



COMMISSION OF ARCHITECTURAL REVIEW

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

PROPERTY (location of work)

Address 1600 Monument Ave, Richmond, VA 23220

Historic district Monument Avenue

Date/time rec'd: 7-27-18 8:18am
Rec'd by: JS
Application #: COA-039284-2018
Hearing date: 8/28/18

APPLICANT INFORMATION

Name Stuart Court Apartments LLC C/O Luis A. Cozza

Phone 917-538-2210

Company _____

Email cozza@lmre.co

Mailing Address 55 5th Ave., 14th Floor

Applicant Type: Owner Agent

New York, NY 10003

Lessee Architect Contractor

Other (please specify): _____

OWNER INFORMATION (if different from above)

Name Stuart Court Apartments LLC

Company _____

Mailing Address 55 5th Ave., 14th Floor

Phone _____

New York, NY 10003

Email _____

PROJECT INFORMATION

Review Type: Conceptual Review Final Review

Project Type: Alteration Demolition

New Construction
(Conceptual Review Required)

Project Description: (attach additional sheets if needed)

Parking lot improvements and screening wall. See attached site plan and rendering.

ACKNOWLEDGEMENT OF RESPONSIBILITY

Compliance: If granted, you agree to comply with all conditions of the COA. Revisions to approved work require staff review and may require a new application and CAR approval. Failure to comply with the COA may result in project delays or legal action. The COA is valid for one (1) year and may be extended for an additional year, upon written request.

Requirements: A complete application includes all applicable information requested on checklists to provide a complete and accurate description of existing and proposed conditions. Preliminary review meeting or site visit with staff may be necessary to process the application. Owner contact information and signature is required. Late or incomplete applications will not be considered.

Zoning Requirements: Prior to CAR review, it is the responsibility of the applicant to determine if zoning approval is required and application materials should be prepared in compliance with zoning.

Signature of Owner _____

July 24, 2018

Date _____

CERTIFICATE OF APPROPRIATENESS APPLICATION INSTRUCTIONS

Well in advance of the COA application deadline contact staff to discuss your project, application requirements, and if necessary, to make an appointment to meet with staff for a project consultation in the office or on-site. Visit the Commission of Architectural Review website for project guidance and forms:

<http://www.richmondgov.com/CommissionArchitecturalReview/index.aspx>

Division of Planning and Preservation 804.646.6335 Marianne.Pitts@Richmondgov.com

SUBMISSION INSTRUCTIONS

Submit applications to the Division of Planning and Preservation, Rm. 510, 900 E. Broad Street

- One (1) signed and completed application – property owners signature required
- Twelve (12) copies of supporting documentation, as indicated on appropriate check-list, collated and stapled

MEETING SCHEDULE

- Applications are due by 12 PM (noon) on the deadline date. Exception: revisions to items deferred, denied or presented conceptually at the previous CAR meeting are due 15 days in advance of the scheduled meeting.
- **Application deadlines are firm.** All materials must be submitted by the deadline to be considered at the following CAR meeting. Designs must be final at the time of application; revisions will not be accepted after the deadline. Incomplete and/or late applications will not be placed on the agenda.
- CAR will not accept new materials, revisions, or redesigns at the meeting. Deferral until the following month's meeting may be necessary in such cases to allow for adequate review by staff, commissioners, and public notice if required.
- CAR monthly meetings are held at 3:30 PM in the 5th floor conference room of City Hall, 900 E. Broad Street. The owner and/or applicant is *encouraged to attend* the meeting.

2018 Meeting Dates (Tuesdays unless noted otherwise)	Application Deadlines (Fridays unless noted otherwise)
January 23	December 22, 2017
February 27	January 26
March 27	March 2
April 24	March 30
May 22	April 27
June 26	May 25
July 24	June 29
August 28	July 27
September 25	August 24
October 23	September 28
November 27	October 26
December 18	November 26 (Monday)



