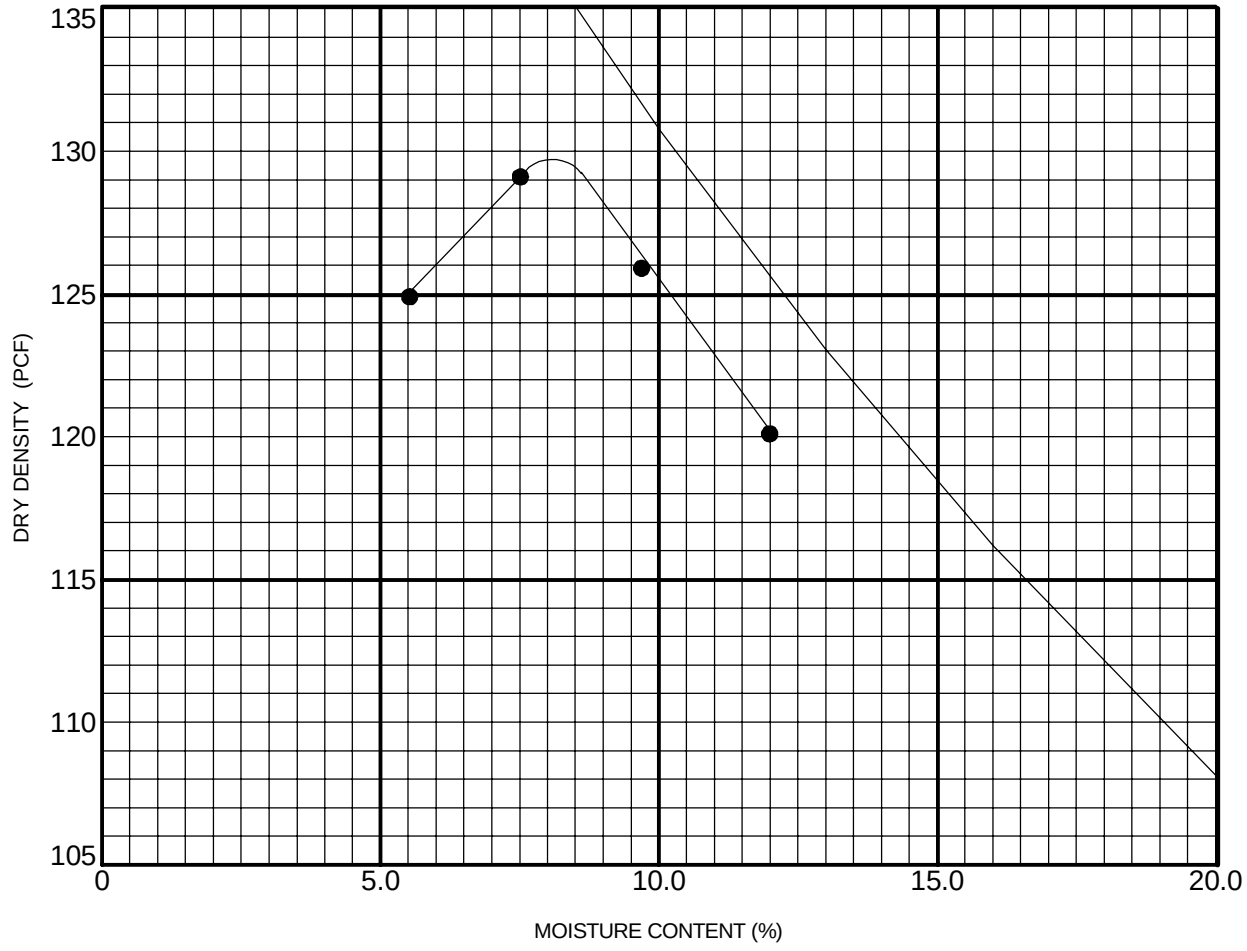
BORING NO.: B- 2 **SAMPLE NO.: BS-2** **SAMPLE DEPTH: 0 to 5** **LABORATORY NO.:**

METHOD OF COMPACTION: **D698A**

LIQUID LIMIT: **22** **PLASTIC LIMIT:** **18** **PLASTICITY INDEX:** **5**

CLASSIFICATION: **SC-SM** **ASTM SOIL DESCRIPTION:** **SILTY, CLAYEY SAND with GRAVEL**

MAXIMUM DRY DENSITY: **129.6 PCF** OPTIMUM MOISTURE CONTENT: **8.0%**



SPEEDIE AND ASSOCIATES

GEOTECH PROCTOR 221526SA.GPJ 8/24/22

SWELL TEST DATA

BORING or TEST PIT No.	SAMPLE DEPTH, ft	MAXIMUM DRY DENSITY (pcf)	OPTIMUM MOISTURE CONTENT (%)	REMOLDED DRY DENSITY (pcf)	INITIAL MOISTURE CONTENT (%)	PERCENT COMPACTION	FINAL MOISTURE CONTENT (%)	CONFINING LOAD (psf)	TOTAL SWELL (%)
B- 2, BS-2	5.0	129.6	8.0	123.4	6.0	95.2	11	100	0.8

One Scottsdale - Lot 14
NWC Henkel Way & 74th Street Alignment
Scottsdale, Arizona
Project No. 221526SA

SPEEDIE AND ASSOCIATES

SWELL TEST 221526SA.GPJ GENGEO.GDT 8/24/22

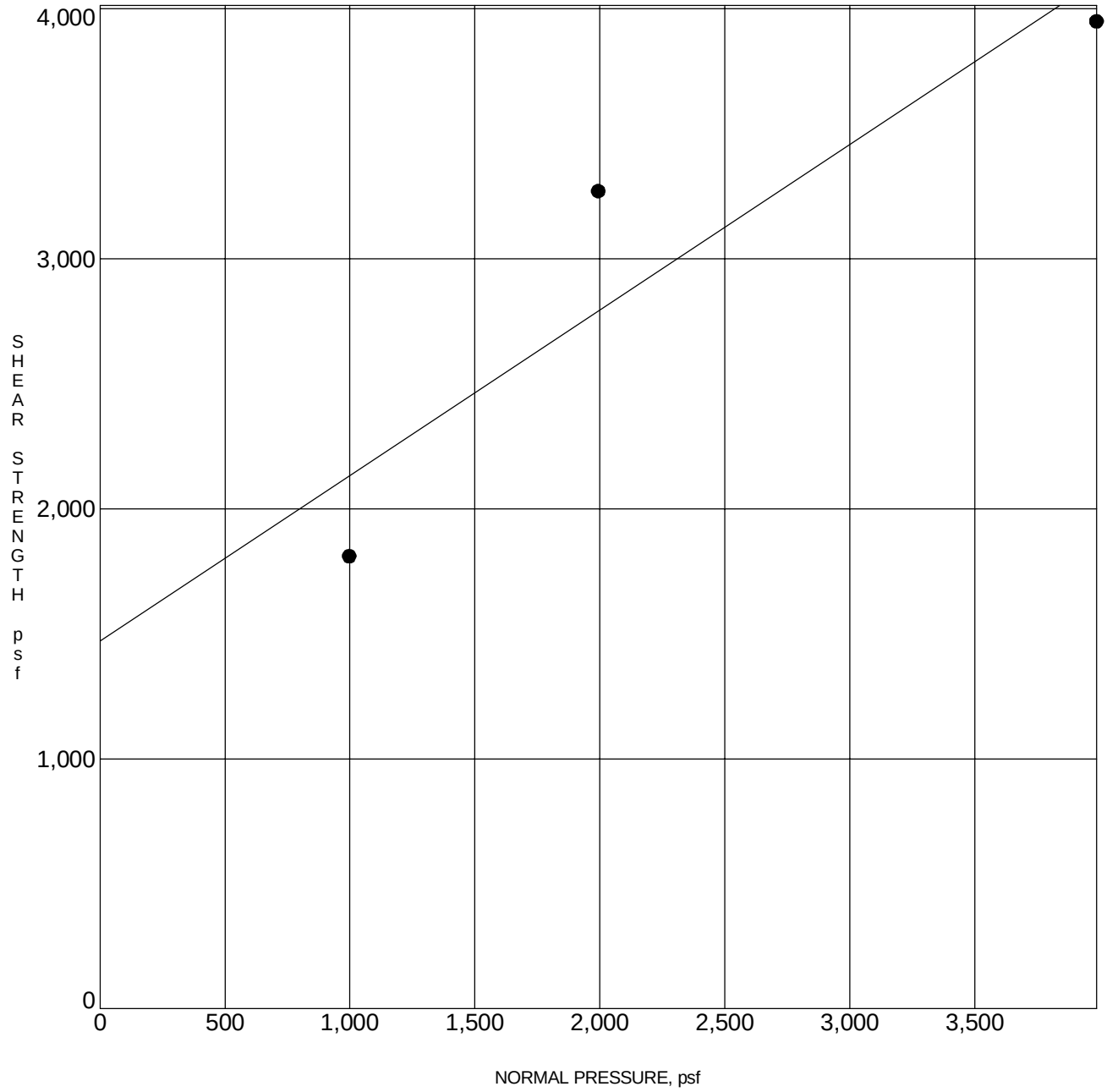
CORROSIVE TEST DATA

SOIL BORING or TEST PIT NUMBER	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE INTERVAL (ft)	PERCENT FINER #200 SIEVE	pH	RESISTIVITY (Ohm-Centimeters)	SULFATE (SO4) (ppm)	CHLORIDE (CL) (ppm)	SULFIDE (+ or -)	REDOX (millivolts)	UNIFIED SOIL CLASSIFICATION	SPECIMEN DESCRIPTION
B- 2	BS-2	BULK	0.0 - 5.0	27.6	7.8	1000	87.4	99	NT	NT	SC-SM	SILTY, CLAYEY SAND with GRAVEL

One Scottsdale - Lot 14
NWC Henkel Way & 74th Street Alignment
Scottsdale, Arizona
Project No. 221526SA

SPEEDIE AND ASSOCIATES

SHEAR TEST DIAGRAM



	Specimen Identification		Cohesion, psf	Friction Angle	DD	MC%
●	**B- 5**	**10.0**	**1470.0**	**34.0**	**96.5**	**4.6**

PROJECT **One Scottsdale - Lot 14 - NWC Henkel Way & 74th Street Alignment**

JOB NO. **221526SA**

DATE **7/20/22**

SPEEDIE AND ASSOCIATES

GEOTECH DIRECT SHEAR 221526SA.GPJ 8/24/22

APPENDIX TWO – LEGAL DESCRIPTION

Wood, Patel & Associates, Inc.
602.335.8500
www.woodpatel.com

LEGAL DESCRIPTION
One Scottsdale
Proposed Lot 14

A portion of Parcel 2 and Parcel 4, One Scottsdale, recorded in Book 971, page 6, Maricopa County Records (MCR), lying within Section 26, Township 4 North, Range 4 East, of the Gila and Salt River Meridian, Maricopa County, Arizona, more particularly described as follows:

COMMENCING at the southeast corner of Legacy Boulevard, recorded in Book 1034, page 5, MCR, from which the southeast corner of said Parcel 2, bears South 00°02'11" East (basis of bearing), a distance of 1306.46 feet;
THENCE along the east line of said Parcel 2, South 00°02'11" East, a distance of 1028.28 feet;
THENCE leaving said east line, South 89°57'49" West, a distance of 415.99 feet;
THENCE South 00°02'08" East, a distance of 310.52 feet, to a point of intersection with a non-tangent curve;
THENCE southerly along said non-tangent curve to the right, having a radius of 186.00 feet, concave westerly, whose radius bears South 89°57'49" West, through a central angle of 12°56'43", a distance of 42.02 feet, to the curves end;
THENCE South 12°54'32" West, a distance of 84.84 feet;
THENCE South 57°54'25" West, a distance of 11.31 feet;
THENCE North 77°05'41" West, a distance of 316.71 feet;
THENCE North 12°54'32" East, a distance of 90.11 feet, to a point of intersection with a non-tangent curve;
THENCE northerly along said non-tangent curve to the left, having a radius of 211.99 feet, concave westerly, whose radius bears North 77°05'26" West, through a central angle of 12°54'34", a distance of 47.76 feet, to a point of intersection with a non-tangent line;
THENCE North 00°00'03" East, a distance of 249.56 feet;
THENCE South 89°58'33" East, a distance of 306.87 feet;

THENCE South 33°01'29" East, a distance of 17.24 feet, to the **POINT OF BEGINNING**.

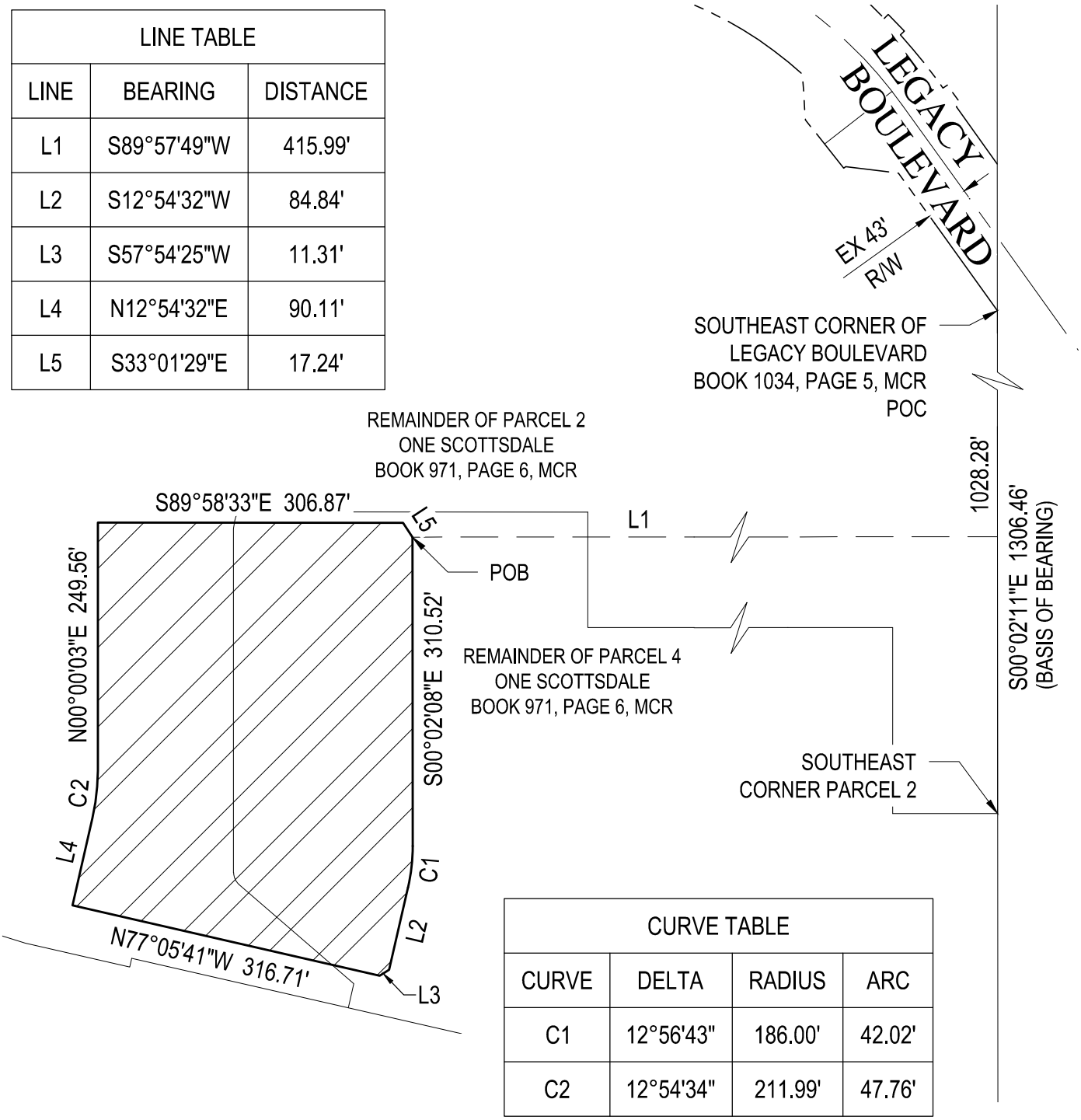
Containing 134,936 square feet or 3.0977 acres, more or less.

Subject to existing right-of-ways and easements.

This parcel description is based on the Final Plat of One Scottsdale, recorded in Book 971, page 6, MCR and other client provided information. This parcel description is located within an area surveyed by Wood, Patel & Associates, Inc. during the month of March, 2021. Any monumentation noted in this parcel description is within acceptable tolerance (as defined in Arizona Boundary Survey Minimum Standards dated 02/14/2002) of said positions based on said survey.

Y:\WP\Parcel Descriptions\2021\215234.82 One Scottsdale Proposed Lot 14 L02R01 06-17-22.docx

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S89°57'49"W	415.99'
L2	S12°54'32"W	84.84'
L3	S57°54'25"W	11.31'
L4	N12°54'32"E	90.11'
L5	S33°01'29"E	17.24'



CURVE TABLE			
CURVE	DELTA	RADIUS	ARC
C1	12°56'43"	186.00'	42.02'
C2	12°54'34"	211.99'	47.76'

WOOD PATEL

N

REGISTERED LAND SURVEYOR
CERTIFICATE NO. 23945
BRIAN J. DIEHL
06-17-22
Date Signed .....
ARIZONA, U.S.A.
EXPIRES 09-30-23

EXHIBIT "A"

ONE SCOTTSDALE
PROPOSED LOT 14
REVISED 06/17/2022
WP# 215234.82
PAGE 3 OF 3
NOT TO SCALE
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APPENDIX THREE – SEWER REPORT

3 engineering

planning civil engineering surveying

One Scottsdale

Sewer Design Report

3 engineering Job #: 5246

September 6, 2022

COS# 555-PA-2022

3engineering
planning civil engineering surveying

ONE SCOTTSDALE

SEWER DESIGN REPORT

Prepared for:

Augusta Development
34522 N. Scottsdale Road, Suite 120-638
Scottsdale, Arizona 85266
Contact: Bo Nickoloff
Phone: (651) 324-9492

Expires 12/31/2024
Matthew J. Mancini, P.E.

September 6, 2022

Submittal to:

City of Scottsdale
7447 E. Indian School Road, Suite 105
Scottsdale, Arizona 85251

Prepared by:

3 engineering, L.L.C.
6370 E. Thomas Road, Suite 200
Scottsdale, AZ 85251
Contact: Matthew J. Mancini, P.E.

Job Number 5246

3 engineering
planning civil engineering surveying

Table of Contents

Tables

Appendices

Exhibits

1. Introduction

The purpose of this sewer report is to present the existing and proposed sewer plan for the project, One Scottsdale (Site). It is our opinion the proposed sewer concept is in accordance with the City of Scottsdale's Design Standards & Policies Manual (Ref. 1).

The Site, is located in Section 26, Township 4 North, Range 4 East of the Gila and Salt River Meridian, Maricopa County, Arizona within the City of Scottsdale, Arizona. The Site is located North of Henkel Way, and East of Scottsdale Road, Scottsdale, Arizona 85255 (Portion of APN 215-05-004A & 215-05-006). The Site is bound on the south by Henkel Way and Henkel Building, the east by a vacant parcel, on the north by a vacant parcel, and on the west by a vacant parcel. See Appendix A for a Vicinity Map.

The Site is zoned PRC. The Site currently exists as a vacant un-developed parcel. The intent of this project is to construct an approximate 187,000 SF Senior Living Center, including new site utility, drainage, and circulatory infrastructure. The Site does contain a swimming pool, which will be included as part of the sewer demand.

2. Design Documentation

Manning's Equation was used to model and analyze the proposed sewer system for compliance with the City of Scottsdale design requirements. Demands were calculated using the City of Scottsdale Design Standards Manual for Water and Wastewater Systems. It is our opinion that this report is in accordance with the City of Scottsdale's Design Standards & Policies Manual.

3. Existing Conditions

The Site currently exists as a vacant un-developed parcel. See Appendix A for a vicinity map. The existing topography slopes from north to south at approximately 3.0% percent.

The Site is bound on the south by Henkel Way and Henkel Building and on the east, west, and north by vacant parcels. There is an existing 8" sewer line in Henkel Way, and a 12" sewer line that will be installed prior to the development of the site that being completed by the Master Developer (See Appendix C). These sewer lines will service the project. See Exhibit SE1 Sewer Plans for sewer line layouts.

4. Proposed Conditions

The project consists of a Senior Living Center, including a pool, new site utility, drainage, and circulatory infrastructure. The on-site sewer system will be private. The on-site sewer system will tie into the public system with 6-inch service taps into a manhole along the north, and an existing service along the south. Onsite sewer consists 6" private sewer lines that are designed at a minimum 1.0% slope Half of the Site's sewer demand is planned to drain south, with the other half draining north. See Exhibit SE1 for the proposed sewer design.

5. Computations

The following demand criteria were used in determining the system demands for the proposed site.

1. 120 Rooms
2. 180 gal/day per room (Multifamily)
3. Pool drain rate = 50gpm = 72,000 gal/day
4. Design Flow = Peak Flow = Q Peak = Q avg x 3.0

TABLE 1: ON-SITE SEWER DEMANDS	
Number of Rooms	120
Average Daily Demand	21,600 gpd
Design Flow Rate (peaking factor – use 3.0)	64,800
Pool Drain Rate	72,000 gpd
Total Rate	136,800 gpd

Average daily demand: 120 rooms x 180 gpd/room = 21,600 gpd
= 21,600 gpd/1440 mpd = 15 gpm

Peak Factor = 3.0

Design flow rate = 3.0 x 21,600 gpd = 64,800 gpd
= 64,800 gpd/1440 mpd = 45 gpm

Pool Drain Rate = 50 gpm = 72,000 gpd

Total Peak Sewer Demand = 136,800 gpd = 95 gpm

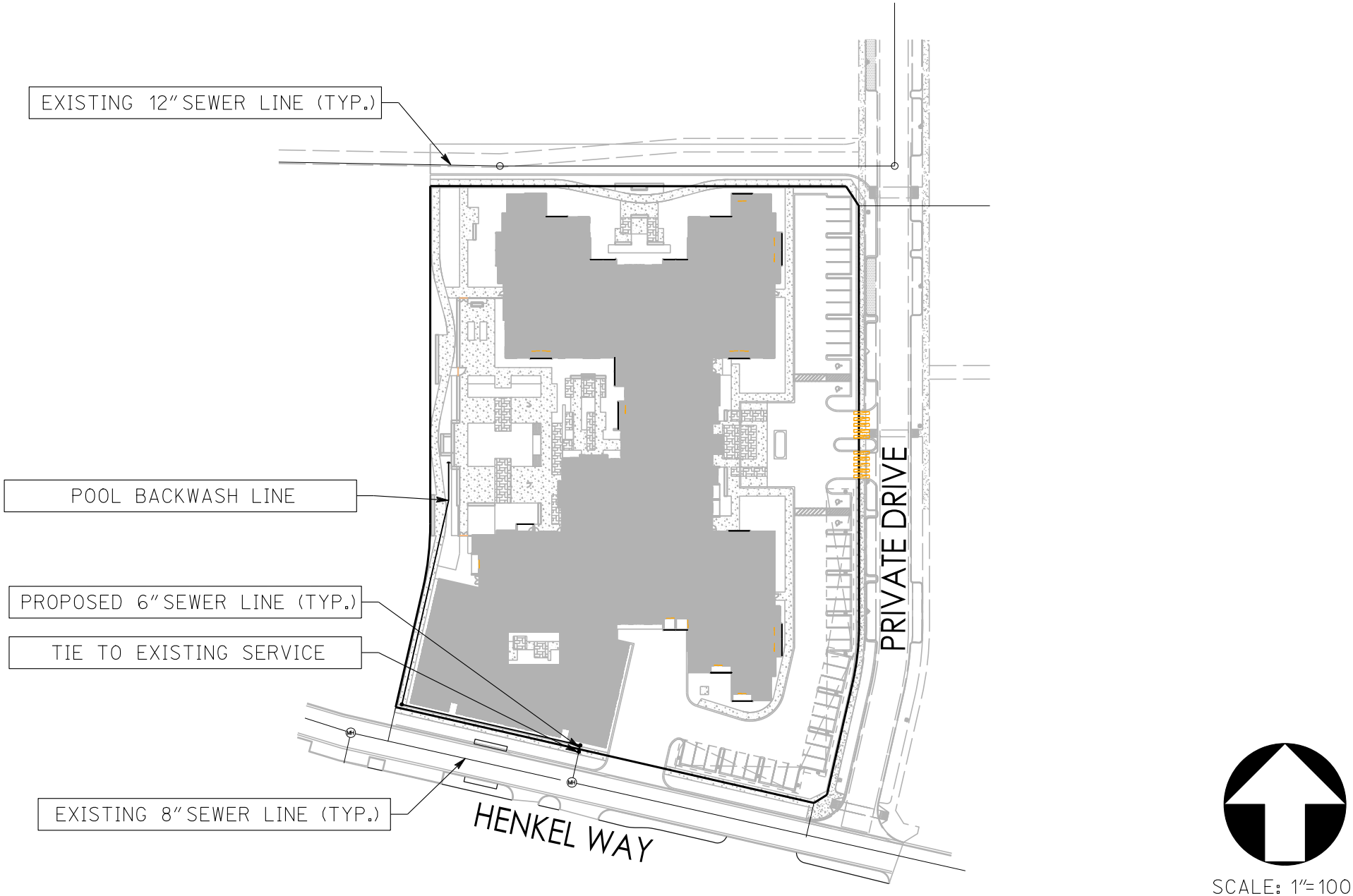
Manning's Equation was used to model and analyze the proposed 6" sewer system for compliance with the City of Scottsdale design requirements. Refer to Appendix B for loading of the sewer line and Exhibit SE1 for the sewer design.

6. ***Summary***

The Peak Flow for the proposed site is 136,800 gpd or 95 gpm. Based on the results from the sewer system analysis the onsite 6" system provides adequate capacity at 251.8 gpm, or 362,592 gpd.

EXHIBIT 1

Sewer Design Exhibit



SCALE: 1"=100'

SE1

ONE SCOTTSDALE
SCOTTSDALE AZ

SEWER EXHIBIT - SE1

3engineering
planning civil engineering surveying

3 ENGINEERING, LLC
6370 E. THOMAS ROAD SUITE 200 SCOTTSDALE, ARIZONA 85251
PHONE: (602) 334-4387 - FAX: (602) 490-3230
WWW.3ENGINEERING.COM

DATE:	PROJECT NO.
9/6/22	5246

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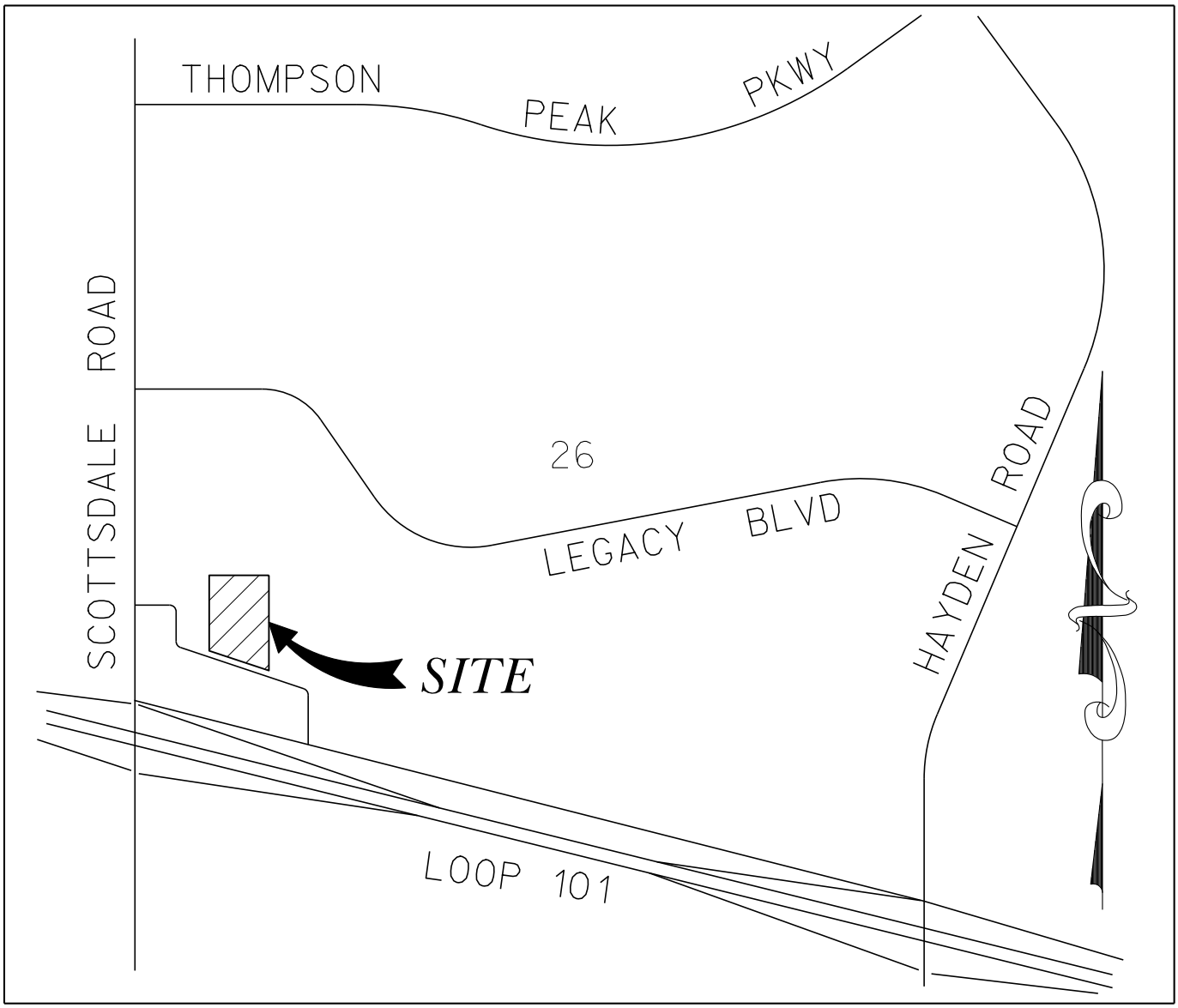
APPENDIX A

Vicinity Map



VICINITY MAP

N.T.S.

APPENDIX B

Manning's Calculations

Manning Pipe Flow Calculator

Manning Formula Uniform Pipe Flow at Given Slope and Depth

One Scottsdale

Sewer Capacity - 6"

Set units: m | mm | ft | in

Pipe diameter, d_0	6 in
Manning roughness, n ?	0.013
Pressure slope S_0	.01 rise/run
Percent of (or ratio to) full depth (100% or 1 if flowing full)	100 %

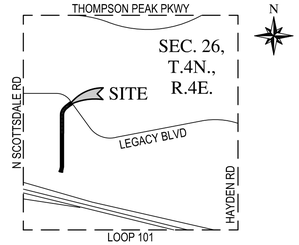
Results

Flow, Q	251.8086	gpm
Velocity, v	2.8575	ft/sec
Velocity head, h_v	0.1269	ft
Flow area	0.1964	ft^2
Wetted perimeter	18.8496	in
Hydraulic radius	0.1250	ft
Top width, T	0.0000	in
Froude number, F	0.00	
Shear stress (tractive force), tau	0.3122	psf

APPENDIX C

Excerpts from Sewer Plans by Wood Patel

ONE SCOTTSDALE
PRIVATE DRIVE PLAN
SCOTTSDALE, ARIZONA
A PORTION OF SECTION 26, TOWNSHIP 4 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



VICINITY MAP
N.T.S.

CITY OF SCOTTSDALE GENERAL NOTES

GENERAL NOTES FOR PUBLIC WORKS CONSTRUCTION

1. ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MAG UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE CITY'S SUPPLEMENTAL STANDARD DETAILS WILL GOVERN.
2. THE CITY ONLY APPROVES THE SCOPE, NOT THE DETAIL, OF ENGINEERING DESIGNS; THEREFORE, IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
3. THE APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF A RIGHT-OF-WAY PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN THIS TIME FRAME, THE PLANS MUST BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
4. A CITY INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY OF SCOTTSDALE. NOTIFY INSPECTION SERVICES 72 HOURS BEFORE BEGINNING WORK.
5. WHENEVER EXCAVATION IS NECESSARY, CALL THE BLUE STAKE CENTER, 811, TWO WORKING DAYS BEFORE EXCAVATION BEGINS.
6. PERMISSION TO WORK IN THE RIGHT-OF-WAY (PWR) PERMITS ARE REQUIRED FOR ALL WORKS WITHIN THE RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. COPIES OF ALL PERMITS MUST BE RETAINED ON-SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE SUSPENSION OF ALL WORK UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.

FIRE NOTE:

1. ALL PRIVATE STREETS AND DRIVES SHALL CONFORM TO THE FIRE DEPARTMENT GUIDELINES FOR EMERGENCY VEHICLE ACCESS.

SEWER NOTE:

1. THE ONSITE SEWER SYSTEM CONSTRUCTED BY THIS PLAN SET IS A PRIVATE SYSTEM AND WILL NOT BE MAINTAINED BY THE CITY OF SCOTTSDALE.
2. MAINTENANCE OF THE ONSITE SEWER SYSTEM IS THE RESPONSIBILITY OF THE OWNER.

