



Stern and Bucek
Architects

MASTER PLAN: SITES FOR TEMPORARY PUBLIC ART
UNIVERSITY OF HOUSTON | MAY 2023

PHOTO BY UNIVERSITY OF HOUSTON

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Cost Estimator
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PROJECT SUMMARY

Public Art of the University of Houston System initiated the following report seeking to identify and designate sites around the University of Houston that could be repeatedly used for temporary public art installations. At an initial kick-off meeting, a selection of ten candidate sites were selected for further analysis. These sites included:

1. Wilhelmina's Grove
2. Louise J. Moran Fine Arts Courtyard
3. Butler Plaza
4. Cullen Family Plaza
5. Science and Engineering Research Center (SERC) Courtyard
6. University Drive
7. Lynn Eusan Park
8. Oberholtzer Plaza
9. Student Life
10. Cougar Woods

The design team performed site visits and reviewed provided record drawings of the ten selected sites to evaluate the following criteria:

1. Compatibility with the UH campus master plan
2. Compatibility with the Public Art master plan
3. Visibility and impact of site
4. Access to electrical power
5. Access to data (Wi-Fi or cable/fiber)
6. Condition and quality of existing site lighting
7. Lack of conflict with existing underground utilities and tunnels
8. Evaluation of potential tree and landscape impacts
9. Access to visitor parking
10. Accessible (ADA) access routes to and around project sites

After reviewing the design team's findings, the steering committee selected four sites to further investigate. These four project sites selected include: Wilhelmina's Grove, Louise J. Moran Fine Arts Courtyard, Cullen Family Plaza, and the Science and Engineering Research Center (SERC) Courtyard. The following plans present the findings for these four sites around the University of Houston and the recommended improvements to make them function for the broadest range of art installation types possible.

SELECTED SITES FOR TEMPORARY ART



Site 1: Wilhelmina's Grove



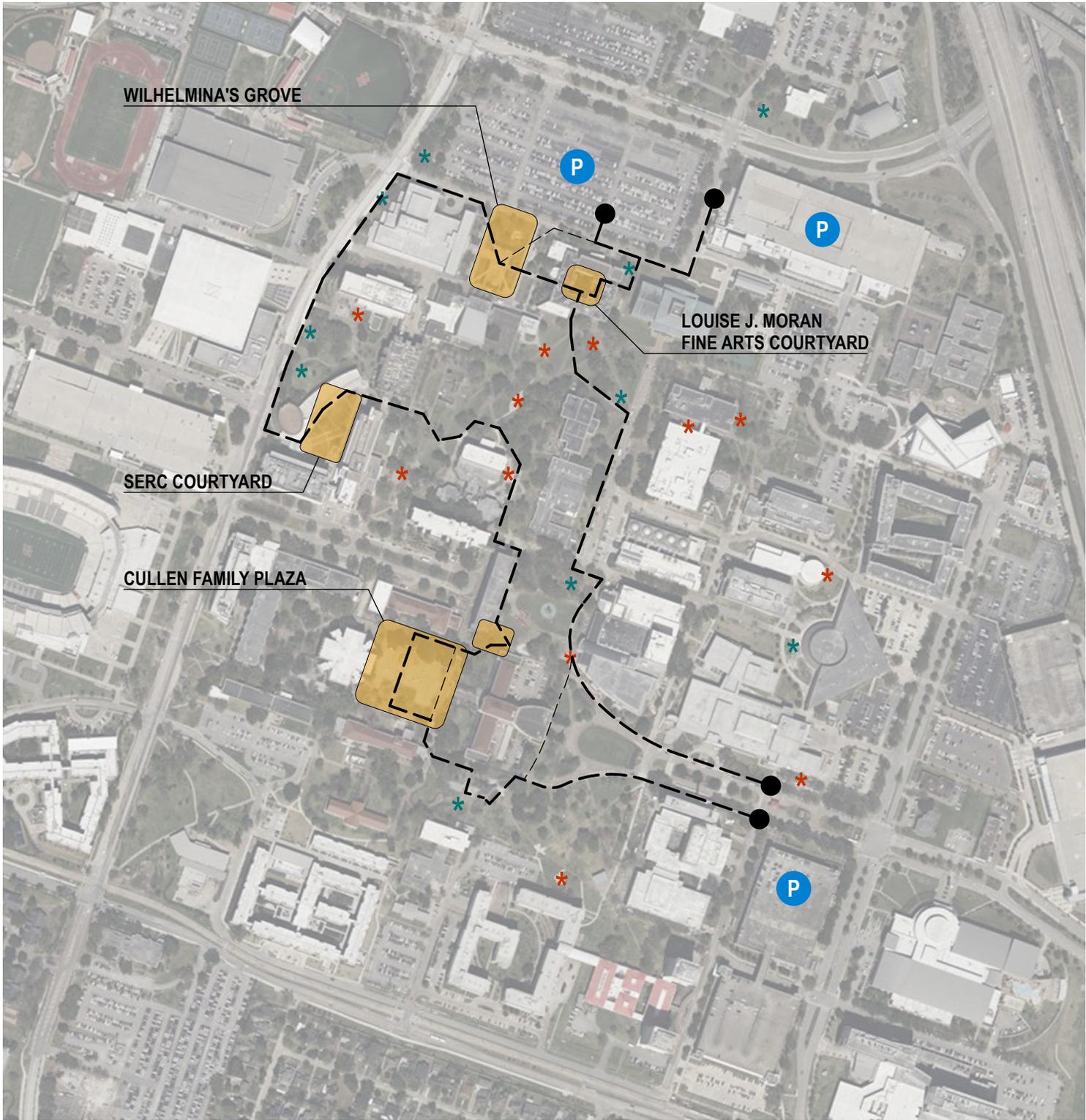
Site 2: Louise J. Moran Fine Arts Courtyard



Site 3: SERC Courtyard



Site 4: Cullen Family Plaza



PUBLIC ART WALKING TOUR

PROPOSED PATH LINKING PERMANENT AND TEMPORARY SITES

LEGEND

-  Visitor Parking
-  Existing Permanent Art Installations
-  Future Permanent Art Installations
-  Proposed Temp Art Sites
-  Walking Path

Proposed temporary art installation sites chosen to connect Public Art's permanent art installations and form a continuous walking path.



APPLICABLE ADA / TAS REQUIREMENTS

1. Consideration should be given for the approach, viewing and interaction with works of art.
2. Circulation paths up to and around art installations are required to be accessible. All constructed areas that visitors are invited to occupy, including raised or sunken areas, are required to be on an accessible route.
Accessible routes are required to be firm, stable and slip resistant. Loose gravel is not an acceptable surface but stabilized decomposed granite can be an accessible surface if it is properly maintained. Natural areas such as grass lawns are only required to be accessed by an accessible route.
3. The running slope of walkways shall not exceed a 1:20 slope unless it is a ramp and cross slopes shall never exceed 1:48. Changes in level shall not exceed ¼" vertical. Changes in level up to ½" shall be beveled 1:2 and changes in level greater than ½" shall be ramped with a 1:12 maximum slope.
4. Elements that project into circulation paths or where headroom is reduced shall be provided with cane detection. Objects shall not project more than 4" into circulation paths if they are located between 27" and 80" above the ground surface. The minimum headroom for circulation paths is 80".
5. If a work of art includes interactive elements, they should be placed between 15" and 48". At least one of each type of interactive element should be accessible.

The Americans with Disabilities Act includes requirements for the design and construction of accessible public spaces. These requirements are included in the ADA Standards for Accessible Design. As a public entity, the University of Houston is subject to Title II of the ADA which includes the requirement that all new construction or alterations comply with applicable requirements of the ADA Standards. There is no mandatory review or inspection required for ADA compliance.

The Texas Accessibility Standards (TAS) is modeled on the ADA Standards. For the purposes of this project, TAS standards are the same as the requirements for ADA. In Texas, a construction project with an estimated cost greater than \$50,000 is required to be registered with Texas Department of Licensing and Regulation (TDLR) and reviewed and inspected by a Registered Accessibility Specialist (RAS) for compliance with TAS. The cost of the artwork should be excluded from the construction cost, but all other costs related to preparing the site would be included. If the construction cost is less than \$50,000, compliance with the standards is still required but there are no requirements for registration, review and inspection.

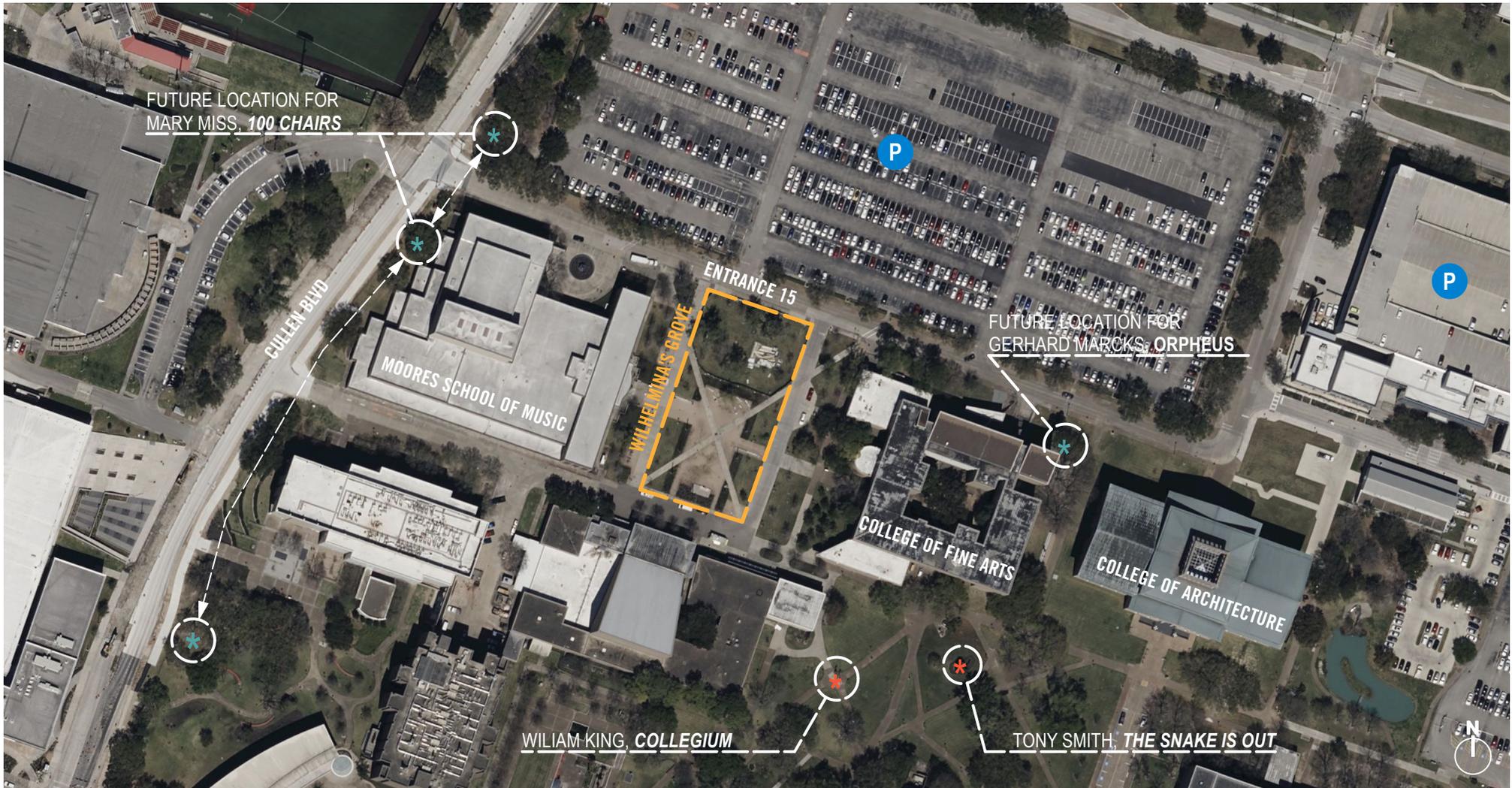
There are no specific requirements for works of art but there are also no exceptions for art. Art installations must comply with all applicable requirements of the ADA.