1600 MONUMENT AVENUE - EXISTING SITE CONDITIONS

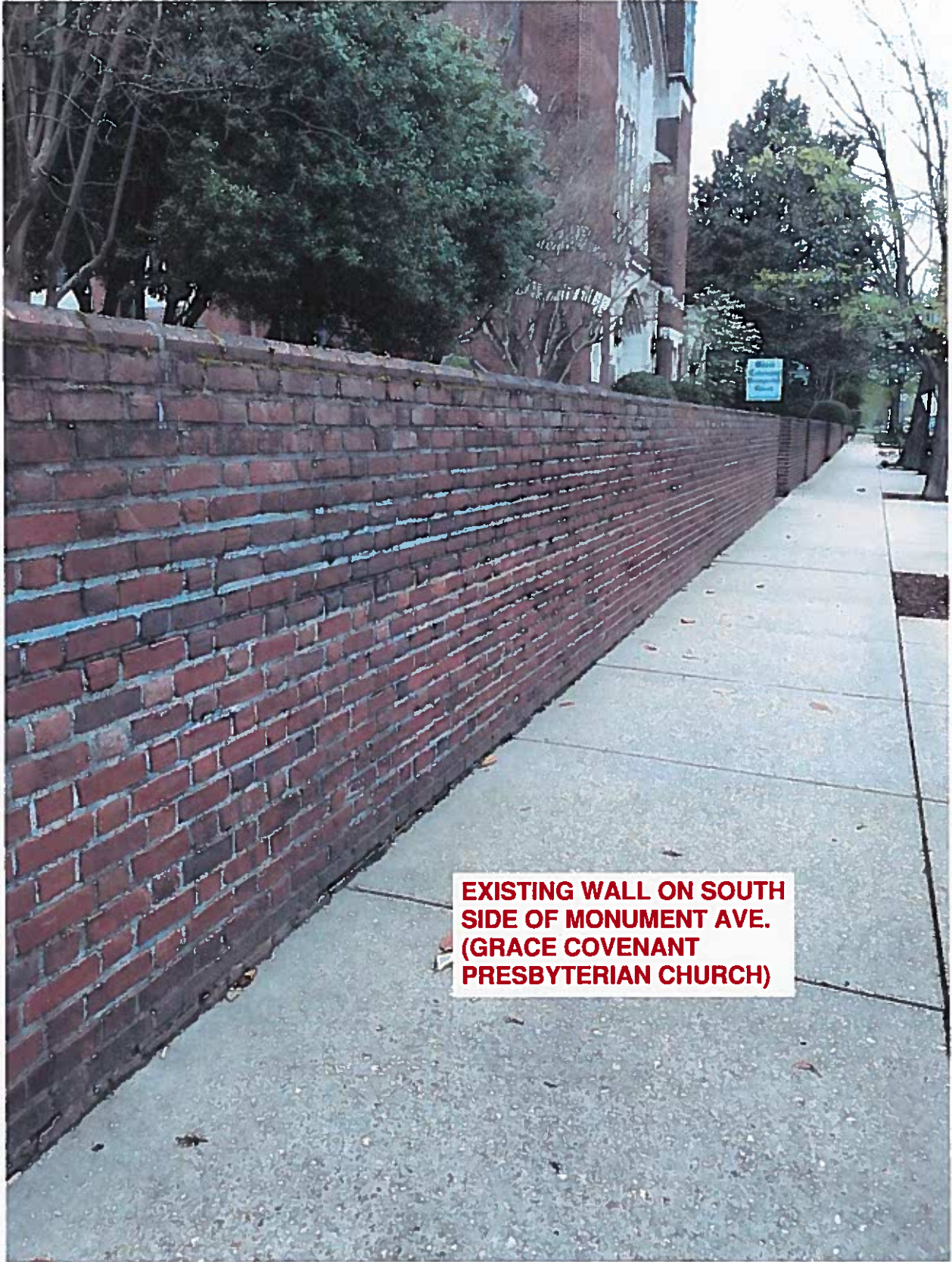
July 2018



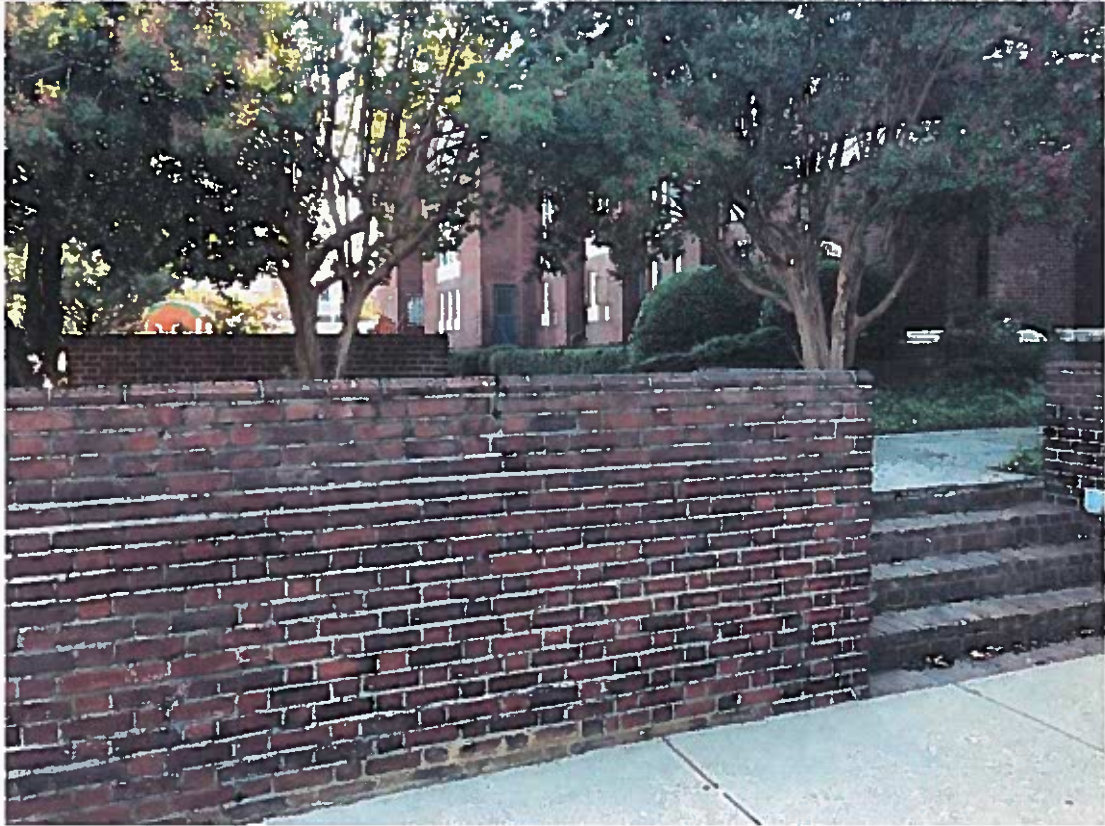
1600 MONUMENT AVENUE

August 2018

 Dewberry



**EXISTING WALL ON SOUTH
SIDE OF MONUMENT AVE.
(GRACE COVENANT
PRESBYTERIAN CHURCH)**



GENERAL NOTES

1. SURVEYED INFORMATION SHOWN IN BLACK AND GIS INFORMATION FADED TO GRAY FOR CLARITY.

1600 MONUMENT AVENUE
 PARKING LOT

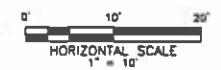
PRELIMINARY DOCUMENTS
 RICHMOND, VIRGINIA

SEAL

PRELIMINARY
 NOT FOR CONSTRUCTION

KEY PLAN

SCALE



REVISIONS

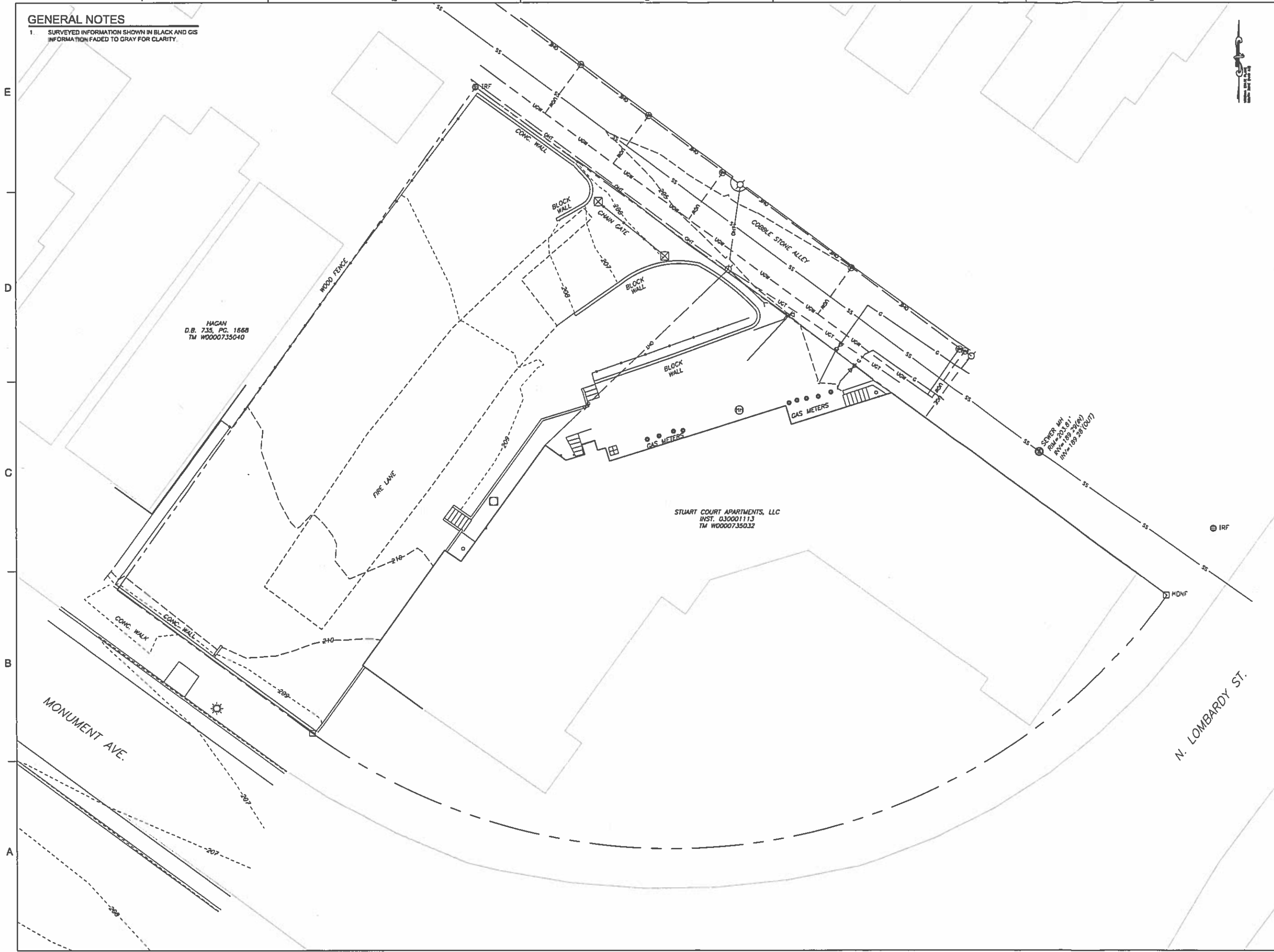
No.	DATE	BY	Description

DRAWN BY: MNW
 APPROVED BY: DMK
 CHECKED BY: ARN

TITLE
**EXISTING
 CONDITIONS**

DEI PROJECT NO: 50103814
 SHEET NO.