WATER NOTE:

1. THE WATER SYSTEM SHOWN HEREIN HAS BEEN DESIGNED TO ADEQUATELY SUPPLY WATER IN SUFFICIENT QUANTITY AND PRESSURE TO MEET LOCAL FIRE REQUIREMENTS.

ENGINEER'S NOTES

PLEASE REFER TO SHEET C2 FOR ENGINEER'S NOTES.

EARTHWORK QUANTITIES (ESTIMATED)

RAW CUT:	4,288	CY
RAW FILL:	10,323	CY

QUANTITIES ARE ESTIMATED IN PLACE. NO PRECOMPACTION, SHRINK OR SWELL IS ASSUMED.

QUANTITIES

PLEASE REFER TO SHEET C2 FOR ESTIMATED QUANTITIES FOR WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS.

LEGEND

PLEASE REFER TO SHEET C2 FOR LEGEND AND LIST OF ABBREVIATIONS.

UTILITY NOTES

1. THESE PLANS HAVE BEEN SUBMITTED TO THE FOLLOWING UTILITY COMPANIES FOR APPROVAL WITHIN THEIR AREA OF INTEREST. THE SIZE AND LOCATIONS, AS SHOWN, OF THE GAS, TELEPHONE AND POWER LINES, AND CONNECTIONS AGREE WITH THE FURNISHED INFORMATION CONTAINED IN THE UTILITY COMPANY'S RECORDS. WHERE THE WORK TO BE DONE CONFLICTS WITH ANY OF THESE UTILITIES, THE CONFLICTS SHALL BE RESOLVED AS SPECIFIED IN THE SPECIAL PROVISIONS AND/OR AS OTHERWISE NOTED ON THESE PLANS. CONFLICTS ARISING DURING THE COURSE OF CONSTRUCTION FROM UNFORESEEN CIRCUMSTANCES SHALL BE REPORTED TO THE INTERESTED UTILITY COMPANY AND BE RESOLVED BY THEM AND THE DESIGN ENGINEER.
2. THE CITY WILL NOT PARTICIPATE IN THE COST OF CONSTRUCTION OR UTILITY RELOCATION.

NO CONFLICT SIGNATURE BLOCK

UTILITY	UTILITY COMPANY	NAME OF COMPANY REPRESENTATIVE	TELEPHONE NUMBER	DATE CONTACTED	DATE SIGNED
ELECTRIC	ARIZONA PUBLIC SERVICE	HAILEY PARKS	602-493-4401	02/23/2022	03/16/2022
TELEPHONE	CENTURYLINK	JEANETTE DEBOARD	480-221-7810	02/23/2022	04/08/2022
NATURAL GAS	SOUTHWEST GAS	-	-	02/23/2022	-
CABLE TV	COX COMMUNICATIONS	JACOB HORSMAN	-	02/23/2022	03/24/2022
OTHER	MCI	RICHARD YOUNG	602-615-8995	02/23/2022	03/24/2022

ENGINEER'S CERTIFICATION

I John Ritchie, AS THE ENGINEER OF RECORD FOR THIS DEVELOPMENT, HEREBY CERTIFY THAT ALL UTILITY COMPANIES LISTED ABOVE HAVE BEEN PROVIDED FINAL IMPROVEMENT PLANS FOR REVIEW, AND THAT ALL CONFLICTS IDENTIFIED BY THE UTILITIES HAVE BEEN RESOLVED. IN ADDITION, "NO CONFLICT" FORMS HAVE BEEN OBTAINED FROM EACH UTILITY COMPANY AND ARE INCLUDED IN THIS SUBMITTAL.

SIGNATURE — DATE 06/02/2022

ENGINEER'S CERTIFICATION

"THE ENGINEER OF RECORD ON THESE PLANS HAS RECEIVED A COPY OF THE APPROVED STIPULATIONS FOR THIS PROJECT AND HAS DESIGNED THESE PLANS IN CONFORMANCE WITH THE APPROVED STIPULATIONS."

ENGINEER SIGNATURE — DATE 06/02/2022

FEMA FIRM NOTE (ZONE X)

ACCORDING TO FEMA FLOOD INSURANCE RATE MAPPING, THE SUBJECT PROPERTY IS LOCATED IN 'OTHER FLOOD AREAS' "ZONE X" (ZONE X SHADED). ZONE X SHADED IS DESCRIBED AS: "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD."

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

MAP NUMBER	COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM	FIRM ZONE	BASE FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
04013C	045012	1320	L	10/16/2013		N/A

PARCEL DESCRIPTION

PARCEL ONE:

PARCEL 2 AND 4, OF ONE SCOTTSDALE, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA, RECORDED IN BOOK 971 OF MAPS, PAGE 6.

(NOTE: THE ABOVE DESCRIPTION INCLUDES LEGACY BOULEVARD DEDICATED IN MAP OF DEDICATION FILED JULY 13, 2009 IN BOOK 1034 PAGE 5, M.C.R.)

PARCEL TWO:

A NON-EXCLUSIVE EASEMENT FOR REASONABLE VEHICULAR AND PEDESTRIAN ACCESS, INGRESS AND EGRESS AS MORE PARTICULARLY DESCRIBED IN THAT CERTAIN "RECIPROCAL ACCESS EASEMENT AGREEMENT" RECORDED NOVEMBER 9, 2006 AS 2006-1482868 OF OFFICIAL RECORDS.

SOILS REPORT NOTE

A SOILS GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED ONE SCOTTSDALE MULTI-FAMILY. PROJECT NO. 210496SA BY SPEEDIE AND ASSOCIATES, INC. DATED JUNE 16, 2021

M.C.E.S.D. APPROVAL

ALL POTABLE WATERLINES AND FITTINGS SHALL HAVE A NSF-PW SEAL. ALL MATERIALS AND PRODUCTS USED IN THE POTABLE WATER SYSTEM SHALL CONFORM TO NSF STANDARDS 60 AND 61 IN ACCORDANCE WITH AAC R18-4-213. ALL MATERIALS SHALL BE LEAD FREE AS DEFINED IN AAC R18-5-504 AND R18-4-101.

BY: — 6/1/2022

MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPT. (DWR-22-00299 & WWR-22-00234) — DATE

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/ LAND SURVEYOR — DATE

SEAL

SHEET INDEX

BENCHMARK

THE VERTICAL DATUM FOR THIS SURVEY IS BASED ON A MARICOPA COUNTY HIGHWAY DEPARTMENT BRASS CAP IN HANDHOLE, SCOTTSDALE GPS POINT 2272, LOCATED AT THE INTERSECTION OF SCOTTSDALE ROAD AND THOMPSON PEAK PARKWAY, HAVING AN ELEVATION OF 1622.878, CITY OF SCOTTSDALE NAVD 88 DATUM.

BENCHMARK CERTIFICATION STATEMENT
I HEREBY CERTIFY THAT ALL ELEVATIONS REPRESENTED ON THIS PLAN ARE BASED ON NAVD 1988 AND MEET THE FEMA BENCHMARK MAITENANCE (BMM) CRITERIA.

RELATED PROJECTS

PROJECT NAME	CITY PROJECT #	WP PROJECT #
ONE SCOTTSDALE STREETLIGHTS RESIDENTIAL	238-22	215234

PUBLIC UTILITIES

WATER	CITY OF SCOTTSDALE
SEWER	CITY OF SCOTTSDALE
ELECTRIC	APS
TELEPHONE	CENTURYLINK
NATURAL GAS	SOUTHWEST GAS
CABLE TV	COX COMMUNICATIONS

OWNER / DEVELOPER

ONE SCOTTSDALE INVESTORS, LLC
6263 NORTH SCOTTSDALE ROAD, SUITE 330
SCOTTSDALE, ARIZONA 85250
PHONE: (480)-367-7000
CONTACT: MICHAEL BURKE

ENGINEER

WOOD, PATEL & ASSOCIATES, INC.
2051 WEST NORTHERN AVENUE, SUITE 100
PHOENIX, ARIZONA 85021
CONTACT:
PHONE: (602) 335-8500
FAX: (602) 335-8580

PROJECT SITE DATA

ASSESSOR PARCEL NUMBER(S):
215-05-004A
PROJECT SITE ADDRESS:
7395 E. LEGACY BOULEVARD
SCOTTSDALE, ARIZONA 85255
PROJECT SITE AREA(S):
NET AREA = 2.14 AC
DISTURBED AREA = 3.5± AC
ZONING:
PRC

CITY OF SCOTTSDALE CIVIL APPROVAL

REVIEW & RECOMMENDED APPROVAL BY:

PAVING		SIGNS & MARKINGS	
GRADING & DRAINAGE		PLANNING	
WATER & SEWER		FIRE	
RETAINING WALLS		SIGNALS & STREET	

ENGINEERING DEPARTMENT MANAGER — DATE

WOOD PATEL

Wood, Patel & Associates, Inc.
Civil Engineering
Water Resources
Land Survey
Construction Management
602.335.8500
www.woodpatel.com

ONE SCOTTSDALE
PRIVATE DRIVE PLAN
SCOTTSDALE, ARIZONA
COVER SHEET

REV	DESCRIPTION	DATE

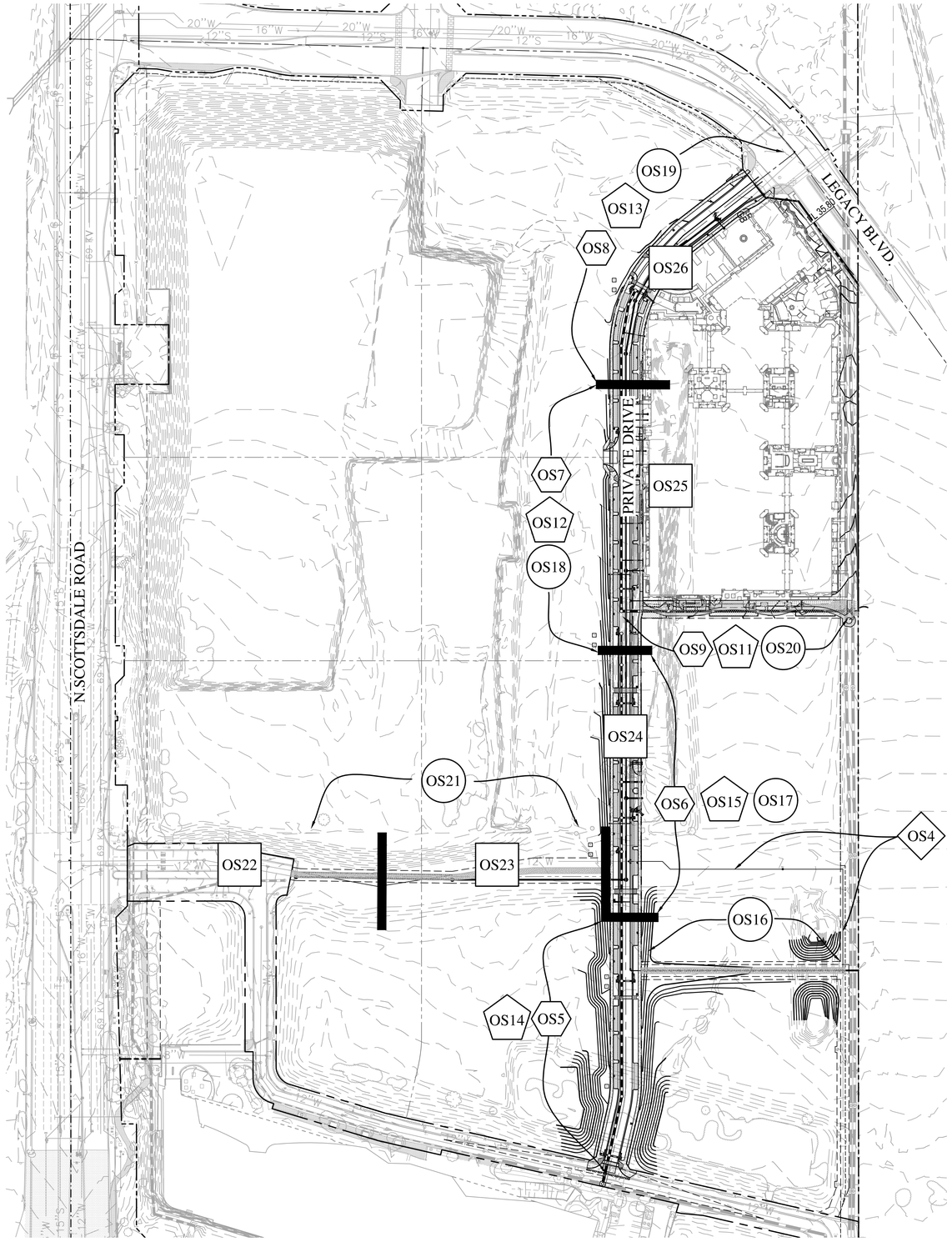
Registered Professional Engineer (Civil)
CERTIFICATE NO.
59956
JOHN
G. RITCHIE
Date Signed 6-30-22
EXPIRES 6-30-24

SCALE (HORIZ.)	N/A
SCALE (VERT.)	N/A
DATE	06/02/22
JOB NUMBER	215234
SHEET	OS1 OF 30

CASE #30-DR-2021 PLAN CHECK #2328-22

CHECKED BY: JGR DESIGNED BY: ZR DRAFTED BY: JRS

Z:\2021\215234\Dwg\Imp\Offsite Improvements\5234-001-CVOS.dwg



N

0 40 80

Horz. 1 in. = 40 ft.

INDEX MAP LEGEND

- OSX — DEMOLITION
- OSX — PAVING
- OSX — STORM DRAIN
- OSX — WATER
- OSX — SEWER

WOOD PATEL

Wood, Patel & Associates, Inc.

Civil Engineering
Water Resources
Land Survey
Construction Management

602.335.8500

www.woodpatel.com

ONE SCOTTSDALE

PRIVATE DRIVE PLAN

SCOTTSDALE, ARIZONA

INDEX MAP

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO.
59956
JOHN
G. RITCHIE
Date Signed 6-30-22
EXPIRES 6-30-24

SCALE (HORIZ.)	1" = 40'
SCALE (VERT.)	N/A
DATE	06/02/22
JOB NUMBER	215234
SHEET	OS3 OF 30

CASE #30-DR-2021 PLAN CHECK #2328-22

CHECKED BY: JGR DESIGNED BY: ZR DRAFTED BY: JRS

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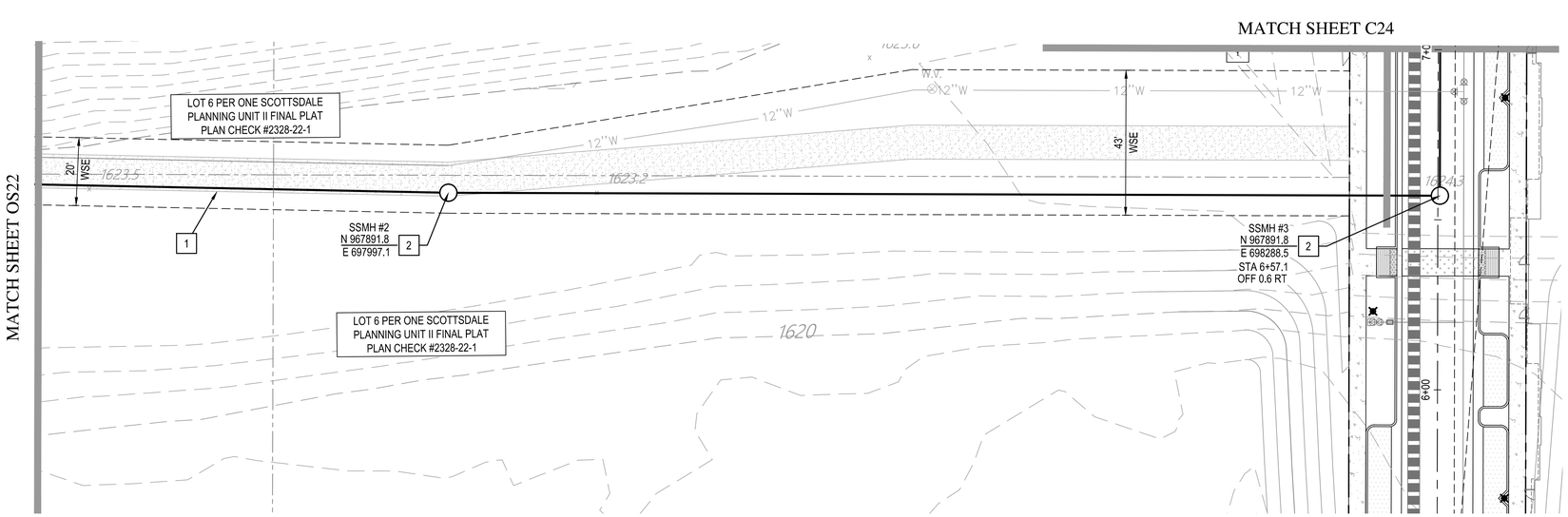


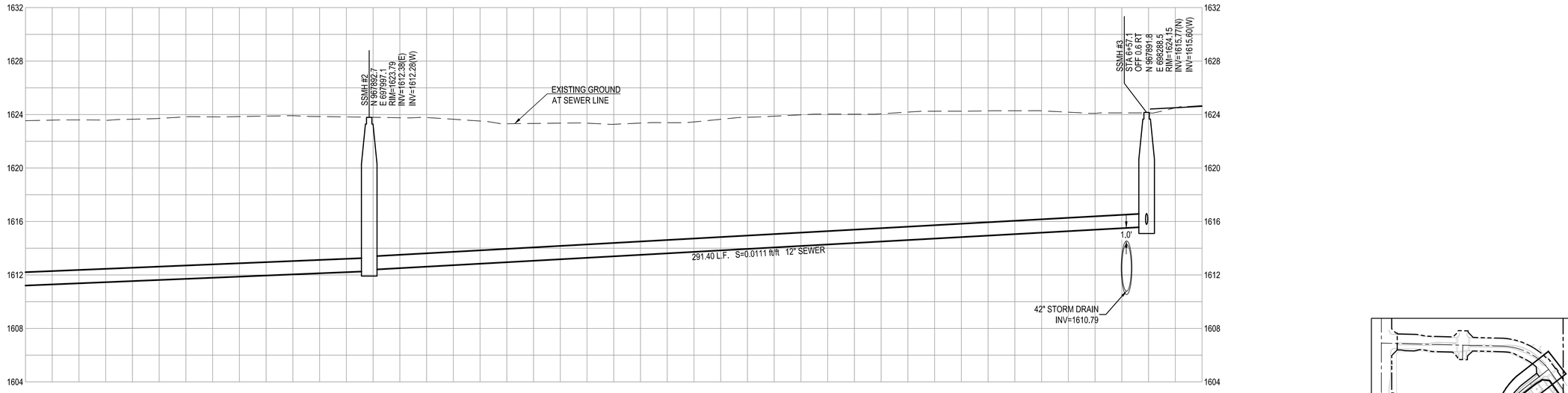
N

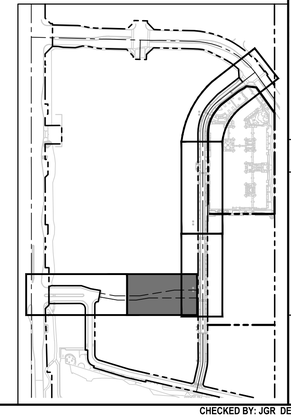
0 20 40

Horz. 1 in. = 20 ft.
Vert. 1 in. = 4 ft.

SEWER NOTES

1. INSTALL 12" PVC SDR35 SANITARY SEWER PIPE.
2. CONSTRUCT 5' DIA. SANITARY SEWER MANHOLE WITH NO STEPS PER M.A.G. STD. DTL. 420, WITH 30" WATERTIGHT MANHOLE FRAME & COVER PER M.A.G. STD. DTL. 424-2.





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Civil Engineering
Water Resources
Land Survey
Construction Management

602.335.8500

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ONE SCOTTSDALE

PRIVATE DRIVE PLAN

SCOTTSDALE, ARIZONA

SEWER PLAN

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
STATE OF ARIZONA
59956
JOHN
G. RITCHIE
Date Signed 6-30-22

EXPIRES 6-30-24

SCALE (HORIZ.)	1" = 20'
SCALE (VERT.)	1" = 4'
DATE	06/02/22
JOB NUMBER	215234
SHEET	OS23 OF 30

CASE #30-DR-2021 PLAN CHECK #2328-22

CHECKED BY: JGR DESIGNED BY: ZR DRAFTED BY: JRS

Z:\2021\215234\Dwg\Imp\Offsite Improvements\5234-021-025-SS-OS.dwg

Accepted For:
City of Scottsdale
Water Resources Department
9379 E. San Salvador
Scottsdale, Arizona

By: _____
Date: 3.3.2016

20-ZN-2002#3
2/12/2016

WOOD/PATEL
MISSION: CLIENT SERVICE™

ONE SCOTTSDALE
(Stacked 40s)

MASTER ON-SITE WASTEWATER PLAN

Revised January 28, 2016
Revised February 10, 2012
Revised April 16, 2009
August 25, 2005
WP# 154391

Submitted to:

City of Scottsdale
7447 East Indian School Road
Suite 205
Scottsdale, Arizona 85251

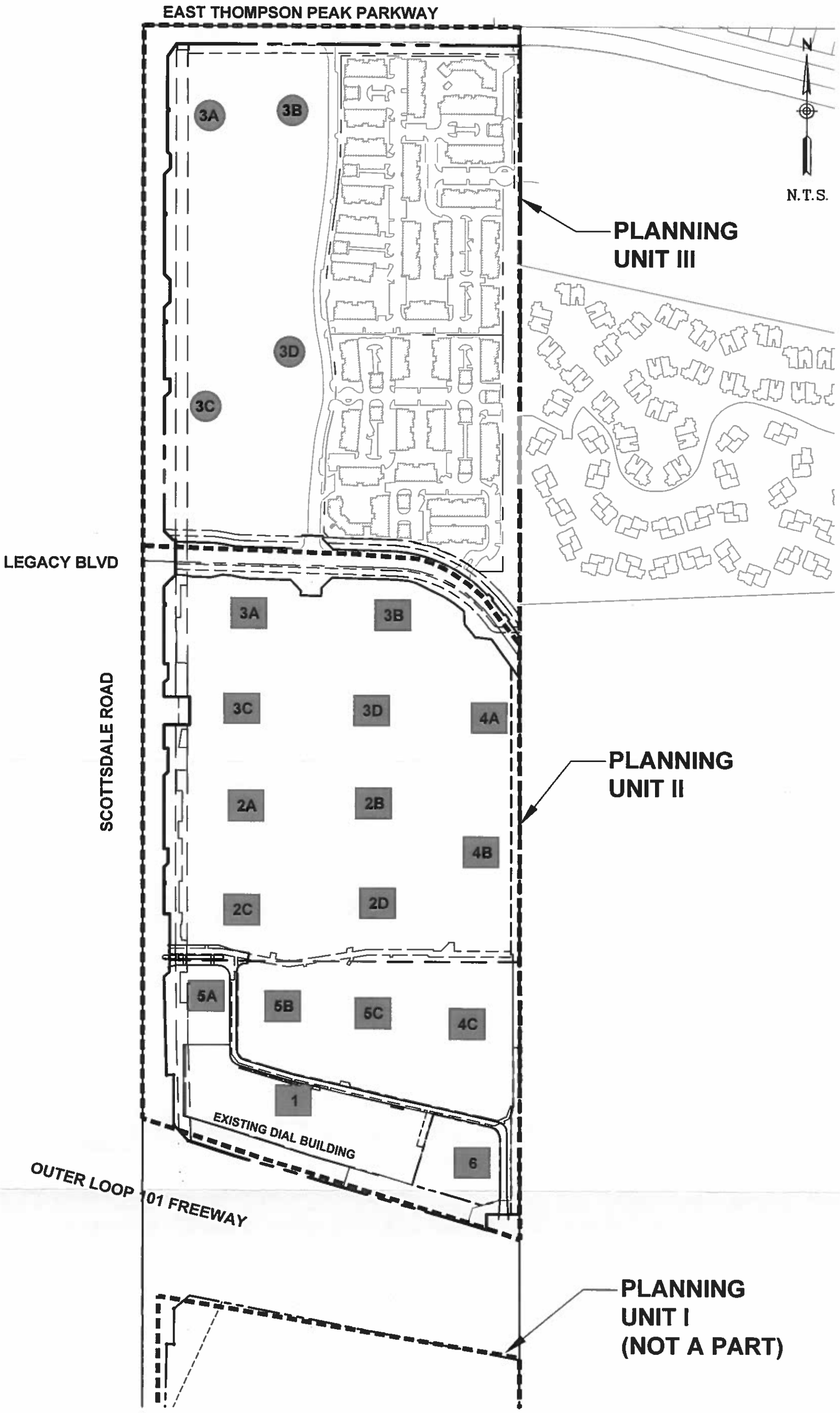
Prepared for:

One Scottsdale Holdings, LLC
7600 East Doubletree Ranch Road
Suite 300
Scottsdale, Arizona 85258
Phone: (480) 367-7000
Fax: (480) 367-9788
Contact: Mr. Michael Burke

Prepared by:

Wood, Patel & Associates, Inc.
2051 West Northern Avenue
Suite 100
Phoenix, Arizona 85021
Phone: (602) 335-8500
Fax: (602) 335-8580
Contact: Mr. Darin L. Moore, P.E.

WOOD/PATEL
MISSION: CLIENT SERVICE℠



3 PHASE AREA IN PLANNING UNIT III

1 PHASE AREA IN PLANNING UNIT II

PLANNING UNIT LINE

PLATE 2

JANUARY 2016

ONE SCOTTSDALE MODELED ON-SITE LAND USE PLAN

WOOD/PATEL ASSOCIATES
Civil Engineers
Hydrologists
Land Surveyors
Construction Managers
(602) 335-8500

PRELIMINARY
NOT FOR
CONSTRUCTION
OR RECORDING

EAST THOMPSON PEAK PARKWAY

N

400 0 200 400

1 inch = 400 ft.

EXISTING TDI SITE

EXISTING VILLAGE AT GRAYHAWK CONDOMINIUMS

SCOTTSDALE ROAD

LEGACY BOULEVARD

F1 (OUTFALL # 6)
E1 (OUTFALL # 5)
D1 (OUTFALL # 4)
C1 (OUTFALL # 3)
B1 (OUTFALL # 2)
A1 (OUTFALL # 1)

EX 12" 3/4/16

EX 8" 3/4/16

OUTER LOOP 101 FREEWAY

EXISTING DIAL BUILDING

PLANNING UNIT I
(NOT A PART OF
PROJECT)

LEGEND

- B9 — SEWER NODE
- SEWER MANHOLE
- 3 — PHASE AREA IN PLANNING UNIT III
- 1 — PHASE AREA IN PLANNING UNIT II
- PROPOSED 8" SEWER LINE
- EXISTING 8" SEWER LINE
- PROPOSED 10" SEWER LINE
- EXISTING 10" SEWER LINE
- PROPOSED 12" SEWER LINE
- EXISTING 12" SEWER LINE
- PROPOSED 15" SEWER LINE
- EXISTING 15" SEWER LINE

PLATE 3

JANUARY 2016

ONE SCOTTSDALE ON-SITE WASTEWATER COLLECTION SYSTEM

WOOD/PATEL ASSOCIATES
Civil Engineers
Hydrologists
Land Surveyors
Construction Managers
(602) 335-8500

APPENDIX FOUR – WATER REPORT

3 engineering

planning civil engineering surveying

One Scottsdale

Water Design Report

3 engineering Job #: 5246

September 6, 2022

COS# 555-PA-2022

3 engineering
planning civil engineering surveying

ONE SCOTTSDALE

WATER DESIGN REPORT

Prepared for:

Augusta Development
34522 N. Scottsdale Road, Suite 120-638
Scottsdale, Arizona 85266
Contact: Bo Nickoloff
Phone: (651) 324-9492

Expires 12/31/2024
Matthew J. Mancini, P.E.

September 6, 2022

Submittal to:

City of Scottsdale
7447 E. Indian School Road, Suite 105
Scottsdale, Arizona 85251

Prepared by:

3 engineering, L.L.C.
6370 E. Thomas Road, Suite 200
Scottsdale, Arizona 85251
Contact: Matthew J. Mancini, P.E.

Job Number 5246

3 engineering
planning civil engineering surveying

Table of Contents

Tables

Appendices

Exhibits

1. Introduction

The purpose of this water report is to present the existing and proposed water plan for the project, One Scottsdale (Site). It is our opinion the proposed water concept is in accordance with the City of Scottsdale's Design Standards & Policies Manual (Ref. 1).

The Site, is located in Section 26, Township 4 North, Range 4 East of the Gila and Salt River Meridian, Maricopa County, Arizona within the City of Scottsdale, Arizona. The Site is located North of Henkel Way, and East of Scottsdale Road, Scottsdale, Arizona 85255 (Portion of APN 215-05-004A & 215-05-006). The Site is bound on the south by Henkel Way and Henkel Building, the east by a vacant parcel, on the north by a vacant parcel, and on the west by a vacant parcel. See Appendix A for a Vicinity Map.

The Site is zoned PRC. The Site currently exists as a vacant un-developed parcel. The intent of this project is to construct an approximate 187,000 SF Senior Living Center, including new site utility, drainage, and circulatory infrastructure. The building will be sprinklered.

2. Design Documentation

Demands were calculated using the City of Scottsdale Design Standards and Policies Manual, which will serve as the basis of design for this project, and using Table 6.1-2 Average Day Demands. The site is in accordance with the City of Scottsdale design standards for water design.

3. Existing Conditions

The Site currently exists as a vacant un-developed parcel. See Appendix A for a vicinity map. The existing topography slopes from north to south at approximately 3.0% percent.

The Site is bound on the south by Henkel Way and Henkel Building and on the east, west, and north by vacant parcels. There is an existing 12" water line in Henkel Way. In addition, there is a proposed 12" waterline along the north side of the Site and at the Site's NE Corner that is being installed as part of the One Scottsdale Infrastructure. This is being installed by the Master Developer, will be installed prior to this development site, and is based on the Water Report completed by Wood Patel (Excerpts in Appendix C).. These two 12" water lines will be used to service the proposed project. See Exhibit WE1 for water design.

4. Proposed Conditions

The project consists of a Senior Living Center, including new site utility, drainage, and circulatory infrastructure. The on-site water system will be private and will connect to the existing infrastructure adjacent to the Site. The site proposes 6-inch fire line building connections. Fire Service will be provided by the City of Scottsdale, and is covered by the existing hydrants and proposed hydrants. See WE1 for the water design. The fire flow demand for the site is 1,937.50 gpm (7,750 gpm w/ 75% sprinkler reduction based on Section B105.1 of the International Fire Code at Type V-A construction for 187,000 SF), which is also greater than the City's 1,500 gpm fire flow requirement.

5. Computations

The following demand criteria was used in determining the system demands for the proposed site.

1. Domestic Demand (Resort Hotel) = 0.63 gallons/minute per room = 0.63 x 120 = 75.6 gal/min or 108,864 gal/day
2. Max Day Demand = 2.0 x 75.6 gpm = 151.20 gpm
3. Peak Hour Demand = 3.5 x 75.6 gpm = 264.60 gpm

TABLE 1: ON-SITE WATER DEMANDS	
Number of Rooms	120
Fire flow (7,750 gpm – 187,000 SF (largest building) x 0.75 for sprinkler = 1,937.50 gpm)	1,937.50 gpm
Max Day Demand	151.20 gpm
Fire flow + Max Day Demand	2,088.70 gpm

A fire flow test was completed on the existing hydrants adjacent to the site, and show, with safety factors, and flow rate of 3,740 gpm at 20-psi. See Appendix B for the fire flow test results

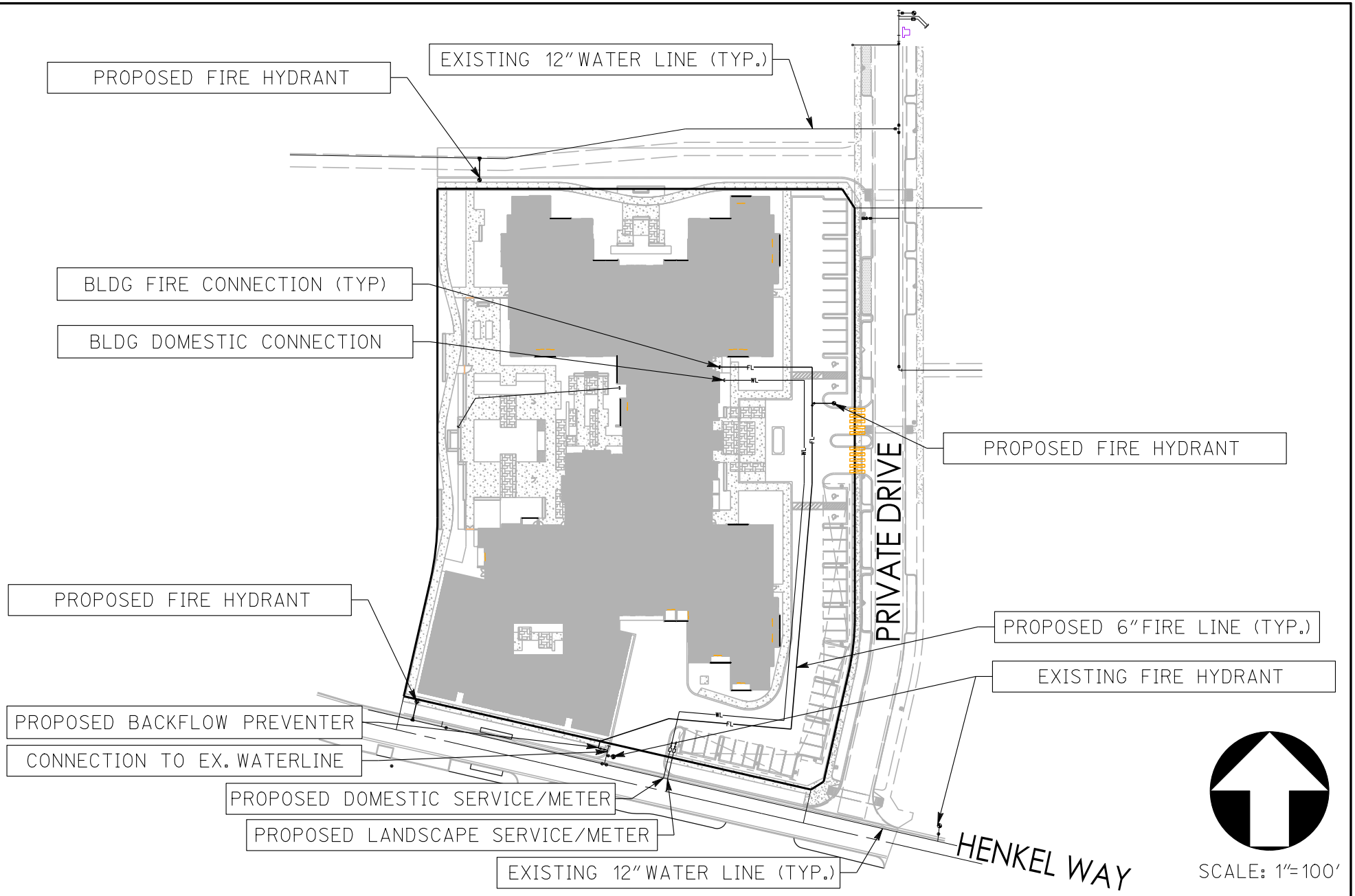
6. ***Summary***

The Max Day Plus Fire Flow demand for the proposed site is 2,088.70 gpm. Per the fire flow test, the existing system provides adequate flow and pressure for the anticipated project demands. Therefore, this site meets the requirements for fire flow.