WILHELMINA'S GROVE

CONTEXT

LEGEND

- P** Visitor Parking
- * Existing Permanent Art Installations
- * Future Permanent Art Installations
- Proposed Temp Art Sites

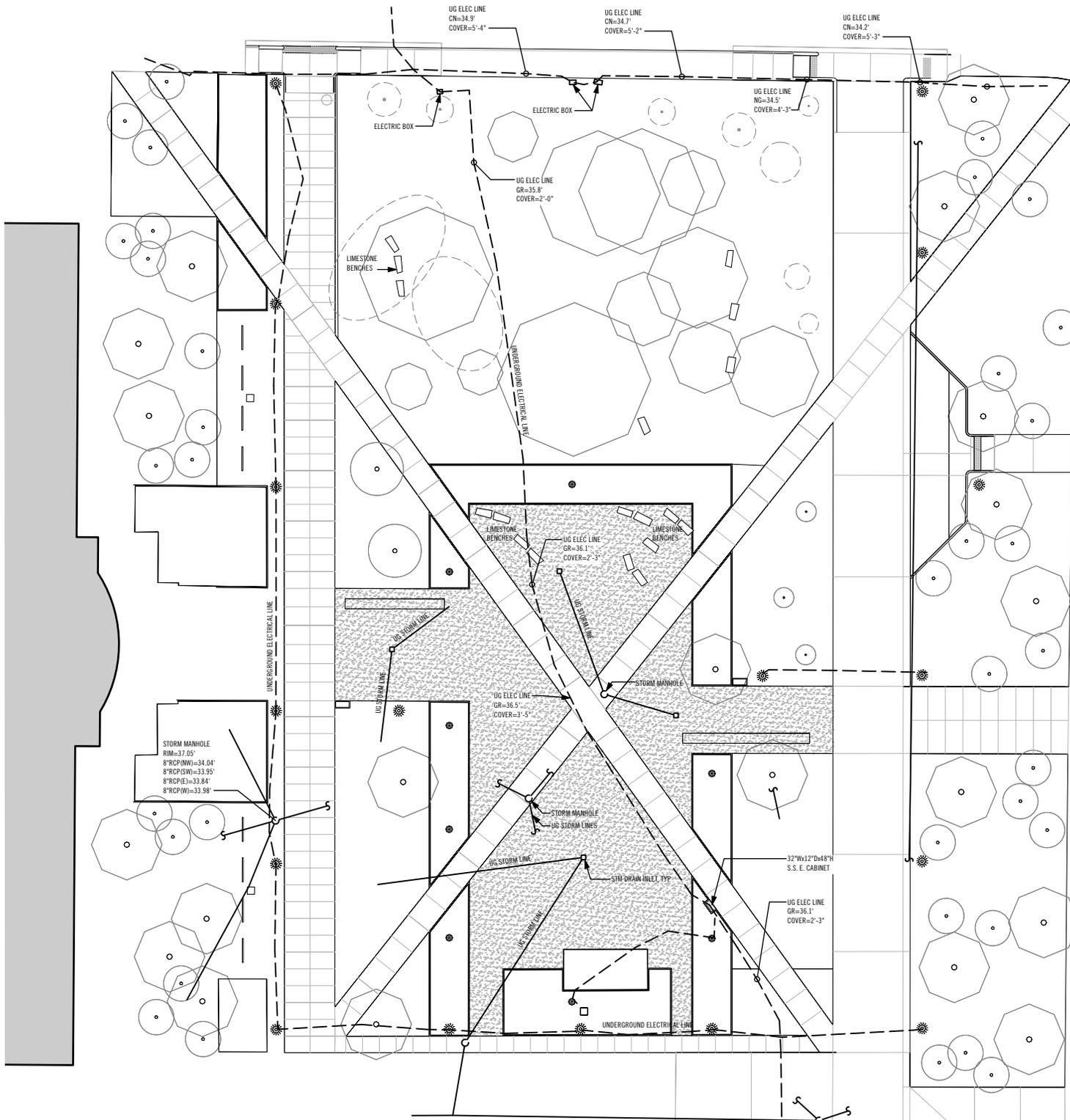


WILHELMINA'S GROVE

EXISTING CONDITIONS PLAN

LEGEND

- Underground Electrical Line
- Undetground Storm Line



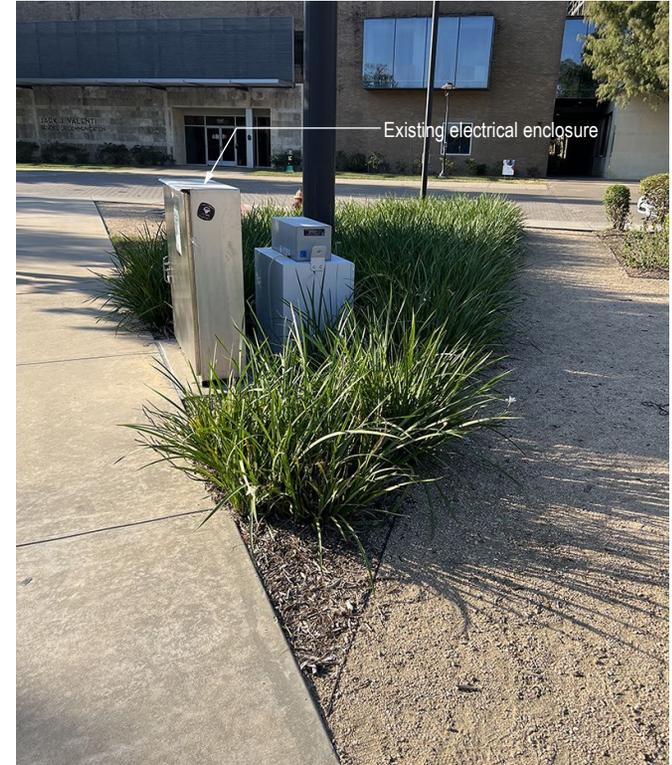
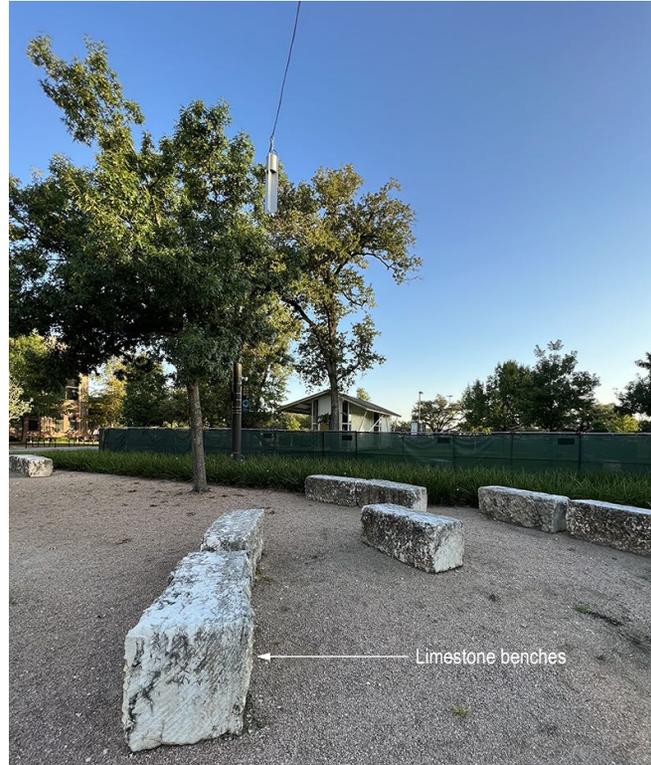
EXISTING TREE REVIEW COMMENTS FROM URBAN FORESTER

Wilhelmina's Grove has four mature post oak trees, and many planted trees. Trees appear to be in good health. Post oak trees require proper pruning to remove large dead wood and to reduce weight of limbs to lessen the potential for limb breakage. One post oak has a significant lean. A stone bench exists under this leaning tree. Installation of a support brace is recommended. Automatic watering system provides water to all trees. Recommend review of irrigation system operation and coverage.



WILHELMINA'S GROVE

PHOTOS OF EXISTING CONDITIONS



WILHELMINA'S GROVE

DEMOLITION PLAN

LEGEND

 Area of Demolition

REMOVE CATENARY LIGHTING

The existing lighting is fixed along structural catenary cables and does not offer flexibility. Recommend removal of light fixtures, overhead cables, structural poles and foundations.

Qty: 9 poles

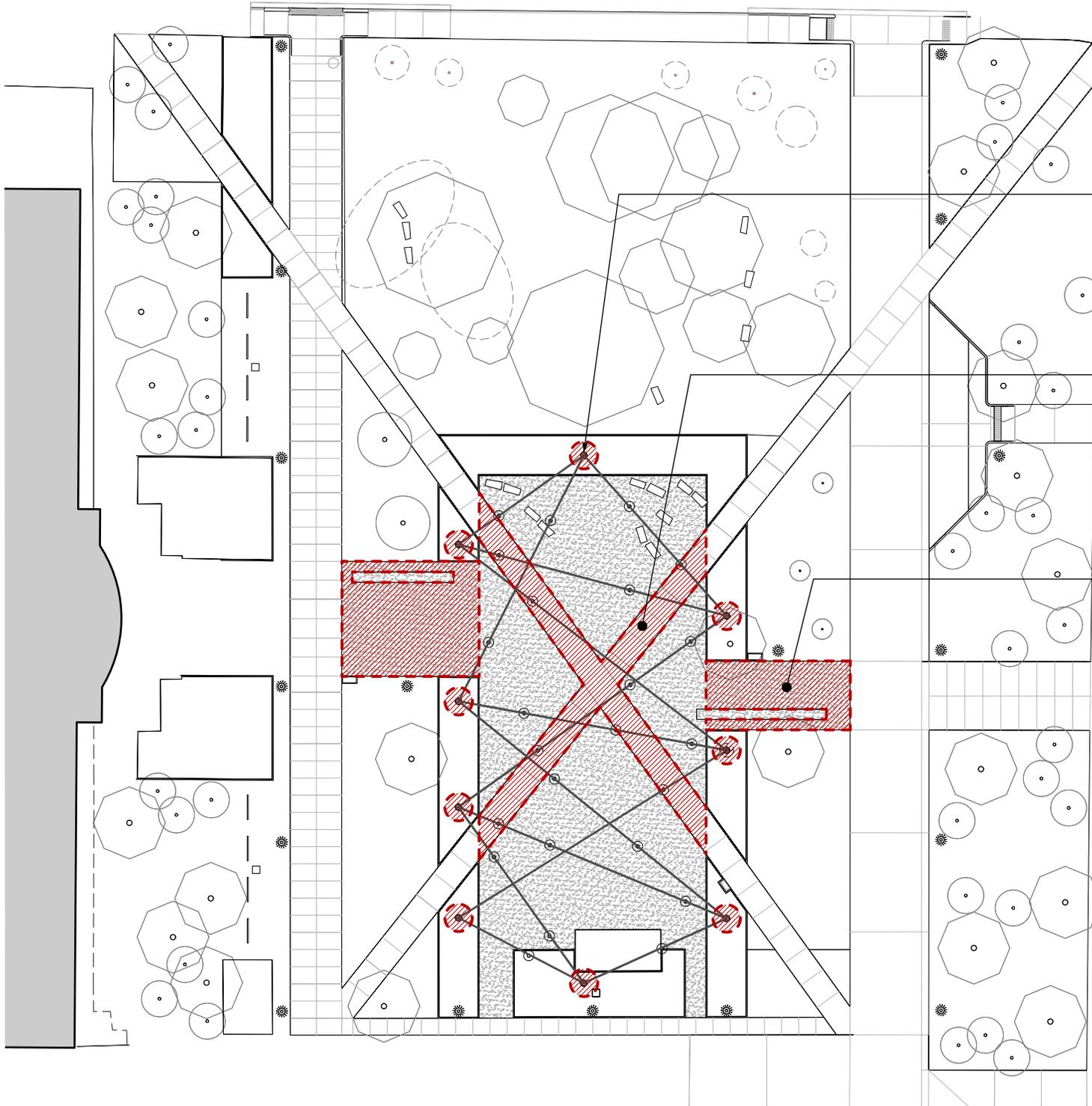
REMOVE CONCRETE SIDEWALK

Existing sidewalk limits the use of the decomposed granite "ballroom" area by forcing circulation through the center. Constant maintenance is required to keep the level of the DG and concrete at 1/2" difference max.

Approximate Area of Demolition: 1700 sf

REMOVE DECOMPOSED GRANITE WALKWAYS

Approximate Area of Demolition: 2,200 sf



WILHELMINA'S GROVE

PROPOSED IMPROVEMENTS

2023 CONSTRUCTION COST ESTIMATE: \$399,175

2023 TOTAL PROJECT COST ESTIMATE: \$556,650

LEGEND

- New Site Lighting
- Temporary Art Installation Zone

INSTALL NEW SITE LIGHTING

Fixture Type: PH4

Selux - Olivio Grande Sistema 2

Qty:8

Permanently affixed light pole with power and duplex at base. Integral data. Multiple adjustable head spots lights with options for image projection and color changing. Assume 30ft pole height.