C1.01



HAGAN
 D.B. 735, P.C. 1668
 TM W0000735040

STUART COURT APARTMENTS, LLC
 INST. 030001113
 TM W0000735032

SEWER MH
 RM# 203.811
 INV# 189.24(0)
 INV# 188.28 (OUT)

**1600 MONUMENT AVENUE
 PARKING LOT**

PRELIMINARY DOCUMENTS
 RICHMOND, VIRGINIA

SEAL

**PRELIMINARY
 NOT FOR CONSTRUCTION**

KEY PLAN

SCALE



REVISIONS

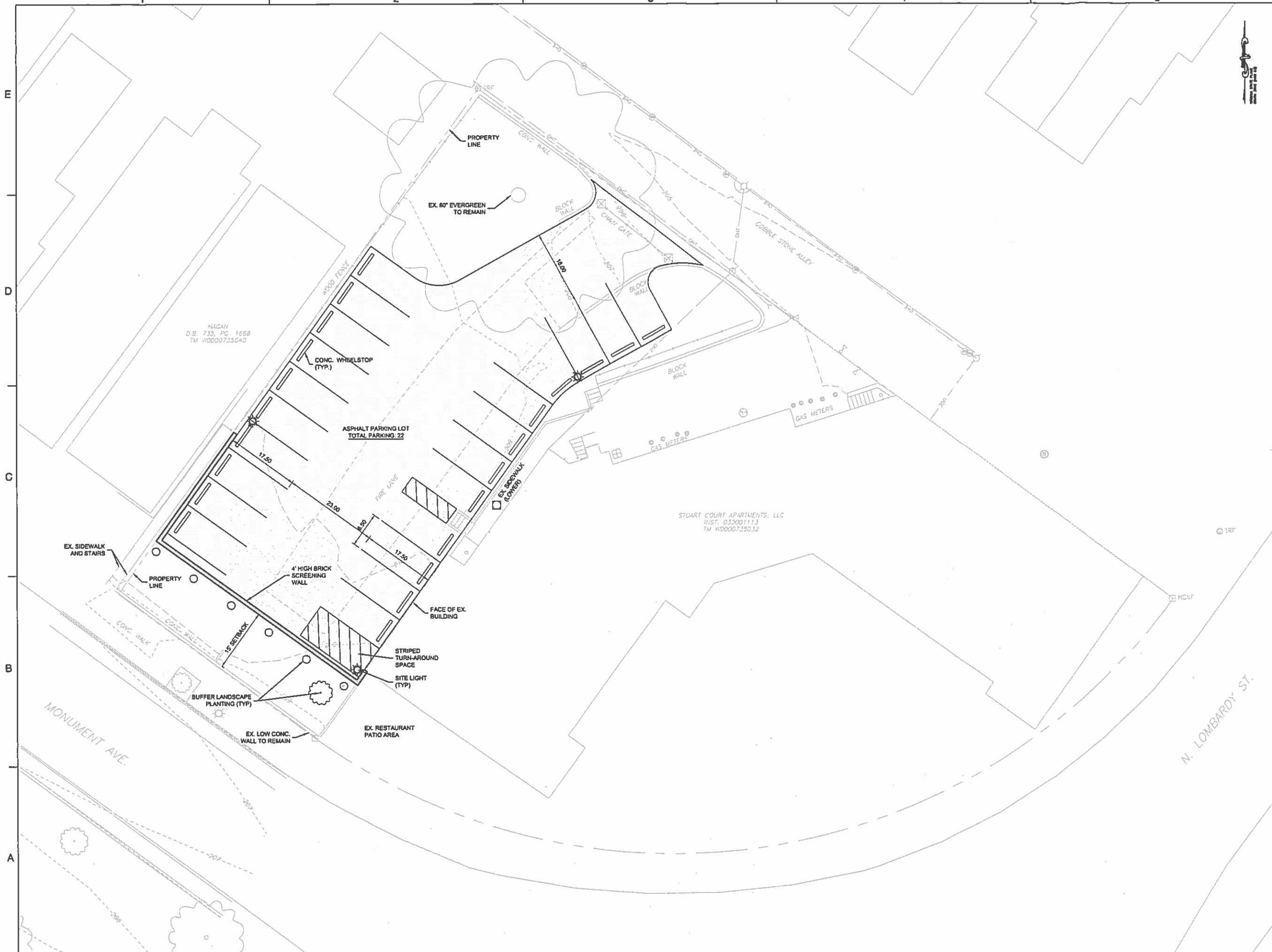
No.	DATE	BY	Description

DRAWN BY MMJ
 APPROVED BY DMK
 CHECKED BY ABN

TITLE
SITE PLAN

DEI PROJECT NO: 50103814
 SHEET NO.

C3.01





1600 MONUMENT AVENUE
 PARKING LOT

PRELIMINARY DOCUMENTS
 RICHMOND, VIRGINIA

NEW WORK SITE GENERAL NOTES

- SOME UTILITIES IN WORK AREA NOT SHOWN FOR CLARITY, REFER TO CIVIL DRAWINGS FOR ALL UNDERGROUND UTILITIES. THE ELECTRICAL CONTRACTOR SHALL CONTACT "MISS UTILITY" TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES FOR FOUNDATIONS AND CONDUIT INSTALLATION PRIOR TO DIGGING.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE TRENCHING AND BACKFILL FOR ALL OUTDOOR LIGHTING CIRCUITS ON SITE.
- ALL CONDUCTORS SHALL BE COPPER.
- SET LIGHT POLES PLUMB AND LEVEL ON THE FOUNDATION BASE.
- PROVIDE MINIMUM BURIAL DEPTH PER NEC TABLE 300-5 AT 24 INCHES BELOW GRADE.
- COORDINATE EXACT LOCATION OF POLES WITH UTILITIES, ETC. IN THE AREA OF WORK.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES AND PERFORM WORK IN A MANNER TO ACCOMMODATE EXISTING CONDITIONS.

ELECTRICAL SITE LEGEND

-  NEW LIGHT FIXTURE W/POLE
-  UNDERGROUND ELECTRICAL

LIGHTING STATISTICS

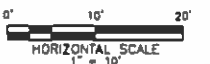
DESCRIPTION	AVG	MAX	MIN	MAX/MIN
1600 MONUMENT PARKING LOT	1.21fc	2.80fc	0.50fc	5.60:1

SEAL

PRELIMINARY
 NOT FOR CONSTRUCTION

KEY PLAN

SCALE



REVISIONS

No.	DATE	BY	Description

DRAWN BY: ELP
 APPROVED BY: PQA
 CHECKED BY: PQA

TITLE
ELECTRICAL SITE PLAN

DEI PROJECT NO: 50103814

SHEET NO.

E3.01



VIRGINIA STATE PLUMB
 SOUTH ZONE (NO 83)

1
 E3.01 | E3.01
ELECTRICAL SITE PLAN
 SCALE: 1"=10'

E
D
C
B
A

HACAN
 D.B. 735, PG. 1658
 TM W0000735040

ASPHALT PARKING LOT
 TOTAL PARKING: 22

STUART COURT APARTMENTS, LLC
 INST. 03001113
 TM W0000735032

MONUMENT AVE.