3 engineering
planning civil engineering surveying

EXHIBIT 1

Water Design



SCALE: 1"=100'

WE1

ONE SCOTTSDALE
SCOTTSDALE AZ

WATER EXHIBIT - WE1

3engineering
planning civil engineering surveying

3 ENGINEERING, LLC
6370 E. THOMAS ROAD SUITE 200 SCOTTSDALE, ARIZONA 85251
PHONE: (602) 334-4387 - FAX: (602) 490-3230
WWW.3ENGINEERING.COM

DATE:	PROJECT NO.
8/19/22	5246

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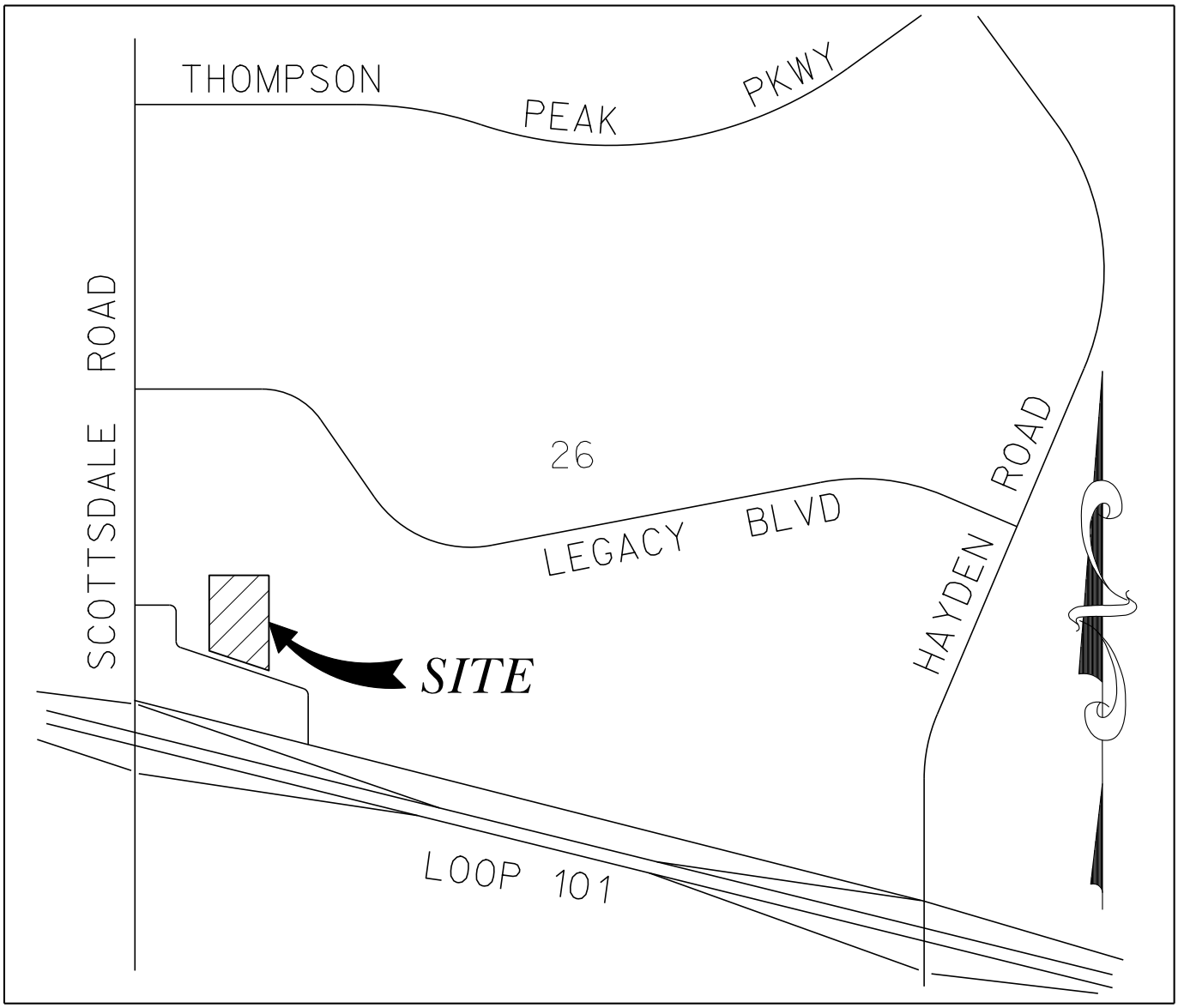
APPENDIX A

Vicinity Map



VICINITY MAP

N.T.S.

APPENDIX B

Fire Flow Test

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	101 & Scottsdale
Project Address:	101 & Scottsdale Road (NEC), Scottsdale, Arizona 85255
Client Project No.:	3E# 5246
Arizona Flow Testing Project No.:	22516
Flow Test Permit No.:	C69570
Date and time flow test conducted:	July 21, 2022 at 7:00 AM
Data is current and reliable until:	January 21, 2023
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Sonny Schreiner –City of Scottsdale-Inspector (602-819-7718)

Raw Test Data

Static Pressure: **54.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **43.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **27.0 PSI**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Pollard Diffuser
(Measured in inches)

Coefficient of Diffuser: 0.9

Flowing GPM: **2,233 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **4,107 GPM**

Data with 10% Safety Factor

Static Pressure: **48.6 PSI**
(Measured in pounds per square inch)

Residual Pressure: **37.6 PSI**
(Measured in pounds per square inch)

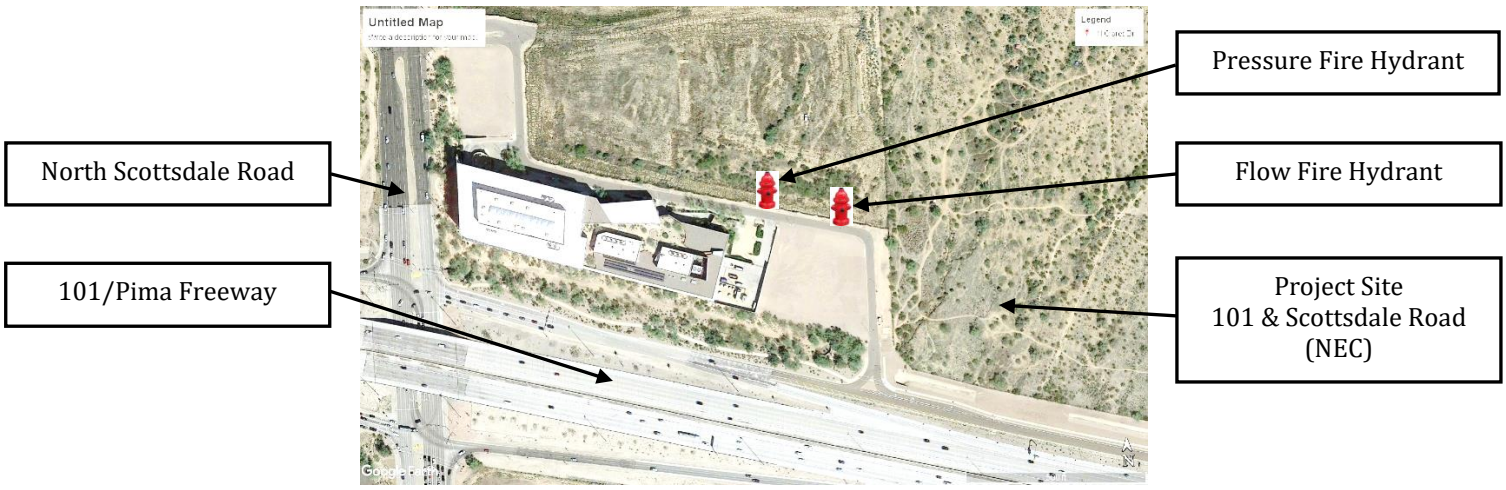
Distance between hydrants: Approx. 220 Feet

Main size: Not Provided

Flowing GPM: **2,233 GPM**

GPM @ 20 PSI**:** **3,740 GPM**

Flow Test Location **North**



APPENDIX C

Excerpt from Water Report by Wood Patel

Accepted For:
City of Scottsdale
Water Resources Department
9379 E. San Salvador
Scottsdale, Arizona

By: Doug Mann
Date: 3.3.2016

20-ZN-2002#3
2/12/2016

WOOD/PATEL
MISSION: CLIENT SERVICE™

ONE SCOTTSDALE
(Stacked 40s)

MASTER ON-SITE WATER PLAN

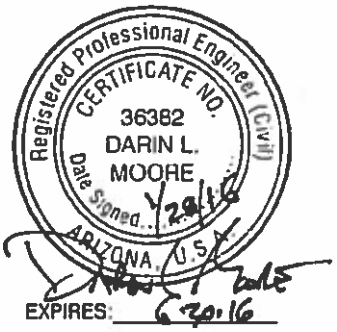
Revised January 28, 2016
Revised February 10, 2012
Revised April 16, 2009
August 25, 2005
WP# 154391

Submitted to:

City of Scottsdale
7447 East Indian School Road
Suite 205
Scottsdale, AZ 85251

Prepared for:

One Scottsdale Holdings, LLC
7600 East Doubletree Ranch Road
Suite 300
Scottsdale, AZ 85258
Phone: (480) 367-7000
Fax: (480) 367-9788
Contact: Mr. Michael Burke



Prepared by:

Wood, Patel & Associates, Inc.
2051 West Northern Avenue
Suite 100
Phoenix, AZ 85021
Phone: (602) 335-8500
Fax: (602) 335-8580
Contact: Mr. Darin L. Moore, P.E.

WOOD/PATEL
MISSION: CLIENT SERVICE℠

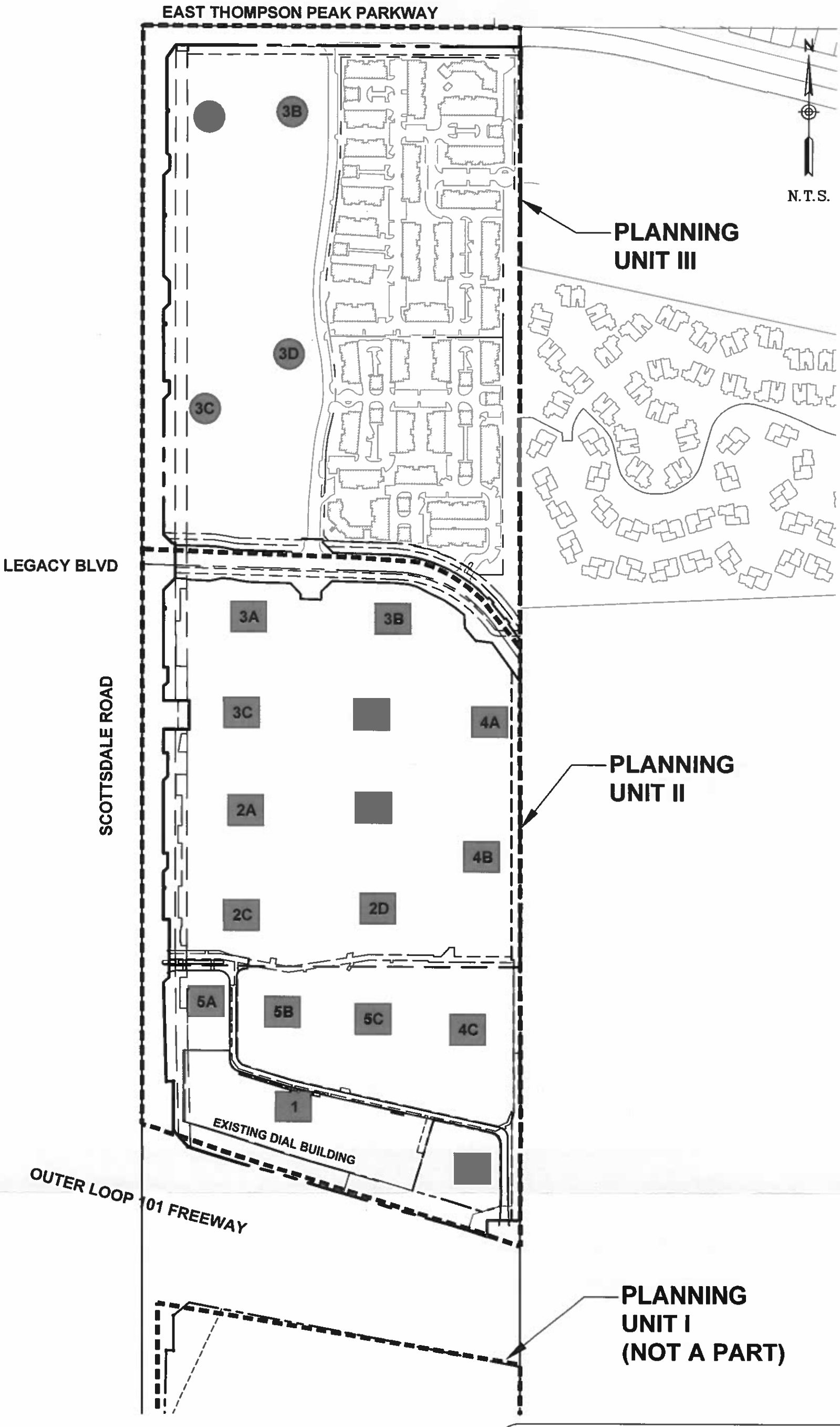


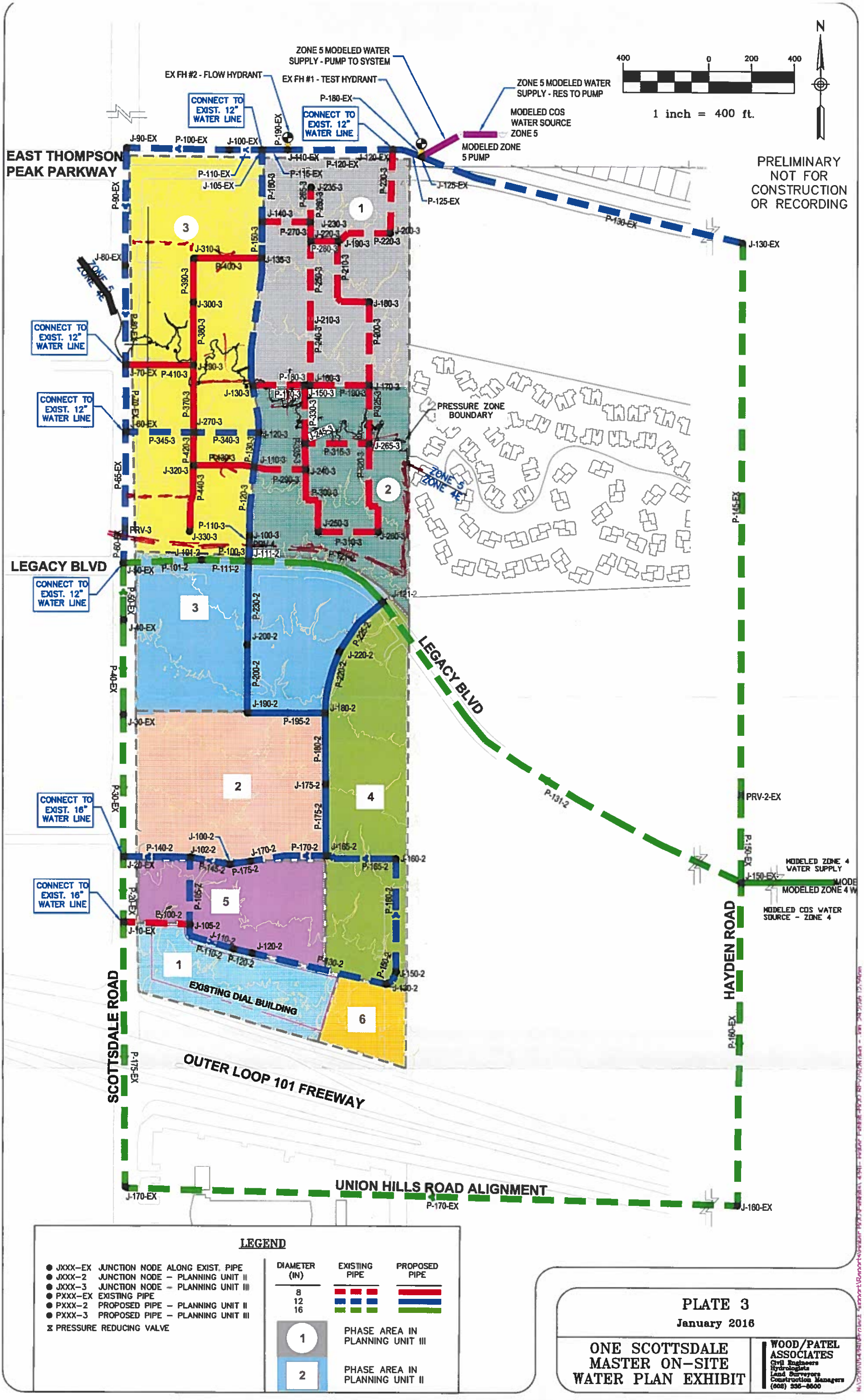
PLATE 2

JANUARY 2016

ONE SCOTTSDALE MODELED ON-SITE LAND USE PLAN

WOOD/PATEL ASSOCIATES
Civil Engineers
Hydrologists
Land Surveyors
Construction Managers
(602) 335-8500

N:\2015\15439\Project Support\Reports\Sewer RDI\Exhibits\4391 - Wastewater - Plate 2.dwg



LEGEND

- ● JXXX–EX JUNCTION NODE ALONG EXIST. PIPE
- ● JXXX–2 JUNCTION NODE – PLANNING UNIT II
- ● JXXX–3 JUNCTION NODE – PLANNING UNIT III
- ● PXXX–EX EXISTING PIPE
- ● PXXX–2 PROPOSED PIPE – PLANNING UNIT II
- ● PXXX–3 PROPOSED PIPE – PLANNING UNIT III
- ⧖ PRESSURE REDUCING VALVE

DIAMETER (IN)	EXISTING PIPE	PROPOSED PIPE
8		
12		
16		

1 — PHASE AREA IN PLANNING UNIT III

2 — PHASE AREA IN PLANNING UNIT II

PLATE 3

January 2016

ONE SCOTTSDALE MASTER ON–SITE WATER PLAN EXHIBIT

WOOD/PATEL ASSOCIATES
Civil Engineers
Hydrologists
Land Surveyors
Construction Managers
(602) 335–8500

APPENDIX FIVE – LIGHT FIXTURE CUTSHEETS

BL
Invue

DESCRIPTION

The Arbor Bollard from Invue brings architectural style to the pedestrian level. The Arbor Bollard can be used along with Arbor post top luminaires to provide a coordinated look sure to enhance any architectural setting. WaveStream™ LED optics present a pixilation free image replacing visible glare, while providing high levels of pavement illumination.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Top Housing: Low copper, cast aluminum top maintains strength and precision while providing for: rapid heat dissipation, vandal resistance and superior dayform. Lower Housing: Heavy 0.188" wall seamless extruded aluminum 4" O.D. shaft attaches to base via stainless steel fasteners. BASE: Rugged corrosion resistant extruded aluminum base mounts to foundation with three anchor bolts. Base features a pliable 1/2" thick neoprene leveling pad fitted to the bottom of base allows for sealing against water and dirt ingress regardless of minor deviations in grade of concrete pad.

Optics

General purpose symmetric distribution is available using WaveStream LED optical technology. The optical waveguide is manufactured using precision injection molded acrylic for the ultimate level of glare control and visual comfort. Offered standard in 4000K (+/- 275K) CCT, optional 3000K minimum 80 CRI.

Electrical

LED driver(s) are mounted to electrical tray for easy installation and maintenance for 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Offered standard with 0-10V dimming driver and Cooper Lighting Solutions' proprietary circuit module designed to withstand 10kV of transient line surge. Luminaire is suitable for ambient temperature applications from -30°C (-22°F) to 40°C (104°F) and IP66 rated against the ingress of dust and water.

Controls

The Arbor Bollard options are designed to be simple and cost-effective ASHRAE and California Title 24 compliant solutions. An integrated dimming and occupancy sensor is a standalone control option available in on/off (MSP) and bi-level dimming (MSP/DIM) operation. An optional handheld remote (ISHH) allows custom programming to suit all needs.

Mounting

Luminaire is mounted to 3 x 1/2" anchor bolts on a 2-3/8" bolt circle to with stand a 600 pound overturn moment. Order anchor bolts and installation template separately (ABAnchor).

Finish

Cooper Lighting Solutions utilizes premium ultra-weatherable TGIC based polyester powder coatings that are specifically formulated to withstand extended outdoor exposure. The powders are formulated exclusively for Cooper Lighting Solutions to serve functionally as well as decorative. Good film appearance combinded with excellent mechanical an exterior exposure qualities display greater than twice as much gloss retention. RAL and custom color matches available. Finish is compliant with ASTM B117 3000hr salt spray standard. Options to meet Buy American Act requirements

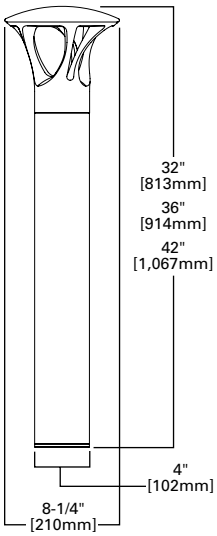
Warranty

Five-year warranty.

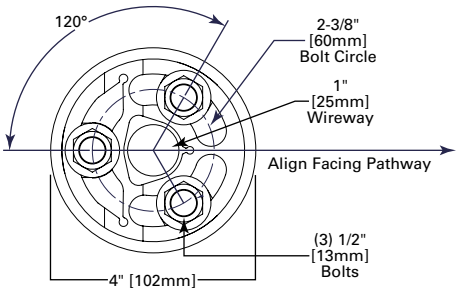
ABB ARBOR BOLLARD

PATHWAY LUMINAIRE

DIMENSIONS



BOLT CIRCLE ORIENTATION



CERTIFICATION DATA

UL/cUL Listed
IP66 Housing
ISO 9001
RoHS
Dark Sky Approved (3000K CCT and warmer only)

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V 50/60Hz
347V 60Hz, 480V 60Hz
-30°C Minimum Temperature
40°C Ambient Temperature Rating

Approximate Net Weight:
19.25 lbs. [8.75 kgs.]

COOPER Lighting Solutions

POWER AND LUMENS

Lumen/Distribution	B1 Symmetric	B2 Symmetric	B1 Asymmetric	B2 Asymmetric
Drive Current				
Power Wattage (Watts)	16W	32W	11W	23W
Input Current (mA) @ 120V	140	270	100	200
Input Current (mA) @ 208V	80	160	60	120
Input Current (mA) @ 240V	70	140	50	100
Input Current (mA) @ 277V	60	120	40	90
Power Wattage (Watts)	19W	37W	13W	27W
Input Current (mA) @ 347V	60	110	40	80
Input Current (mA) @ 480V	180	320	120	240
Optics				
Lumens	717	1,276	472	848
BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G2

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Calculated L70 (Hours)
25°C	>94%	>350,000
40°C	>93%	>250,000
50°C	>90%	>170,000

NOTE: Maintenance data applies to the highest drive current and represents the worst case at the highest wattage.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
50°C	0.97

COLOR TEMPERATURE

Color Temperature (CCT)	CRI (Nominal)	Multiplier (Hours)
4000	70	1.00
3000	80	0.87

ORDERING INFORMATION

Sample Number: ABB-B2-LED-42-D1-A-GM

Product Family	Lumen Output [1]	CRI / CCT	Source	Nominal Height	Voltage	Distribution	Color
ABB=Arbor Bollard **BAA-ABB**=Arbor Bollard Buy American Act Compliant [10]	**B1**=Mid Lumen Output **B2**=High Lumen Output	**8027**=80 CRI / 2700K CCT **8030**=80 CRI / 3000K CCT [6]	**LED**	**30**=32" **36**=36" **42**=42"	**D1**=Dimming Driver (120-277V) [2] **347**=347V [3] **480**=480V [3,4]	**A**=Asymmetric **S**=Symmetric	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **CC**=Custom Color [5]

Options (Add as Suffix)	**Accessories** (Order Separately) [11]
8030=80 CRI / 3000K CCT [6] **HA**=High Ambient [7] **MS/DIM-H8**=Motion Sensor for Dimming or Bi-Level Operation (Horizontal Detection) [8] **MS/DIM-2H8**=Twin Motion Sensors for 360° Dimming or Bi-Level Operation (Horizontal Detection) [8] **DIM**=0-10V Dimming Driver Leads Brought Out from Fixture	**ABAnchor**=Anchor Bolt Kit and Template [9] **ISHH**=Wireless Configuration Tool for Integrated Sensor (Occupancy Sensor Settings)

NOTES:
1. Standard 4000K CCT nominal 70 CRI.
2. Dimming driver standard.
3. Requires the use of a step down transformer.
4. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
5. RAL and custom color matching available. Consult your lighting representative at Cooper Lighting Solutions for more information.
6. Extended lead times apply. Use dedicated IES files when performing layouts.
7. 50°C ambient rating.
8. The ISHH configuration tool is required to adjust parameters including high and low dimming levels, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
9. Contact your customer service representative at Cooper Lighting Solutions for advance shipping.
10. Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
11. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

Project		**Catalog #**		**Type**	
Prepared by		**Notes**		**Date**	

HALO Commercial

HC6 | HM6 | 61 | 61PS

6-inch LED downlight and wall wash

Typical Applications

Office • Healthcare • Hospitality • Institutional • Mixed-Use/Retail

Interactive Menu

Product Certification

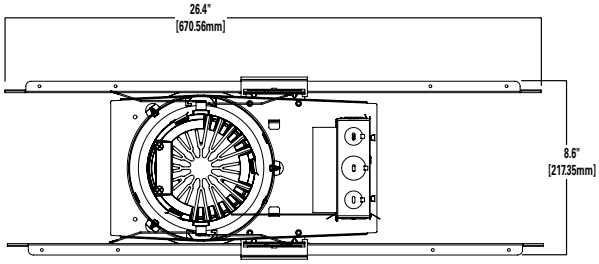
Product Features

WaveLinx

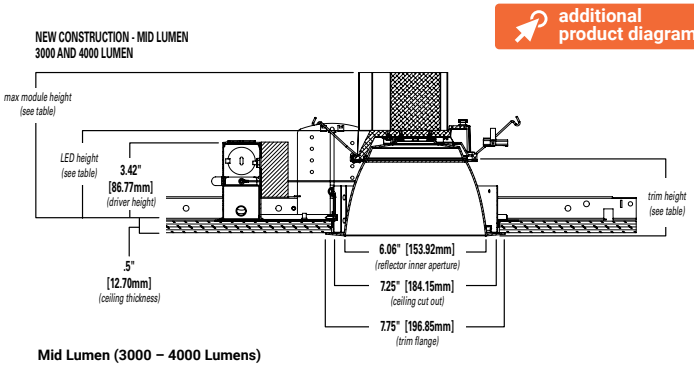
Top Product Features

- New construction/remodel series; 500 to 6,000 lumens
- Narrow, Medium and Wide distributions; Wall wash with rotatable linear spread lens
- 2700K, 3000K, 3500K, 4000K, 5000K CCT; 80 or 90 CRI
- Universal voltage 120V-277V; Standard 0-10V driver dims to 1%
- Mounting frame converts to remodel that installs from below the ceiling

Dimensional and Mounting Details



additional product diagrams



Mid Lumen (3000 – 4000 Lumens)

Distribution	Max. Module Height	Trim Height	LED Height
Narrow	6.6"	3.4"	3.8"
Medium	6.7"	3.5"	3.9"
Wide	6.5"	3.3"	3.7"
Baffle	6.5"	3.3"	3.7"

Order Information

Sample Number: HC620D010REM7 – HM60525835 - 61MDC

A complete luminaire consists of a housing frame, LED module, and reflector (ordered separately)

Mounting Frame	Lumens	Driver Options	Factory Installed Emergency & Connected Lighting Options	Accessories (Order & Install Separately)
HC6 = 6" new construction downlight housing **HC6CP** = 6" new construction housing, Chicago Plenum - CCEA compliant	**05** = 500 lm **07** = 750 lm **10** = 1000 lm **15** = 1500 lm **20** = 2000 lm **25** = 2500 lm **30** = 3000 lm **35** = 3500 lm **40** = 4000 lm **45** = 4500 lm (7) **50** = 5000 lm (7) **55** = 5500 lm (7) **60** = 6000 lm (7)	**D010**=UNV 120-277V, 50/60Hz, 0-10V 1%-100% dimming at 120-277V on 0-10V controls **Canada Option 500-5000 lumens:** **D010347** = 347VAC 50/60Hz 0-10V 1%-100% dimming. For 500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000lm models only (1) **Canada Option 5500-6000 lumens:** **D010X347** = step down transformer factory installed (with standard "D010" 120V-277V LED driver). For 5500, 6000lm models only (1)	**REM7** = 7 watt emergency battery pack with remote test / indicator light, use with D010 only (1) (2) (6) **REM14** = 14 watt emergency battery pack with remote test / indicator light, use with D010 only (1) (2) (6) **IEM7** = 7 watt emergency battery pack with integral test / indicator light, use with D010 only (1) (2) (6) **IEM14** = 14 watt emergency battery pack with integral test / indicator light, use with D010 only (1) (2) (6) **BOD7ST** = 7.5 watt Bodine self-test emergency battery pack with remote test / indicator light, use with D010 only (1) (2) (6) **WTA** = Factory WaveLinx Tilemount Sensor Kit (4) **WTK** = Factory WaveLinx Lite Commercial Tilemount Sensor Kit (5)	**HB128APK** = L channel hanger bar, 26", pair (replacement) **RMB22** = Adjustable wood joist mounting bars, pair, extend to 22" long **HSA6** = Slope Adapter for 6" Aperture Housings, Specify Slope (refer to instructions for installing housing and trim) **H347** = 347 to 120V step down transformer, 75VA **H347200** = 347 to 120V step down transformer, 200VA **WTA** = Field WaveLinx Tilemount Sensor Kit (4) **WTK** = Field WaveLinx Lite Commercial Tilemount Sensor Kit (5)
		DLV = Distributed Low Voltage driver 1%-100% dimming. DLV for use with DLVP system only. Refer to DLVP low-voltage power module and DLVP specifications for details. (1)	**REMV7** = 7 watt emergency battery pack with remote test / indicator light, use with DLV only (1) (2) (3) (6) **REMV14** = 14 watt emergency battery pack with remote test / indicator light, use with DLV only (1) (2) (3) (6) **IEMV7** = 7 watt emergency battery pack with integral test / indicator light, use with DLV only (1) (2) (3) (6) **IEMV14** = 14 watt emergency battery pack with integral test / indicator light, use with DLV only (1) (2) (3) (6)	
Notes	**Notes** (7) Marked Spacing: Center to Center of Adjacent Luminaires = 36" Center of Luminaire to Building Member = 18" Minimum overhead = 0.5	**Notes** (1) Not available with CP models	**Notes** (1) Not available with CP models (2) Not available with D010347 (347V models) (3) ULus for U.S. only (4) WTA = WaveLinx tile mount sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinx specifications) (5) WTK = WaveLinx Lite tile mount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx Lite specifications) (6) Emergency battery backup options are Non-IC only, and rated for a minimum starting temperature of 0°C	**Notes** (4) WTA = WaveLinx tile mount sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinx specifications) (5) WTK = WaveLinx Lite tile mount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx Lite specifications)