RELOCATE & RECONFIGURE EXISTING LIMESTONE BENCHES

INSTALL NEW CONCRETE WALKWAYS

5" Thick broom finished concrete walkways
Approximate Area: 2200 sf

REPLACE LANDSCAPING DISTURBED BY CONSTRUCTION

INSTALL DECOMPOSED GRANITE TO REPLACE SIDEWALK

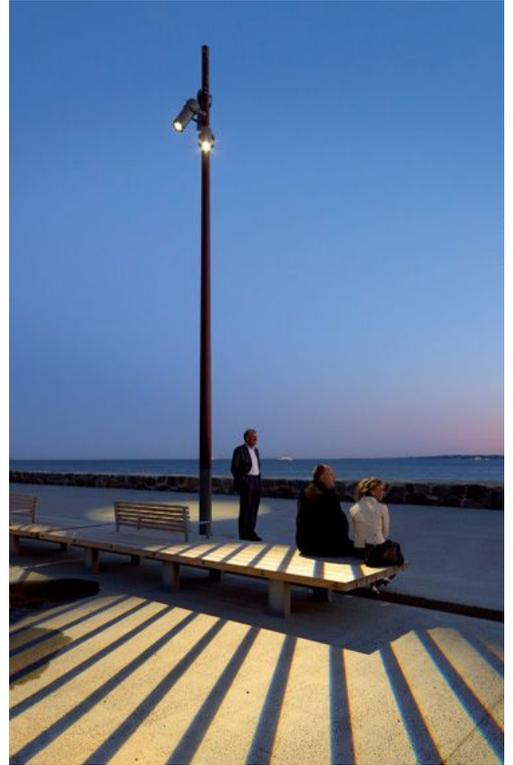
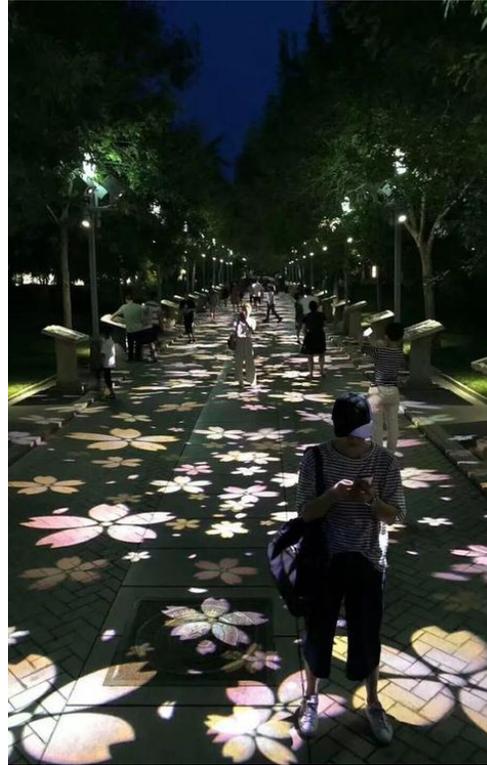
Approximate Area: 1700 sf

Installation specs:

- 2"-3" min of 1/4" minus decomposed granite premixed w/ stabilizer solution, compacted to 85%
- Landscape Fabric
- 3"-4" of recycled sub base, compacted to 95%; no limestone
- Compacted sub grade

EXISTING POWER LOCATION





EXAMPLE IMAGES OF FIXTURE TYPE PH4



WILHELMINA'S GROVE

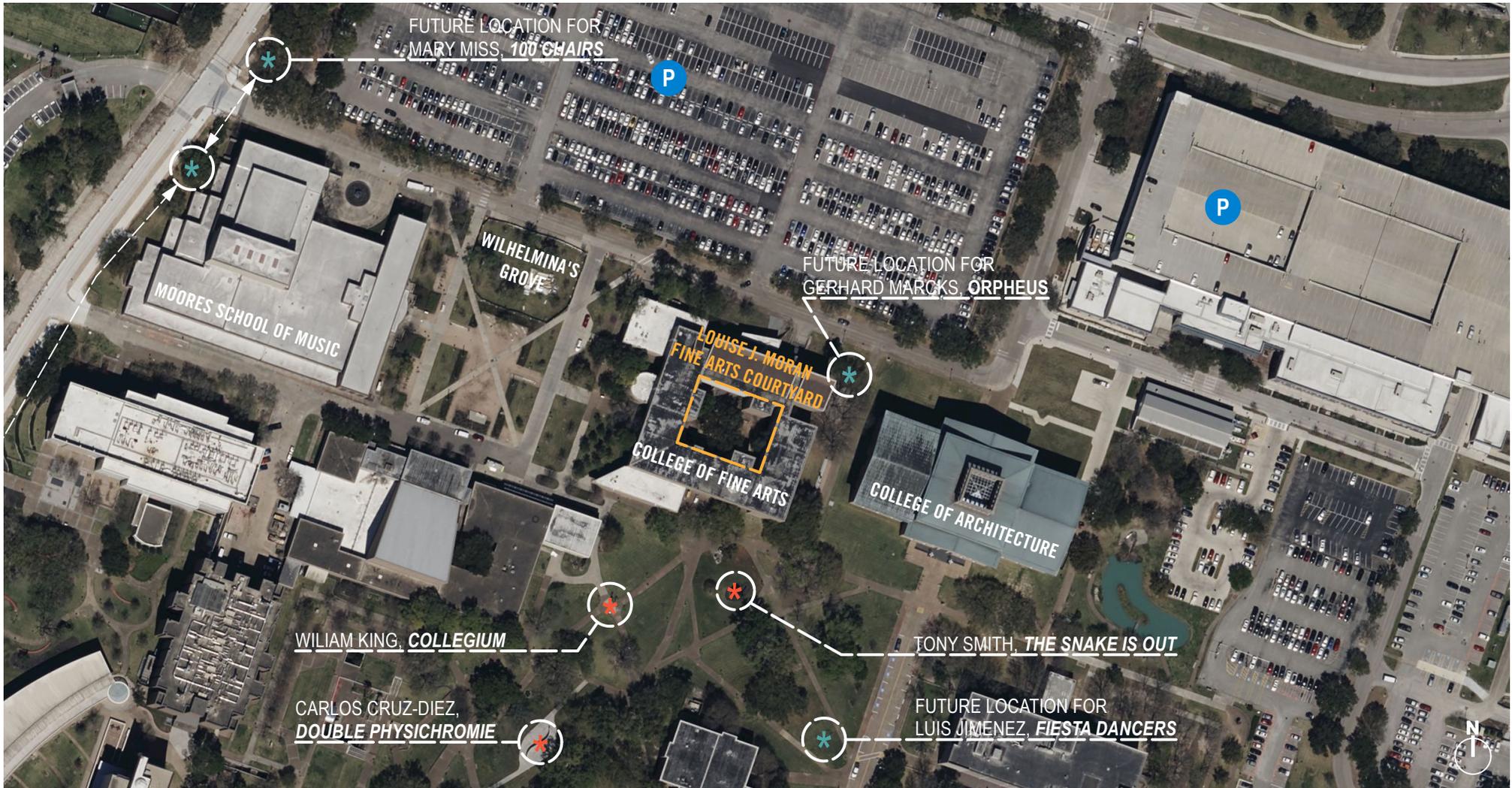
EXAMPLE IMAGES OF FIXTURE TYPE: PH4

LOUISE J. MORAN FINE ARTS COURTYARD

CONTEXT

LEGEND

- Visitor Parking
- Existing Permanent Art Installations
- Future Permanent Art Installations
- Proposed Temp Art Sites

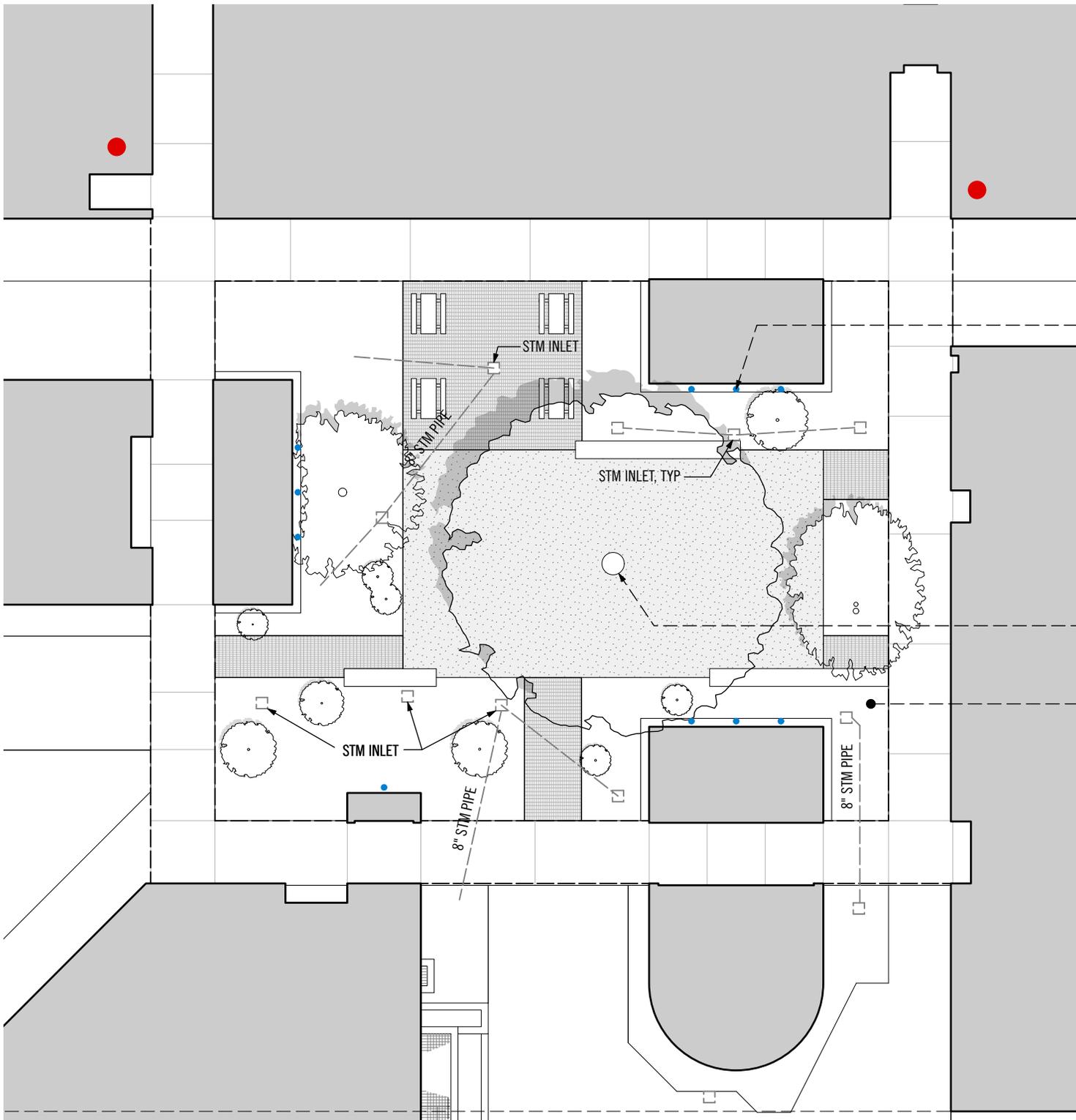


LOUISE J. MORAN FINE ARTS COURTYARD

EXISTING / DEMOLITION PLAN

LEGEND

- Existing Electrical IDF Closets
- Existing Power Receptables



Existing power receptables conveniently distributed around courtyard. Due to lack of planting, receptables are very visible.
Note: Scheduled drainage renovations could affect existing power receptables locations.

Existing trees show signs of stress. see notes below.

Existing planting beds lack vegetation. Majority of plants have died due to lack of irrigation system.