CONC WALK

PROPERTY LINE

COBBLE STONE ALLEY

GAS METERS

GAS METERS

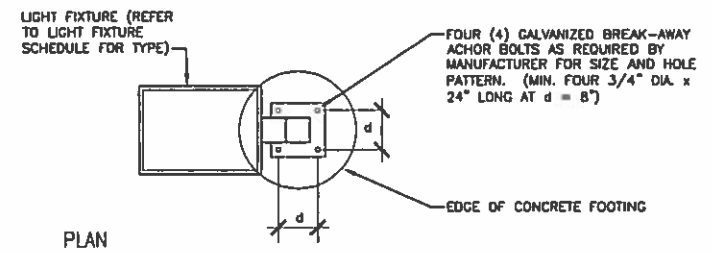
1" SCHEDULE 40 PVC

LIGHTING FIXTURE SCHEDULE

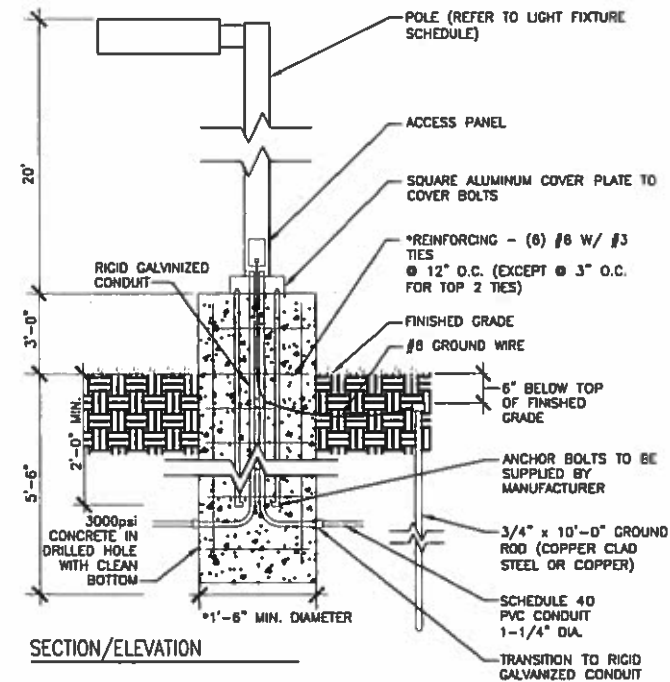
TYPE	DESCRIPTION	SIZE	MANUFACTURER	LAMP	# OF BALLASTS	NOTES	VOLTAGE	VA
A	PARKING LOT AREA LIGHT, HIGH TRANSMISSION GLASS LENS, TYPE 4 DISTRIBUTION, INTEGRAL NEUTRAL WHITE LED ARRAY, 4000K, INTEGRAL POWER SUPPLY, PHOTOCELL, EXTERNAL HOUSESIDE SHIELD, 36" ABOVE GRADE POLE BASE.	31" LONG 20" WIDTH 3 3/4" HEIGHT 20' HIGH POLE REFER TO POLE FOUNDATION DETAIL	GARDCO PUREFORM #P21-A1-1-4-55LA-NW-UNV-BRP-EHHS-PC POLE GARDCO #SS54-20-4-11-D1-BRP	LED	N/A	N/A	120V	54
A1	PARKING LOT AREA LIGHT, HIGH TRANSMISSION GLASS LENS, TYPE 2 DISTRIBUTION, INTEGRAL NEUTRAL WHITE LED ARRAY, 4000K, INTEGRAL POWER SUPPLY, PHOTOCELL, EXTERNAL HOUSESIDE SHIELD, 36" ABOVE GRADE POLE BASE.	31" LONG 20" WIDTH 3 3/4" HEIGHT 20' HIGH POLE REFER TO POLE FOUNDATION DETAIL	GARDCO PUREFORM #P21-A1-1-2-55LA-NW-UNV-BRP-EHHS-PC POLE GARDCO #SS54-20-4-11-D1-BRP	LED	N/A	N/A	120V	54

GENERAL NOTES:

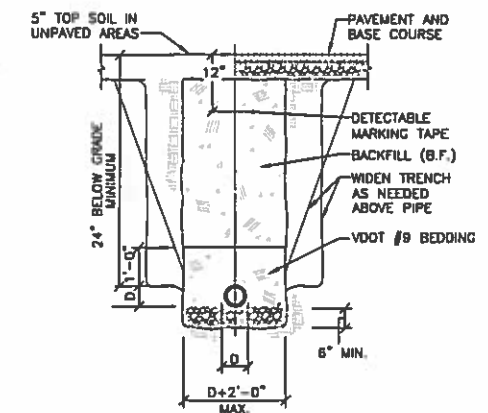
1. FIRST MANUFACTURER AND MODEL NUMBER LISTED IN SCHEDULE DESIGNATES THE BASIS OF DESIGN. WHERE ADDITIONAL MANUFACTURERS ARE LISTED THEY REPRESENT MANUFACTURERS WHO PROVIDE EQUAL FIXTURES. ALL SUBSTITUTIONS TO FIXTURES LISTED MUST BE SUBMITTED PRIOR TO BID AND INCORPORATED INTO AN ADDENDUM. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.



PLAN



SECTION/ELEVATION



2 TRENCH DETAIL SINGLE PIPE, PAVED AREA NOT TO SCALE

1600 MONUMENT AVENUE
PARKING LOT

PRELIMINARY DOCUMENTS
RICHMOND, VIRGINIA

SEAL

PRELIMINARY
NOT FOR CONSTRUCTION

KEY PLAN

SCALE

REVISIONS

No.	DATE	BY	Description

DRAWN BY: ELP
 APPROVED BY: RQA
 CHECKED BY: RQA

TITLE
ELECTRICAL SCHEDULES AND DETAILS

DB PROJECT NO: 60103814

SHEET NO.

E5.01

E
D
C
B
A

PHILIPS



Site & Area

PureForm

21" housing



Project	1600 MONUMENT AVE
Location	RICHMOND, VA
Cat No	
Type	A and A1
Qty	
Notes	

Philips Gardco PureForm luminaires combine LED performance excellence and advanced LED thermal management technology with a distinct purity of style to provide outdoor area lighting that is both energy efficient and aesthetically pleasing. PureForm is defined by its high performance, sleek low profile design and rugged construction.

Ordering guide

example: P21-APD-A1-1-5M-130LA-NW-120-NP-PCB

Prefix	Controls	Arm	Mounting	Optical System ⁸	Wattage	Color Temp	Voltage	Finish	Options
P21		A1	1	4 and 2	55LA	NW	UNV	BRP	EHHS, PC
P21- PureForm 21" fixture	— Standard luminaire DIM 0-10V Dimming APD ¹ Automatic Profile Dimming APD-MRO ¹ APD with Motion Response Override pole mounted sensor APD-MRI ¹ APD with Motion Response Override luminaire mounted sensor MRI ¹ Motion Response at 50% low, luminaire mount sensor MR50 ² Motion Response at 50% low, pole mounted sensor Wireless system (Remote wireless controller available See p 2 for details) LLC2 ^{4,5} #2 lens for 8' mounting heights LLC3 ^{4,5} #3 lens for 9-20' mounting heights LLC4 ^{4,5} #4 lens for 21-40' mounting heights	A1 ¹ Standard 9" Arm A2 ⁶ Short 5" Arm A3 ⁶ Decorative Arm MA Mast Arm Filter (requires 2 1/8" O.D. Mast Arm)	1 Standard 2 2@180 2@90 2@90 3 3@90 3@120 3@120 4 4@90 W Wall Mount WS ⁷ Wall mount including surface conduit rear entry permitted	Standard Optic Position 2 Type 2 3 Type 3 4 Type 4 5M Type 5 Medium 5W Type 5 Wide BLC Backlight Ctrl 2BL Type 2 with backlight (less shield) LCL ⁸ LEED Corner Cutoff Optics LCR ⁷ LEED Corner Cutoff Optics Optics Rotated Left (90°) ⁹ 2-90 Type 2 3-90 Type 3 4-90 Type 4 BLC-90 Backlight Ctrl 2BL-90 Type 2 with backlight (less shield) Optic Rotated Right (270°) ¹⁰ 2-270 Type 2 3-270 Type 3 4-270 Type 4 BLC-270 Backlight Ctrl 2BL-270 Type 2 with backlight (less shield)	350mA 55LA 70LA 90LA 530mA 80LA 105LA 130LA 640mA 165LA ¹¹ 700mA 110LA 140LA 180LA 800mA 200LA ¹²	CW Cool White 5.700K 70CRI (nominal) NW Neutral White 4.000K 70CRI (nominal) WW Warm White 3.000K 80CRI (nominal)	120 120V 208 208V 240 240V 277 277V 347 347V 480 480V UNV 120-277V 50hz/60hz HVU 347-480V 50hz/60hz	BRP Bronze Paint BLP Black Paint WP White Paint NP Natural Paint OC Optional Color Specify optional color or RAL (ex OC-LGP or OC-RAL7024) SC Special color Specify must supply color chip Requires factory quote	TL Tool-Less entry and driver removal hardware TB Terminal Block F ¹² Fusing LF In-Line/In-Pole Fusing PC ^{4,5,11} Receptacle with Photocell (includes PCR5) PCB ^{4,5,11} Photocell Button PCR5 ^{4,5,11,15} Photocell Receptacle only with 2 dimming connections PCR7 ^{4,5,11,16} Photocell Receptacle only with 2 dimming and 2 auxiliary connections EHHS External Houseside Shield SPA1-2 Square Pole Adapter for use with A1 or A2 Arms SPA3 ⁶ Square Pole Adapter for use with A3 Arms DL ¹⁷ Diffusing Lens CLR ⁷ Clear Glass Lens