LED Module	Lumens	CRI/CCT	
HM6 = 6" LED Modules For use with HC6 - HC6CP New Construction housings only	**0525** = 500 - 2500 lumen **3040** = 3000-4000 lumen **4560** = 4500-6000 lumen	**827** = 80CRI, 2700K **830** = 80CRI, 3000K **835** = 80CRI, 3500K **840** = 80CRI, 4000K **850** = 80CRI, 5000K	**927** = 90CRI, 2700K **930** = 90CRI, 3000K **935** = 90CRI, 3500K **940** = 90CRI, 4000K **950** = 90CRI, 5000K
Notes	**Notes**	**Notes**	

Order Information

Reflector	Distribution	Finish	Flange	Accessories
61 = 6" conical reflector	**ND** = narrow 55° beam angle 0.97 SC **MD** = medium 60° beam angle 1.10 SC **WD** = wide 65° beam angle 1.28 SC **RWW** = rotatable wall wash with linear spread lens	**C** = Specular clear **H** = Semi-specular clear **W** = White	**Blank** = Polished flange standard with C & H reflectors **Blank** = White flange standard with W reflector **WF** = White flange option available with C & H reflectors	**61RWWPK** = Replacement part kit - wall wash lens insert - for use with 61RWW* only.
Notes	**Notes** (8) Values are nominal, with specular clear reflector, other finishes and field results may vary.	**Notes**	**Notes**	**Notes**

Baffle	Distribution	Finish	Flange	Accessories
61 = 6" baffle reflector	**WD** = wide 65° beam angle 1.28 SC (nominal) **RWW** = rotatable wall wash with linear spread lens	**BB** = Black baffle **WB** = White baffle	**Blank** = White flange standard with BB, & WB **BF** = Black flange option available with BB	**61RWWPK** = Replacement part kit - wall wash lens insert - for use with 61RWW* only.
Notes	**Notes** (8) Values are nominal, with specular clear reflector, other finishes and field results may vary.	**Notes**	**Notes**	**Notes**

IEM Reflector	Distribution	Finish	Flange	Integral Emergency
61 = 6" IEM reflector for integral emergency only	**ND** = narrow 55° beam angle 0.97 SC **MD** = medium 60° beam angle 1.10 SC **WD** = wide 65° beam angle 1.28 SC	**C** = Specular clear **H** = Semi-specular clear **W** = White	**Blank** = Polished flange standard with C & H reflectors **Blank** = White flange standard with W reflector **WF** = White flange option available with C & H reflectors	**IEM** = Reflector for use with integral emergency housings only. Provides access hole for integral emergency test switch.
Notes	**Notes** (8) Values are nominal, with specular clear reflector, other finishes and field results may vary.	**Notes**	**Notes**	**Notes**

IEM Baffle	Distribution	Finish	Flange	Integral Emergency
61 = 6" IEM baffle reflector for integral emergency only	**WD** = wide 65° beam angle 1.28 SC (nominal)	**BB** = Black baffle **WB** = White baffle	**Blank** = White flange standard with BB, & WB **BF** = Black flange option with BB	**IEM** = Reflector for use with integral emergency housings only. Provides access hole for integral emergency test switch.
Notes	**Notes** (8) Values are nominal, with specular clear reflector, other finishes and field results may vary.	**Notes**	**Notes**	**Notes**

Reflector	Distribution	Finish	Flange
61PS = 6" non-conductive polymer 'dead front' conical reflector (9)	**MD** = medium 60° beam angle 1.10 SC (nominal)	**W** = White	**Blank** = White flange standard with W reflector
Notes (9) 61PS is 1000-2000 lumens Non-IC rated. 500 & 750 lumens IC rated. 61PS is not for use over 2000lm in Non-IC or over 750lm in IC.	**Notes** (8) Values are nominal, with specular clear reflector, other finishes and field results may vary.	**Notes**	**Notes**

Product Specifications

Housing Frame
- Boat shaped galvanized steel plaster frame with adjustable plaster lip
- Accommodates 1/2" to 1-1/2" thick ceilings
- Installs in new construction or from below the finished ceiling (non-accessible) for remodeling (with mounting bars removed)
- Provided with two remodel clips to secure the frame to the ceiling

Universal Mounting Bracket
- Adjusts 2" vertically from above and below the ceiling
- Use with the included mounting bars or with 1/2" Electric Metallic Tube (EMT)
- Removable to facilitate remodeling installation from below the finished ceiling

Mounting Bars
- Captive pre-installed No Fuss™ mounting bars lock to T-grid with screwdriver or pliers
- Centering detents allow for consistent positioning of fixtures

LED Module
- Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation
- Available in 80 or 90 color rendering index (CRI)
- Color accuracy within 3 SDCM provides color consistency and uniformity
- 90 CRI option: R9>50 (refer to chromaticity information for details)
- Available in 2700K, 3000K, 3500K, 4000K and 5000K correlated color temperature (CCT)
- Lumen options include 500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 5500, 6000 lumens (nominal)
- Passive thermal management achieves 60,000 hours at 70% lumen maintenance (L70) in insulated ceilings (IC) and non-IC applications
- Integral diffuse lens provides visual shielding
- Integral connector allows quick connection to housing flex

Reflector
- Self-flanged aluminum reflectors available in narrow, medium or wide distribution patterns
- Medium distribution polymer non-conductive matte white reflector may be used to meet local codes for 'dead front' applications (500 & 750 lumen max. in IC and 2000 lumen max. in Non-IC)
- Wall wash reflector features a rotatable linear spread lens for alignment of vertical illumination
- Reflectors attach to LED module with three speed clamps
- Available in multiple painted or plated finishes

Reflector/Module Retention
- Reflector/module assembly is securely retained in the housing with two torsion springs

Driver
- Field-replaceable constant current driver provides low noise operation
- Universal 120-277VAC 50/60Hz input standard
- Continuous, 1% to 100% dimming with 0-10V analog control
- Optional low-voltage DC driver for use with Distributed Low Voltage Power (DLVP) system
- Distributed Low Voltage Power (DLVP) system combines power, lighting and controls with ease of installation (refer to DLVP Design Guide at www.cooperlighting.com for details)

Canada Options
- 347VAC 50/60Hz; 1% dimming on 0 -10V analog control, for 500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000 lumen models only
- 347V step down transformer factory installed with the standard "D010" 120V-277V, LED driver on 5500, 6000 lumen models only

Emergency Option
- Provides 90 minutes of standby lighting, meeting most life safety codes for egress lighting
- Available with integral or remote charge indicator and test switch
- Available Self-Test (self-diagnostic) with remote charge indicator and test switch

Connected Lighting System Options
Two WaveLinx connected systems to choose. Summary information provided below, refer to WaveLinx system specifications and application guides for details.

<u>WaveLinx System Tilemount Sensor Kit</u>
- WaveLinx WTA tile mount sensor kit offers daylight dimming, PIR motion sensing, scene and zone configuration, automatic commissioning; and optional RLTS - Real Time Location Services available.

<u>WaveLinx Lite System Tilemount Sensor Kit</u>
- WaveLinx Lite WTK tile mount sensor kit offers daylight dimming and PIR motion sensing, scene and grouping configuration.

<u>WaveLinx Tilemount Kits Application</u>
- The WTA and WTK tilemount kits include a control module mounted on the luminaire junction box via 1/2" knock-out, and a tilemount sensor on 54-inch whip; for ceiling installation by direct-mount spring clips or via mounting bracket in octagon ceiling boxes.
- The WTA and WTK tilemount kits may be ordered as factory installed on the luminaire, or ordered separately as a field installed accessory kit.

Junction Box
- Galvanized steel junction box
- 20 in^3 internal volume excluding voltage barrier
- 25 in^3 internal total volume
- Voltage barrier for 0-10V dimming wires (occupies one 1/2" pry-out space)
- Listed for eight #12 AWG (four in, four out) 90˚C conductors and feed-thru branch wiring
- Three 1/2" and two 3/4" trade size pry-outs available
- Three 4-port push wire nuts for mains voltage with 1-port for fixture connection

Compliance
- cULus Listed to UL 1598 / C22.2 No. 250.0, suitable for damp locations and wet locations in covered ceilings only
- Emergency options provided with UL Listed emergency drivers to UL 924 / C22.2 No. 141, suitable for indoor/damp locations
- IP20 - Above finished ceiling; IP65 - Below finished ceiling
- Non-Insulated ceiling (Non-IC) rated for 2500, 3000, 3500, 4000, 4500, 5000, 5500, 6000 lumen models (insulation must be kept 3" from top and sides)
- Insulated ceiling (IC) rated for 500, 750, 1000, 1500, 2000 lumen models and suitable for direct contact with air permeable insulation* (IC models are also suitable for Non-IC installations)
- Non-IC marked spacing required for 4500, 5000, 5500, 6000 lumen models
  - Marked Spacing Center to Center of Adjacent Luminaires = 36"
  - Center of Luminaire to Building Member = 18"
  - Minimum overhead = 0.5"
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions FCC CFR Title 47 Part 15 Class A at 120/277V
- Contains no mercury or lead and RoHS compliant
- Photometric testing completed in accordance of IES LM-79-08
- Lumen maintenance projection in accordance of IES LM-80-08 and TM-21-11
- 500, 750, 1,000, 1,500 and 2,000 lumen, 90 CRI, ICAT models may be used to comply with State of California Title 24 residential code, per JA8 certification standards
- May be used to comply with State of California Title 24 non-residential code as a dimmable LED luminaire
- ENERGY STAR® certified, reference certified light fixtures database

*Not for use in direct contact with spray foam insulation, consult NEMA LSD57-2013

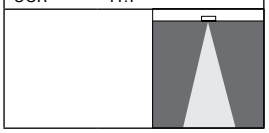
Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Photometric Data

View IES files

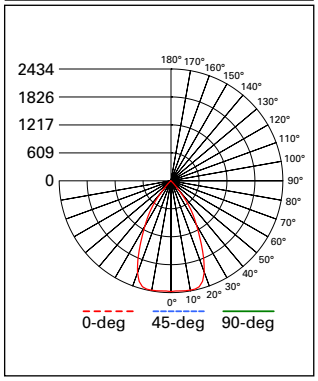
NARROW DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

NARROW (55° BEAM*)	
Test Number	P581878
Housing	HC620D010
Module	HM60525835
Reflector	61NDC
Lumens	2228 Lm
Efficacy	111.4 Lm/W
SC	0.93
UGR	11.7

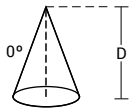


CANDLEPOWER DISTRIBUTION

Downlight



CONE OF LIGHT



MH	FC	L	W
5.5'	80.2	5	5
7'	49.5	6.4	6.4
8'	37.9	7.4	7.4
9'	30	8.2	8.2
10'	24.3	9.2	9.2
12'	16.9	11	11

CANDELA TABLE

Degrees Vertical	Candela
0	2427
5	2422
15	2405
25	1621
35	761
45	118
55	12
65	3
75	2
85	0
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	1636	73.4
0-40	2098	94.2
0-60	2223	99.8
0-90	2228	100
90-180	0	0
0-180	2228	100

LUMINANCE

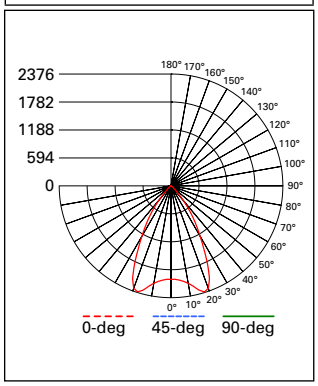
Average Candela Degrees	Average 0° Luminance
45	9187
55	1118
65	376
75	318
85	0

MEDIUM DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

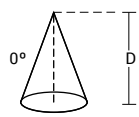
MEDIUM (60° BEAM*)	
Test Number	P581875
Housing	HC620D010
Module	HM60525835
Reflector	61MDC
Lumens	2307 Lm
Efficacy	115.3 Lm/W
SC	1.06
UGR	11.8

CANDLEPOWER DISTRIBUTION

Downlight



CONE OF LIGHT



MH	FC	L	W
5.5'	68.7	5.6	5.6
7'	42.4	7.2	7.2
8'	32.5	8.2	8.2
9'	25.7	9.4	9.4
10'	20.8	10.4	10.4
12'	14.4	12.4	12.4

CANDELA TABLE

Degrees Vertical	Candela
0	1998
5	2022
15	2307
25	1842
35	796
45	126
55	15
65	4
75	2
85	0
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	1671	72.4
0-40	2163	93.8
0-60	2301	99.7
0-90	2307	100
90-180	0	0
0-180	2307	100

LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	9753
55	1395
65	571
75	318
85	0

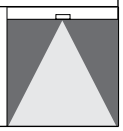
Note: Refer to IES files for more product data.

Photometric Data

View IES files

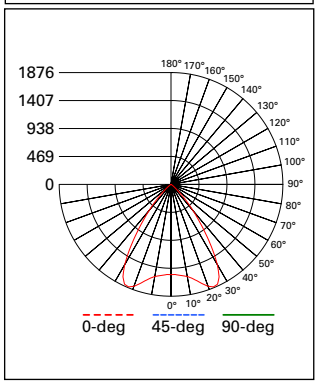
WIDE DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

WIDE (65° BEAM*)	
Test Number	P581885
Housing	HC620D010
Module	HM60525835
Reflector	61WDC
Lumens	2359 Lm
Efficacy	118 Lm/W
SC	1.28
UGR	11.6

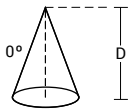


CANDLEPOWER DISTRIBUTION

Downlight



CONE OF LIGHT



MH	FC	L	W
5.5'	50.5	7	7
7'	31.2	8.8	8.8
8'	23.9	10.2	10.2
9'	18.8	11.4	11.4
10'	15.3	12.8	12.8
12'	10.6	15.4	15.4

CANDELA TABLE

Degrees Vertical	Candela
0	1526
5	1540
15	1685
25	1861
35	1027
45	252
55	32
65	6
75	2
85	0
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	1461	61.9
0-40	2105	89.2
0-60	2351	99.6
0-90	2359	100
90-180	0	0
0-180	2359	100

LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	19506
55	3078
65	765
75	318
85	0

*Value are nominal with specular clear reflectors, other finishes and field results may vary.
SC = Spacing Criteria
UGR = Unified Glare Rating

Photometric Multipliers (Nominal Lumen Values)

500 Lumen	750 Lumen	1000 Lumen	1500 Lumen	2000 Lumen	2500 Lumen	3000 Lumen	3500 Lumen
0.33	0.44	0.54	0.74	1.00	1.12	1.46	1.76

4000 Lumen	4500 Lumen	5000 Lumen	5500 Lumen	6000 Lumen
1.81	2.17	2.28	2.38	2.65

Multipliers for relative lumen values with other series models.

Color Finish Multipliers

Finish code	C	H	W/WB	BB
Finish	Specular Clear	Semi-Specular	Matte White White Baffle	Black Baffle
Multiplier	1.00	0.92	0.91	0.82

Multipliers for relative lumen values with other color finishes.

CCT Multipliers – 80CRI

2700K	3000K	3500K	4000K	5000K
0.92	0.98	1.00	1.03	1.03

Multipliers for relative lumen values with other series color temperatures.

CCT Multipliers – 90CRI

2700K	3000K	3500K	4000K	5000K
0.77	0.84	0.89	0.90	0.90

Multipliers for relative lumen values with other series color temperatures.

Note: Refer to IES files for more product data.

Photometric Data

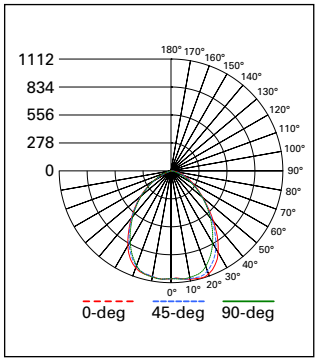
View IES files

WALL WASH DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

WALL WASH	
Test Number	P581882
Housing	HC620D010
Module	HM60525835
Reflector	61RWWC
Lumens	2179 Lm
Efficacy	109 Lm/W
SC	1.15

CANDLEPOWER DISTRIBUTION

Downlight



CANDELA TABLE	
Degrees Vertical	Candela
0	1080
5	1081
15	1112
25	1034
35	800
45	514
55	319
65	184
75	85
85	12
90	0

ZONAL LUMEN SUMMARY		
Zone	Lumens	% Fixture
0-30	849	39
0-40	1313	60.2
0-60	1978	90.8
0-90	2179	100
90-180	0	0
0-180	2179	100

LUMINANCE	
Average Candela Degrees	Average 0° Luminance
45	39810
55	30479
65	23907
75	17983
85	7359

SC = Spacing Criteria, nominal for specular clear reflector, other finishes and field results may vary.

SINGLE UNIT FOOTCANDLES

	2.5' from wall (distance from fixture along wall)						
1	19.3	13.8	6.1	2.2	0.7	0.3	0.1
2	29.1	22.6	12.3	5.7	2.5	1.2	0.6
3	27.6	22.5	13.8	7.3	3.7	1.9	1
4	21	18.2	12.4	7.4	4.2	2.4	1.4
5	14.4	13.1	9.9	6.6	4.1	2.5	1.6
6	9.7	9.1	7.5	5.5	3.7	2.5	1.6
7	6.7	6.4	5.5	4.3	3.2	2.2	1.5
8	4.7	4.6	4.1	3.4	2.7	2	1.4
9	3.4	3.3	3.1	2.7	2.2	1.7	1.3
10	2.5	2.5	2.4	2.1	1.8	1.4	1.1

MULTIPLE UNIT FOOTCANDLES

	2.5' from wall (Distance from fixture along 3')			2.5' from wall (Distance from fixture along 4')		
1	21.5	19.1	21.5	20	12.1	20
2	34.7	34.4	34.7	31.6	24.6	31.6
3	34.9	36	34.9	31.3	27.6	31.3
4	28.4	30.7	28.4	25.2	24.8	25.2
5	21	23.2	21	18.6	19.8	18.6
6	15.2	16.8	15.2	13.4	15	13.4
7	11	12	11	9.9	11	9.9
8	8.1	8.7	8.1	7.4	8.2	7.4
9	6.1	6.5	6.1	5.6	6.2	5.6
10	4.6	4.9	4.6	4.3	4.7	4.3

Photometric Multipliers (Nominal Lumen Values)

500 Lumen	750 Lumen	1000 Lumen	1500 Lumen	2000 Lumen	2500 Lumen	3000 Lumen	3500 Lumen
0.33	0.44	0.54	0.74	1.00	1.12	1.46	1.76

4000 Lumen	4500 Lumen	5000 Lumen	5500 Lumen	6000 Lumen
1.81	2.17	2.28	2.38	2.65

Multipliers for relative lumen values with other series models.

Color Finish Multipliers

Finish code	C	H	W/WB	BB
Finish	Specular Clear	Semi-Specular	Matte White White Baffle	Black Baffle
Multiplier	1.00	0.92	0.91	0.82

Multipliers for relative lumen values with other color finishes.

CCT Multipliers – 80CRI

2700K	3000K	3500K	4000K	5000K
0.92	0.98	1.00	1.03	1.03

Multipliers for relative lumen values with other series color temperatures.

CCT Multipliers – 90CRI

2700K	3000K	3500K	4000K	5000K
0.77	0.84	0.89	0.90	0.90

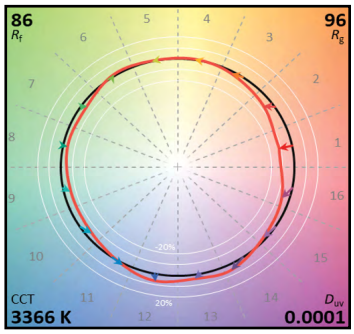
Multipliers for relative lumen values with other series color temperatures.

Note: Refer to IES files for more product data.

Energy & Performance Data

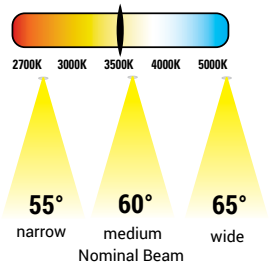
COLOR METRICS - TM-30-15 & CRI/CIE (3500K)

80 CRI Color Metric Summary - 3500K*

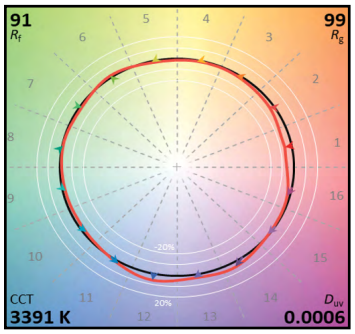


Reference Illuminant — Test Source

TM-30-15	Rf = 86
	Rg = 95.5
CRI/CIE	Ra = 83.8
	R9 = 10.3

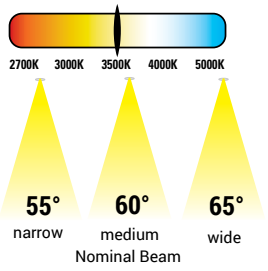


90 CRI Color Metric Summary - 3500K*



Reference Illuminant — Test Source

TM-30-15	Rf = 91.1
	Rg = 99
CRI/CIE	Ra = 92.4
	R9 = 55.1



* Color values are based on 61WDWB reflector, other finishes and field results may vary.

ENERGY DATA

Series	500 lumen		750 lumen		1000 lumen		1500 lumen		2000 lumen	
Input Voltage 120-277VAC	120V	277V	120V	277V	120V	277V	120V	277V	120V	277V
Input Current (A)	0.051	0.026	0.067	0.036	0.083	0.039	0.119	0.053	0.171	0.077
Input Power (W)	6.1	6.5	7.9	8.3	10	10.4	14.5	14.5	20.9	20.6
In-rush (A)	1.9	8.4	2	8.4	2.2	8.5	2.7	8.5	2.1	9.7
Inrush duration (µs)	251	135	237	133	250	134	250	139	245	131
THD (%)	6.2	13.5	7.4	8.8	5.4	10.3	10	6.7	6.5	7.9
PF	≥ 0.99	≥ 0.9	≥ 0.98	≥ 0.92	≥ 0.99	≥ 0.95	≥ 0.99	≥ 0.97	≥ 0.99	≥ 0.96

Series	2500 lumen		3000 lumen		3500 lumen		4000 lumen		4500 lumen	
Input Voltage 120-277VAC	120V	277V	120V	277V	120V	277V	120V	277V	120V	277V
Input Current (A)	0.23	0.103	0.24	0.107	0.292	0.152	0.351	0.159	0.384	0.172
Input Power (W)	27.5	27.5	28.6	28.5	34.6	35.1	42.1	42.1	45.9	45.6
In-rush (A)	2.5	5.6	2.5	11.6	3.4	13.9	3.1	14.7	3.1	14.8
Inrush duration (µs)	232	123	216	111	183	95	200	98	202	100
THD (%)	6.5	8.1	7.8	8.3	5.6	10	4.1	9.5	4.5	8.5
PF	≥ 0.99	≥ 0.96	≥ 0.99	≥ 0.96	≥ 0.99	≥ 0.93	≥ 0.99	≥ 0.94	≥ 0.99	≥ 0.95

Series	5000 lumen		5500 lumen		6000 lumen	
Input Voltage 120-277VAC	120V	277V	120V	277V	120V	277V
Input Current (A)	0.419	0.186	0.457	0.201	0.489	0.214
Input Power (W)	50.1	49.5	54.6	53.7	58.4	57.4
In-rush (A)	3.1	15	3.2	14.8	3.4	14.8
Inrush duration (µs)	202	117	196	131	192	121
THD (%)	5.5	7.6	7	7.2	8.1	7.2
PF	≥ 0.99	≥ 0.96	≥ 0.99	≥ 0.96	≥ 0.99	≥ 0.97

Minimum starting temperature -30°C (-22°F)* (Nominal input 120-277VAC & 100% of rated output power)
Sound Rating: Class A standards

Notes:
* Emergency Battery packs are rated for a minimum starting temperature of 0°C.

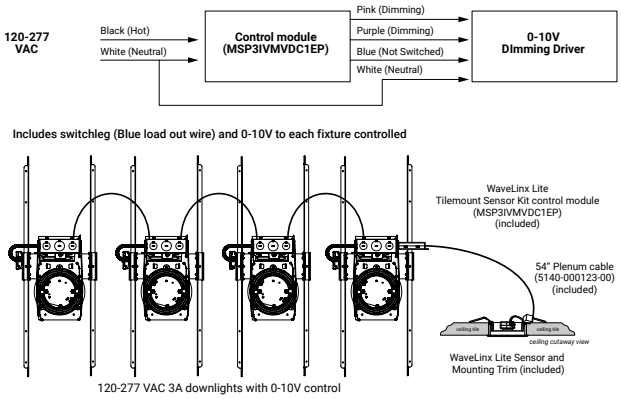
Connected Systems

WaveLinx Lite - WTK Tilemount Sensor

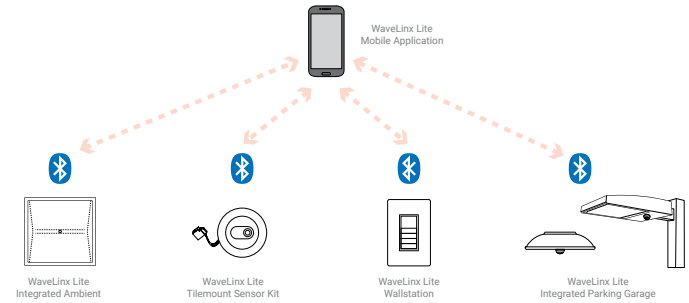
- Intuitive Android™ or Apple® iOS® app for basic system code compliant set up and configuration via Bluetooth
- Up to 28 unique areas per project site (WaveLinx Lite Bluetooth network)
- Up to 50 devices for an area, any one of 16 control zones, up to 6 occupancy sets, and custom lighting scenes
- Automatic occupancy or vacancy, sensor sensitivity, daylight dimming, etc. configurable through the app
- Refer to the WaveLinx system specifications for details

Device Security | Manual Dimmer | Occupancy Sensor | Daylighting Control | Manually Switched ON/OFF | Tuning Control | Lumen Maintenance Control | Scenes

WaveLinx Lite WTK Tilemount Wiring Diagram



WaveLinx Lite Bluetooth Enabled System



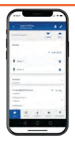
WaveLinx – WTA Tilemount Sensor

- WaveLinx functionality configures zones and customizes settings from one secure mobile app
- Automatic code commissioning that meets the strictest codes
- Fixtures and sensors integrate with Wireless Area Controller, Wall Stations, and Control Devices
- Stand-Alone Offices or Entire Building Network Installations

Downlights with tilemount sensor wireless communication
Highly efficient LED fixtures

Wireless Area Controller
Provides centralized coordination of multiple area control options

Wireless Wall Station/Receptacle
Provides customized wireless control of each area



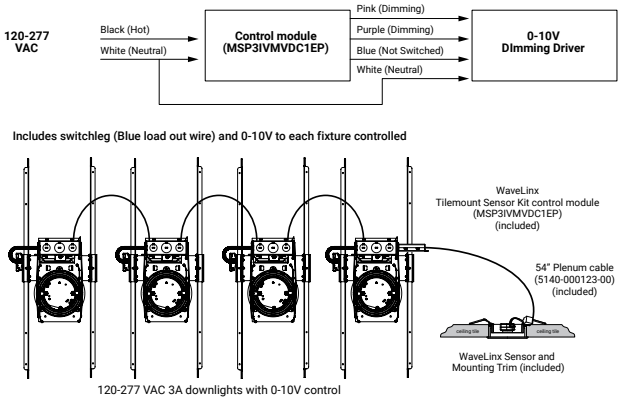
Mobile Applications
Provides personalized, local control from a tablet or smartphone

WaveLinx mobile app settings

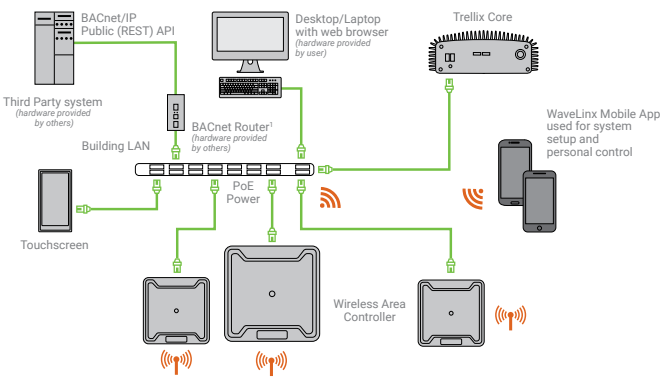
Manual Dimmer | Occupancy Sensor | Lumen Maintenance Control | Daylighting Control

Receptacle Control | Tuning Control | Scheduling | Manually Switched ON/OFF | Demand Response

WaveLinx WTA Tilemount Wiring Diagram

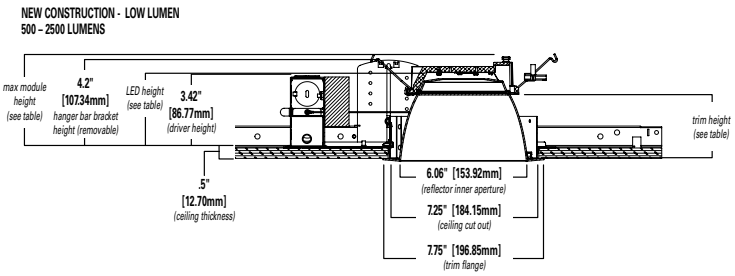


WaveLinx Trellix Building Management Integration



Dimensional and Mounting Details

NEW CONSTRUCTIONS - LOW LUMEN 500 – 2500 LUMENS

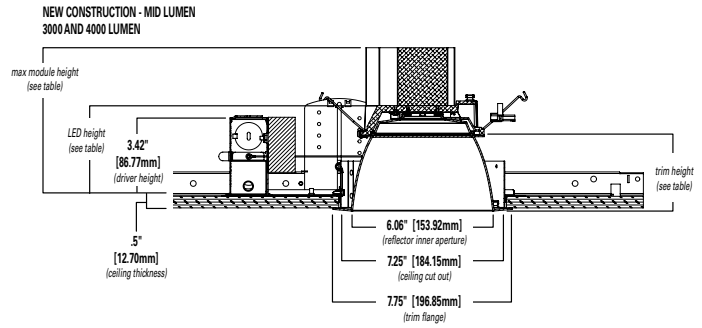


Low Lumen (500 – 2500 Lumens)*

Distribution	Max. Module Height	Trim Height	LED Height
Narrow	4.5"	3.4"	3.8"
Medium	4.6"	3.5"	3.9"
Wide	4.4"	3.3"	3.7"
Baffle	4.4"	3.3"	3.7"

*Max. height w/removable hanger bar bracket 4.2"

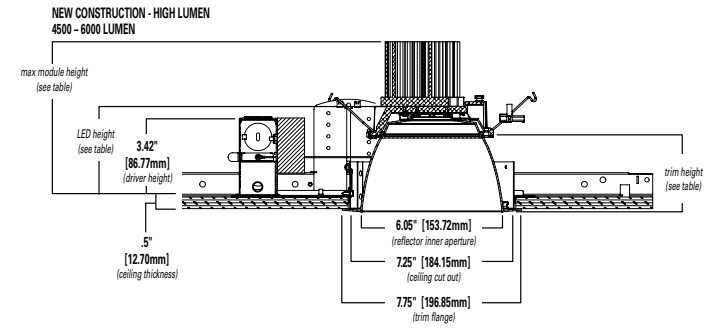
NEW CONSTRUCTIONS - MID LUMEN 3000 – 4000 LUMENS



Mid Lumen (3000 – 4000 Lumens)

Distribution	Max. Module Height	Trim Height	LED Height
Narrow	6.6"	3.4"	3.8"
Medium	6.7"	3.5"	3.9"
Wide	6.5"	3.3"	3.7"
Baffle	6.5"	3.3"	3.7"

NEW CONSTRUCTIONS - HIGH LUMEN 4500 – 6000 LUMENS



High Lumen (4500 – 6000 Lumens)

Distribution	Max. Module Height	Trim Height	LED Height
Narrow	6.9"	3.4"	3.8"
Medium	7.0"	3.5"	3.9"
Wide	6.8"	3.3"	3.7"
Baffle	6.8"	3.3"	3.7"

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

Project		Catalog #		Type	
Prepared by		Notes		Date	

HALO

SMD6 Series

6" Round and Square Surface Mount Downlight

SMD6R & SMD6S

Typical Applications

Residential

Interactive Menu

Product Certification

Refer to ENERGY STAR® Certified Products List.
Can be used to comply with California Title 24 High Efficacy requirements.
Certified to California Appliance Efficiency Database under JA8.