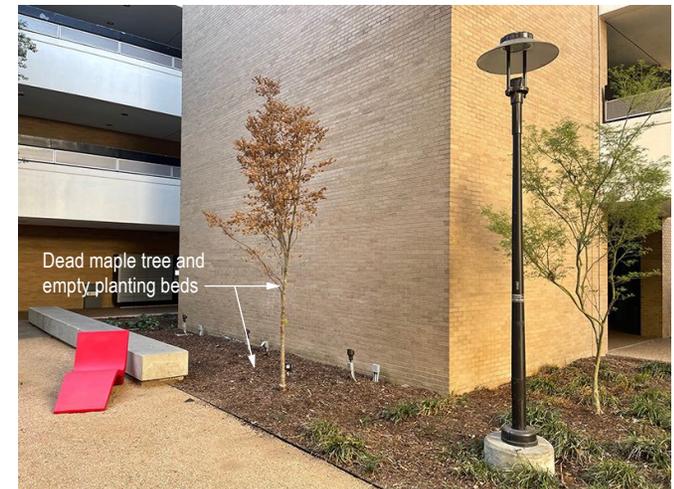
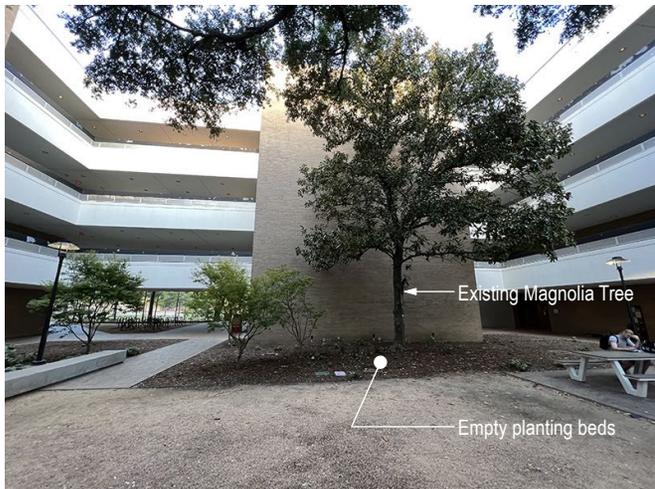
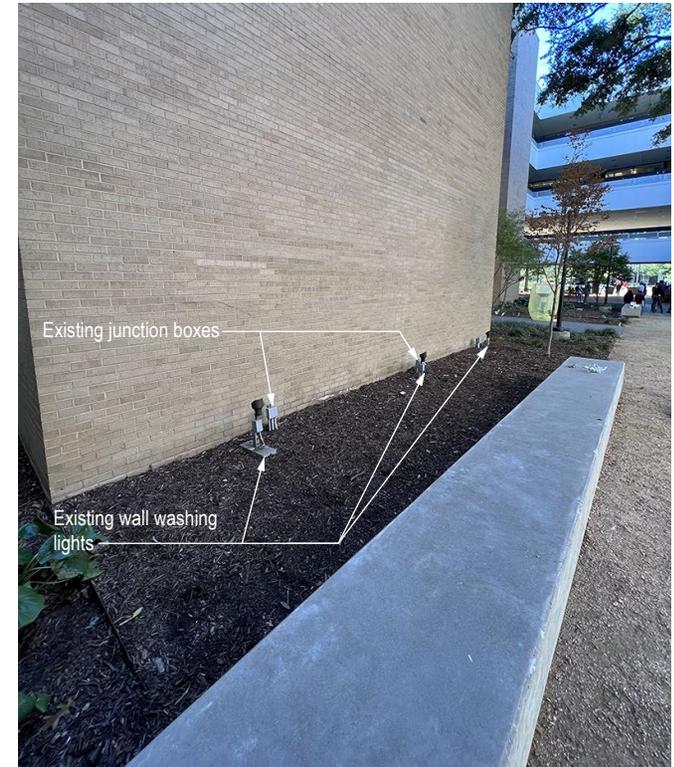
EXISTING TREE REVIEW COMMENTS FROM URBAN FORESTER

One mature live oak in center of plaza. Root zone covered in decomposed granite gravel. One mature magnolia, two mature holly trees and several small maples (of which 1 is dead) exist on the perimeter of the courtyard, beyond the DG in open landscape beds. Moisture stress is evident in holly and maple trees. Dead maple is most likely due to drought. No irrigation in this area.



LOUISE J. MORAN FINE ARTS COURTYARD

PHOTOS OF EXISTING CONDITIONS



LOUISE J. MORAN FINE ARTS COURTYARD

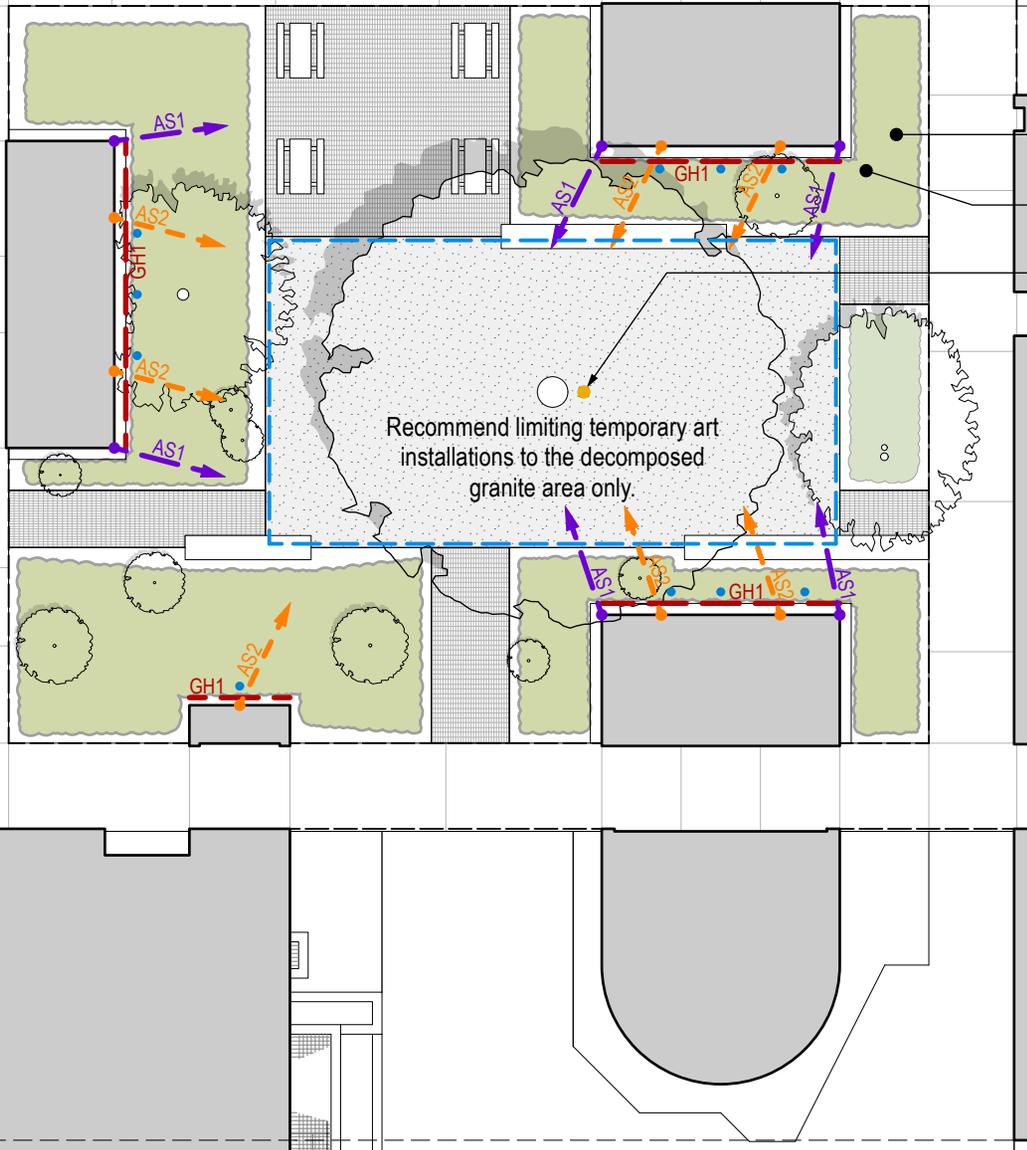
PROPOSED UPGRADES

2023 CONSTRUCTION COST ESTIMATE: \$128,130

2023 TOTAL PROJECT COST ESTIMATE: \$178,677

LEGEND

- AS1 Fixture
- AS2 Fixture
- Temporary Art Installation Zone
- GH1 Fixture
- In-Ground Power
- Existing Power Receptacle (relocated to ground cover)



NEW ROBUST GROUND COVER PLANTING IN ALL EXISTING BEDS TO CREATE A LUSH GARDEN
INSTALL NEW IRRIGATION SYSTEM THROUGHOUT COURTYARD

INSTALL NEW IN-GROUND DEDICATED POWER ENCLOSURE NEAR CENTRAL TREE. Legrand Wiremold outdoor ground box or equal.

INSTALL LINEAR WALL WASH
 Fixture Type: GH1
 Lumenpulse - Lumenfacade
 Qty:4
 Above grade linear wall wash uplight to illuminate brick walls, with planting to conceal fixture from view.

INSTALL ROOF MOUNTED PROJECTORS
 Fixture Type: AS1
 Selux - Olivio Grande LED Universal
 Qty:6
 Roof mounted image projectors to create light art patterns. Internal Gobo (pattern maker) can be changed by artists' needs.

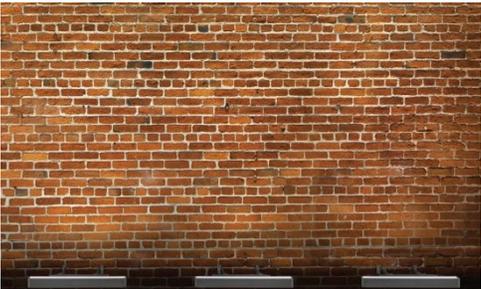
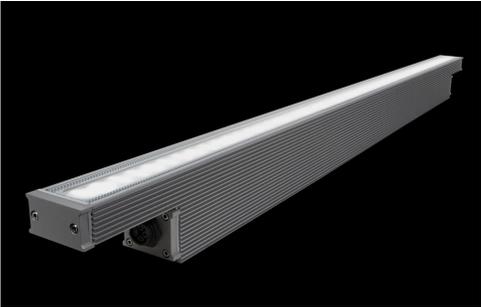
INSTALL ROOF MOUNTED SPOT LIGHTS
 Fixture Type: AS2
 Selux - Olivio Grande LED Universal
 Qty:7
 Roof mounted spot lights for lighting artwork and /or trees. Option for color changing on tunable white; data and control required