- Available 120-277V only (UNV, 120, 208, 240 & 277).
- Available 120V or 277V only. MR50 and APD-MRO require one motion sensor per pole. ordered separately See page 2 for Accessories.
- Available 120V to 277V only Wattages 180LA and 200LA require outboarded sensor enclosure mounted to the arm of the luminaire (A1 arm only).
- Not available with A3 Arm Style.
- LLC2/LLC3/LLC4 wireless system not configurable with PC/PCB/PCR5/PCR7 Options. See pages 6-7 for more info.
- Arm Styles mount to a round pole with no adapter. If mounting to a square pole, specify Square Pole Adapter option: SPA1-2 for A1/A2 arms, or SPA3 for A3 arms
- Available with A1 or A2 Arms only Not available in P21-MR50, or P21-APD-MRO
- Luminaire door frame and optic assembly provided standard without glass lens Specify CLR option for clear glass lens
- Available with 130LA or 200LA only.
- See page 8-9 for information on optical rotation prior to ordering.
- 200LA and 165LA not available in 347V or 480V
- Available with A1 arm or with MA mounting only Provide specific input voltage.
- Not configurable with 480V Voltage must be specified.
- Works with 3-pin or 5-pin NEMA photo-cell/dimming device
- If ordered with DIM, APD, MRI, MR50, APD-MRI, APD-MRO, dimming will not be connected to NEMA receptacle
- Works with 3-pin or 5-pin NEMA photo-cell/dimming device and auxiliary connections are not connected (for future use only).
- Option reduces performance

P21 PureForm LED area luminaire

21" housing

PureForm accessories (order separately)

PTF2-(F)

Pole top fitter fits 2 3/8-2 1/2" OD x 4" depth tenon with 1, 2, 3 or 4 luminaires at 90°

PTF3-(F)

Pole top fitter fits 3-3 1/2" OD x 6" depth tenon with 1, 2, 3 or 4 luminaires at 90°

PTF4-(F)

Pole top fitter fits 3 1/2-4" OD x 6" depth tenon with 1, 2, 3 or 4 luminaires at 90°

MS-A-120V – 120V Input Area Motion Sensor For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

MS-A-277V – 277V Input Area Motion Sensor For MR50 (Motion Response) or APD-MRO (Automatic Profile Dimming with Motion Response Override)

Note: Motion Sensors are ordered separately with one (1) motion sensor required per pole location for MR50 or APD-MRO luminaires. See Luminaire Configuration Information on page 5 for more details. Area motion sensor color is Arctic White. MRI and APD-MRI luminaires include an integral motion sensor.

PureForm Wireless system accessories (for wall or pole mount)^{1,2,3,4}

LLCR2-(F)

Standalone wall or pole wireless controller with #2 Lens

LLCR3-(F)

Standalone wall or pole wireless controller with #3 Lens

LLCR4-(F)

Standalone wall or pole wireless controller with #4 Lens

- 1 When using the wireless remote accessory option (LLCR-F) in a pole mount application, specify pole option (CL Coupling Internal Thread 3/4" size)
- 2 120-277V only
- 3 Must specify finish (F=Specify matching finish)
- 4 Luminaire configuration must include 0-10V Dimming 'P21-DIM' option when Wireless system accessories are specified

LED Wattage and Lumen values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts ⁵	Type 2			Type 2BL			Type 3		
					Lumen Output ^{6,5}	Efficacy (LPW)	BUG Rating	Lumen Output ^{6,5}	Efficacy (LPW)	BUG Rating	Lumen Output ^{6,5}	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	6,603	122	B1-U0-G1	7,414	137	B3-U0-G3	6,607	122	B1-U0-G2
70LA	64	350	4000K	69	9,111	132	B1-U0-G2	10,229	148	B3-U0-G3	9,116	132	B1-U0-G2
90LA	80	350	4000K	88	11,615	132	B1-U0-G2	13,042	148	B3-U0-G3	11,621	132	B1-U0-G2
80LA	48	530	4000K	78	9,490	122	B1-U0-G2	10,656	137	B3-U0-G3	9,495	122	B1-U0-G2
105LA	64	530	4000K	103	13,042	127	B1-U0-G2	14,645	142	B4-U0-G4	13,049	127	B1-U0-G2
130LA	80	530	4000K	127	16,722	132	B2-U0-G2	18,776	148	B4-U0-G4	16,732	132	B2-U0-G3
165LA	80	640	4000K	162	19,401	120	B2-U0-G2	21,600	133	B4-U0-G4	19,451	120	B2-U0-G3
110LA	48	700	4000K	108	12,068	112	B1-U0-G2	13,550	125	B3-U0-G3	12,074	112	B1-U0-G2
140LA	64	700	4000K	137	16,471	120	B2-U0-G2	18,493	135	B4-U0-G4	16,479	120	B2-U0-G3
180LA	80	700	4000K	176	20,730	118	B2-U0-G2	23,276	132	B4-U0-G4	20,741	118	B2-U0-G3
200LA	80	800	4000K	205	22,950	112	B2-U0-G3	25,769	126	B4-U0-G4	22,963	112	B2-U0-G3

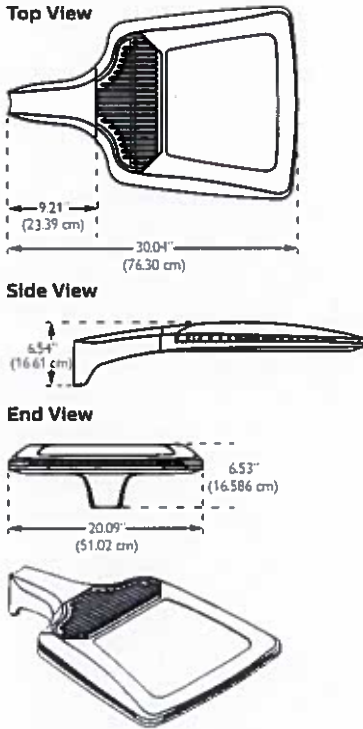
Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts ⁵	Type 4			Type 5M			Type 5W		
					Lumen Output ^{6,5}	Efficacy (LPW)	BUG Rating	Lumen Output ^{6,5}	Efficacy (LPW)	BUG Rating	Lumen Output ^{6,5}	Efficacy (LPW)	BUG Rating
55LA	48	350	4000K	54	6,544	121	B1-U0-G2	7,058	131	B2-U0-G0	7,313	135	B3-U0-G2
70LA	64	350	4000K	69	9,029	131	B1-U0-G2	9,738	141	B3-U0-G1	10,078	146	B4-U0-G2
90LA	80	350	4000K	88	11,511	131	B1-U0-G2	12,414	141	B3-U0-G1	12,855	146	B4-U0-G2
80LA	48	530	4000K	78	9,406	121	B1-U0-G2	10,144	130	B3-U0-G1	10,499	135	B4-U0-G2
105LA	64	530	4000K	103	12,927	126	B1-U0-G2	13,940	135	B3-U0-G1	14,431	140	B4-U0-G2
130LA	80	530	4000K	127	16,574	131	B2-U0-G2	17,874	141	B4-U0-G1	18,512	146	B4-U0-G2
165LA	80	640	4000K	162	19,076	118	B2-U0-G3	20,575	127	B4-U0-G2	21,715	134	B4-U0-G3
110LA	48	700	4000K	108	11,960	111	B1-U0-G2	12,899	119	B3-U0-G1	13,617	126	B4-U0-G2
140LA	64	700	4000K	137	16,323	119	B2-U0-G2	17,604	128	B4-U0-G1	18,290	134	B4-U0-G2
180LA	80	700	4000K	176	20,545	117	B2-U0-G3	22,157	126	B4-U0-G2	22,931	130	B5-U0-G3
200LA	80	800	4000K	205	22,746	111	B2-U0-G3	24,530	120	B4-U0-G2	24,817	121	B5-U0-G3

- 5 Wattage and lumen output may vary by due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Measured wattage may vary due to variation in input voltage.
- 6 Lumen values based on photometric tests performed in compliance with IESNA LM-79.