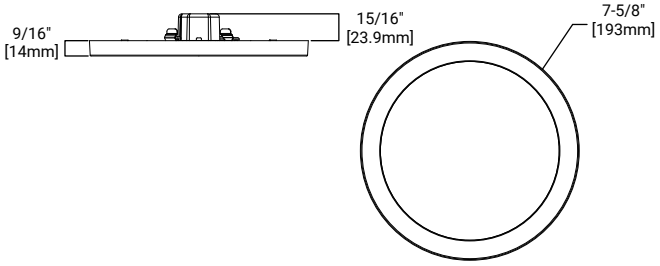
Product Features

Top Product Features

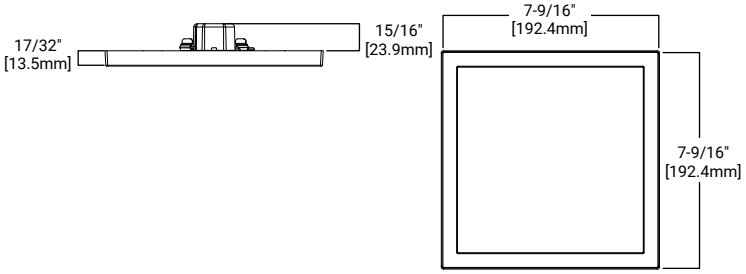
- Ultra-low profile surface luminaire with wide distribution
- Ceiling or wall mounting in compatible junction boxes
- 600 & 1200 lumen; 2700K, 3000K, 3500K, 4000K or 5000K field selectable CCT; 90 CRI
- 120V only and Universal Voltage 120V – 277V options
- Dimmable with 120V dimmers

Dimensional and Mounting Details

SMD6RXXXWH



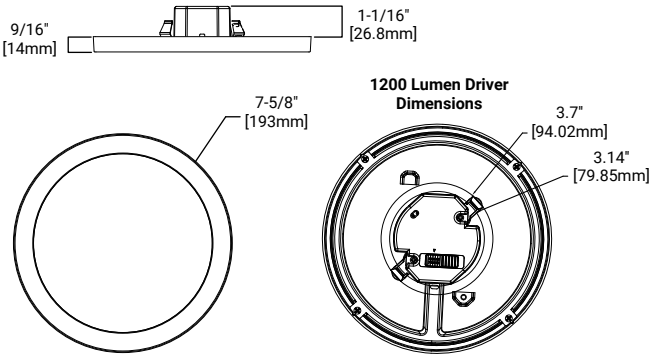
SMD6SXXXWH



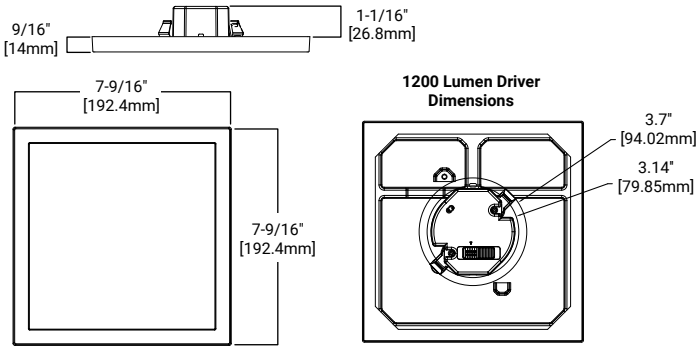
additional product diagrams

Dimensional and Mounting Details (continued)

SMD12RXXXWH
SMD12RXXXWHE



SMD12SXXXWH
SMD12SXXXWHE



Note: Ensure junction box (provided by others) internal dimension supports driver dimension.

Ordering Information

SAMPLE NUMBER: **SMD6R69SWH** = 6" Round Surface Mount Downlight, 600 lumen, 90CRI, Selectable CCT, White, 120V
Junction Box Installation: Order junction box separately, as supplied by others, to complete installation.
Recessed Installation: Order HALO recessed housing and SMD6ACCKIT separately to complete installation.

Models	Lumens	CRI/CCT	Finish	Voltage
SMD6R = 6" Round Surface Mount Downlight **SMD6S** = 6" Square Surface Mount Downlight	**6** = 600 lumen series (120V only) **12** = 1200 lumen series (1)	**9S** = 90CRI, 2700K - 5000K Field Selectable CCT	**WH** = Matte White	**Blank** = 120V standard **E** = UNV Universal 120-277V (2)
Notes	**Notes** (1) 1200 lumen series requires use of 4" square junction box or similar to support driver.	**Notes**	**Notes**	**Notes** (2) UNV voltage configuration is offered only in the 1200 lumen series

Accessories

Accessories
Designer Trims **SMD6RTRMSN** = 6" Round SMD Satin Nickel **SMD6RTRMTBZ** = 6" Round SMD Tuscan Bronze **SMD6RTRMWH** = 6" Round SMD White (paintable) **SMD6STRMSN** = 6" Square SMD Satin Nickel **SMD6STRMTBZ** = 6" Square SMD Tuscan Bronze **SMD6STRMWH** = 6" Square SMD White (paintable) **T24HWKIT** = Title 24 Cable harness kit used to convert incandescent and low voltage housings to LED **SMD6ACCKIT =** SMD6 accessory kit includes friction clips, torsion sprigs and a Edison screwbase adapter for recessed housing installation.
Notes

Accessories

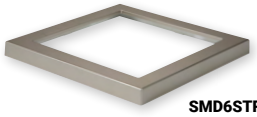
Designer Trims

SMD6RTRMWH
round, white (paintable)

SMD6RTRMSN
round, satin nickel

SMD6RTRMTBZ
round, tuscan bronze

SMD6STRMWH
square, white (paintable)



SMD6STRMSN
square, satin nickel

SMD6STRMTBZ
square, tuscan bronze

JUNCTION BOX COMPATIBILITY

***Note:** SMD 1200 lumen 120V configuration is only compatible with junction boxes 4” x 2-1/8” deep. Square junction box is required for 1200 lumen version.

TP316*
for non-metallic cable
4” x 4” x 2-1/8”
(102mm x 102mm x 54mm)

TP317*
for metal clad cable
4” x 4” x 2-1/8”
(102mm x 102mm x 54mm)

4" octagon light fixture/fan steel box*
4" x 4" x 2-1/8"
(102mm x 102mm x 54mm)

4" octagon steel box
4" x 4" x 1-1/2"
(102mm x 102mm x 38mm)

4" square deep steel box*
4" x 4" x 2-1/8"
(102mm x 102mm x 54mm)

4" square standard steel box
4" x 4" x 1-1/2"
(102mm x 102mm x 38mm)

4" round new work non-metallic light fixture/fan box
4" diameter x 2-3/16"
(102mm x 56mm)

3-1/2" round new work non-metallic ceiling box
3-1/2" diameter x 2-3/4"
(89mm x 70mm)

4” round surface mount box
4" diameter x 1-1/2”
(102mm x 38mm)
Requires SLD6RAD adapter

4" round new work non-metallic box with hanger bar assembly
4" diameter x 2-3/16" (102mm x 56mm)

This is a representative list of compatible junction boxes only. Information contained in this literature about other manufacturers’ products is from published information made available by the manufacturer and is deemed to be reliable, but has not been verified. Cooper Lighting Solutions makes no specific recommendation on product selection and there are no warranties of performance or compatibility implied. Installer must determine that site conditions are suitable to allow proper installation of the mounting bracket in the box.

Product Specifications

Housing
- Non-electrically conductive polycarbonate frame.
- High impact diffuse polystyrene lens provides shielding to the light guide with no pixilation
- Stamped aluminum housing provides thermal cooling achieving L70 at 50,000 hours in IC and non-IC applications

Gaskets
- Closed cell gasket achieves restrictive airflow and wet location requirements without additional caulking

Optics
- Precision acrylic light guide organizes source flux into wide distribution with 1.2 – 1.4 spacing criteria useful for general area illumination

LED
- Mid power LED array provide a uniform source with high efficiency and long life
- Available in 90 CRI minimum, R9 greater than 50 and color accuracy within 3 SDCM provide color accuracy and uniformity

Driver
SMD 120V
- Integral 120V 50/60Hz constant current driver provides noise free operation
- Continuous, flicker-free dimming from 100% to 5% with select leading or trailing edge 120V phase cut dimmers
- Dimming to 5% is best assured using dimmers with low end trim adjustment. Consult dimmer manufacturer for compatibility and conditions of use. (Note some dimmers require a neutral in the wallbox.)
- Inline electrical quick connect and E26 adapter (provided) provides mains connections

SMD 120-277V
- Integrated 120-277V 60Hz constant current driver provides noise free operation
- SMD Universal Voltage (120-277V) configurations are recommended for use with compatible 0-10V DC
- low voltage dimmers only

Mounting/Retention
- Adjustable spider plate allows for quick installation into both junction boxes and recessed housings
- Torsion springs and friction blades included

Electrical Junction Box Mounting
- The SMD may be used in compatible electrical junction boxes in direct contact with insulation including spray foam insulation
- Suitable for installation in many 3-1/2" and 4" square, octagon, and round electrical junction boxes **Note:** SMD120-277V UNV is only compatible with junction boxes that provide minimum depth of 2-1/8"
- Installer must ensure compatibility of fit, wiring and proper mounting in the electrical junction box. This includes all applicable national and local electrical and building coded

Recessed Housing Mounting
Note: Use the SMDACCKIT which includes torsion springs and Edison base adapter. (SOLD SEPERATELY)
- May be installed in IC recessed housings in direct contact with insulation
  Note: Not for use in recessed housing in direct contact with spray foam insulation. Refer to NEMA LSD 57-2013

Designer Skins (Sold Separately)
- SMD skins are accessory rings in both round and square. These skins attach to the SMD for a permanent finish. Refer to the SMD accessories specification sheet for details
  - Matte White (Paintable)
  - Satin Nickel
  - Tuscan Bronze

Compliance
- cULus Certified for use with Halo housings and for use with other's housings, , when used with SMDACCKIT (Sold Seperately) see instruction sheet for conditions of acceptability
- Wet and Damp Location listed, airtight per ASTM-E283
- Suitable for use in closets, compliant with NFPA® 70, NEC® Section 410.16 (A)(3) and 410.16 (C)(5)
- EMI/RFI emissions per FCC 47CFR Part 15B
- Contains no mercury or lead and RoHS compliant.
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- Can be used for State of California Title 24 high efficacy luminaire compliance, reference the California Energy Commission Title 20 Appliance Efficiency Database for current listings
- Can be used for International Energy Conservation Code (IECC) and high efficiency luminaire compliance
- ENERGY STAR® listed, reference database for current listings

Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Energy Data

SMD6R6 / SMD6S6

	Round	Square
Lumens (5000K models)	777	800
Input Power	9 W	9 W
Input Current	0.085 A	0.085 A
Efficiency	86 lm/W	85 lm/W
THDi	8	8
Input Voltage	120V	
Frequency	60 Hz	
CRI	90 CRI	
Power Factor	0.98	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

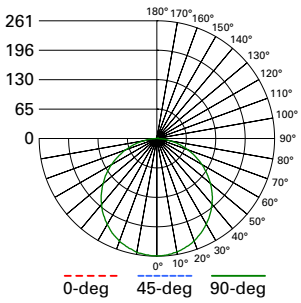
SMD6R12 / SMD6S12

	Round	Square
Lumens (5000K models)	1271	1345
Input Power	15	15
Input Current	0.129 A	0.129 A
Efficiency	85 lm/W	88 lm/W
THDi	12.6	12.6
Input Voltage	120V	
Frequency	60 Hz	
CRI	90 CRI	
Power Factor	0.98	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

SMD6R12-E / SMD6S12-E

	Round	Square
Lumens (5000K models)	1357	1364
Input Power	14.5	14.5
Input Current	0.125 A (120V) 0.058 A (277V)	0.125 A (120V) 0.058 A (277V)
Efficiency	94 lm/W	94 lm/W
THDi	12.8	12.8
Input Voltage	120 - 277V	
Frequency	60 Hz	
CRI	90 CRI	
Power Factor	0.99 (120V) 0.94 (277V)	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

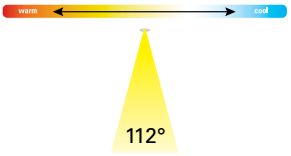
Photometric Data



SMD6R69SWH - 3000K.IES
Spacing criterion: (0-180) 1.26
(90-270) 1.26
(Diagonal) 1.38
Beam Angle: 112°
Lumens: 757
Input Watts: 8.9 W
Efficacy: 85 LPW
Test Report:
SMD6R69SWH - 3000K.IES

Zonal Lumen	Lumens	% Lumens
0-30	201	26.6
0-40	330	43.6
0-60	585	77.4
0-90	752	99.4

CCT - Range of 2700K- 5000K

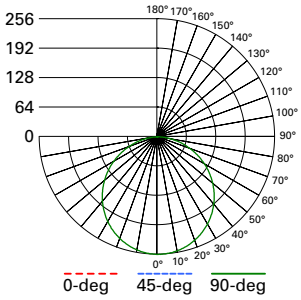


SMD6R69SWH	CCT	Watts	Lumens	LPW	CRI
600 Lumen 6" Round Selectable CCT	2700K	9.2	704	76.6	93
	3000K	9.2	716	77.8	93
	3500K	9.2	729	79.2	94
	4000K	9.2	742	80.5	94
	5000K	9.2	756	82.0	93

PRODUCT SPECIFICATIONS

Lumens	716
Watts	9.2
Lumens Per Watt (Efficacy)	77.8
Color Accuracy (CRI)	93
Light Color (CCT)	3000K

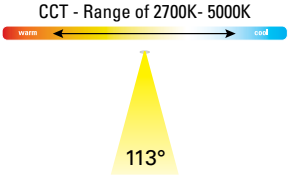
Correlated Color Temperature (CCT)



SMD6S69SWH - 3000K.IES
Spacing criterion: (0-180) 1.28
(90-270) 1.28
(Diagonal) 1.40
Beam Angle: 113°
Lumens: 752
Input Watts: 9.2 W
Efficacy: 82 LPW
Test Report:
SMD6S69SWH - 3000K.IES

Zonal Lumen	Lumens	% Lumens
0-30	199	26.4
0-40	326	43.4
0-60	580	77.2
0-90	748	99.5

CCT - Range of 2700K- 5000K



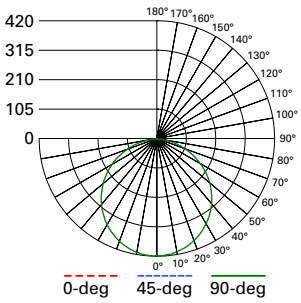
SMD6S69SWH	CCT	Watts	Lumens	LPW	CRI
600 Lumen 6" Square Selectable CCT	2700K	9.6	720	75.3	93
	3000K	9.6	735	76.7	93
	3500K	9.6	750	78.2	94
	4000K	9.6	764	79.5	94
	5000K	9.6	774	80.7	92

PRODUCT SPECIFICATIONS

Lumens	735
Watts	9.6
Lumens Per Watt (Efficacy)	76.6
Color Accuracy (CRI)	93
Light Color (CCT)	3000K

Correlated Color Temperature (CCT)

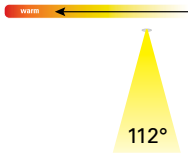
Photometric Data



SMD6R129SWH - 3000K.IES
Spacing criterion: (0-180) 1.26
(90-270) 1.26
(Diagonal) 1.38
Beam Angle: 112°
Lumens: 1221
Input Watts: 14.9 W
Efficacy: 82 LPW
Test Report:
SMD6R129SWH - 3000K.IES

Zonal Lumen	Lumens	% Lumens
0-30	325	26.6
0-40	533	43.6
0-60	945	77.4
0-90	1215	99.5

CCT - Range of 2700K- 5000K

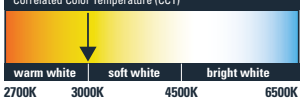


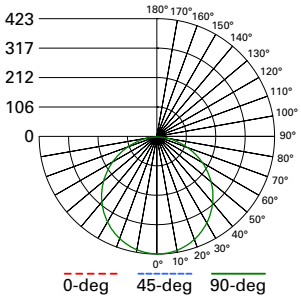
SMD6R129SWH	CCT	Watts	Lumens	LPW	CRI
1200 Lumen 6" Round Selectable CCT	2700K	15.2	1135	74.7	92
	3000K	15.2	1156	76.1	93
	3500K	15.2	1178	77.5	94
	4000K	15.2	1198	78.8	95
	5000K	15.2	1226	80.7	93

PRODUCT SPECIFICATIONS

Lumens	1156
Watts	15.2
Lumens Per Watt (Efficacy)	76.1
Color Accuracy (CRI)	93
Light Color (CCT)	3000K

Correlated Color Temperature (CCT)

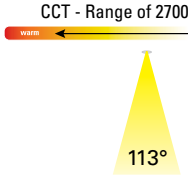




SMD6S129SWH - 3000K.IES
Spacing criterion: (0-180) 1.26
(90-270) 1.26
(Diagonal) 1.40
Beam Angle: 113°
Lumens: 1241
Input Watts: 14.9 W
Efficacy: 83 LPW
Test Report:
SMD6S129SWH - 3000K.IES

Zonal Lumen	Lumens	% Lumens
0-30	329	26.5
0-40	539	43.5
0-60	960	77.3
0-90	1237	99.6

CCT - Range of 2700K- 5000K

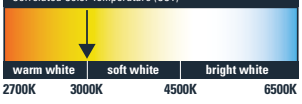


SMD6S129SWH	CCT	Watts	Lumens	LPW	CRI
1200 Lumen 6" Square Selectable CCT	2700K	15.5	1153	74.4	92
	3000K	15.5	1177	75.9	93
	3500K	15.5	1206	77.8	95
	4000K	15.5	1224	79.0	95
	5000K	15.4	1256	81.6	93

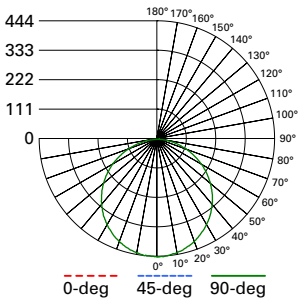
PRODUCT SPECIFICATIONS

Lumens	1177
Watts	15.5
Lumens Per Watt (Efficacy)	75.9
Color Accuracy (CRI)	93
Light Color (CCT)	3000K

Correlated Color Temperature (CCT)

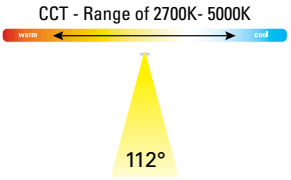


Photometric Data

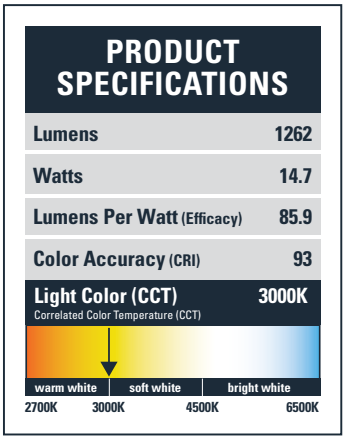


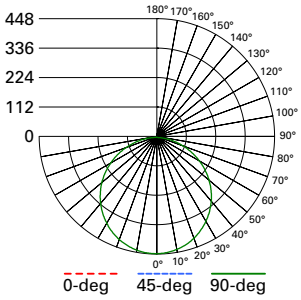
SMD6R129SWHE - 3000K.IES
Spacing criterion: (0-180) 1.24
(90-270) 1.24
(Diagonal) 1.38
Beam Angle: 112°
Lumens: 1289
Input Watts: 14.5 W
Efficacy: 89 LPW
Test Report:
SMD6R129SWHE - 3000K.IES

Zonal Lumen	Lumens	% Lumens
0-30	343	26.6
0-40	562	43.6
0-60	997	77.3
0-90	1282	99.5



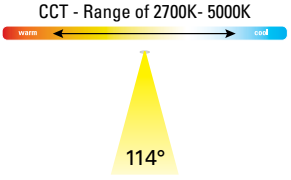
SMD6R129SWHE	CCT	Watts	Lumens	LPW	CRI
1200 Lumen 6" Round Selectable CCT 120-277V	2700K	14.7	1237	84.1	92
	3000K	14.7	1262	85.9	93
	3500K	14.7	1289	87.7	95
	4000K	14.7	1311	89.2	95
	5000K	14.7	1306	88.8	93



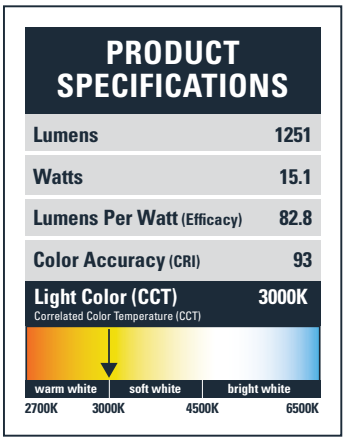


SMD6S129SWHE - 3000K.IES
Spacing criterion: (0-180) 1.26
(90-270) 1.26
(Diagonal) 1.40
Beam Angle: 114°
Lumens: 1312
Input Watts: 14.7 W
Efficacy: 89 LPW
Test Report:
SMD6S129SWHE - 3000K.IES

Zonal Lumen	Lumens	% Lumens
0-30	348	26.5
0-40	570	43.5
0-60	1014	77.3
0-90	1307	99.6



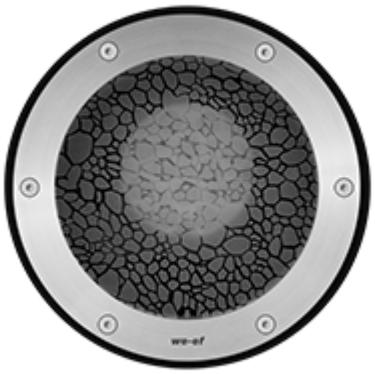
SMD6S129SWHE	CCT	Watts	Lumens	LPW	CRI
1200 Lumen 6" Square Selectable CCT 120-277V	2700K	15.1	1225	81.1	92
	3000K	15.1	1251	82.8	93
	3500K	15.1	1277	84.6	95
	4000K	15.1	1299	86.0	95
	5000K	15.1	1327	87.9	93

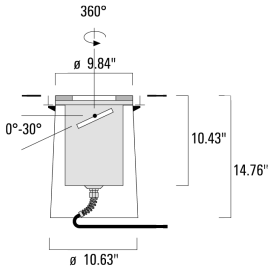


Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

ETC130-GB LED ASC

Inground Luminaires





Description

Anti-Slip ceramic Coating. ASC Lens light loss factor = 14.25%. IP69K. Class I. IK10+. Stainless steel construction. PCS hardware. Silicone CCG® Controlled Compression Gasket. Safety glass lens; max load 5.5 tons (11,000 lbs). Luminaire can be driven over at low speed. Cable gland with spiral cable bending protection. Factory-sealed termination chamber complete with cable gland and 3 ft of flexible PVC-free, gel-impregnated anti-wicking cable. Factory-installed circuit board with High Efficiency LEDs. 0-10V Dimming comes standard with luminaire. Gimbal mounted, 360° rotatable and 30° tiltable. 'No tool' removable gear/lens tray. Suitable for flush installation in concrete or earth. The concrete-pour installation blockout is supplied as standard with luminaire. Specify product with 7 Digit product code – Finish Color. Accessories, such as mounting, optical, and electrical, must be specified separately. Example: XXX-XXXX-9004 (Black) + XXX-XXXX (Accessory 1)

Specifications

Material Specification

Body:	Luminaire body constructed of deep drawn stainless steel. Outer housing composite material.
Lens:	5/8 in thick Antislip Coating ASC tempered glass lens (Slip Resistance Class R10), max load 5 Tonnes
Colours:	Stainless Steel
IP69K	The Highest Ingress Protection Rating Available!
ETL	ETL, UL-1598 equivalent, CSA-C22.2#250.0. Suitable for Wet Locations.
Quick Ship	Quickship features a one week ship time for Steplights and two week ship time for the rest of our Core products. All applicable information must be included for orders to be processed and colors must be in one of our 4 standard finishes. A maximum order quantity of 30 pieces applies.
Gasket:	Silicone rubber gasket
Fasteners:	PCS polymer coated stainless steel
Ingress protection:	IP69K - HIGHEST PROTECTION RATING AVAILABLE
Impact protection:	IK10+
Corrosion protection:	5CE
Surge protection:	Integral 10kV Surge Protector
Mounting:	Suitable for installation in concrete or earth. Suitable for walk-over and DRIVE-OVER applications. Proper drainage and foundation support must be provided.
Listings:	ETL, UL-1598, CSA-C22.2#250.0. Suitable for Wet Locations.

Electrical Specification

Power supply:	Integral [ECG] electronic driver 120V-277V. 0-10V dimmable, to be specified with order.
Driver / Ballast:	Integral [ECG] electronic driver 120V-277V. 0-10V dimmable, to be specified with order.
Termination:	Factory sealed termination chamber
Cable:	3 feet of flexible 18/3 cable

Lifetime

Ta=25°/40° L90B10 > 90000h

Dimming

0-10V available in request. Must be factory fitted.

ETC130-GB LED ASC
Inground Luminaires

Choices

Light Distributions	Nominal Lumen	Nominal Watt	Colour Temperatures	Colours
 symmetric, wide beam [W]	2217	18	3000 K	Stainless Steel
 symmetric, medium beam [M]			4000 K	
 symmetric, very narrow beam [VN]				
 symmetric, very narrow beam, 'sharp cut-off' [VNS]				
 linear spread, medium beam [M]				
 linear spread, very narrow beam [VN]				
 linear spread, very narrow beam, 'sharp cut-off'				

ETC130-GB LED ASC
Inground Luminaires

Configurations

Light Distributions	Part ID	Light Source	Delivered Lumens	Rated Input Power	CRI	Weight	Link
 symmetric, very narrow beam, 'sharp cut-off' [VNS]	611-3134	LED-12/18W / 500 mA - 3000 K	1697	21	80	18.20	
	611-3135	LED-12/18W / 500 mA - 4000 K	1697	21	80	18.20	
 symmetric, medium beam [M]	611-3120	LED-12/18W / 500 mA - 3000 K	1650.2	21	80	18.20	
	611-3121	LED-12/18W / 500 mA - 4000 K	1650.2	21	80	18.20	
 symmetric, wide beam [W]	611-3140	LED-12/18W / 500 mA - 3000 K	1457.1	21	80	18.20	
	611-3141	LED-12/18W / 500 mA - 4000 K	1457.1	21	80	18.20	
 symmetric, very narrow beam [VN]	611-3114	LED-12/18W / 500 mA - 3000 K	1586.2	21	80	18.20	
	611-3115	LED-12/18W / 500 mA - 4000 K	1586.2	21	80	18.20	
 linear spread, medium beam [M]	611-3120 185-2632	LED-12/18W / 500 mA - 3000 K	1541.7	21	80	18.20	
	611-3121 185-2632	LED-12/18W / 500 mA - 4000 K	1541.7	21	80	18.20	
 linear spread, very narrow beam [VN]	611-3114 185-2632	LED-12/18W / 500 mA - 3000 K	1393.2	21	80	18.20	
	611-3115 185-2632	LED-12/18W / 500 mA - 4000 K	1393.2	21	80	18.20	
 linear spread, very narrow beam, 'sharp cut-off'	611-3134 185-2632	LED-12/18W / 500 mA - 3000 K	1502	21	80	18.20	
	611-3135 185-2632	LED-12/18W / 500 mA - 4000 K	1502	21	80	18.20	

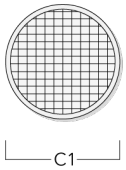
Related Families / ETC100-GB ASC

Family		Dimensions	Wattage	Nominal Lumen	Links	
					Links	Download Data Sheet
ETC120-GB LED ASC		6.3	6 W	738		
ETC130-GB LED ASC		9.84	18 W	2217		
ETC140-GB LED ASC		11.81	24 W	3228		

Optical Accessories

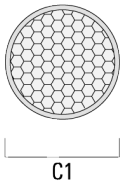
Softening Lens

185-2866 IO-360-ETC130-GB-LED



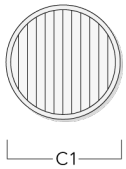
Honeycomb louvre

185-2870 IW-ETC130/330-GB-LED



Linear spread lens

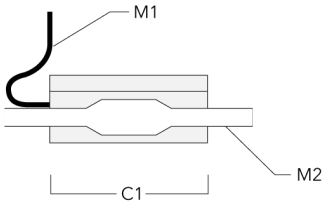
185-2632 IO-180 ETC130/330-GB LED



Electrical Accessories

Sealable junction box

	M1	M2
185-1624 Sealable junction box SJB 130	Ø 0.39	Ø 0.47 - 0.75



LL
RISE™

OVERVIEW • SPECIFICATIONS • ORDERING

INTERIOR + EXTERIOR | **F080 SINGLE**

DATE	PROJECT	FIRM	TYPE

RISE IS A SYSTEM OF BEAUTIFULLY DESIGNED OUTDOOR RATED LUMINAIRES THAT PROVIDE EFFICIENT AND POWERFUL LIGHT USING THE LATEST IN LED TECHNOLOGY. RISE F080 SINGLE IS A POWERFUL AND COMPACT LED LIGHT FIXTURE, DELIVERING UP TO 1170 LUMENS, THAT CAN BE USED IN SPOT, ACCENT, LANDSCAPE AND FLOODLIGHT APPLICATIONS. ITS UNIQUE MACRO™ LOCK FEATURE ALLOWS FOR FULL 180 DEGREE TILT AND 360 DEGREE PAN AIMABILITY USING ONLY ONE TWIST.

FEATURES :

- POWERFUL CBCP
- EXTREMELY COMPACT
- POWERFUL OUTPUT UP TO 1170 LUMENS
- MACRO™ LOCK - 180° TILT AND 360° PAN
- 12 UNIQUE BEAM ANGLES
- MULTIVOLT (110 V-277 V)
- 8 CCTS: 2200K THROUGH 6500K
- 80+ AND 90+ CRI
- DIMMABLE TO 5%
- IP66 RATED

FIXTURE MODEL	FIXTURE CONFIG.	POWER/ LUMEN OUTPUT*	CCT/ COLOR	CRI	BEAM ANGLE	FINISHES	ACCESSORIES	WIRING AND MOUNTING
F080	1S - Single Head	LO - Low Output MO - Medium Output HO - High Output	22 - 2200K 25 - 2500K 27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K 50 - 5000K 65 - 6500K RD - Red GR - Green BL - Blue AM - Amber *2200K and 2500K not available in 40°, 60°, 70° and 90°	8 - 80 9 - 90* X - For RD, GR, BL, AM *90 CRI not available in 2200K, 2500K, 5000K, and 6500K	05 - Laser Spot (5°) 10 - Very Narrow Spot (10°) 15 - Narrow Spot (15°) 20 - Spot (20°) 40 - Flood (40°) 60 - Medium Flood (60°) 70 - Wide Flood (70°) 90 - Very Wide Flood (90°) E1 - Elliptical 1 (15°x60°) E2 - Elliptical 2 (30°x60°) E3 - Elliptical 3 (60°x15°) E4 - Elliptical 4 (60°x30°)	K - Black Z - Bronze S - Silver W - White C - Custom* *Provide RAL #	X - No Accessory H - Half Snoot F - Full Snoot Will ship as X if not specified	A - 19" Flying Leads - Internal Cable IC; Bottom Exit; 1/2" NPT ; UL/CE Listed B* - 10' External Cable Side Exit; Surface Mount ; UL Listed C* - 10' External Cable Bottom Exit; Surface Mount - 1/2" NPT ; UL Listed D* - 10' External Cable Side Exit; Surface Mount ; CE Listed E* - 10' External Cable Bottom Exit; Surface Mount - 1/2" NPT; CE Listed *Will ship as A if not specified

EXAMPLE: F080-1S-LO-22-8-05-S-X-A

*See Photometry Chart for Lumen Data

PERFORMANCE	WATTS	POWER	LUMEN OUTPUT	OPTIC	EFFICACY	CBCP
	4	Low Output	309	5°	77	22,017
	7.5	Medium Output	531	5°	71	37,812
	11.5	High Output	744	5°	65	52,991

ALL LUMEN DATA IS FROM 4000K 80CRI FIXTURES. PLEASE SEE PHOTOMETRY SPEC SHEET FOR ADDITIONAL LUMEN DATA.

COLOR RENDERING INDEX 80+, 90+

COLOR CONSISTENCY 3-STEP MACADAM ELLIPSE

LUMEN DEPRECIATION

WATTS	L70 @ 25C	L70 @ 50C	L90 @ 25C	L90 @ 50C
LOW	>60,500* >(109,000)**	>60,500* >(109,000)**	>60,500* >(109,000)**	>60,500* >(109,000)**
MEDIUM	>60,500* >(109,000)**	>60,500* >(109,000)**	>60,500* >(109,000)**	>60,500* >(109,000)**
HIGH	>60,500* >(181,000)**	>36,300*	>60,500* >(69,800)**	>33,200*

* ENERGY STAR REPORTED TESTING HOURS TO DATE. CALCULATIONS FOR LED FIXTURES ARE BASED ON MEASUREMENTS THAT COMPLY WITH IES LM-80 TESTING PROCEDURES AND IES TM-21 CALCULATOR

** ESTIMATED HOURS

NOTE: Information on this Spec Sheet is subject to change, please visit ecosenselighting.com/downloads/rise for the most updated information.