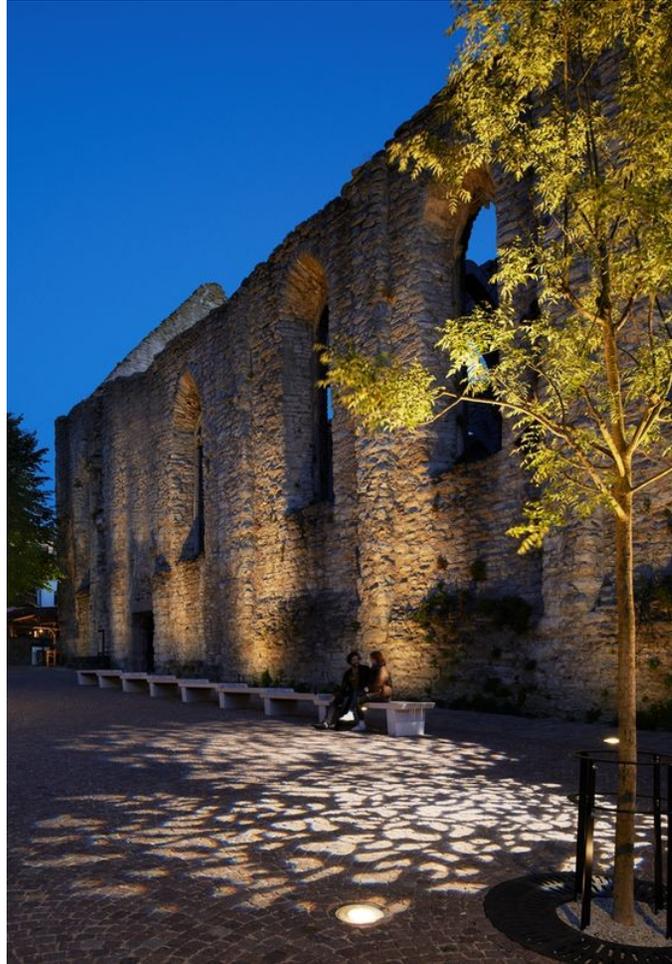
FIXTURE TYPE:
AS1 & AS2



FIXTURE TYPE:
GH1



EXAMPLE IMAGE OF FIXTURE TYPE GH1



EXAMPLE IMAGE OF FIXTURE TYPES AS1 & AS2



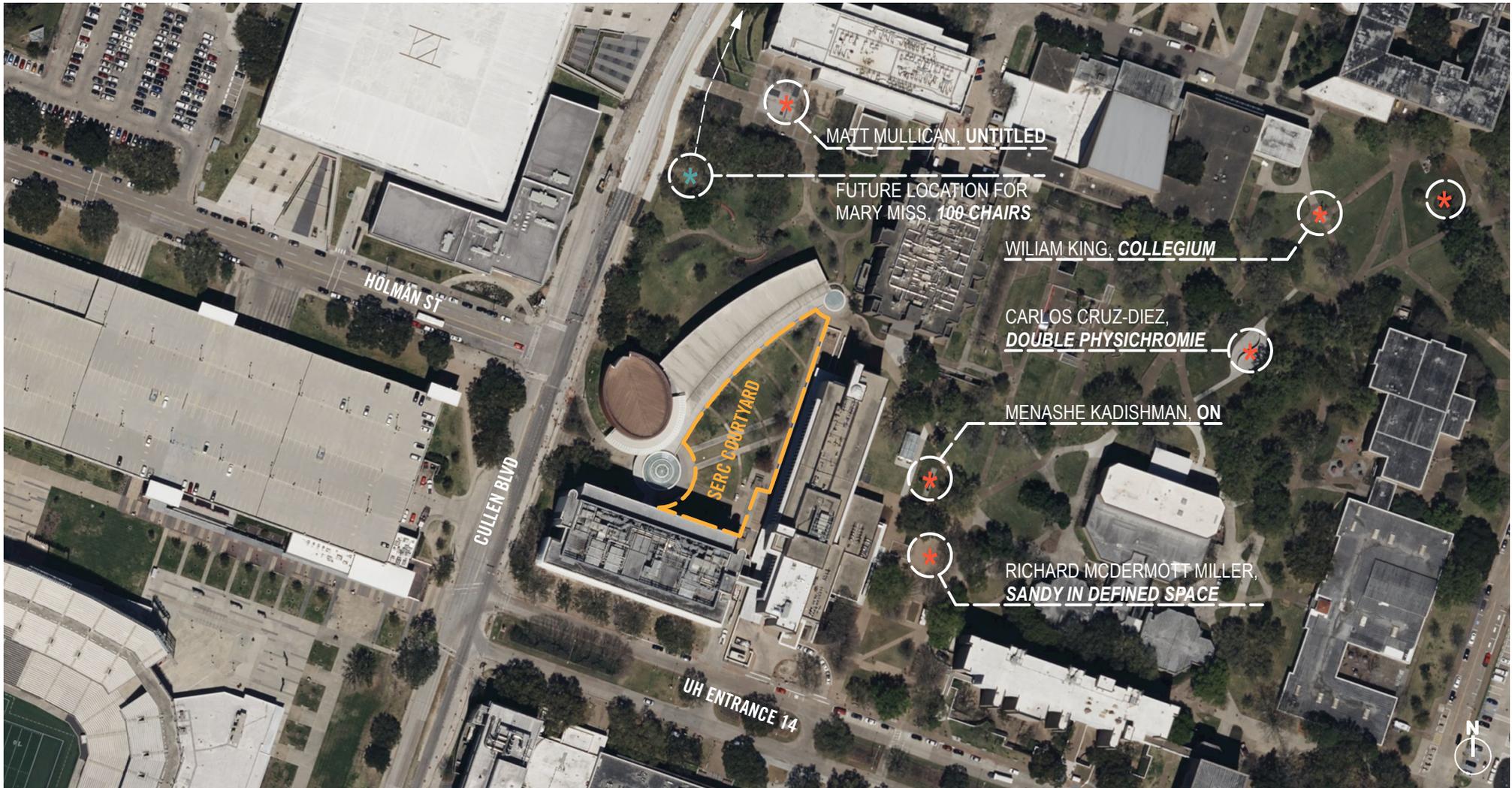
EXAMPLE IMAGE OF FIXTURE TYPES AS1 & AS2

SERC COURTYARD

CONTEXT

LEGEND

-  Visitor Parking
-  Existing Permanent Art Installations
-  Future Permanent Art Installations
-  Proposed Temp Art Sites



SERC COURTYARD

EXISTING CONDITIONS PLAN

LEGEND



EXISTING BENCHES

The existing benches do not meet UH standards.

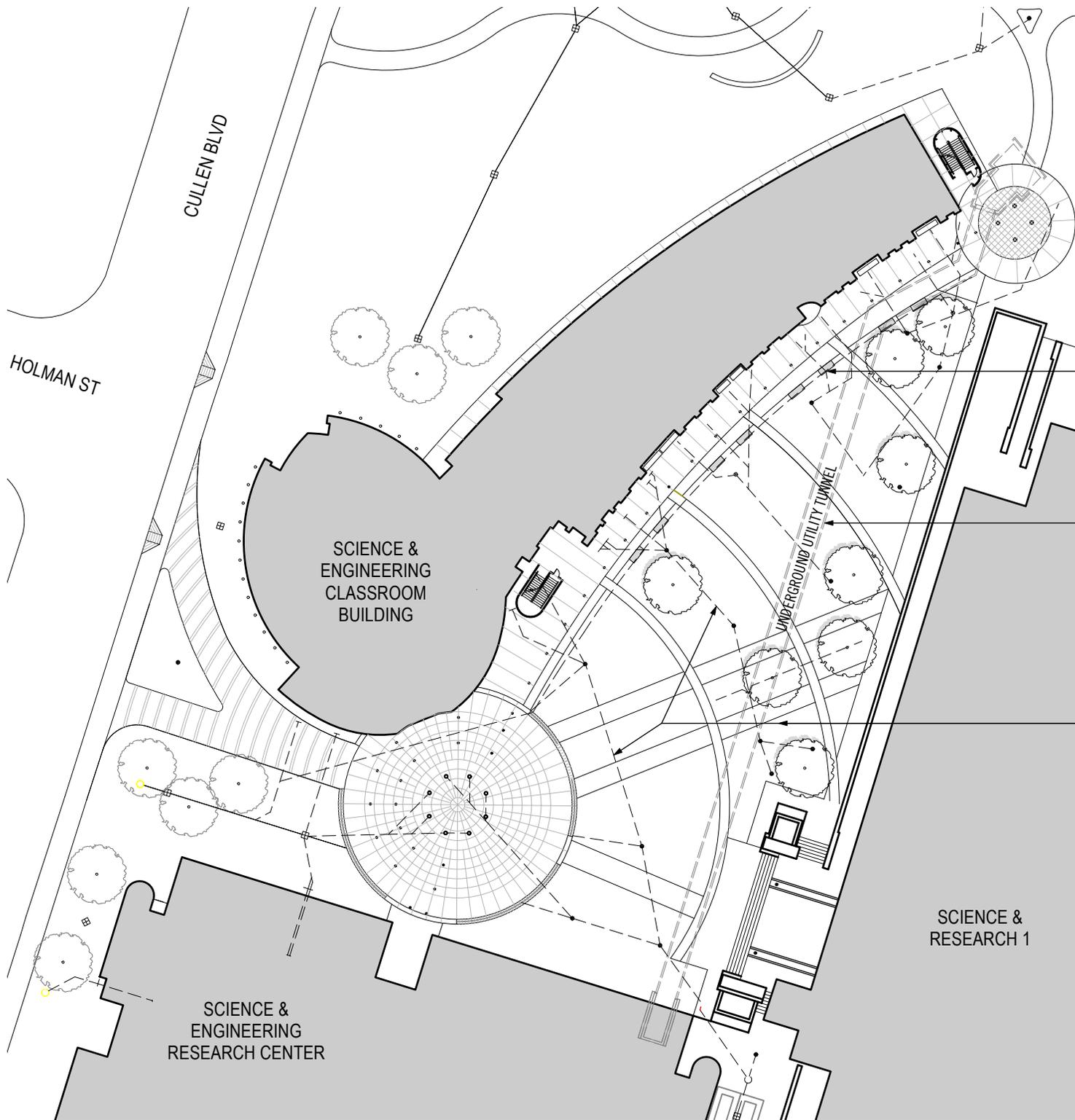
UNDERGROUND UTILITY TUNNEL

The existing underground utility tunnel will limit the depth of any proposed foundations required for art installations.

UNDERGROUND STORM LINES

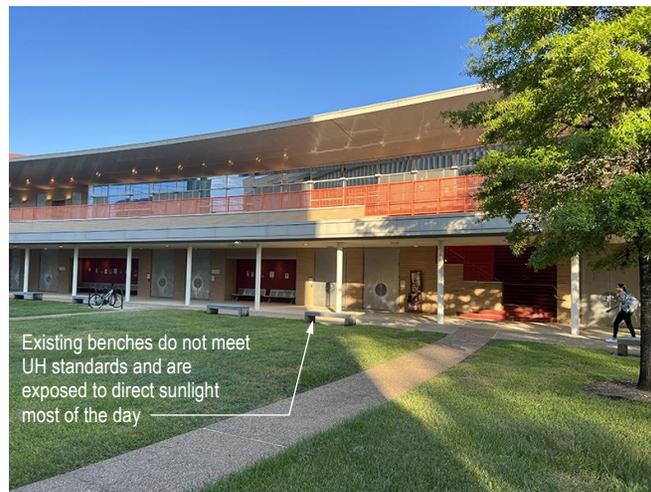
EXISTING TREE REVIEW COMMENTS FROM URBAN FORESTER

Many red maple trees of varying size and age. All are planted trees. Age range, 10-20 years. All fair condition, stressed condition due to drought. Appears there is no irrigation. Trees are planted high and mulch is built up on trunks. Most have low limb structure 6'-8' above surrounding grade. Recommend pruning to begin raising low limbs.



SERC COURTYARD

PHOTOS OF EXISTING CONDITIONS



SERC COURTYARD

DEMOLITION PLAN

LEGEND

 Area of Demolition

CULLEN BLVD

HOLMAN ST

SCIENCE &
ENGINEERING
CLASSROOM
BUILDING

SCIENCE &
RESEARCH 1

SCIENCE &
ENGINEERING
RESEARCH CENTER

REMOVE EXISTING BENCHES

The existing benches do not meet UH standards

REMOVE EXISTING SIDEWALK

Remove existing sidewalk to create larger zone for future art installations



SERC COURTYARD

PROPOSED IMPROVEMENTS

2023 CONSTRUCTION COST ESTIMATE: \$851,693

2023 TOTAL PROJECT COST ESTIMATE: \$1,187,685

LEGEND

- PH1 Fixture
- PH3 Fixture
- New Tree
- Bench
- Temporary Art Installation Zone



INSTALL NEW BENCHES

Install new Austin Bench, backless, wood & aluminum, cantilevered. On concrete foundation
Qty: 12

PLANT ADDITIONAL TREES

Plant additional trees to create defined outdoor rooms and provide additional shade.
Assume Red Maples to match existing.
Caliper: 4" min. Qty: 21

INSTALL DECOMPOSED GRANITE

Approximate Area: 6286 sf
Installation specs:

- 2"-3" min of 1/4" minus decomposed granite premixed w/ stabilizer solution, compacted to 85%
- Landscape Fabric
- 3"-4" of recycled sub base, compacted to 95%; no limestone
- Compacted sub grade

INSTALL NEW DECORATIVE LIGHTING

Fixture Type: PH3 Qty: 15
Manufacturer: Neri Model: Nebula L
Decorative pedestrian scale art pole to line visual spine of landscape and lead visitors to the artwork areas. Assume 20ft pole height.

INSTALL NEW SITE LIGHTING

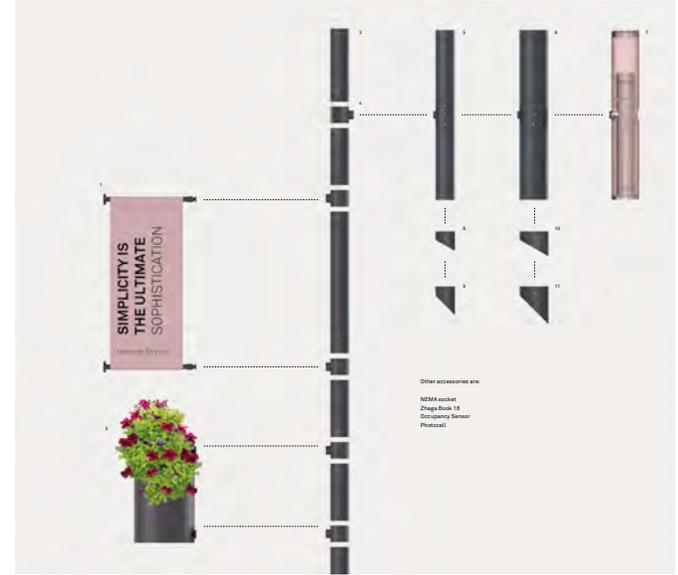
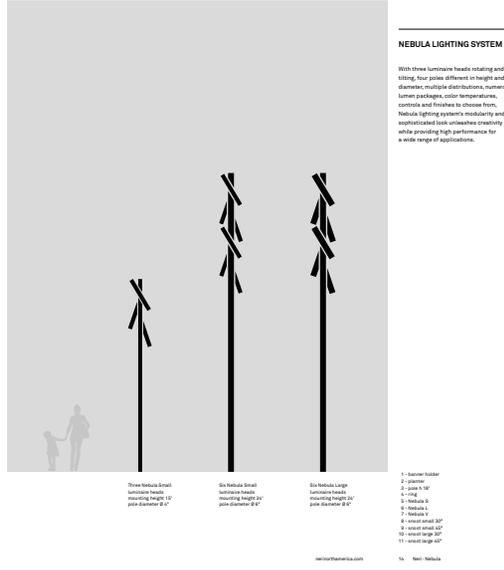
Fixture Type: PH1 Qty: 16
Manufacturer: Selux Model: Modular Columns
Permanently affixed light pole with power and data. Modular system accommodates spot lights, cameras and wifi. Assume 18ft pole height.