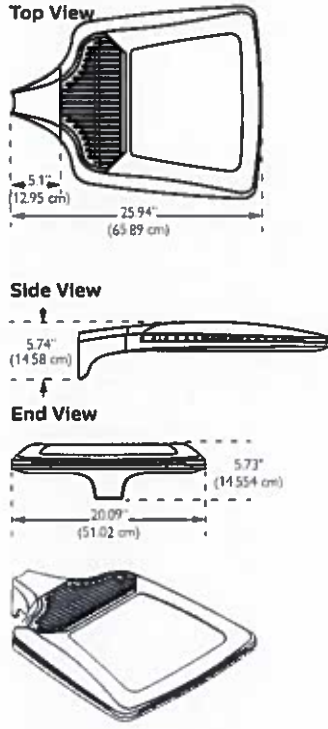
P21 PureForm LED area luminaire

21" housing

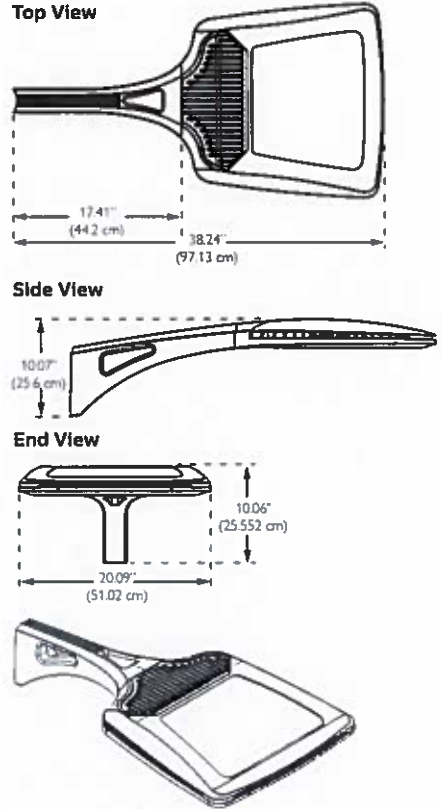
Dimensions – Standard Arm (A1)



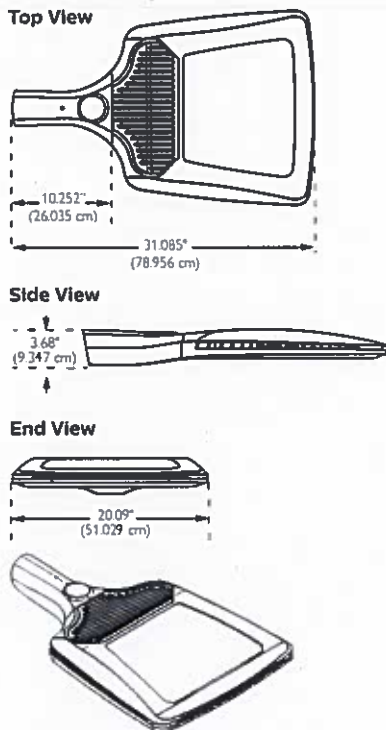
Dimensions – Short Arm (A2)



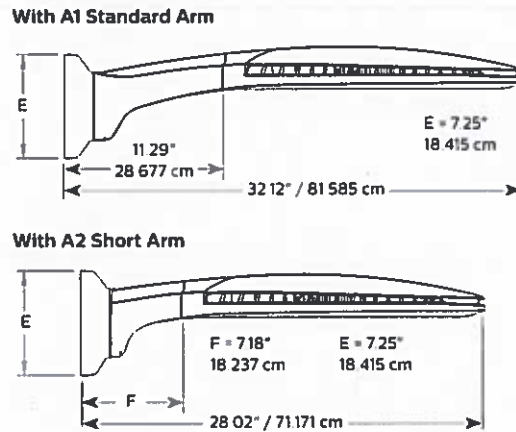
Dimensions – Decorative Arm (A3)



Dimensions – Mast Arm (MA)



Dimensions – Wall Mount



Single Luminaire Weight

Mounting	Approx. Weight
A1	38 lbs / 17.237 kg
A2	37 lbs / 16.783 kg
A3	41.5 lbs / 18.824 kg
MA	38 lbs / 17.237 kg
W or WS	39 lbs / 17.69 kg

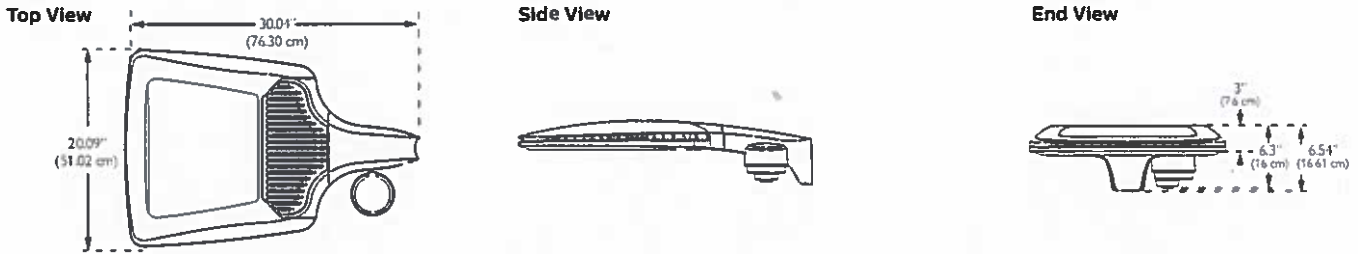
Effective Projected Area (ft²/m²)

Mounting	Single	Twin @ 180	3/4
A1	0.35 / 0.033	0.70 / 0.066	1.25 / 0.117
A2	0.30 / 0.028	0.60 / 0.056	1.10 / 0.103
A3	0.50 / 0.047	1.0 / 0.093	1.70 / 0.158
MA	0.35 / 0.033	N/A	N/A

P21 PureForm LED area luminaire

21" housing

Dimensions – PureForm with wireless system (luminaire mounted controller)



Luminaire configuration information

P21

Philips Gardco PureForm LED standard luminaire providing constant wattage and constant light output when power to the luminaire is energized.

P21-DIM

Philips Gardco PureForm LED luminaire provided with 0-10V dimming for connection to a control system provided by Philips or by others.

P21-APD

Philips Gardco PureForm LED luminaire with Automatic Profile Dimming Luminaire is provided with a programmable LED Driver, programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously recalculated by the programmable LED Driver based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

P21-APD is available in 120V – 277V input only.

P21-APD Dimming Profile:

100%	2 hours 50%	6 hours 50%	100%
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Power On Mid Point Power Off

The P21-APD offers many of the advantages of a sophisticated control system, including an average energy savings of at least 33% versus constant wattage, constant light output systems, without the need for a control system.

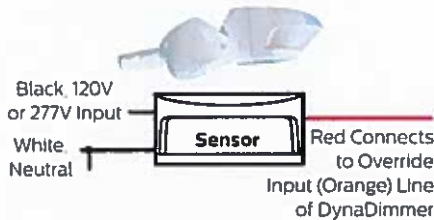
P21-MR50

Philips Gardco PureForm LED luminaire with motion response, providing a 50% power reduction on low and a commensurate reduction in light output. The power and light output reduction is accomplished utilizing the Philips DynaDimmer module, programmed for a constant 50% power. Power supplied by the motion sensor connected to the override line on the DynaDimmer takes the luminaire to high setting, 100% power and light output, when motion is detected. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 5 minutes, and is field adjustable from 5 minutes up to 15 minutes.

This configuration is not available for use with wall mounted luminaires.

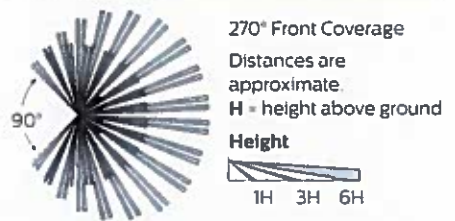
P21-MR50 is available in 120V–277V input only to the luminaire. Motion sensors require single voltage 120V or 277V input.

The Area PIR motion sensor is the WattStopper EW-200-120-W (120V Input – MSA-120V) or the WattStopper EW-200-277-W (277V Input – MSA-277V). One motion sensor per pole is required and is ordered separately. Area sensors require single voltage 120V or 277V input.



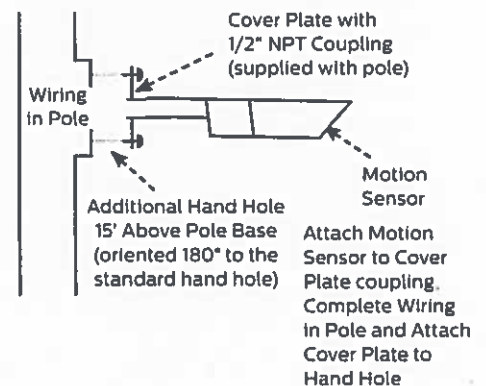
The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor.

Area PIR Motion Sensor Coverage Pattern



Motion response requires that the pole include an additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Philips Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole.