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DATE	PROJECT	FIRM	TYPE

ELECTRICAL	**WATTAGE**	LOW OUTPUT = 4 W; MEDIUM OUTPUT = 7.5 W; HIGH OUTPUT = 11.5 W
	POWER FACTOR	>0.9 for 120 V (HO, MO, LO), 230 V (HO, MO), 277 V (HO)
	THD	<0.2 for 120 V (HO, MO, LO), 230 V (HO, MO), 277 V (HO)
	OPERATING VOLTAGE	MULTIVOLT: 110-277 VAC, 50/60 Hz
	DRIVER	INTEGRAL TO FIXTURE; DE-RATED POWER AND SYNCHRONOUS START-UP AT FULL BRIGHTNESS
	STARTUP TEMPERATURE	-40 ˚F TO 122 ˚F (-40 ˚C TO 50 ˚C)
	OPERATING TEMPERATURE	-40 ˚F TO 122 ˚F (-40 ˚C TO 50 ˚C)
	STORAGE TEMPERATURE	-40 ˚F TO 176 ˚F (-40 ˚C TO 80 ˚C)
CONTROL	**DIMMING**	110-277 VAC, ELV TYPE, REVERSE PHASE, TRAILING EDGE
PHYSICAL	**DIMENSIONS**	W 2.49" x H 8.13" x L 6.97" ; (63.33 mm x 206.45 mm x 177.05 mm)
	HOUSING/LENS	EXTRUDED ALUMINUM; UV STABILIZED POLYCARBONATE; STAINLESS STEEL FASTENERS
	WEIGHT	1.25 LBS / 0.56 KG
	ENVIRONMENT	OUTDOOR • UL CERTIFIED FOR WET LOCATIONS IP66 IMPACT RATED TO IK10 MEETS 3G ANSI C136.31 VIBRATION STANDARD FOR BRIDGE APPLICATIONS
	MOUNTING OPTIONS	A - FLYING LEADS - INTERNAL CABLE IC; BOTTOM EXIT; 1/2" NPT ; UL/ CE RATED B - EXTERNAL CABLE SIDE EXIT; SURFACE MOUNT ; UL LISTED SURFACE MOUNT PLATE INCLUDED C - EXTERNAL CABLE BOTTOM EXIT; 1/2" NPT ; UL LISTED SURFACE MOUNT PLATE INCLUDED D - EXTERNAL CABLE SIDE EXIT; SURFACE MOUNT ; CE LISTED SURFACE MOUNT PLATE INCLUDED E - EXTERNAL CABLE BOTTOM EXIT; SURFACE MOUNT ; CE LISTED SURFACE MOUNT PLATE INCLUDED
	WIRING	LENGTH OF FLYING LEADS 19" (482.6 mm) LENGTH OF EXTERNAL CABLE 10' (3.05 m)
	TOOLS	2.5 mm HEX KEY AND PHILLIPS #0 SCREWDRIVER FOR INTERCHANGEABLE LENS + SNOOTS 4 mm HEX KEY FOR AIMING 5 mm HEX KEY FOR MAIN TILT ARM
	WIND LOAD (EPA)	EFFECTIVE PROJECTED AREA 0.14 ft^2
	CORROSION RESISTANT	RISE HAS A HIGH-PERFORMING, CORROSION-RESISTANT FINISH THAT USES HIGH DURABILITY TRIGLYCIDYL ISOCYANURATE (TGIC) POWDER COATINGS SPECIFICALLY DESIGNED FOR NATATORIUMS AND EXTERIOR WEATHER EXPOSURE. THIS FINISH HAS BEEN TESTED AND APPROVED TO **MARINE GRADE** CORROSION RESISTANCE STANDARD IN UL1598A, ASTM B117 SALT FOG TEST FOR 200 HOURS.
FIXTURE RATING & CERTIFICATIONS	**CE, UL CERTIFIED RoHS COMPLIANT, IK10**	CE · c UL us LISTED · RoHS COMPLIANT · IK10
LIMITED WARRANTY	**5 YEARS**	

0-10V CONTROL OPTIONS

100-120 VAC / 277 VAC Linear Dimming Control Module 0-10 V - Plenum Rated **LDCM-PL-120-277-010V-GR**

All products come standard with ELV dimming capabilities. 0-10V Control options required for operation at 0-10V.

OPTIONAL ACCESSORIES

Snoots

Half Snoot, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom) ..... **F080-H-(K,Z,S,W,C)**

Full Snoot, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom) ..... **F080-F-(K,Z,S,W,C)**

Interchangeble Lens

If inner optic = 5°,

Desired angle .....order the following spread lens

5 Degree **F080-LENS-05**

10 Degree **F080-LENS-10**

15 Degree **F080-LENS-15**

20 Degree **F080-LENS-20**

40 Degree **F080-LENS-40**

60 Degree **F080-LENS-60**

80 Degree **F080-LENS-80**

15x60 or 60x15 Degree **F080-LENS-E1E3**

30x60 or 60x30 ..... **F080-LENS-E2E4**

Full Set of Beam Angle Lens Degree (5, 10, 15, 20, 40, 60, 80, 15x60 or 60x15, 30x60 or 60x30) **F080-LENS-FULLSET**

NOTE: Information on this Spec Sheet is subject to change, please visit ecosenselighting.com/downloads/rise for the most updated information.

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DATE	PROJECT	FIRM	TYPE

If inner optic = 40°,

Desired angle	**Order the following spread lens**
5 Degree	NOT SUPPORTED
10 Degree	NOT SUPPORTED
15 Degree	NOT SUPPORTED
20 Degree	NOT SUPPORTED
40 Degree	F080-LENS-10
60 Degree	F080-LENS-40
70 Degree	F080-LENS-60
90 Degree	F080-LENS-80
15x60 or 60x15 Degree	NOT SUPPORTED
30x60 or 60x30 Degree	NOT SUPPORTED
Full Set of Beam Angle Lens Degree (5, 10, 15, 20, 40, 60, 70, 90, 15X60 or 60X15, 30X60 or 60X30)	F080-LENS-FULLSET

Honeycomb Louver

Honeycomb Louver F080	F080-LV-HComb

Canopy Plate (Not for use with wire Option B - External Cable Side Exit)

RISE Canopy Plate (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	RISE-CANOPY-04-(K,Z,S,W,C)

Color Filters

Red	F080-FILTER-RED
Blue	F080-FILTER-BLUE
Green	F080-FILTER-GREEN
Amber	F080-FILTER-AMBER

F080 Wall Mount Arm (for use only with Wiring Option C – External Cable Bottom Exit and not for use with multi-up fixtures)

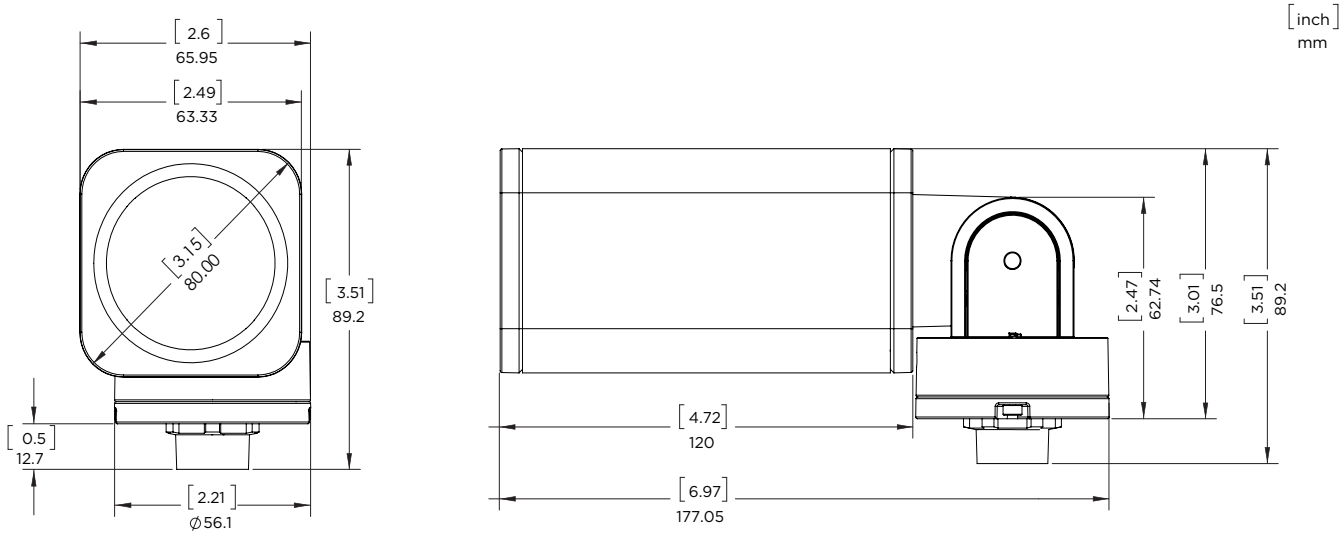
Wall Mount Arm, 6 inch, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	F080-WMA-06-(K,Z,S,W,C)
Wall Mount Arm, 12 inch, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	F080-WMA-12-(K,Z,S,W,C)
Wall Mount Arm, 18 inch, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	F080-WMA-18-(K,Z,S,W,C)
Wall Mount Arm, 24 inch, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	F080-WMA-24-(K,Z,S,W,C)

Ground Stake (for use only with Wiring Option C – External Cable Bottom Exit and not for use with multi-up fixtures)

Landscape Stake, 12 in (for use with F080 Single Head only, not for use with multi-fixture units)	F080-LS-1S-STK-12

DIMENSIONS

[inch]
mm



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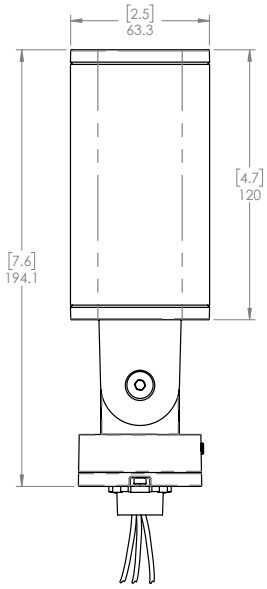
WIRING GUIDE

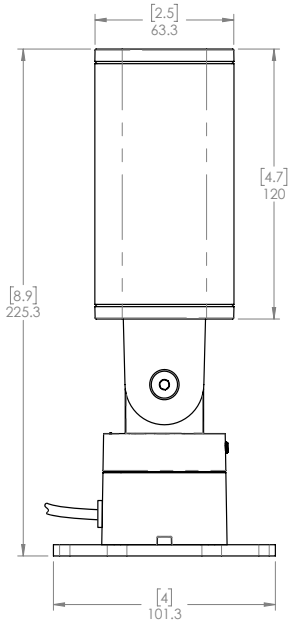
RISE is and exterior rated (IP66) fixture that is available in three different wiring options:

Flying Leads - Internal Cable
(UL Listed or CE Listed)



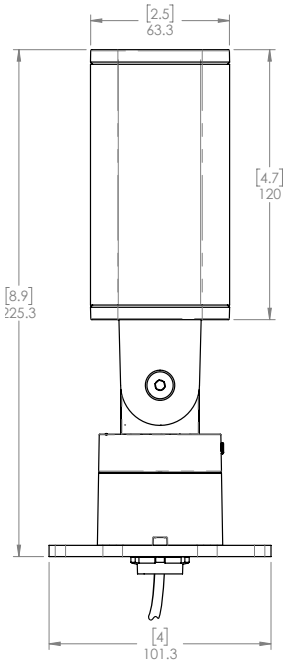
- For use with standard junction boxes
- 1/2” NPT Taper, Cable Length is 19”
- Compatible with EcoSense Canopy junction Box Cover
- 18 AWG Stranded Copper Cable - 3 Conductors

External Cable Side Exit
(UL Listed or CE Listed)



- For use when external, exterior rated cable is required to run to remote junction box or mains
- Cable exits the side of the base
- Comes with a Surface Mount Plate, for mounting direct to surface
- Cable Length is 10’ (3.05 m)

External Cable Bottom Exit
(UL Listed or CE Listed)



- For use when external, exterior rated cable is required to run to remote junction box or mains
- Cable exits the bottom for use with various accessories such as Wall Mount Arm and Ground Stake
- 1/2” NPT taper for mounting
- Comes with a Surface Mount Plate, for mounting direct to surface
- Cable Length is 10’ (3.05 m)

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PR

Project		Catalog #		Type	
Prepared by		Notes		Date	

Metalux

Vaportite LED

2' and 4' Industrial LED
Vaportite Industrial

Typical Applications

Parking Garage • Cold Storage • Canopy • Warehouse • Food Processing • Manufacturing • Complex Environments

Interactive Menu

Product Certification

Product Features

Connected Systems

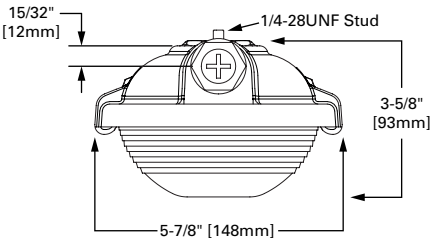
LINEAR DISCONNECT
Safe and convenient means of disconnecting power

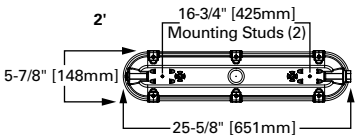
wet location

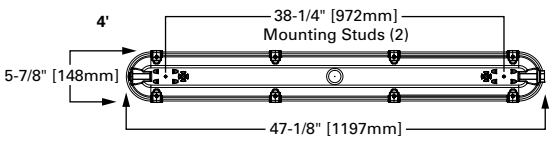
Top Product Features

- Compact and durable fiberglass reinforced polyester housing
- Precision optics in general, wide, or parking garage distribution
- High Impact Polycarbonate optical lens
- Available in 2ft and 4ft, with lumen packages up to 8,000 lumens
- Wet Location and IP67 Listed
- Options to meet Buy American and other domestic preference requirements

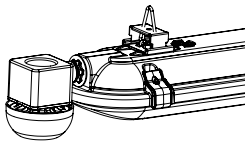
Dimensional, Mounting Details





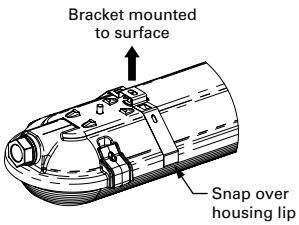


ZW-SWPD3 Sidecar

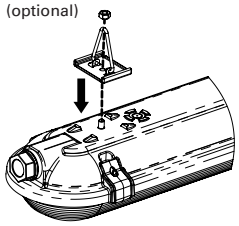


Installation Data

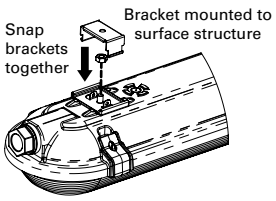
STANDARD



V-HANGER (optional)



SURFACE BRACKET (optional)



Order Information

SAMPLE ORDER NUMBER: **4VT3-LD5-6-G-UNV-L840-CD1-U**

Domestic Preferences	Series	Lamp Type	LED Lumens Output	Distribution	Voltage	Remote Emergency Enclosure
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act	**2VT3**=2' Vaportite **4VT3**=4' Vaportite	**LD5**=LED 5.0	**2 ft.** **2**=2000 Lumens **3**=3000 Lumens **4**=4000 Lumens **4 ft.** **4**=4000 Lumens **5**=5000 Lumens **6**=6000 Lumens **8**=8000 Lumens	**G**=General Distribution **W**=Wide Distribution **P**=Parking Garage Distribution **WPC**=Wide Distribution, Polycarbonate **PPC**=Parking Distribution, Polycarbonate	**120V**=120 Volt **277V**=277 Volt **347V**=347 Volt **480V**=480 Volt **UNV**=Universal Voltage 120-277 Volt **UNC**=Universal Voltage 347-480 Volt	**EL10W**=10-watt, 120-277V emergency battery pack installed (5), (6), (9) **VT-REM-EL10W**=Remote mounted 10-watt, 120-277V emergency battery pack (5), (10)
Notes (1) Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	**Notes** (2) DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.			**Notes** (3) General distribution provided with smooth frosted lens, Wide distribution provided with frosted prismatic lens, and Parking Garage distribution provided with clear prismatic lens. (4) IP69 only available in Wide or Parking Garage distributions.		**Notes** (5) EL and REM-EL options not available with UNC, 347V and 480V configurations. (6) EL10W available in 4ft 4000 and 6000 lumen packages only. (7) IP ratings require fixtures be mounted horizontally. (8) Specify voltage when ordering sensor option. (9) EL10W option rated for max. 35°C ambient. (10) VT-REM-EL10W option rated for max. 45°C ambient.

Lamps	Driver Type	Options	Packaging	Accessories
L835=3500K, LED **L840**=4000K, LED **L850**=5000K, LED	**CD1**=1 Dimming Driver **5LTD1**=Fifth Light DALI	**SSL**=Stainless Steel Latches **TP**=Standard Latch with Tamper-proof Screws **SSLTP**=Stainless Steel Latches with Tamper-proof Screws **MSWL20**=Wet Listed Motion Sensor 360° **ZW-SWPD3**=WaveLinx Wireless Sensor, Sidecar mount, with 1200 sq ft. coverage (12) **WLS4**=WaveLinx Lite Wireless Integrated Sensor, 15'–40' Mounting Height (11), (12)	**U**=Unit Pack	**VT3-SS-VBK**=Stainless Steel V-Bracket (2 per kit) **VT3-SS-SBK**=Stainless Steel Surface Bracket (2 per kit)
		Notes (11) Not compatible with EL10W. Not available with 347V, 480V, or UNC. Not available with 5LTD option. (12) WaveLinx Lite devices are not currently compatible with the WaveLinx Pro Wireless Area Controller.		**Notes** (13) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

Product Specifications

Construction

- Rugged and durable construction
- Fiberglass housing is reinforced polyester and self-extinguishing (ASTM-D635-74) plastic
- Full metal fixture liner
- Watertight housing
- 1/2" conduit entry at each end of housing (standard) for continuous feed
- Polyurethane gasketing provides a continuous seamless seal for the diffuser lens
- Four sturdy cam latches clamp diffuser tightly for a positive seal between housing, gasketing and diffuser
- Stainless steel latches option
- Surface or chain mounting

Electrical

- Long-Life LED system coupled with electrical driver for optimal performance
- LED's available in 3500K, 4000K and 5000K with a CRI ≥ 80
- Projected life is 60,000 hours at 91% lumen output
- Electronic drivers are available for 120-277V applications
- 0-10V dimming control (standard)
- Operating temperature of -40°C to 55°C; Ideal for cold storage environments

Lens

- Thermoformed low profile, high impact 50% DR High acrylic lens
- Smooth frosted lens for general distribution
- Frosted prismatic lens for wide distribution
- Clear prismatic lens for parking garage distribution

Warranty

- Five-year limited warranty

Compliance

- UL/cUL listed for Wet location
- RoHS compliant
- LED modules comply with IESNA LM-79 and LM-80 standards
- NEMA 4X, IP65, IP66 and IP67 rated (see installation instructions for requirements)
- IP69 rated with wide or parking garage distributions
- NSF International certified for NSF/ANSI Standard 2 – Food Equipment
- DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium (refer to www.designlights.org for details)

WaveLinx Lite devices are not currently compatible with the WaveLinx Pro Wireless Area Controller

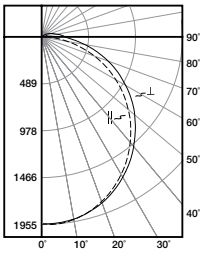
Control Systems

- WaveLinx Wireless
- WaveLinx Wired
- WaveLinx Lite
- DLVP
- VividTune

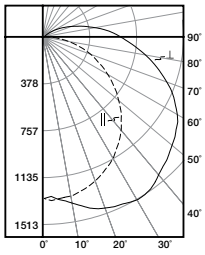
Connected Systems CLICK HERE

Photometric Data

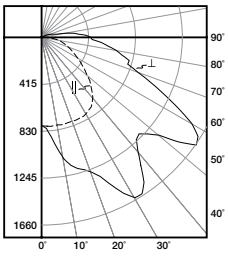
View IES files



4VT3-LD5-6-G-UNV-L840-CD1-U
Electronic Driver
Linear LED 4000K
Spacing criterion: (II) 1.24 x mounting height, (⊥) 1.26 x mounting height
Lumens: 6033
Input Watts: 51.1W
Efficacy: 118.1 lm/W
Test Report: 4VT3-LD5-6-G-UNV-L840-CD1-U.IES



4VT3-LD5-6-W-UNV-L840-CD1-U
Electronic Driver
Linear LED 4000K
Spacing criterion: (II) 1.27 x mounting height, (⊥) 1.67 x mounting height
Lumens: 6655
Input Watts: 49.3W
Efficacy: 135 lm/W
Test Report: 4VT3-LD5-6-W-UNV-L840-CD1-U.IES



4VT3-LD5-6-P-UNV-L840-CD1-U
Electronic Driver
Linear LED 4000K
Spacing criterion: (II) 1.45 x mounting height, (⊥) 2.17 x mounting height
Lumens: 6050
Input Watts: 49.3W
Efficacy: 122.7 lm/W
Test Report: 4VT3-LD5-6-P-UNV-L840-CD1-U.IES

Energy and Performance Data by Catalog Number

Catalog Number	Description	Delivered Lumens	Watts	Efficacy (lm/W)
General				
2VT3-LD5-2-G-UNV-L850-CD1-U	2ft Vaportight, 2K Lumen, General Dist, 120-277V, 5000K, Dim	2203	16	138
2VT3-LD5-3-G-UNV-L850-CD1-U	2ft Vaportight, 3K Lumen, General Dist, 120-277V, 5000K, Dim	3334	24	139
2VT3-LD5-4-G-UNV-L850-CD1-U	2ft Vaportight, 4K Lumen, General Dist, 120-277V, 5000K, Dim	4366	32	136
4VT3-LD5-4-G-UNV-L850-CD1-U	4ft Vaportight, 4K Lumen, General Dist, 120-277V, 5000K, Dim	4428	32	138
4VT3-LD5-5-G-UNV-L850-CD1-U	4ft Vaportight, 5K Lumen, General Dist, 120-277V, 5000K, Dim	5405	44	124
4VT3-LD5-6-G-UNV-L850-CD1-U	4ft Vaportight, 6K Lumen, General Dist, 120-277V, 5000K, Dim	6490	51	127
4VT3-LD5-8-G-UNV-L850-CD1-U	4ft Vaportight, 8K Lumen, General Dist, 120-277V, 5000K, Dim	8694	67	130
Wide				
2VT3-LD5-2-W-UNV-L850-CD1-U	2ft Vaportight, 2K Lumen, Wide Dist, 120-277V, 5000K, Dim	2445	17	144
2VT3-LD5-3-W-UNV-L850-CD1-U	2ft Vaportight, 3K Lumen, Wide Dist, 120-277V, 5000K, Dim	3547	25	142
2VT3-LD5-4-W-UNV-L850-CD1-U	2ft Vaportight, 4K Lumen, Wide Dist, 120-277V, 5000K, Dim	4700	34	138
4VT3-LD5-4-W-UNV-L850-CD1-U	4ft Vaportight, 4K Lumen, Wide Dist, 120-277V, 5000K, Dim	4767	31	154
4VT3-LD5-5-W-UNV-L850-CD1-U	4ft Vaportight, 5K Lumen, Wide Dist, 120-277V, 5000K, Dim	5818	44	133
4VT3-LD5-6-W-UNV-L850-CD1-U	4ft Vaportight, 6K Lumen, Wide Dist, 120-277V, 5000K, Dim	7159	49	146
4VT3-LD5-8-W-UNV-L850-CD1-U	4ft Vaportight, 8K Lumen, Wide Dist, 120-277V, 5000K, Dim	9552	70	136
Parking				
2VT3-LD5-2-P-UNV-L850-CD1-U	2ft Vaportight, 2K Lumen, Parking Garage, 120-277V, 5000K, Dim	2228	17	131
2VT3-LD5-3-P-UNV-L850-CD1-U	2ft Vaportight, 3K Lumen, Parking Garage, 120-277V, 5000K, Dim	3231	25	129
2VT3-LD5-4-P-UNV-L850-CD1-U	2ft Vaportight, 4K Lumen, Parking Garage, 120-277V, 5000K, Dim	4271	34	126
4VT3-LD5-4-P-UNV-L850-CD1-U	4ft Vaportight, 4K Lumen, Parking Garage, 120-277V, 5000K, Dim	4338	31	140
4VT3-LD5-5-P-UNV-L850-CD1-U	4ft Vaportight, 5K Lumen, Parking Garage, 120-277V, 5000K, Dim	5294	44	121
4VT3-LD5-6-P-UNV-L850-CD1-U	4ft Vaportight, 6K Lumen, Parking Garage, 120-277V, 5000K, Dim	6509	49	133
4VT3-LD5-8-P-UNV-L850-CD1-U	4ft Vaportight, 8K Lumen, Parking Garage, 120-277V, 5000K, Dim	8671	69	126

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 91%	> 247,000

Input Watts:
4VT3LD5-4 (4,000 lumens)=31W
4VT3-LD5-5 (5,000 lumens)=44W
4VT3-LD5-6 (6,000 lumens)=49W
4VT3-LD5-8 (8,000 lumens)=69W

Ambient Ratings

2ft. Lumen Package	Ambient Rating
2VT3-LD5-2	55°C
2VT3-LD5-3	50°C
2VT3-LD5-4	50°C

4ft. Lumen Package	Ambient Rating
4VT3-LD5-4	55°C
4VT3-LD5-5	50°C
4VT3-LD5-6	50°C
4VT3-LD5-8	45°C

Shipping Data

Catalog No.	Wt.
4VT3-LD5	12 lbs.

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

SC

Lumiere

DESCRIPTION

Lanterra 9004-W1 (Up or Down) and 9004-W2 (Up and Down) are 4.25" O.D., line voltage cylinder fixtures with dimmable LED. The luminiare comes in various mountings, surface mount with integral driver in the housing, remote driver mount with round and square wall plates and square wall integral driver, all of which can be mounted over standard 4 inch j-box. The luminaire also comes with various field replaceable optics and premium color tuning option. It also comes with various lens, louvers and colors or dichroic filters, which can combine up to two at once to create multiple lighting effects. The fixture may be used indoors or outdoors and carries IP66 rating.

Catalog #		**Type**	
Project			
Comments		**Date**	
Prepared by			

SPECIFICATION FEATURES

Material
Housing, hood and mounting stem are precision-machined from corrosion resistant billet stock 6061-T6 aluminum.

Finish
Fixtures constructed from 6061-T6 aluminum are double protected by an ROHS complaint chemical film undercoating and polyester powder coat paint finish, surpassing the rigorous demands of the outdoor environment. A variety of standard colors are available.

Hood
Hood is removable and accepts up to two internal accessories at once (lenses, louvers and filters) to achieve multiple lighting effects. Weep holes prevents water and mineral stains from collecting on the lens, even in the straight up position. The flush lens design reduces fixture length, minimizes debris collection and prevents water and mineral stains from collecting on the lens.

Gasket
Housing and hood are sealed with a high temperature silicone O-ring gasket to prevent water intrusion.

Lens
Tempered glass lens, factory sealed with high temperature silicone O-ring to prevent water intrusion and breakage due to thermal stock.

Hardware
Stainless steel hardware is standard to provide maximum corrosion resistance.

Electrical
Long life LED system coupled with electronic driver (120-277V/50-60Hz) is compatible with TRIAC (Trailing Edge), ELV (Forward phase) and 0-10V dimming to deliver optical performance. Light can be dimmed from 100-1% while maintaining constant CCT. It will operate in -30°C to 50°C unless noted otherwise. The driver incorporates surge protection. LED's are available in 2700K, 3000K, 3500K at 90CRI and 97CRI, 4000K at 80CRI and 97CRI, 5000K at 80CRI and are industry leading high output with 87% lumen maintenance at 60,000hrs.

Compliance
Components are UL recognized and luminaires are cULus listed for 50˚C ambient environments unless noted otherwise, wet location listed, and ROHS compliant. IP66 Rated. Options to meet Buy American Act requirements

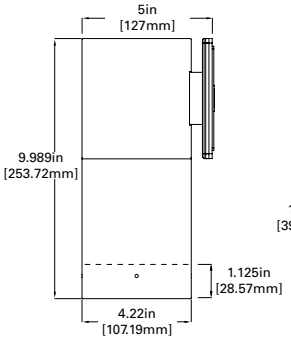
Warranty
Lumiere warrants the Lanterra series of fixtures against defects in material and workmanship for five (5) years. Auxiliary equipment such as LED drivers carries the original manufacturer's warranty.

Lanterra 9004

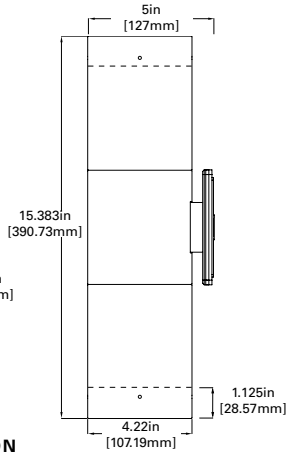
LED
INTERIOR / EXTERIOR
CYLINDER FLOOD LIGHT
CERTIFICATION DATA
cULus - 1598
Wet Location Listed - IP66
LM79/LM80 Compliant
ROHS Compliant
10W LED, L70/102,000@25° Celcius
20W LED, L70/102,000@25° Celcius
30W LED, L70/102,000@25° Celcius

DIMENSIONS

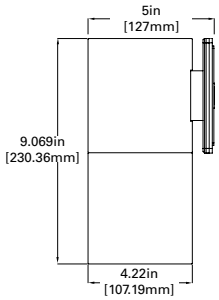
9004-W1-RW



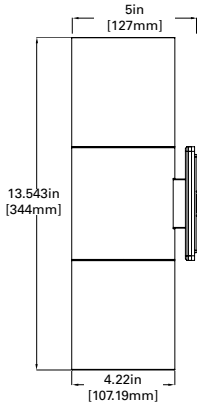
9004-W2-RW



9004-W1-FL



9004-W2-FL



ORDERING INFORMATION

DOMESTIC PREFERENCES [9]	SERIES	DIRECTION	HOOD	LED CCT & CRI	FIELD REPLACEABLE OPTIC 1	FIELD REPLACEABLE OPTIC 2 [2]	FINISH	LIGHT LEVEL	VOLTAGE	MOUNTING	OPTIONS
[Blank]=Standard **BAA**=Buy American Act	9004	W1 Up or Down W2 [6] Up and Down	RW Standard-Recessed Lens with weep holes - Outdoor RI Recessed Lens with no weep holes - Indoor FL Flush lens hood	**Standard CRI** LED2790 - 2700K, 90 CRI LED 3090 - 3000K, 90 CRI LED 3590 - 3500K, 90 CRI LED 4080 - 4000K, 80 CRI LED 5080 - 5000K, 80 CRI **Premium CRI** LED 2797 - 2700K, 97 CRI LED 3097 - 3000K, 97 CRI LED 3597 - 3500K, 97 CRI LED 4097 - 4000K, 97 CRI	S Spot M Medium F Flood W Wide Flood	S Spot M Medium F Flood W Wide Flood	**Standard Paint Finish** BK Black BZ Bronze CS City Silver WT White	L1 Light Level 1 (10W) L2 Light Level 2 (20W) L3 Light Level 3 (30W) LC1 Light Level Color 1 (12W) LC2 Light Level Color 2 (20W)	UNV 120-277V	Surface Mount - Wall, Ceiling, Ground RSM Round Surface Mount- mounts directly to junction box Thermal Limitations (unless otherwise noted 50C) 9004-W1-xxx-L3-xxx-RSM (45C) 9004-W2-xxx-L3-xxx-RSM (35C) 9004-W2-xxx-LC2-xxx-RSM (40C) Remote Driver Housing WRR [8] Remote Driver Housing - Round Wall Plate WRS [8] Remote Driver Housing - Square Wall Plate Thermal Limitations (unless otherwise noted 50C) 9004-W1-xxx-L3-xxx-WRx (45C) 9004-W2-xxx-L3-xxx-WRx (35C) 9004-W2-xxx-LC2-xxx-WRx (40C) Integral Driver Mount WIS [3,4] Wall Integral Driver Plate Thermal Limitations (unless otherwise noted 45C) 9004-(W1,W2)-xx-L1-xx-WIS (50C)	SVPD2 [5] Stand-alone integral sensor

Notes: 1. Order LC remote separately
2. Only available for double head option (W2)
3. 9004-W1 not available in LC2, L3
4. 9004-W2 not available in L2, L3, LC1 and LC2
5. Only available for Single head, Up or down (W1) with RSM only
6. W2 doubles input wattage listed
7. Only available for LEDCR
8. Remote Driver distance up to 60', For L3 (30W) remote distance up to 15'
9. Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
10. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

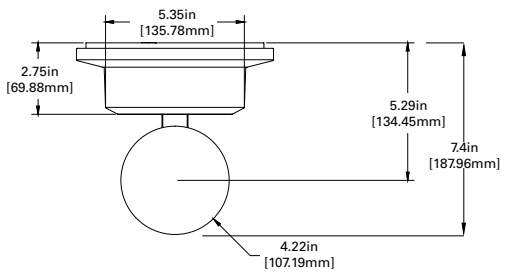
ACCESSORIES - ORDER SEPARATELY

ACCESSORIES [10]						OPTICS	
LCTL1RZRT452L-PK	Light Comissioning Tool (LCT)	**Filters**		**Lens**		**Louver**		LLR-S-3-4	15° Spot
ISHH01LUM	Programming Remote for sensor	F71-4	Peach Dichroic	LSL-4	Linear Spread Lens	LVR-4	45° Hex Cell Louver	LLR-M-3-4	25° Medium
ISHH02LUM	Personal Control Remote for sensor	F72-4	Amber Dichroic	DIF-4	Diffused Lens			LLR-F-3-4	36° Flood
		F73-4	Green Dichroic	OSL-4	Overall Spread Lens			LLR-W-3-4	60° Wide Flood
		F74-4	Medium Blue					LLR-K-3-4	Spot, Medium, Flood, Wide Flood Optic Kit
		F75-4	Yellow Dichroic						
		F76-4	Red Dichroic					LLR-S-LC-3-4	20° Spot - Color tuning optic
		F77-4	Dark Blue Dichroic					LLR-M-LC-3-4	32° Medium - Color tuning optic
		F78-4	Light Blue Dichroic					LLR-F-LC-3-4	42° Flood - Color tuning optic
		F79-4	Neutral Density Dichroic					LLR-W-LC-3-4	56° Wide Flood - color tuning optic
		F80-4	Magenta Dichroic					LR-K-LC-3-4	Spot, Medium, Flood, Wide Flood Color tuning optic Kit
		F22-4	Red Color						
		F33-4	Blue Color						
		F44-4	Green Color						
		F55-4	Yellow Color						
		F66-4	Mercury Color						