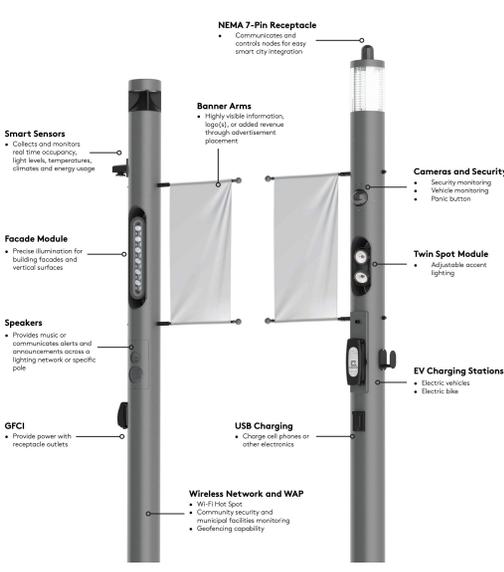
EXAMPLE IMAGE OF FIXTURE TYPE PH3



ASSEMBLY OPTIONS FOR FIXTURE TYPE PH3



EXAMPLE IMAGE OF FIXTURE TYPE PH1



ASSEMBLY OPTIONS FOR FIXTURE TYPE PH1



CULLEN FAMILY PLAZA

CONTEXT

LEGEND

- P** Visitor Parking
- *** Existing Permanent Art Installations
- *** Future Permanent Art Installations
- Proposed Temp Art Sites

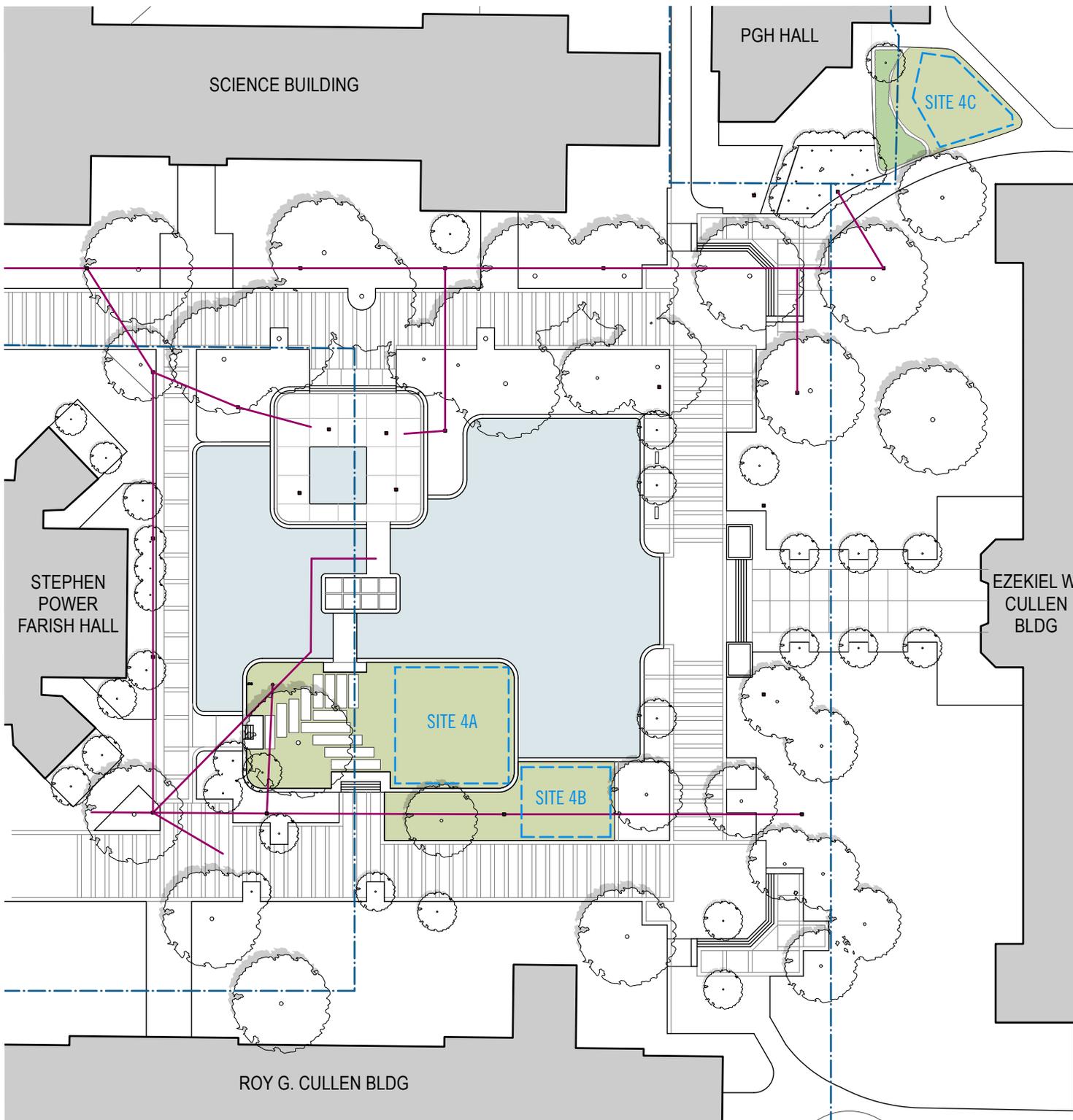


CULLEN FAMILY PLAZA

EXISTING CONDITIONS PLAN

LEGEND

- Underground Water Line
- Undetground Storm Line



EXISTING TREE REVIEW COMMENTS FROM URBAN FORESTER

Cullen Family Plaza – one mature red oak growing on raised pad at site 4A. Appears to be 50 years old, good condition. One pine tree on outside edge of pad – good condition. Irrigation unknown.

Site 4C – two crape-myrtle trees in landscape bed at building. One live oak exists beyond the site limits, however the canopy extends approximately 20' into the area. Prune to remove dead wood. Area of irrigation is limited.