Mounting to a Philips Gardco Pole



P21 PureForm LED area luminaire

21" housing

Luminaire configuration information (Continued)

P21-APD-MRO

Phillips Gardco PureForm LED luminaire with Automatic Profile Dimming, with Motion Response Override. The P21-APD-MRO combines the benefits of both automatic profile dimming and motion response, using the Philips DynaDimmer module. The luminaire will dim to 50% power, 50% light output, per the dimming profile shown for the P21-APD. If motion is detected during the time that the luminaire is operating at 50%, the luminaire returns to 100% power and light output. The luminaire remains on high until no motion is detected for the duration period, after which the luminaire returns to low. Duration period is factory set at 5 minutes, and is field adjustable from 5 minutes up to 15 minutes.

This configuration is not available for use with wall mounted luminaires.

Notes:

P21-APD-MRO is available in 120V through 277V input only to luminaire. The motion sensor requires either 120V or 277V input to the motion sensor.

The P21-APD-MRO has the same pole requirements and utilizes the same motion sensors as the P21-MR50. The motion sensor mounts and wires identically as well. The P21-APD-MRO utilizes the identical dimming profile as shown for the P21-APD.

By combining the benefits of automatic profile dimming and motion response, the P21-APD-MRO assures maximum energy savings, and insures that adequate light is present if motion is detected.

All motion sensors utilized consume 0.0 watts in the off state.

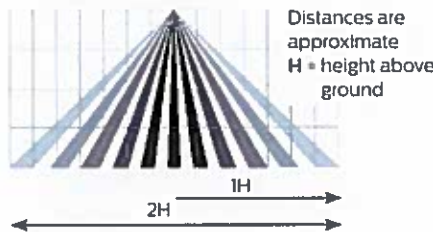
P21-MRI

Luminaires with Motion Response and an integral motion sensor include a programmable LED driver and an integral programmable motion sensor. The motion sensor is set to a constant 50%. When motion is detected, the luminaire goes to 100%. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 5 minutes. Available from 120V to 277V (UNIV) only.

Luminaires include a passive infrared (PIR) motion sensor, WattStopper FSP-211 equipped with an FSP-L3 lens, capable of detecting motion within 20 feet of the sensor, 180° around the luminaire, when placed at a 20 foot mounting height, or mounted on a wall. Available in 120V to 277V input only. Motion sensor off state power is 0.0 watts.

The approximate motion sensor coverage pattern is as shown below.

Side Coverage Pattern



Top Coverage Pattern



FSP-211 Sensor - Bottom View



P21-APD-MRI



Luminaires with Integral Motion Sensor - P21-APD-MRI. Luminaires with Automatic Profile Dimming and Motion Response Override combine the benefits of both automatic profile dimming and motion response. APD-MRI luminaires utilize a programmable LED driver. The luminaire will dim to 50% power, 50% light output, per the dimming profile shown for APD luminaires (see page 4). If motion is detected during the time that the luminaire is operating at 50%, the luminaire goes to 100% power and light output. The luminaire remains on high until no motion is detected for the duration period, after which the luminaire returns to low. Duration period is factory set at 5 minutes.

APD-MRI luminaires are available from 120V to 277V (UNIV) input voltages only.

APD-MRI luminaires use the identical motion sensor as MRI luminaires. See motion sensor details for P21-MRI.

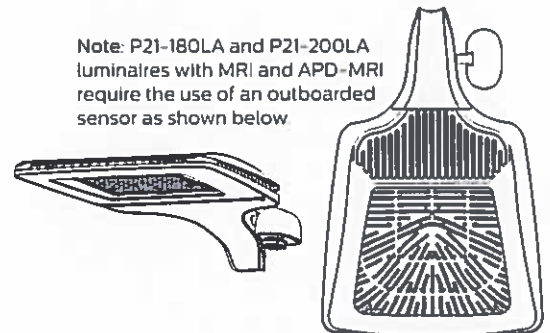


Approximate Sensor Placement on P21-MRI and P21-APD-MRI luminaires.

Sensor - Bottom View



Note: P21-180LA and P21-200LA luminaires with MRI and APD-MRI require the use of an outboard sensor as shown below.



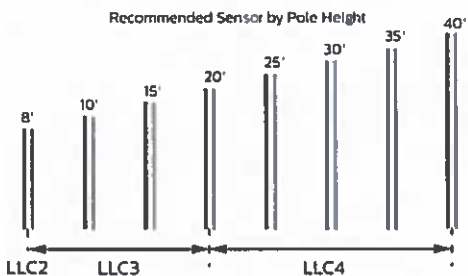
P21 PureForm LED area luminaire

21" housing

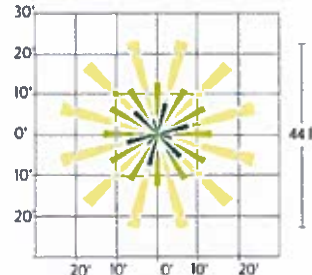
Luminaire configuration information – PureForm with wireless system

P21-LLC2/3/4 Luminaire Mounted Controller

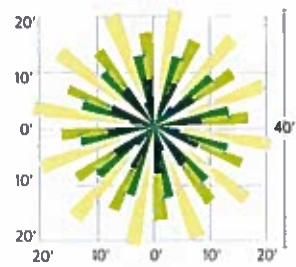
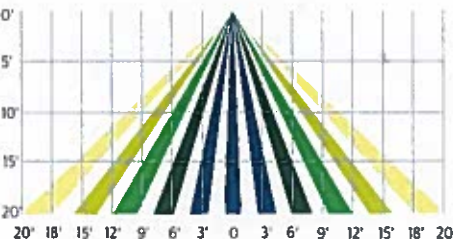
Controller attached to luminaire and includes radio, photocell and motion sensor with #2, 3, or 4 lens for 8-40' mounting heights.



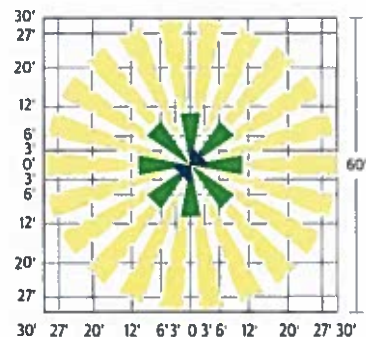
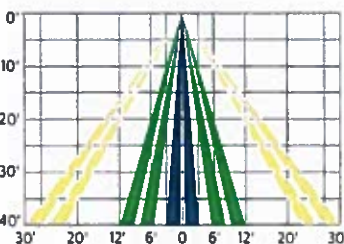
LLC2/LLCR2 (for pole or remote mount only)



LLC3/LLCR3 (for luminaire, pole, or remote mount)

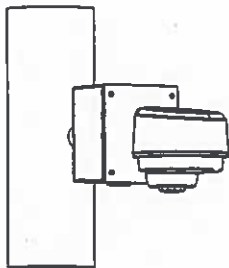


LLC4/LLCR4 (for luminaire, pole, or remote mount)



LLCR2/3/4 Pole Mounted Controller

In this configuration, the wireless controller will be mounted to the pole at a fifteen foot mounting height. The number of luminaires on each pole, as well as the specific wattage chosen, will determine how many controllers will be required.



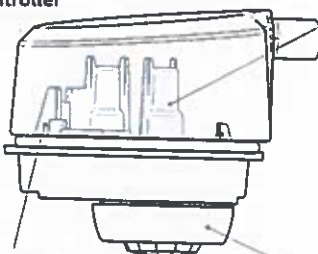
When using the wireless remote accessory option (LLCR-F) in a pole mount application, specify pole option (CL=Coupling Internal Thread, 3/4" size). Confirm required orientation of luminaire and wireless controller. Indicate height above pole base and orientation to handhold. Recommended min pole height is 18ft, with option (CL) 15ft above pole base. Other heights are possible when choosing the appropriate sensor lens type. See pole specification sheets for more information.

Remote Mount Wireless Controller

Used to extend the communication on site, to extend motion response and add other luminaires that are not pole mounted. Consult factory for more information.



Controller



Photocell

- Ambient light photocell on every wireless radio that averages the light levels of up to 5 controllers for an accurate reading and optimal light harvesting activity.
- Reports ambient light readings to 1500 Fc.