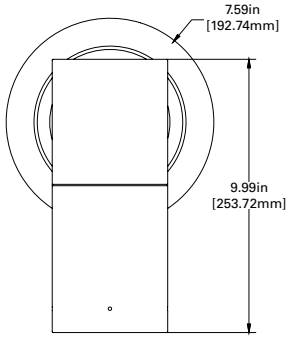
MOUNTINGS

ROUND SURFACE MOUNT (RSM)

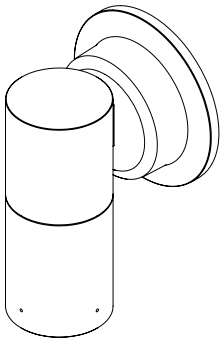
RSM-W1 (Up or down)



TOP VIEW



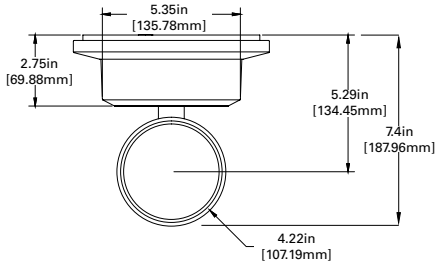
FRONT VIEW



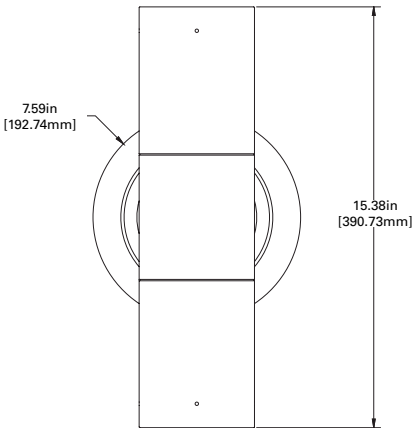
ISO VIEW

ROUND SURFACE MOUNT (RSM)

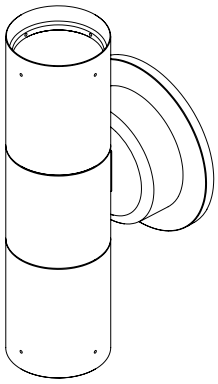
RSM-W2 (Up and down)



TOP VIEW



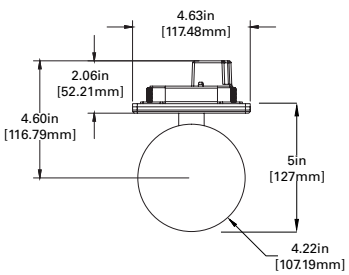
FRONT VIEW



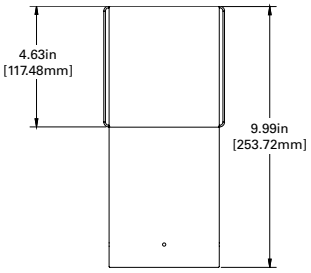
ISO VIEW

WALL INTEGRAL DRIVER PLATE (WIS)

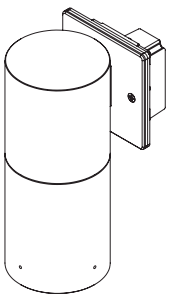
WIS-W1 (Up or down)



TOP VIEW



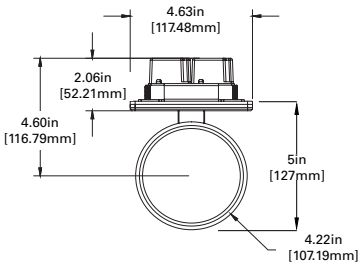
FRONT VIEW



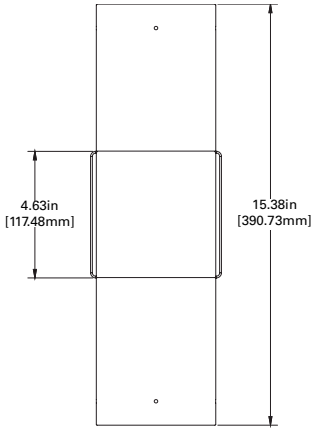
ISO VIEW

WALL INTEGRAL DRIVER PLATE (WIS)

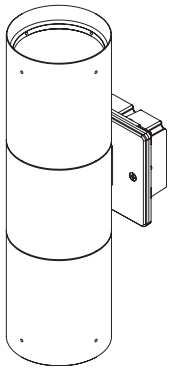
WIS-W2 (Up and down)



TOP VIEW



FRONT VIEW

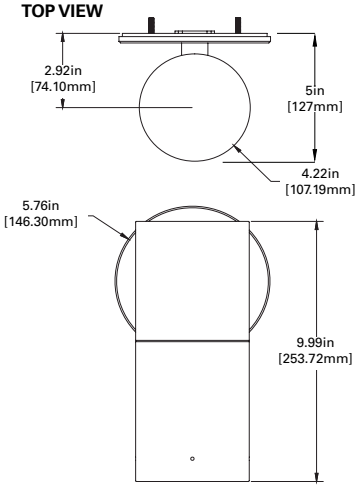


ISO VIEW

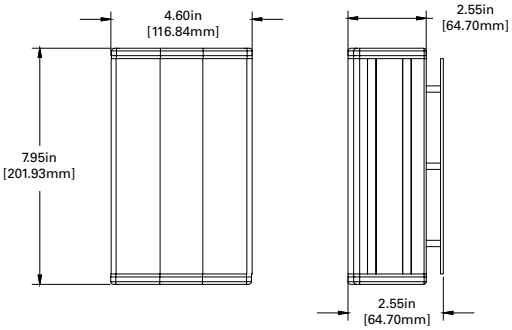
REMOTE DRIVER HOUSING ROUND WALL (WRR)

WRR-W1 (Up or down), as shown
WRS-W1 (Square option also available)

TOP VIEW

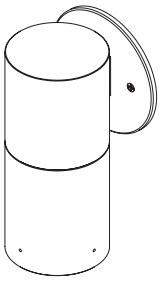


FRONT VIEW



Remote Driver distance up to 60',
For L3 remote distance up to 15'

REMOTE BOX

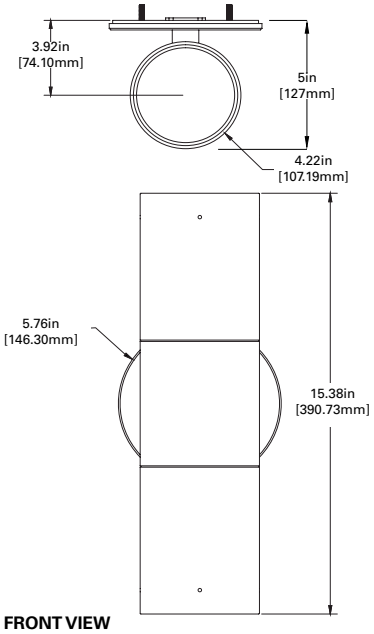


ISO VIEW

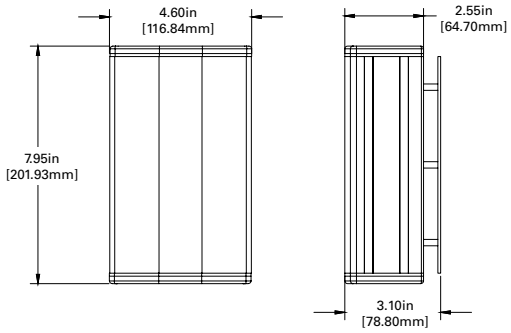
REMOTE DRIVER HOUSING ROUND WALL (WRR)

WRR-W2 (Up and down)
WRS-W2 (Square option also available)

TOP VIEW

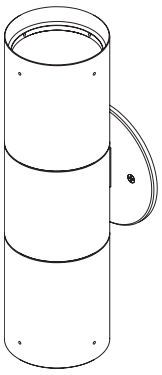


FRONT VIEW



Remote Driver distance up to 60',
For L3 remote distance up to 15'

REMOTE BOX



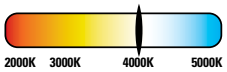
ISO VIEW

PHOTOMETRICS

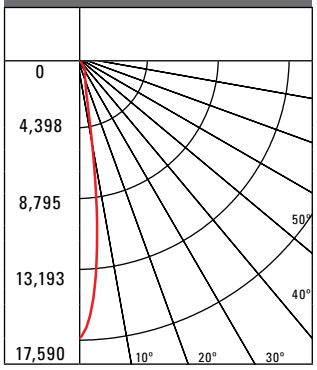
Test Number	P29496
Lumcat	9004-[W1]-X-FL-LED4080-S-BK-L3-UNV
Lumens	2801 Lm
Watts	28.6 W
LPW	97.9 Lm/W
CCT	4000K
SC (0/90/45)	0.27 / 0.27 / 0.27
Beam Angle	15.9°

COLOR METRIC SUMMARY

TM-30-15	Rf = 82.5 Rg = 94.3
CRI/CIE	Ra = 83.1 R9 = 11.4



CANDLE POWER DISTRIBUTION



CONE OF LIGHT

Horizontal Illuminance on Floor

MH	FC	L	W
2'	4397.5	0.4	0.4
4'	1099.4	1	1
6'	488.6	1.6	1.6
8'	274.8	2	2
10'	175.9	2.6	2.6
15'	78.2	4	4
20'	44	5.4	5.4
30'	19.5	8.2	8.2
40'	11	10.8	10.8

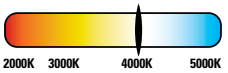
CANDELA TABLE

Angle	0-deg
0	17590
5	13640
10	5616
15	2329
20	1555
30	1057
40	161
50	11
60	4
70	1
80	0
90	0

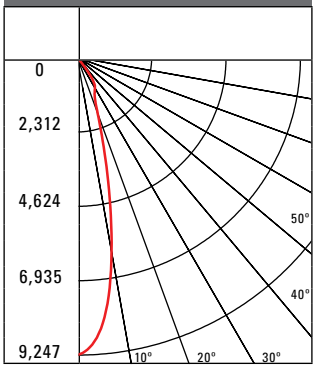
Test Number	29497
Lumcat	9004-[W1]-X-FL-LED4080-M-BK-L3-UNV
Lumens	2826 Lm
Watts	28.6 W
LPW	98.8 Lm/W
CCT	4000K
SC (0/90/45)	0.43 / 0.43 / 0.44
Beam Angle	25.5°

COLOR METRIC SUMMARY

TM-30-15	Rf = 82.5 Rg = 94.3
CRI/CIE	Ra = 83.1 R9 = 11.4



CANDLE POWER DISTRIBUTION



CONE OF LIGHT

Horizontal Illuminance on Floor

MH	FC	L	W
2'	2311.8	0.8	0.8
4'	577.9	1.6	1.6
6'	256.9	2.4	2.4
8'	144.5	3.4	3.4
10'	92.5	4.2	4.2
15'	41.1	6.4	6.4
20'	23.1	8.6	8.6
30'	10.3	12.8	12.8
40'	5.8	17.2	17.2

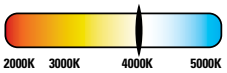
CANDELA TABLE

Angle	0-deg
0	9247
5	8453
10	6140
15	3506
20	1860
30	1098
40	170
50	13
60	4
70	1
80	0
90	0

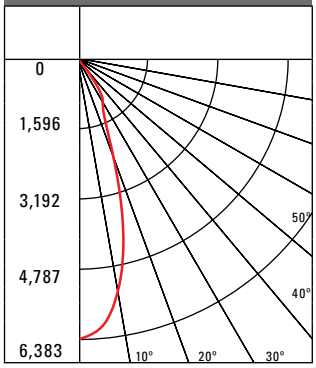
Test Number	P29498
Lumcat	9004-[W1]-X-FL-LED4080-F-BK-L3-UNV
Lumens	2871 Lm
Watts	28.5 W
LPW	100.7 Lm/W
CCT	4000K
SC (0/90/45)	0.58 / 0.58 / 0.56
Beam Angle	35.1°

COLOR METRIC SUMMARY

TM-30-15	Rf = 82.5 Rg = 94.3
CRI/CIE	Ra = 83.1 R9 = 11.4



CANDLE POWER DISTRIBUTION



CONE OF LIGHT

Horizontal Illuminance on Floor

MH	FC	L	W
2'	1595.8	1	1
4'	398.9	2.2	2.2
6'	177.3	3.4	3.4
8'	99.7	4.6	4.6
10'	63.8	5.8	5.8
15'	28.4	8.6	8.6
20'	16	11.6	11.6
30'	7.1	17.4	17.4
40'	4	23.2	23.2

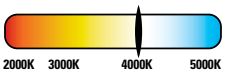
CANDELA TABLE

Angle	0-deg
0	6383
5	6141
10	5345
15	4027
20	2423
30	1153
40	178
50	6
60	4
70	1
80	0
90	0

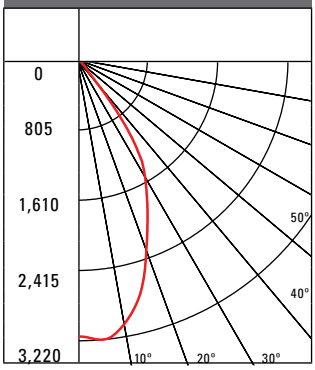
Test Number	P29499
Lumcat	9004-[W1]-X-FL-LED4080-W-BK-L3-UNV
Lumens	2790 Lm
Watts	28.5 W
LPW	97.9 Lm/W
CCT	4000K
SC (0/90/45)	0.86 / 0.86 / 0.91
Beam Angle	58.5°

COLOR METRIC SUMMARY

TM-30-15	Rf = 82.5 Rg = 94.3
CRI/CIE	Ra = 83.1 R9 = 11.4



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT

Horizontal Illuminance on Floor

MH	FC	L	W
2'	796.9	1.6	1.6
4'	199.2	3.4	3.4
6'	88.5	5	5
8'	49.8	6.8	6.8
10'	31.9	8.4	8.4
15'	14.2	12.8	12.8
20'	8	17	17
30'	3.5	25.6	25.6
40'	2	34.2	34.2

CANDELA TABLE

Angle	0-deg
0	3173
5	3220
10	3082
15	2784
20	2321
30	1560
40	366
50	95
60	25
70	3
80	0
90	0

CCT/CRI	LED2790	LED3090	LED3590	LED4080	LED5080	LED2797	LED3097	LED3597	LED4097
FC Multiplier	0.754	0.798	0.808	1.000	1.039	0.699	0.706	0.801	0.793

Light Level	L1	L2	L3
FC Multiplier	0.418	0.772	1.000

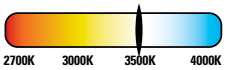
Note: Photometric tables show lumen output for W1 only. For W2 (Up and Down) option, uplight and downlight both match lumen output as W1.

PHOTOMETRICS (PREMIUM COLOR TUNING)

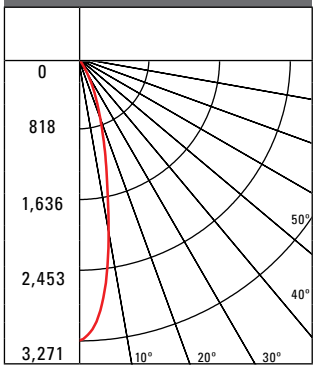
Test Number	P29571
Lumcat	9004-[W1]-X-FL-[LEDCB, LEDCR]-S-BK-LC-UNV
Lumens	853 Lm
Watts	24 W
LPW	35.5 Lm/W
CCT	3500K
SC (0/90/45)	0.41 / 0.41 / 0.45
Beam Angle	24.1°

COLOR METRIC SUMMARY

TM-30-15	Rf = 90.6 Rg = 100.4
CRI/CIE	Ra = 92.7 R9 = 67.5



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT

Horizontal Illuminance on Floor			
MH	FC	L	W
2'	817.8	0.8	0.8
4'	204.4	1.6	1.6
6'	90.9	2.4	2.4
8'	51.1	3.2	3.2
10'	32.7	4	4
15'	14.5	6	6
20'	8.2	8	8
30'	3.6	12	12
40'	2	16.2	16.2

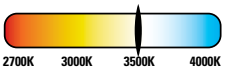
CANDELA TABLE

Angle	0-deg
0	3271
5	2929
10	2021
15	1231
20	747
30	227
40	5
50	1
60	0
70	0
80	0
90	0

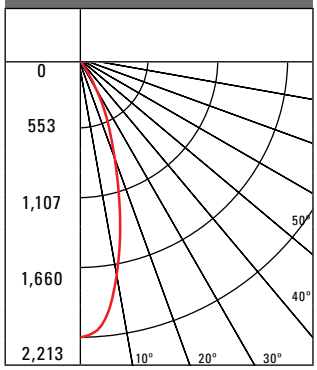
Test Number	P29572
Lumcat	9004-[W1]-X-FL-[LEDCB, LEDCR]-M-BK-LC-UNV
Lumens	853 Lm
Watts	24 W
LPW	35.5 Lm/W
CCT	3500K
SC (0/90/45)	0.55 / 0.55 / 0.58
Beam Angle	33.7°

COLOR METRIC SUMMARY

TM-30-15	Rf = 90.6 Rg = 100.4
CRI/CIE	Ra = 92.7 R9 = 67.5



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT

Horizontal Illuminance on Floor			
MH	FC	L	W
2'	553.2	1	1
4'	138.3	2.2	2.2
6'	61.5	3.2	3.2
8'	34.6	4.4	4.4
10'	22.1	5.4	5.4
15'	9.8	8.2	8.2
20'	5.5	11	11
30'	2.5	16.4	16.4
40'	1.4	22	22

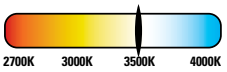
CANDELA TABLE

Angle	0-deg
0	2213
5	2126
10	1754
15	1279
20	845
30	288
40	3
50	1
60	1
70	0
80	0
90	0

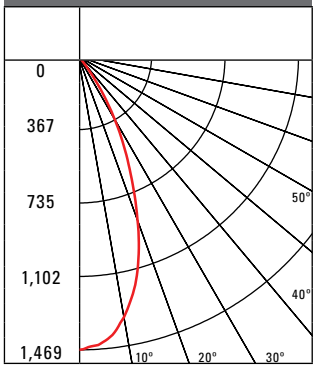
Test Number	P29573
Lumcat	9004-[W1]-X-FL-[LEDCB, LEDCR]-F-BK-LC-UNV
Lumens	834 Lm
Watts	24 W
LPW	34.8 Lm/W
CCT	3500K
SC (0/90/45)	0.72 / 0.72 / 0.71
Beam Angle	44.7°

COLOR METRIC SUMMARY

TM-30-15	Rf = 90.6 Rg = 100.4
CRI/CIE	Ra = 92.7 R9 = 67.5



CANDLE POWER DISTRIBUTION



CONE OF LIGHT

Horizontal Illuminance on Floor			
MH	FC	L	W
2'	367.2	1.4	1.4
4'	91.8	2.8	2.8
6'	40.8	4.2	4.2
8'	23	5.6	5.6
10'	14.7	7	7
15'	6.5	10.6	10.6
20'	3.7	14.2	14.2
30'	1.6	21.4	21.4
40'	0.9	28.6	28.6

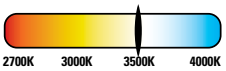
CANDELA TABLE

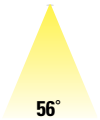
Angle	0-deg
0	1469
5	1435
10	1324
15	1135
20	865
30	368
40	36
50	3
60	3
70	0
80	0
90	0

Test Number	P29574
Lumcat	9004-[W1]-X-FL-[LEDCB, LEDCR]-W-BK-LC-UNV
Lumens	806 Lm
Watts	24 W
LPW	33.6 Lm/W
CCT	3500K
SC (0/90/45)	0.85/ 0.85 / 0.86
Beam Angle	55.8°

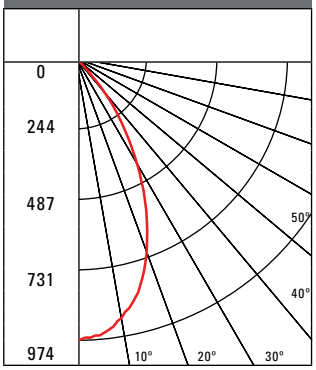
COLOR METRIC SUMMARY

TM-30-15	Rf = 90.6 Rg = 100.4
CRI/CIE	Ra = 92.7 R9 = 67.5





CANDLEPOWER DISTRIBUTION



CONE OF LIGHT

Horizontal Illuminance on Floor			
MH	FC	L	W
2'	243.5	1.6	1.6
4'	60.9	3.4	3.4
6'	27.1	5	5
8'	15.2	6.8	6.8
10'	9.7	8.4	8.4
15'	4.3	12.8	12.8
20'	2.4	17	17
30'	1.1	25.6	25.6
40'	0.6	34	34

CANDELA TABLE

Angle	0-deg
0	974
5	960
10	910
15	835
20	715
30	424
40	157
50	6
60	4
70	3
80	0
90	0

Note: Photometric tables show lumen output for W1 only. For W2 (Up and Down) option, uplight and downlight both match lumen output as W1.

LUMEN TABLE

		9004-[W1] Regressed Hood - Black								
		L1 - 10 W			L2 - 20 W			L3 - 30W		
		CBCP	Lumens	LPW	CBCP	Lumens	LPW	CBCP	Lumens	LPW
Spot 15°	LED2790	5584	783	79.5	10310	1445	71.9	13357	1872	65.7
	LED3090	5907	828	84.1	10906	1529	76.1	14130	1981	69.5
	LED3590	5983	839	85.1	11047	1549	77.0	14311	2006	70.4
	LED4080	7401	1038	105.3	13666	1916	95.3	17705	2482	87.1
	LED5080	7689	1078	109.4	14197	1990	99.0	18393	2578	90.5
	LED2797	5175	726	73.7	9556	1340	66.6	12380	1736	60.9
	LED3097	5224	732	74.4	9646	1352	67.3	12497	1752	61.5
	LED3597	5926	831	84.3	10941	1534	76.3	14175	1987	69.7
	LED4097	5869	823	83.5	10836	1519	75.6	14038	1968	69.1
Medium Flood 25°	LED2790	2907	781	79.2	5368	1441	71.7	6954	1867	65.5
	LED3090	3075	826	83.8	5678	1525	75.8	7357	1975	69.3
	LED3590	3115	836	84.9	5751	1544	76.8	7451	2001	70.2
	LED4080	3853	1035	105.0	7115	1910	95.0	9218	2475	86.8
	LED5080	4003	1075	109.1	7391	1984	98.7	9576	2571	90.2
	LED2797	2695	723	73.4	4975	1336	66.5	6446	1731	60.7
	LED3097	2720	730	74.1	5022	1348	67.1	6505	1747	61.3
	LED3597	3085	828	84.1	5696	1529	76.1	7380	1981	69.5
	LED4097	3055	820	83.3	5642	1515	75.4	7309	1962	68.9
Flood 36°	LED2790	2006	792	80.4	3704	1463	72.8	4799	1895	66.3
	LED3090	2122	838	85.1	3918	1547	77.0	5076	2004	70.1
	LED3590	2149	849	86.2	3969	1567	78.0	5142	2030	71.0
	LED4080	2659	1050	106.6	4910	1939	96.4	6361	2512	87.8
	LED5080	2762	1091	110.7	5101	2014	100.2	6608	2609	91.2
	LED2797	1859	734	74.5	3233	1356	67.4	4448	1756	61.4
	LED3097	1877	741	75.2	3466	1368	68.1	4490	1773	62.0
	LED3597	2129	841	85.3	3931	1552	77.2	5093	2011	70.3
	LED4097	2108	832	84.5	3893	1537	76.5	5044	1991	69.6
Wide Flood 60°	LED2790	1012	753	76.4	1869	1390	69.2	2422	1801	63.0
	LED3090	1071	796	80.8	1977	1470	73.2	2562	1905	66.6
	LED3590	1085	807	81.9	2003	1489	74.1	2595	1929	67.5
	LED4080	1342	998	101.3	2478	1842	91.7	3210	2387	83.5
	LED5080	1394	1037	105.2	2574	1914	95.2	3335	2480	86.7
	LED2797	938	698	70.8	1733	1288	64.1	2245	1669	58.4
	LED3097	947	704	71.5	1749	1300	64.7	2266	1685	58.9
	LED3597	1074	799	81.1	1984	1475	73.4	2570	1911	66.8
	LED4097	1064	791	80.3	1965	1461	72.7	2545	1893	66.2

TM30 DATA

	CCT/CRI	Rf	Rg	Ra	R9
9004	2790	90.9	98.9	91.7	58.3
	3090	90.8	99.1	92.5	62.6
	3590	90.6	100.4	92.7	67.5
	4080	82.5	94.3	83.1	11.4
	5080	81.6	94.1	82	6
	2797	94.9	100	98.1	86.9
	3097	94	100.3	97.8	88.9
	3597	92.9	99.3	97.2	89.1
	4097	91.5	98.7	95.4	84

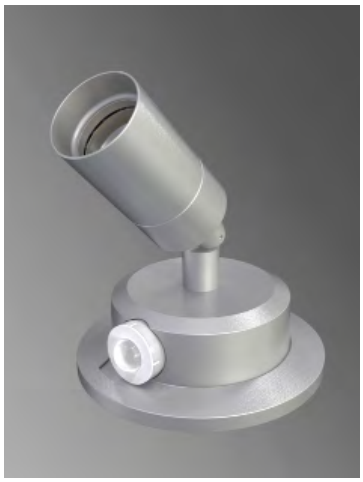
LUMEN MAINTENANCE

Ambient Tempurature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C, 40°C, 50°C	> 87%	> 102,000

POWER TABLE

Number of Heads	Light Level	Input Current (A) at 120 VAC	Input Current (A) at 277 VAC	Input Power (W)
W1	L1	0.08	0.03	10
	L2	0.177	0.088	20.93
	L3	0.252	0.118	30.02
	LC1	0.1	0.085	11.4
	LC2	0.183	0.088	21.44
W2	L1	0.16	0.06	20
	L2	0.354	0.176	41.86
	L3	0.504	0.236	60.04
	LC1	0.2	0.17	22.8
	LC2	0.366	0.176	42.88

INTEGRATED SENSOR - SVPD2



The Lanterra Cylinder 9004 with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Lanterra Cylinder 9004 delivers superior lighting with integrated PIR occupancy sensing and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated circuit planning or special wiring. The Lanterra Cylinder 9004 delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

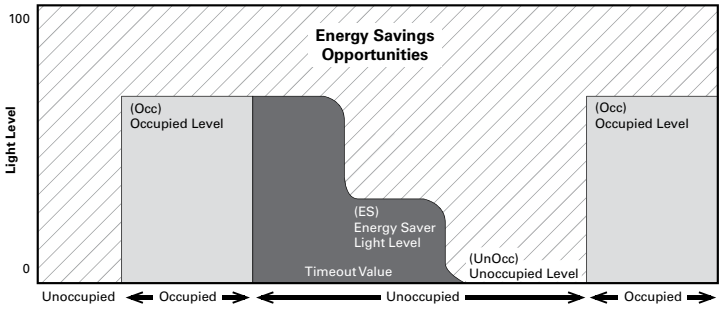
The SVPD2 sensor is configured for outdoor use, so the integral daylight sensor will enable the luminaire to automatically adjust to daylight conditions by turning off when sufficient sunlight is present. Consult factory for indoor configuration.

Occupied light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH01LUM). While the default unoccupied level is OFF, a lower light level can be saved instead using the programming remote. The integrated sensor personal remote (Catalog Number: ISHH02LUM) provides code compliant manual raise, lower, ON, OFF control.

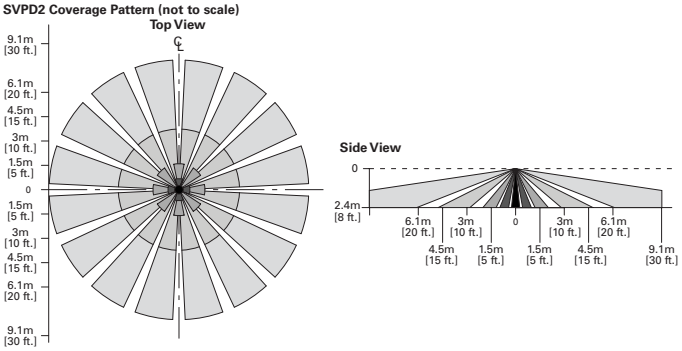
The Lanterra Cylinder 9004 with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

HOW IT WORKS

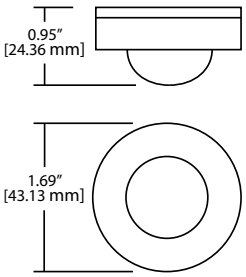
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the occupied light level.
- Lighting will remain at the occupied level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level (default matches occupied level). This adjustable light level is often set to half of the occupied daylight level using the programming remote.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.
- If sufficient sunlight is present, the luminaire will remain OFF, regardless of occupancy.