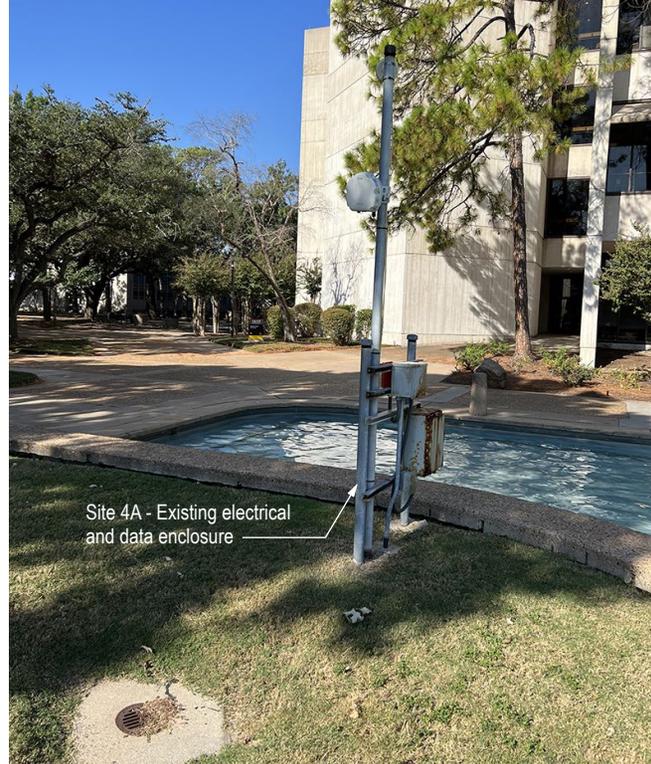


CULLEN FAMILY PLAZA

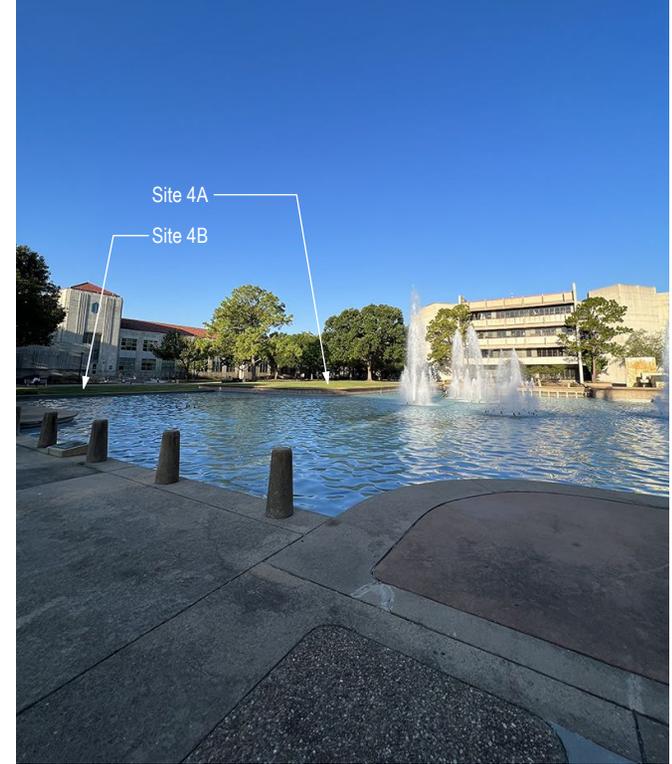
PHOTOS OF EXISTING CONDITIONS



Site 4A - Uneven walking surface due to soil subsidence

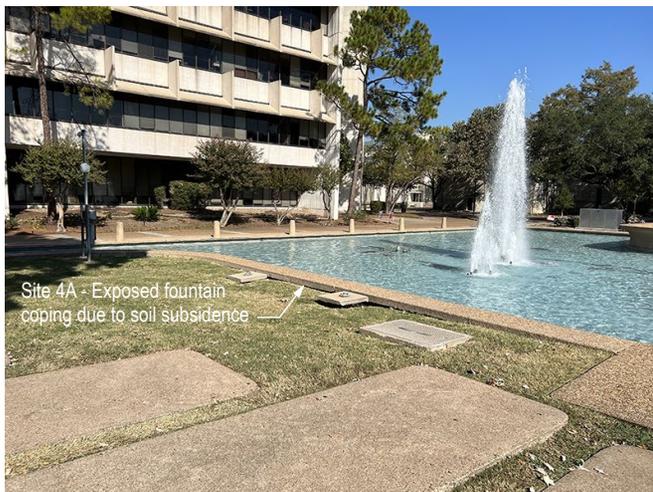


Site 4A - Existing electrical and data enclosure

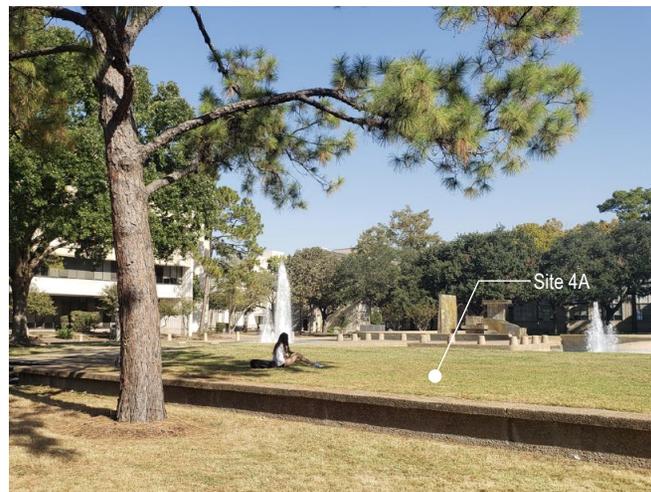


Site 4A

Site 4B



Site 4A - Exposed fountain coping due to soil subsidence



Site 4A



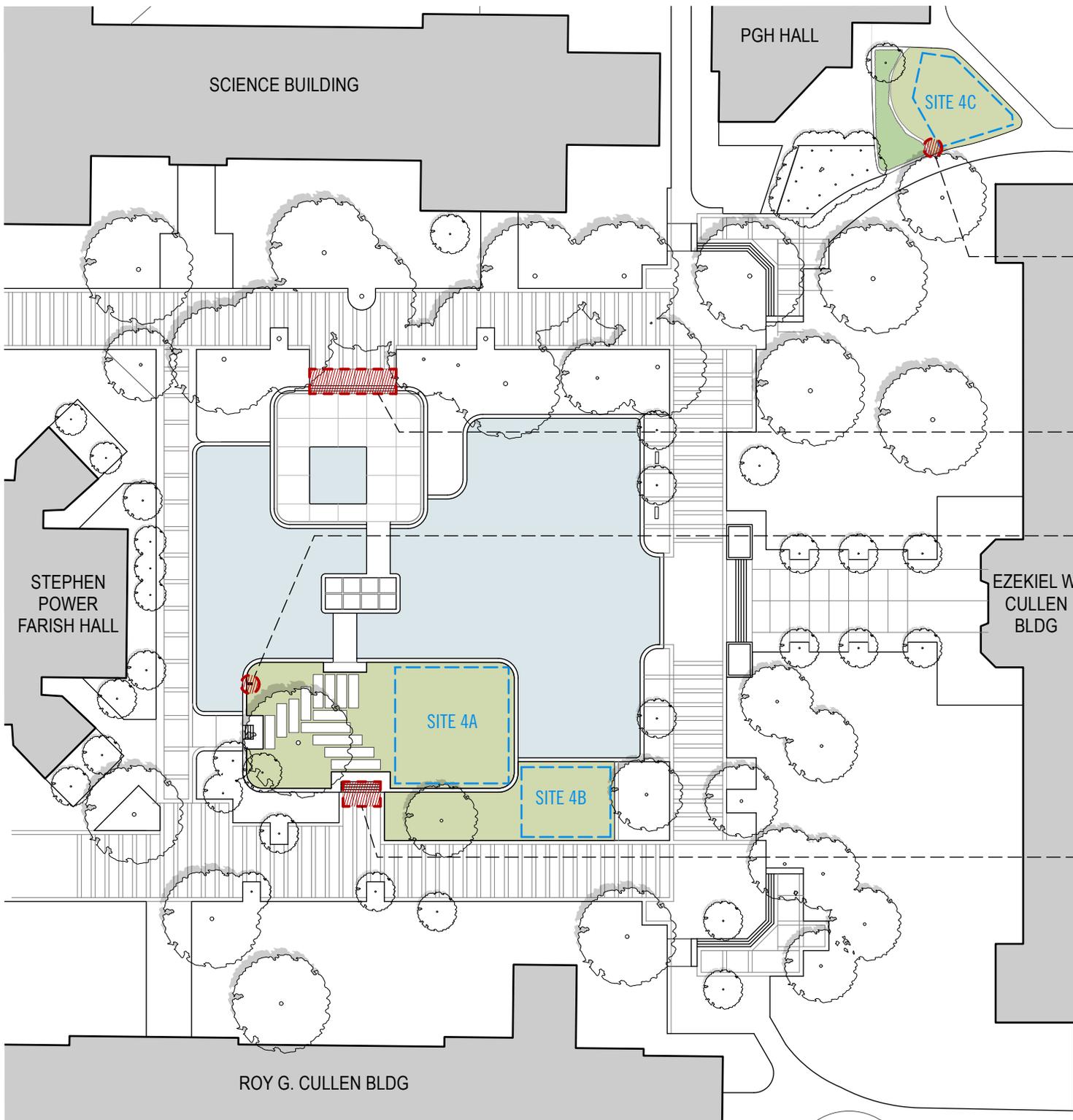
Site 4C

CULLEN FAMILY PLAZA

DEMOLITION PLAN

LEGEND

 Area of Demolition



REMOVE EXISTING SITE LIGHTING

Remove existing site lighting to be replaced
Qty: 1

REMOVE EXISTING STEPS AND PAVEMENT

Remove existing concrete steps and landing and prepare for new ramp and steps

REMOVE EXISTING POWER AND DATA ASSEMBLY

Remove existing electrical, data and wifi assembly and adjoining unistruts and foundations

REMOVE EXISTING STEPS AND PAVEMENT

Remove existing concrete steps and landing and prepare for new ramp and steps



CULLEN FAMILY PLAZA

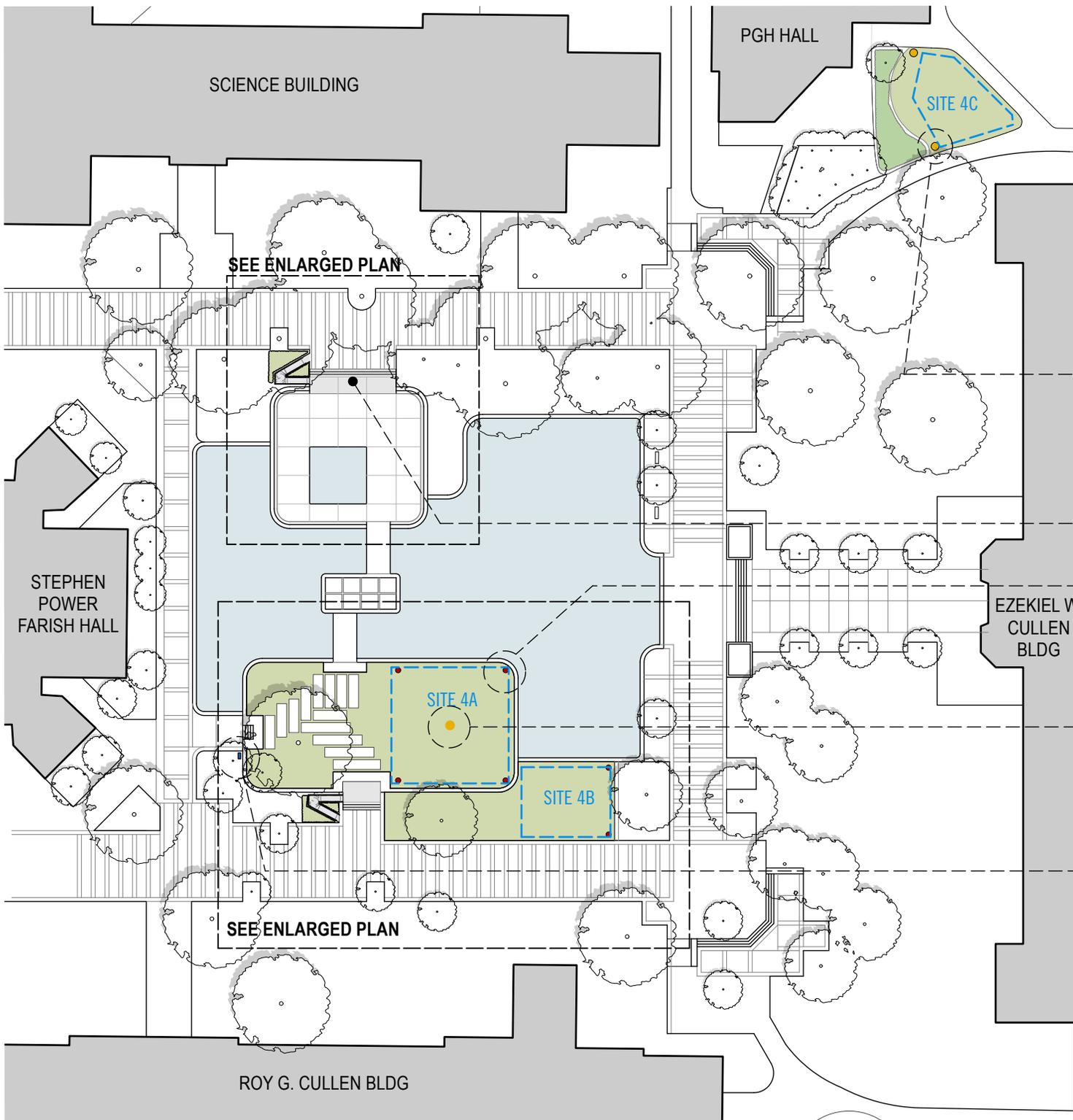
PROPOSED IMPROVEMENTS

2023 CONSTRUCTION COST ESTIMATE: \$325,335

2023 TOTAL PROJECT COST ESTIMATE: \$453,680

LEGEND

- PH1 Fixture
- PH2 Fixture
- NEMA 4 Rated Electrical Enclosure
- In-Ground Power
- Temporary Art Installation Zone



INSTALL NEW SITE LIGHTING

Fixture Type: PH1 Qty: 2
 Manufacturer: Selux Model: Modular Columns
 Permanently affixed light pole with power and data. Modular system accommodates spot lights, cameras and wifi. Assume 18ft pole height.

ACCESSIBILITY IMPROVEMENTS

See enlarged plan for more information.

INSTALL NEW DEDICATED POWER AND CONCRETE FOOTINGS FOR TEMPORARY DECORATIVE LIGHTING

See enlarged plan for more information.

INSTALL NEW IN-GROUND DEDICATED POWER ENCLOSURE

See enlarged plan for more information.

INSTALL NEW NEMA 4 RATED ENCLOSURE TO HOUSE ELECTRICAL BREAKERS, DISCONNECTS, & WIFI EMITTER.

See enlarged plan for more information.



CULLEN FAMILY PLAZA

ENLARGED PLAN OF IMPROVEMENTS

LEGEND

- PH1 Fixture
- PH2 Fixture
- NEMA 4 Rated Electrical Enclosure
- In-Ground Power
- Temporary Art Installation Zone

REPAIR SOIL SUBSIDENCE AND LEVEL CONCRETE PADS

INSTALL NEW IN-GROUND DEDICATED POWER ENCLOSURE IN CENTER OF SITE 4A.

Legrand wiremold outdoor ground box or equal.

INSTALL NEW DEDICATED POWER AND PERMANENT CONCRETE FOOTINGS FOR TEMPORARY DECORATIVE LIGHTING

Fixture Type: PH2

we-ef FLC230 LED Tunable White Floodlights
Qty:6

Temporary truss tower or pole system bolted to permanent concrete footer. Power and Data stub up at base of concrete footer. Temporary Theatrical spot lights clamp onto temporary truss tower. Assume 30ft pole height.

ACCESSIBILITY IMPROVEMENTS

See enlarged plan for more information.

INSTALL NEW NEMA 4 RATED ENCLOSURE TO HOUSE ELECTRICAL BREAKERS, DISCONNECTS, & WIFI EMITTER.

Reroute power to new location. Provide new concrete foundation and install new landscaping to shield enclosure.

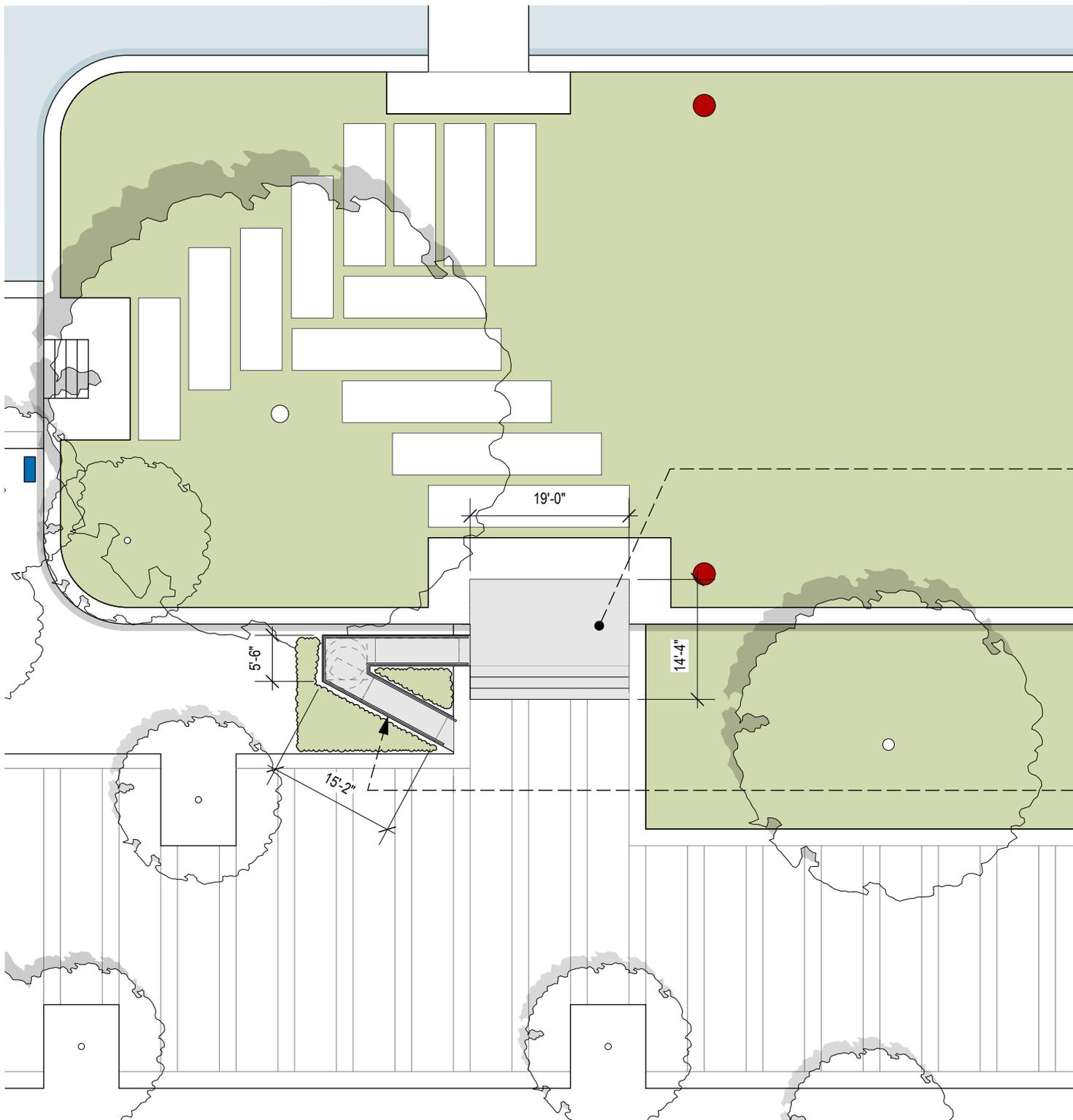


CULLEN FAMILY PLAZA

PROPOSED ACCESSIBILITY IMPROVEMENTS

LEGEND

 Area of new construction



INSTALL NEW CONCRETE STEPS & LANDING CONNECTED TO EXISTING FOUNTAIN.