Wireless Radio

- 1.8 Watts max (no load draw)
- Operating voltage 120-277 VAC RMS
- Communicates using the ZigBee protocol
- Carries out dimming commands from Gateway
- Reports ambient light readings to 1500 Ft-Cd
- Transmission Systems Operating within the band 2400-2483.5Mhz
- ROHS Compliant

Motion Response

- Detects motion through passive infrared sensing technology with three different lens configurations
- Motion sensor coverage can be adjusted from a narrow to a wide detection range, which helps reduce false triggers to further increase energy savings
- Sensing profiles can be updated to adapt to activity levels in the environment, such as occupancy level, wind, and mounting height

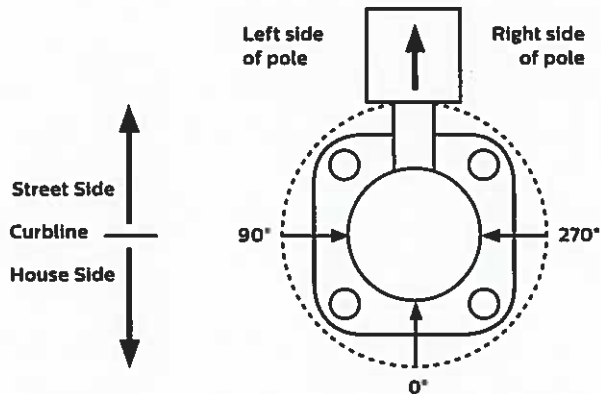
P21 PureForm LED area luminaire

21" housing

Asymmetric optical orientation information

Standard Optic Position

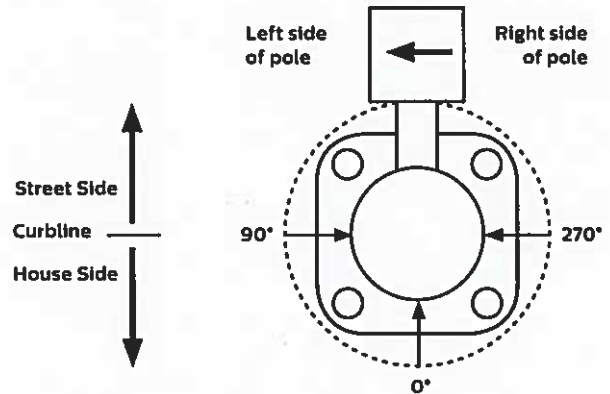
Luminaires ordered with asymmetric optical systems in the standard optic position will have the optical system oriented as shown below:



Note: The hand hole will normally be located on the pole at the 0° point.

Optic Rotated Left (90°) Optic Position

Luminaires ordered with asymmetric optical systems in the Optic Rotated Left (90°) optic position will have the optical system oriented as shown below:

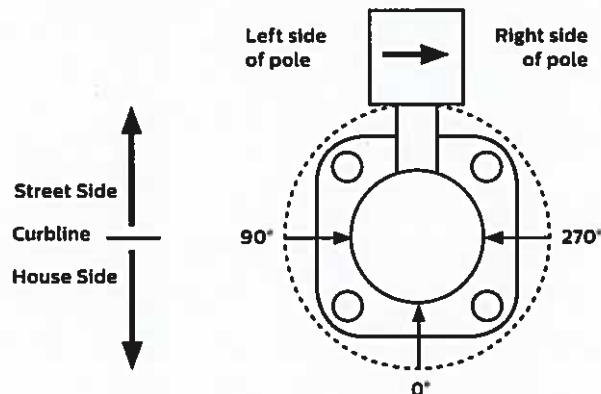


Note: The hand hole will normally be located on the pole at the 0° point.

Asymmetric optical orientation information

Optic Rotated Right (270°) Optic Position:

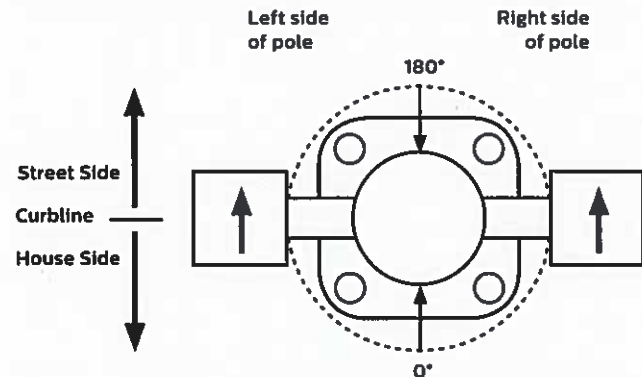
Luminaires ordered with asymmetric optical systems in the Optic Rotated Right (270°) optic position will have the optical system oriented as shown below:



Note: The hand hole will normally be located on the pole at the 0° point.

Twin Luminaire Assemblies With Rotated Optical Systems

Twin luminaire assemblies installed with rotated optical systems are an excellent way to direct light toward the interior of the site (Street Side) without additional equipment. It is important, however, that care be exercised to insure that luminaires are installed in the proper location.



Luminaires with Optic Rotated Right (270°) are installed on the LEFT Side of Pole

Luminaires with Optic Rotated Left (90°) are installed on the RIGHT Side of Pole

Note: The hand hole location will depend on the drilling configuration ordered for the pole.

P21 PureForm LED area luminaire

21" housing

Specifications

Housing

The PureForm features a die cast aluminum housing, and mounts directly to a pole or wall. The low profile rounded form reduces the effective projected area of the luminaire significantly. PureForm luminaires supplied with A1, A2 and A3 arms are provided with arms firmly attached to the main luminaire housing body. As a result, the luminaires provide the functionality, strength and installation ease of an integral arm luminaire. Mast arm mount luminaires are provided with the mast arm mounting assembly firmly attached to the main luminaire housing body.

IP Rating

PureForm luminaires have a rating of IP66.

Vibration resistance

PureForm carries a 3G vibration rating that conforms to standards set forth by ANSI C136.31. Testing includes vibration to 3G acceleration in three axes, all performed on the same luminaire.

Electrical

Luminaires are equipped with an LED driver that accepts 120V through 277V, or 347V through 480V, 50hz to 60hz, input. Driver output is based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F / 150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaire consumes 0.0 watts in the off state. All motion sensors utilized consume 0.0 watts in the off state. Surge protector standard, 10KA per AN SI/IEEE C62.41.2.

LED Performance

Predicted Lumen Depreciation Data¹

Ambient Temperature °C	Driver (mA)	Calculated L ₇₀ Hours ^{1,2}	L ₇₀ Per TM-21 ³	Lumen Maintenance % @ 60,000 hours
Up to 40 °C	Up to 800mA	> 154,000 Hours	> 51,400 Hours	91%

1 Predicted performance derived from LED manufacturer's data and engineering design estimates based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.

2 L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.

3 Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

LED Thermal management

The Philips Gardco PureForm LED provides die cast aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

Wireless system

PureForm luminaires are available with optional wireless controllers ready to be connected to a Limelight system (sold by other). The system allows you to wirelessly manage the entire site, independent lighting groups or individual luminaires while on-site or remotely.

Based on a high density mesh network with an easy to use web-based portal, you can conveniently access, monitor and manage your lighting network remotely. Wireless controls can be combined with site and area, pedestrian, and parking garage luminaires as well, for a completely connected outdoor solution.

Optical systems

The advanced LED optical systems provide IES Types 2, 3, 4 and 5 distributions, as well as a Backlight Control optic. Special LEED corner cutoff optics are also available, both as LCR (right) and LCL (left.) All optical systems feature unitized lens optic construction.

Types 2, 3, 4, BLC and LCR/LCL optical systems utilize an innovative redirecting reflector to complement the performance of the LED optic. The redirecting reflector system utilizes 95% specular reflective material to maximize reflected light forward. Reflector facets minimize aperture brightness when viewed from the rear of the luminaire.

PureForm luminaires are provided standard without a glass lens, for maximized performance. A glass lens is available as an option, resulting in reduced performance. All PureForm luminaires provide full cutoff performance.

Listings

All luminaires bear UL or CUL (where applicable) Wet Location labels. Most PureForm configurations are DesignLights Consortium® qualified. Consult DLC Qualified Products list for more details.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidic isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WP), and natural aluminum (NP). Consult factory for specs on optional or custom colors.

Warranty

Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED Drivers also carry a 5 year limited warranty. Motion sensors are covered by warranty for 5 years by the motion sensor manufacturer. See Warranty information on philips.com/warranties for complete details and exclusions.

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