Coverage



Sensor Dimensions



Optional Remote Controls

ISHH01LUM Programming Remote

ISHH02LUM Personal Control Remote

Project		Catalog #		Type	
Prepared by		Notes		Date	

McGraw-Edison

GWC Galleon Wall

Wall Mount Luminaire

Product Features

Light ARchitect™

Product Certifications

DLC 1 · DLC PREMIUM 1 · ISO SYSTEMS CERTIFIED · UL CERTIFIED · FC CLASS A · IP66 · ida DARK SKY APPROVED 2 · 5 YEAR LIMITED WARRANTY · BAA BUY AMERICAN ACT COMPLIANT OPTIONS AVAILABLE

Interactive Menu

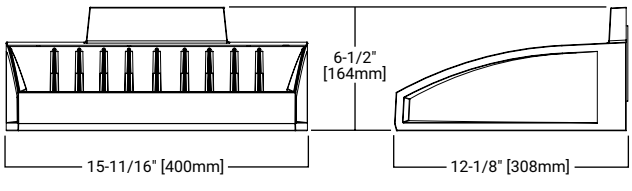
Quick Facts

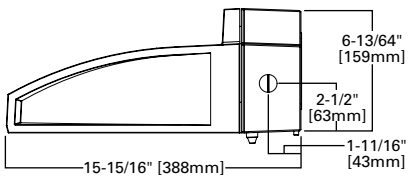
- Choice of thirteen high-efficiency, patented AccuLED Optics
- Downward and inverted wall mounting configurations
- Eight lumen packages from 3,215 up to 17,056
- Efficacies up to 154 lumens per watt

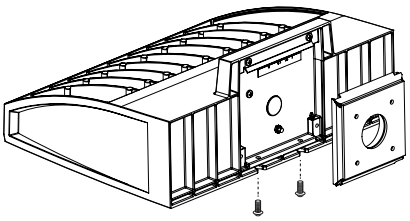
Connected Systems

- WaveLinx
- Enlighted

Dimensional Details







NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Ordering Information

SAMPLE NUMBER: **GWC-SA2C-740-U-T4FT-GM**

Product Family [1]	Light Engine		Color Temperature	Voltage	Distribution	Finish
	Configuration	Drive Current				
GWC=Galleon Wall **BAA-GWC**=Galleon Wall, Buy American Act Compliant [35] **TAA-GWC**=Galleon Wall, Trade Agreements Act Compliant [35]	**SA1**=1 Square **SA2**=2 Squares [2]	**A**=615mA **B**=800mA **C**=1000mA **D**=1200mA [4]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **AMB**=Amber, 590nm [3, 4]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [6,7] **9**=347V [6] **DV**=277-480V DuraVolt Drivers [7, 8, 37]	**T2**=Type II **T3**=Type III **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **5NQ**=Type V Square Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White

Options (Add as Suffix)	**Controls and Systems Options** (Add as Suffix)	**Accessories** (Order Separately) [36]
F=Single Fused (120, 277 or 347V. Must Specify Voltage) **FF**=Double Fused (208, 240 or 480V. Must Specify Voltage) **10K**=10kV Surge Module **20K**=Series 20kV UL 1449 Surge Protective Device **2L**=Two-Circuit Light Engine [38] **DIM**=External 0-10V Dimming Leads [9, 10] **CBP**=Battery Pack with Back Box, Cold Weather Rated [2, 4, 14, 33] **CBP-CEC**=Battery Pack with Back Box, Cold Weather Rated, CEC compliant [2, 4, 14] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **HSS**=Factory Installed House Side Shield [23] **GRSBK**=Factory Installed Glare Shield, BK [4, 27] **GRSWH**=Factory Installed Glare Shield, WH [4, 27] **UPL**=Uplight Housing [13] **HA**=50°C High Ambient [12] **LCF**=Light Square Trim Plate Painted to Match Housing [22] **MT**=Factory Installed Mesh Top **CC**=Coastal Construction finish [5] **CE**=CE Marking and Small Terminal Block [24] **AHD145**=After Hours Dim, 5 Hours [16] **AHD245**=After Hours Dim, 6 Hours [16] **AHD255**=After Hours Dim, 7 Hours [16] **AHD355**=After Hours Dim, 8 Hours [16] **DALI**=DALI Driver [11]	**BPC**=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) **PR**=NEMA 3-PIN Twistlock Photocontrol Receptacle **PR7**=NEMA 7-PIN Twistlock Photocontrol Receptacle [15] **SPB1**=Dimming Occupancy Sensor with Bluetooth Interface, <8' Mounting [19,34] **SPB2**=Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting [19,34] **SPB4**=Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting [19,34] **MS-LXX**=Motion Sensor for On/Off Operation [17, 18, 19] **MS/DIM-LXX**=Motion Sensor for Dimming Operation [17, 18, 19] **ZW**=WaveLinx-enabled 4-PIN Twistlock Receptacle [29, 30] **ZD**=WaveLinx Module with DALI driver and 4-PIN Receptacle [29, 30] **SWPD4XX**=WaveLinx Sensor Only, 7'-15' [31, 32] **SWPD5XX**=WaveLinx Sensor Only, 15'-40' [31, 32] **WOBXX**=WaveLinx Sensor with Bluetooth, 7'-15' [31, 32] **WOFXX**=WaveLinx Sensor with Bluetooth, 15'-40' [31, 32] **LWR-LW**=Enlighted Wireless Sensor, Wide Lens for 8'-16' Mounting Height [19, 20, 21] **LWR-LN**=Enlighted Wireless Sensor, Narrow Lens for 16'-40' Mounting Height [19, 20, 21]	**OA/RA1013**=Photocontrol Shorting Cap **OA/RA1016**=NEMA Photocontrol - Multi-Tap 105-285V **OA/RA1201**=NEMA Photocontrol - 347V **OA/RA1027**=NEMA Photocontrol - 480V **MA1252**=10kV Circuit Module Replacement **MA1059XX**=Thru-branch Back Box (Must Specify Color) **LS/HSS**=Field Installed House Side Shield [23, 25] **LS/GRSBK**=Glare Shield, Black [25, 27] **LS/GRSWH**=Glare Shield, White [25, 27] **LS/PFS**=Perimeter Shield, Black [28] **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [17] **WOLC-7P-10A**=WaveLinx Outdoor Control Module (7-pin) [26, 29] **SWPD4-XX**=Wavelinx Wireless Sensor, 7' – 15' Mounting Height [29, 30, 31, 32] **SWPD5-XX**=Wavelinx Wireless Sensor, 15' – 40' Mounting Height [29, 30, 31, 32]

NOTES:

1. DesignLight Consortium® Qualified. Refer to www.designlights.org, Qualified Products List under Family Models for details.
2. Two light squares with CBP options limited to 25°C. CBP not available in combination with sensor options at 1200mA.
3. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Exact luminaire wattage available in IES files. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
4. Not available with HA option.
5. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
6. Require the use of a step down transformer. Not available in combination with sensor options at 1200mA.
7. 480V not to be used with ungrounded or impedance grounded systems.
8. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
9. Cannot be used with other control options.
10. Low voltage control leads extended 18" from fixture.
11. Not available in 1200mA. When used with CBP or HA options, only available with single light square.
12. Not available in 1200mA, UPL or CBP options. Available with single light square.
13. Not available with SL2, SL3, SL4, HA, CBP, PR or PR7 options.
14. Operates a single light square only. Operates at -20°C to +40°C. Backbox is non-IP rated. Control option limited to BPC.
15. Compatible with standard 3-PIN photocontrols, 5-PIN or 7-PIN ANSI controls.
16. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
17. The FSIR-100 configuration tool is required to adjust parameters such as high and low modes, sensitivity, time delay and cutoff. Consult your lighting representative at Cooper Lighting Solutions for more information.
18. Replace LXX with L08 (<8' mounting), L20 (8'-20' mounting) or L40W (21'-40' mounting.)
19. Includes integral photosensor.
20. Enlighted wireless sensors are factory installed requiring network components in appropriate quantities.
21. White sensor shipped on all housing color options.
22. Not available with HSS or GRS options.
23. Not for use with 5NQ, 5MQ, 5WQ or RW optics. The light square trim plate is painted black when the HSS option is selected.
24. CE is not available with the 1200, DALI, LWR, MS, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
25. One required for each light square.
26. Requires PR7.
27. Not for use with T4FT, T4W or SL4 optics.
28. Set of 4 pcs. Once set required per Light Square.
29. Cannot be used in conjunction with additional photocontrol or other controls systems (BPC, PR, PR7, MS, LWR).
30. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
31. Requires ZW or ZD receptacle.
32. Replace XX with sensor color (WH, BZ, or BK).
33. Specify 120V or 277V.
34. Smart device with mobile application required to change system defaults. See controls section for details.
35. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
36. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
37. Not available in 1 square configuration at 800mA or below. Not available with any control option except SPB.
38. 2L not available with FF, AHD or DALI options. Controls and/or battery packs operate only one of the two circuits when 2L is specified. 2L with controls options not available with 347V or 480V.

Product Specifications

Construction

- Driver enclosure thermally isolated from optics for optimal thermal performance
- Die-cast aluminum heat sinks
- IP66 rated housing
- 1.5G vibration rated

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 13 optical distributions
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED driver assembly mounted for ease of maintenance
- Standard with 0-10V dimming
- Optional 10kV or 20kV surge module
- Suitable for operation in -40°C to 40°C ambient environments; Optional 50°C high ambient (HA) configuration

Mounting

- Gasketed and zinc plated rigid steel mounting attachment
- "Hook-N-Lock" mechanism for easy installation

Finish

- Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Typical Applications

- Exterior Wall, Walkway

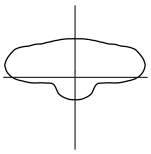
Warranty

- Five-year warranty

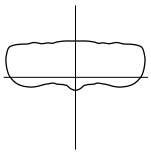
Optical Distributions

Asymmetric Area Distributions

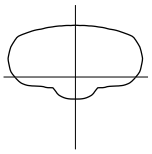
T2 (Type II)



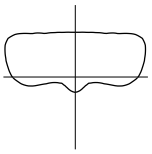
SL2 (Type II with Spill Control)



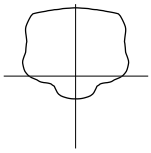
T3 (Type III)



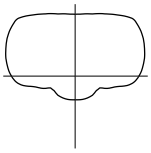
SL3 (Type III with Spill Control)



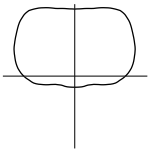
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

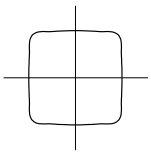


SL4 (Type IV with Spill Control)

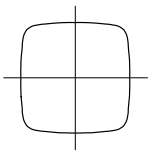


Symmetric Distributions

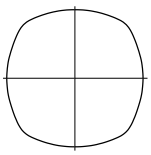
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

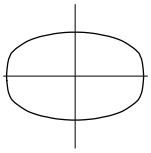


5WQ (Type V Square Wide)

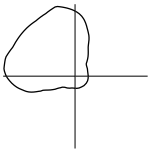


Specialized Distributions

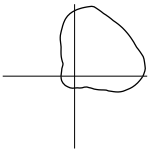
RW (Rectangular Wide Type I)



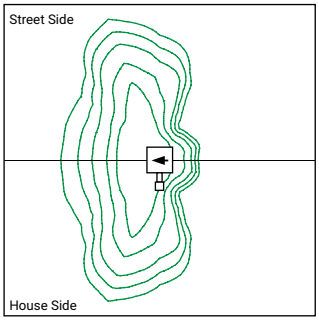
SLL (90° Spill Light Eliminator Left)



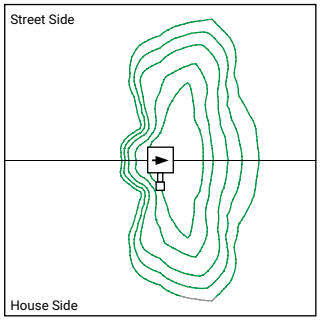
SLR (90° Spill Light Eliminator Right)



Optic Orientation



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

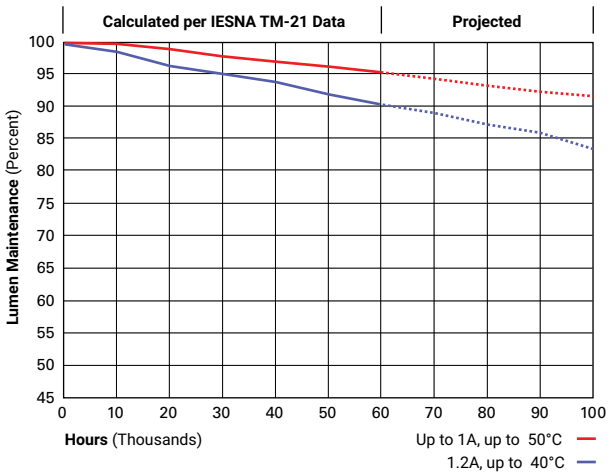
Energy and Performance Data

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

Lumen Maintenance

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	> 416,000
1.2A	Up to 40°C	> 90%	> 205,000



Energy and Performance Data

View GWC Galleon Wall IES files

4000K/5000K/6000K CCT, 70 CRI

Number of Light Squares		1				2			
Drive Current		615mA	800mA	1050mA	1.2A	615mA	800mA	1050mA	1.2A
Nominal Power (Watts)		34	44	59	67	66	86	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (A)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (A)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	Lumens	4,883	5,989	7,412	8,131	9,543	11,703	14,485	15,891
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
	Lumens per Watt	144	136	126	121	145	136	128	123
T3	Lumens	4,978	6,105	7,556	8,288	9,729	11,929	14,764	16,196
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	146	139	128	124	147	139	131	126
T4FT	Lumens	5,008	6,140	7,599	8,337	9,783	11,998	14,850	16,290
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	147	140	129	124	148	140	131	126
T4W	Lumens	4,942	6,060	7,502	8,229	9,658	11,843	14,658	16,080
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
	Lumens per Watt	145	138	127	123	146	138	130	125
SL2	Lumens	4,874	5,979	7,399	8,117	9,528	11,684	14,461	15,863
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3
	Lumens per Watt	143	136	125	121	144	136	128	123
SL3	Lumens	4,976	6,104	7,555	8,287	9,727	11,927	14,763	16,194
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	146	139	128	124	147	139	131	126
SL4	Lumens	4,729	5,799	7,178	7,873	9,239	11,333	14,025	15,387
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4
	Lumens per Watt	139	132	122	118	140	132	124	119
5NQ	Lumens	5,134	6,296	7,793	8,547	10,033	12,303	15,226	16,704
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	Lumens per Watt	151	143	132	128	152	143	135	129
5MQ	Lumens	5,228	6,412	7,935	8,705	10,216	12,529	15,508	17,011
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	154	146	134	130	155	146	137	132
5WQ	Lumens	5,242	6,428	7,956	8,728	10,244	12,563	15,548	17,056
	BUG Rating	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	154	146	135	130	155	146	138	132
SLL/SLR	Lumens	4,373	5,365	6,640	7,283	8,547	10,481	12,973	14,231
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	129	122	113	109	130	122	115	110
RW	Lumens	5,087	6,238	7,721	8,472	9,941	12,190	15,088	16,553
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	150	142	131	126	151	142	134	128

*** Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.**

3000K CCT, 80 CRI

Number of Light Squares		1				2			
Drive Current		615mA	800mA	1050mA	1.2A	615mA	800mA	1050mA	1.2A
Nominal Power (Watts)		34	44	59	67	66	86	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (A)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (A)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	Lumens	3,880	4,759	5,890	6,461	7,583	9,300	11,510	12,628
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	114	108	100	96	115	108	102	98
T3	Lumens	3,956	4,851	6,004	6,586	7,731	9,479	11,732	12,870
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
	Lumens per Watt	116	110	102	98	117	110	104	100
T4FT	Lumens	3,980	4,879	6,038	6,625	7,774	9,534	11,800	12,945
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	117	111	102	99	118	111	104	100
T4W	Lumens	3,927	4,816	5,961	6,539	7,675	9,411	11,648	12,778
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	116	109	101	98	116	109	103	99
SL2	Lumens	3,873	4,751	5,880	6,450	7,571	9,285	11,491	12,605
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	114	108	100	96	115	108	102	98
SL3	Lumens	3,954	4,851	6,004	6,585	7,729	9,478	11,731	12,868
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	116	110	102	98	117	110	104	100
SL4	Lumens	3,758	4,608	5,704	6,256	7,342	9,006	11,145	12,227
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3
	Lumens per Watt	111	105	97	93	111	105	99	95
5NQ	Lumens	4,080	5,003	6,193	6,792	7,973	9,776	12,099	13,274
	BUG Rating	B2-U0-G0	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens per Watt	120	114	105	101	121	114	107	103
5MQ	Lumens	4,154	5,095	6,305	6,917	8,118	9,956	12,323	13,518
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	122	116	107	103	123	116	109	105
5WQ	Lumens	4,166	5,108	6,322	6,936	8,140	9,983	12,355	13,553
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	123	116	107	104	123	116	109	105
SLL/SLR	Lumens	3,475	4,263	5,276	5,787	6,792	8,329	10,309	11,309
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	102	97	89	86	103	97	91	88
RW	Lumens	4,042	4,957	6,135	6,732	7,900	9,687	11,990	13,154
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	Lumens per Watt	119	113	104	100	120	113	106	102

*** Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.**

Control Options

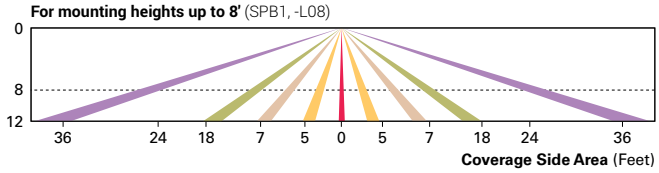
0-10V This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (BPC, PR, and PR7) Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

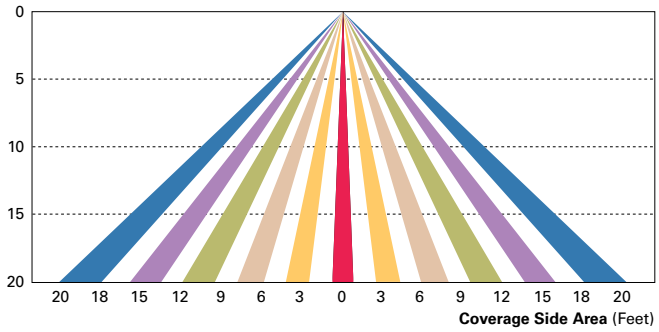
After Hours Dim (AHD) This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX and MS-LXX) These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.

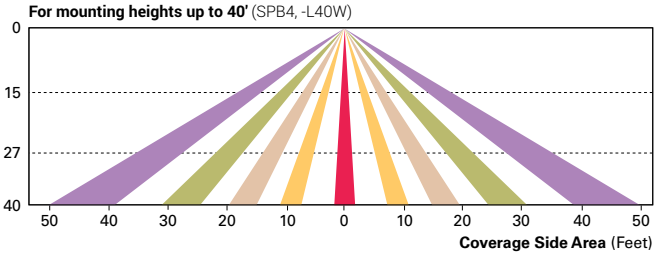
For mounting heights up to 8' (SPB1, -L08)



For mounting heights up to 20' (SPB2, -L20)

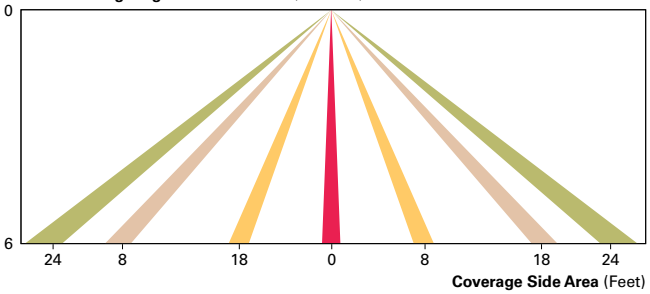


For mounting heights up to 40' (SPB4, -L40W)

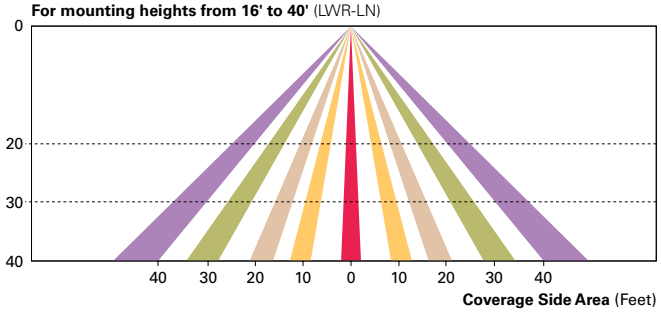


Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN) The Enlighted control system is a connected lighting solution, combining LED luminaires with an integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes while collecting valuable data about building performance and use. Software applications utilizing energy dashboards maximize data inputs to help optimize the use of other resources beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A) The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

APPENDIX SIX – FAA HEIGHT ANALYSIS

Notice Criteria Tool

Notice Criteria Tool - Desk Reference Guide V_2018.2.0

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference CFR Title 14 Part 77.9.

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the FAA Co-location Policy
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- your structure will be on an airport or heliport
- filing has been requested by the FAA

If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the Air Traffic Areas of Responsibility map for Off Airport construction, or contact the FAA Airports Region / District Office for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	33 Deg 39 M 44 S N
Longitude:	111 Deg 55 M 22 S W
Horizontal Datum:	NAD83
Site Elevation (SE):	1616 (nearest foot)
Structure Height :	40 (nearest foot)
Traverseway:	No Traverseway (Additional height is added to certain structures under 77.9(c)) User can increase the default height adjustment for Traverseway, Private Roadway and Waterway
Is structure on airport:	(•) No ( ) Yes

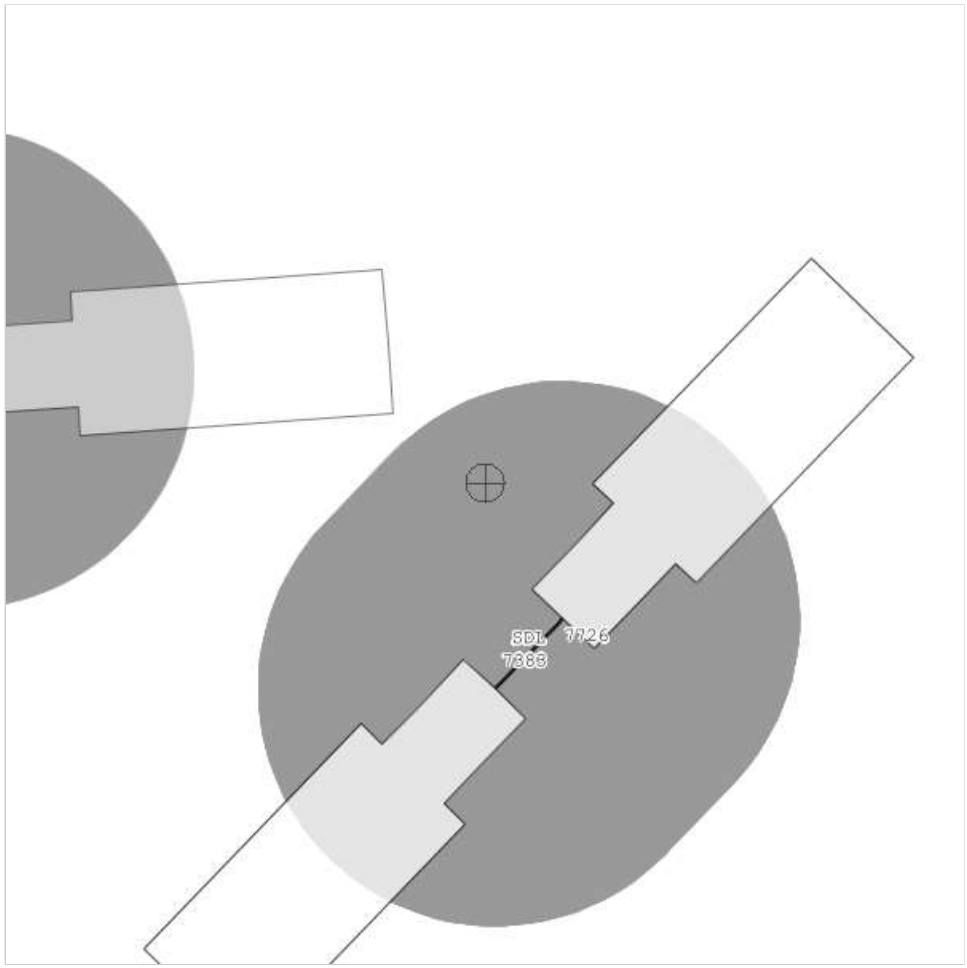
Results

You exceed the following Notice Criteria:

Your proposed structure is in proximity to a navigation facility and may impact the assurance of navigation signal reception. The FAA, in accordance with 77.9, requests that you file.

77.9(b) by 16 ft. The nearest airport is SDL, and the nearest runway is 03/21.

The FAA requests that you file


SDL 7725
7388

APPENDIX SEVEN – ONE SCOTTSDALE OPEN SPACE BUDGET TRACKER

PLANNING UNITS II AND III

OPEN SPACE BUDGET TRACKER

- SCENIC CORRIDOR
- DRAINAGE CORRIDOR
- LANDSCAPE BUFFER
- STREETSCAPE OPEN SPACE
- PARKS & URBAN OPEN SPACE
- AN TICPATE OPEN SPACE

13 SEP 2022

ESPIRITU LOCI
The Spirit of the Place
6625 North Scottsdale Road
Antibes Building Suite X
Scottsdale Arizona 85250
Phone 480.481.9100
Facsimile 480.481.9101
www.Espiritu Loci.com

0' 100' 200' 07JUN22

DMB

Stacked 40s
Open Space Tracker

rev. 13-Sep-22

REQUIRED OPEN SPACE

		PU-II NET SITE AREA	TOTAL *(ac)*
PU-II Gross Site Area		*south of Legacy Boulevard centerline*	61.60
Loop 101 Frontage ROW			*(0.19)*
Scottsdale Road ROW			*(0.50)*
Legacy Boulevard ROW			*(1.64)*
PU-II NET SITE AREA			**59.27**

		PU-III NET SITE AREA	TOTAL *(ac)*
PU-III Gross Site Area		*north of Legacy Boulevard centerline*	53.94
Scottsdale Road ROW			*(0.68)*
Legacy Boulevard ROW			*(1.81)*
Thompson Peak Parkway ROW			*(0.27)*
PU-III NET SITE AREA			**51.19**

		OPEN SPACE REQUIRED		TOTAL *(ac)*
~~*per PU II and III MEDCP Figure 6 - Open Space*~~		~~15% OF PU II AND III NET SITE AREA *(111.4 ac x 15% = 16.7ac)*~~		
per 20-ZN-2002#3 Schedule I		**PU-II ≤ 20% of the net P.R.C. site**	*59.27 x 0.20 =*	**11.85**
		PU-III ≤ 15% of the net P.R.C. site	*51.19 x 0.15 =*	**7.68**
		min. 25% of the required open space shall be Scenic Corridor	*19.53 x 0.25 =*	*4.88*

PU-II OPEN SPACE

PARCEL DESCRIPTION	APN	DRB CASE #	PU-II OPEN SPACE PROVIDED *(ac)*					TOTAL *(ac)*
			SCENIC CORRIDOR	DRAINAGE CORRIDOR	LANDSCAPE BUFFER	STREETSCAPE	PARKS AND URBAN OPEN SPACE	
Henkel Corporation	215-05-005					0.56		0.56
One Scottsdale Investors	215-05-006		1.67	1.33				3.01
One Scottsdale Investors	215-05-004a		1.29	0.08				1.37
Streetlights	(tbd)			0.39				0.39
The Portico	(tbd)			0.38				0.38
								-
TOTAL OPEN SPACE PROVIDED			2.96	2.19	-	0.56	-	**5.71**

PU-II REMAINING OPEN SPACE TO PROVIDE	**6.14**

PARCEL DESCRIPTION	APN	DRB CASE #	PU-II OPEN SPACE ANTICIPATED *(ac)*					TOTAL *(ac)*
			SCENIC CORRIDOR	DRAINAGE CORRIDOR	LANDSCAPE BUFFER	STREETSCAPE	PARKS AND URBAN OPEN SPACE	
One Scottsdale Investors	215-05-006							-
One Scottsdale Investors	215-05-004a							-
Streetlights	(tbd)	30-DR-2021			0.05	0.13	0.36	0.54
The Portico	(tbd)	30-DR-2021			0.03		0.85	0.88
Augusta Senior Living	(tbd)	30-DR-2021					0.69	0.69
								-
TOTAL OPEN SPACE ANTICIPATED			-	-	0.08	0.13	1.90	**2.12**

PU-III OPEN SPACE

PARCEL DESCRIPTION	APN	DRB CASE #	PU-III OPEN SPACE PROVIDED *(ac)*					TOTAL *(ac)*
			SCENIC CORRIDOR	DRAINAGE CORRIDOR	LANDSCAPE BUFFER	STREETSCAPE	PARKS AND URBAN OPEN SPACE	
One North Scottsdale	215-05-008							-
Avion on Legacy	215-05-009						3.27	3.27
One Scottsdale Owners Association Inc.	215-05-011				0.42			0.42
One Scottsdale Owners Association Inc.	215-05-012					0.46		0.46
One Scottsdale Owners Association Inc.	215-05-013					0.72		0.72
One Scottsdale Owners Association Inc.	215-05-014			2.10				2.10
								-
TOTAL OPEN SPACE PROVIDED			-	2.10	0.42	1.17	3.27	**6.96**

PU-III REMAINING OPEN SPACE TO PROVIDE								**0.71**

PARCEL DESCRIPTION	APN	DRB CASE #	PU-III OPEN SPACE ANTICIPATED *(ac)*					TOTAL *(ac)*
			SCENIC CORRIDOR	DRAINAGE CORRIDOR	LANDSCAPE BUFFER	STREETSCAPE	PARKS AND URBAN OPEN SPACE	
One North Scottsdale	215-05-008							-
RKCCLL INVESTMENTS LLC/ETAL	215-05-302	61-DR-2015#2	1.01		0.32	0.77		2.10
SCOTTSDALE SUITES OWNER LLC	215-05-303	61-DR-2015#2				0.18	0.08	0.27
RKCCLL INVESTMENTS LLC/ETAL	215-05-304	61-DR-2015#2	0.85			0.87		1.72
One Scottsdale Core LLC	215-05-305	61-DR-2015#3	0.34					0.34
One Scottsdale Core LLC	215-05-306	61-DR-2015#2	0.56				0.11	0.67
One Scottsdale Core LLC	215-05-307	61-DR-2015#2	0.33					0.33
One Scottsdale Core LLC	215-05-308	61-DR-2015#2	0.29					0.29
RKCCLL INVESTMENTS LLC/ETAL	215-05-309	61-DR-2015#2	0.41					0.41
								-
TOTAL OPEN SPACE ANTICIPATED			3.80	-	0.32	1.82	0.19	**6.13**

APPENDIX EIGHT – EXTERIOR MATERIAL PALETTE

SW 9166
Drift of Mist
Interior / Exterior
Location Number: 238-C2

5

238 Drift of Mist

DETAILS

View All Neutral Paint Colors →

R: 220 **G:** 216 **B:** 208 **Hex Value:** #dcd8d0 **LRV:** 69

Color Collections: Creative, Pottery Barn, Living Well - Renew, Top 50 Colors, Cool White, Finest Whites

SW 7543
Avenue Tan
Interior / Exterior
Location Number: 286-C4

3

286 Avenue Tan

DETAILS

View All Timeless Color Paint Colors →

R: 188 **G:** 176 **B:** 153 **Hex Value:** #bcb099 **LRV:** 44

Color Collections: Timeless Color Wall

SW 9117
Urban Jungle
Interior / Exterior
Location Number: 207-C4

4

207 Urban Jungle

DETAILS

View All Yellow Paint Colors →

R: 164 **G:** 148 **B:** 126 **Hex Value:** #a4947e **LRV:** 31

SW 6151
Quiver Tan
Interior / Exterior
Location Number: 207-C5

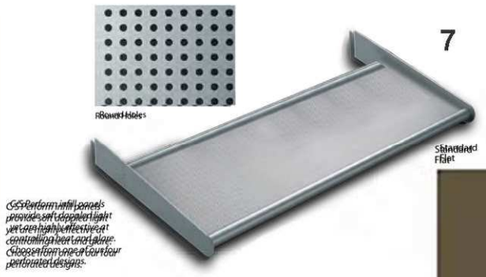
6

207 Quiver Tan

DETAILS

View All Yellow Paint Colors →

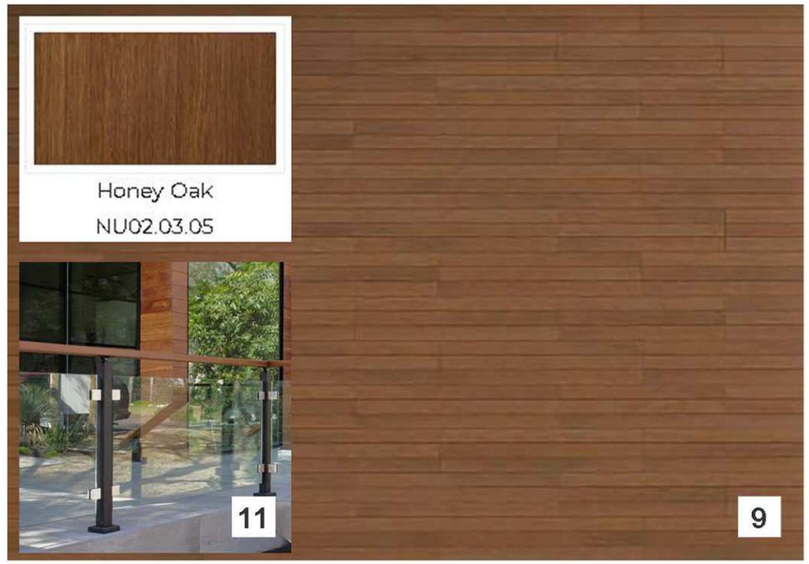
R: 142 **G:** 127 **B:** 106 **Hex Value:** #8e7f6a **LRV:** 22



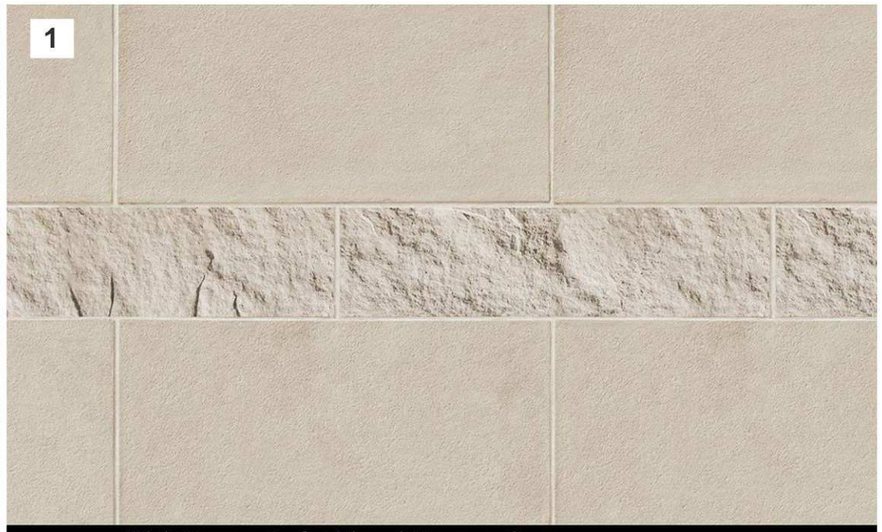
7

8 10

Medium Bronze



Element Ledgestone - Mount Vernon



6" Split Limestone Band with Smooth Limestone - Cream

ONE SCOTTSDALE

AUGUSTA DEVELOPMENT

SRa ARCHITECTURE + INTERIORS

EXTERIOR MATERIALS

FINISH LEGEND

1 CORONADO STONE - FRENCH LIMESTONE - COUNTRY BEIGE
2 CORONADO STONE - ELEMENT LEDGESTONE - MOUNT VERNON
3 DRYVIT EXTERIOR FINISH AND INSULATION [E.I.F.S.] MATCHING SW7543 (LRV=44)
4 DRYVIT EXTERIOR FINISH AND INSULATION [E.I.F.S.] MATCHING SW9117 (LRV=31)
5 DRYVIT EXTERIOR FINISH AND INSULATION [E.I.F.S.] MATCHING SW9166 (LRV=69)
6 DRYVIT EXTERIOR FINISH AND INSULATION [E.I.F.S.] MATCHING SW6151 (LRV=22)
7 CANTILEVERED SHADING DEVICE - C/S PERFORM SUNSHADES, STANDARD FLAT, ROUND HOLES, #543 MEDIUM BRONZE
8 ROOF EDGE: FASCIA = PAC-CLAD PREFINISHED METAL - COLOR: MEDIUM BRONZE
SOFFIT = NUEBOARD PANELS AND TRIMS, COLOR: NU02.03.05 HONEY OAK
9 MFGR WOOD-LOOK CLADDING - NUEBOARD PANELS AND TRIMS, COLOR: NU02.03.05 HONEY OAK
10 PREFINISHED METAIL ROOF EDGE - PAC-CLAD METAL - COLOR: MEDIUM BRONZE
11 TEMPERED GLASS GUARDRAILS WITH WOOD CAP
12 AUTO CANOPIES WITH SOLAR PANEL ROOF - CARPORT STRUCTURES CORPORATION