Approximately ±19'-0" x 14'-4"
Broom finished concrete

INSTALL NEW CONCRETE RAMP UP TO EXISTING FOUNTAIN.

Broom finished concrete
2"x5/8" stainless steel guardrails & handrails with LED lights
Install new Asian Jasmine groundcover in areas disturbed by ramp construction.

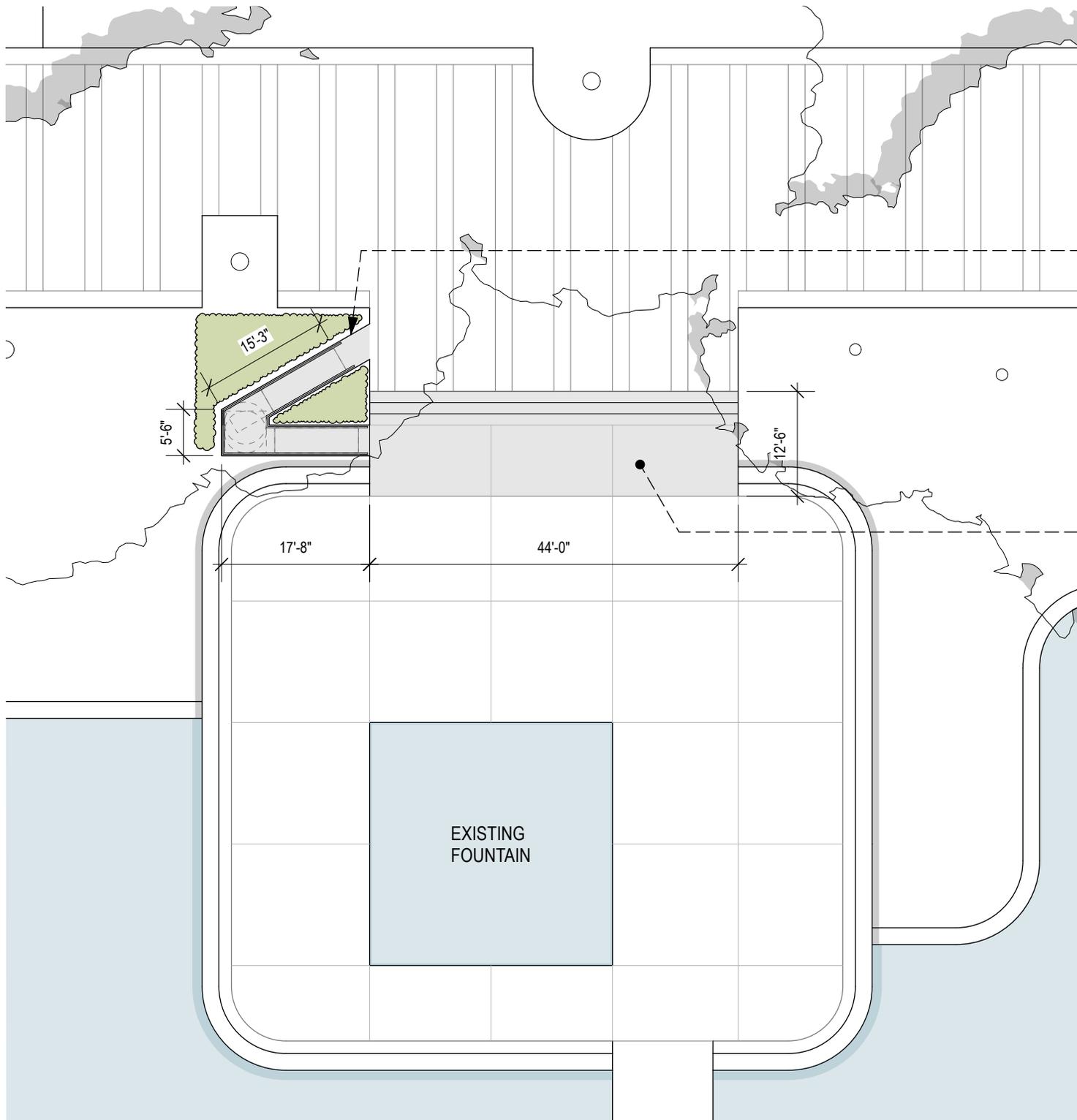


CULLEN FAMILY PLAZA

PROPOSED ACCESSIBILITY IMPROVEMENTS

LEGEND

 Area of new construction



INSTALL NEW CONCRETE RAMP UP TO EXISTING FOUNTAIN.

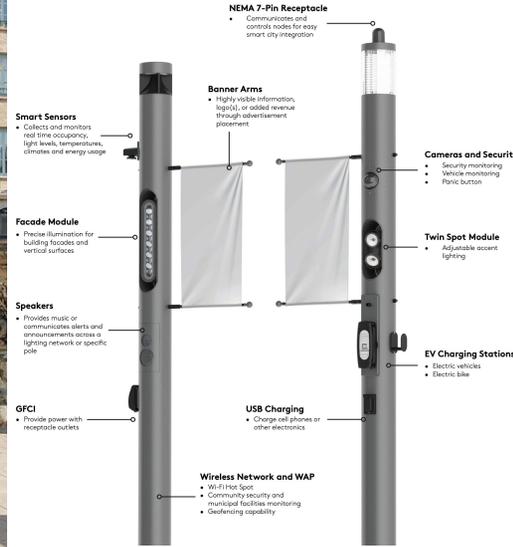
Broom finished concrete
2"x5/8" stainless steel guardrails & handrails with LED lights
Install new Asian Jasmine groundcover in areas disturbed by ramp construction.

INSTALL NEW CONCRETE STEPS & LANDING CONNECTED TO EXISTING FOUNTAIN.

Approximately ±44'-0" x 12'-6"
Broom finished concrete



EXAMPLE IMAGES OF FIXTURE TYPE PH2



EXAMPLE IMAGE OF FIXTURE TYPE PH1

ASSEMBLY OPTIONS FOR FIXTURE TYPE PH1



CULLEN FAMILY PLAZA

EXAMPLE IMAGES OF FIXTURE TYPES: PH1 & PH2

CONSTRUCTION COST ESTIMATES

FOR PROPOSED SITE IMPROVEMENTS



22341 V01
Feasibility Study

University of Houston
TPAF Study

Estimate Date: 2023-03-31
Printed: 10:28 2023-05-18 L3.1

LEVEL 3 ELEMENTAL SUMMARY	\$/sf	Element \$	%	Wilhelmina's Grov	Fine Arts Courtyar	SERC Courtyard	Cullen Family Plaz
GROSS FLOOR AREA							
D1 SITE WORK							
D11 Site Development				90,900	60,420	162,800	99,760
D13 Electrical Site Services				253,925	64,210	650,050	217,575
D2 ANCILLARY WORK							
D21 Demolition				54,350	3,500	38,843	8,000
DIRECT CONSTRUCTION COST, 2023				399,175	128,130	851,693	325,335
Z1 GENERAL REQUIREMENTS							
Z11 General Requirements			11.4%	45,706	14,671	97,519	37,251
Z12 CM/GC Fee			7.5%	29,938	9,610	63,877	24,400
Z2 CONTINGENCIES							
Z21 Design Contingency			12.0%	47,901	15,376	102,203	39,040
Z22 Escalation Contingency - Q3 2023			5.5%	21,955	7,047	46,843	17,893
Z23 Construction Contingency			3.0%	11,975	3,844	25,551	9,760
TOTAL PROJECT COST				556,650	178,677	1,187,685	453,680



ELEMENTAL ESTIMATE

Description	Wilhelmina's Grove Quantity	Fine Arts Courtyard Quantity	SERC Courtyard Quantity	Cullen Family Plaza Quantity
GROSS FLOOR AREA				
Ground Level	1			
TOTAL GROSS FLOOR AREA	1	0	0	0

REPORT NOTES

ELEMENTAL ESTIMATE

Description	Trade	Rate	Wilhelmina's Grove		Fine Arts Courtyard		SERC Courtyard		Cullen Family Plaza	
			Quantity	\$	Quantity	\$	Quantity	\$	Quantity	\$
D1 SITE WORK										
D11 Site Development										
Wilhelmina's Grove										
decomposed granite, landscape fabric, sub grade, repair sub base		8.00 /sf	1,700	13,600	0	0	0	0	0	0
reconfigure existing limestone benches, include repairs/salvaging		4,000.00 /no	11	44,000	0	0	0	0	0	0
repair disturbed flower bed areas from light pole installation		3.00 /sf	2,300	6,900	0	0	0	0	0	0
demolish decomposed granite		2.00 /sf	2,200	4,400	0	0	0	0	0	0
replace decomposed granite w/concrete walkway, 5"		10.00 /sf	2,200	22,000	0	0	0	0	0	0
Subtotal Wilhelmina's Grove				90,900	0	0	0	0	0	0
Fine Arts Courtyard										
replace plantings in existing beds, add new irrigation		12.00 /sf	0	0	5,035	60,420	0	0	0	0
Subtotal Fine Arts Courtyard			0	0	5,035	60,420	0	0	0	0
SERC Courtyard										
decomposed granite, landscape fabric, sub grade, levelling of surrounding area		8.00 /sf	0	0	0	0	6,700	53,600	0	0
surrounding concrete walks/bands & subgrade, assume no work required		0.00 /sf	0	0	0	0	1,350	0	0	0
cantilevered wood/aluminum benches, concrete foundations		600.00 /lf	0	0	0	0	72	43,200	0	0
trees, red maple, minimum 4" cal		3,000.00 /no	0	0	0	0	22	66,000	0	0
Subtotal SERC Courtyard			0	0	0	0	162,800	162,800	0	0
Cullen Family Plaza										
remove/salvage/re-lay concrete steps		1,500.00 /no	0	0	0	0	0	0	14	21,000
soil remediation/relevelling at west side of "Lily Pad"		3.50 /sf	0	0	0	0	0	0	3,000	10,500
replace damaged concrete steps, allow		3,750.00 /no	0	0	0	0	0	0	5	18,750
remove existing concrete steps/pavement		3.00 /sf	0	0	0	0	0	0	635	1,905
prep area for new steps/concrete ramp		1.50 /sf	0	0	0	0	0	0	900	1,350
concrete ramp		22.00 /sf	0	0	0	0	0	0	125	2,750
steel guardrails		300.00 /lf	0	0	0	0	0	0	65	19,500
concrete steps		200.00 /lf	0	0	0	0	0	0	88	17,600

ELEMENTAL ESTIMATE

Description	Trade	Rate	Wilhelmina's Grove		Fine Arts Courtyard		SERC Courtyard		Cullen Family Plaza		
			Quantity	\$	Quantity	\$	Quantity	\$	Quantity	\$	
concrete landing		12.00 /sf		0		0		0	430	5,160	
landscaping around new ramp		7.50 /sf		0		0		0	166	1,245	
Subtotal Cullen Family Plaza				0		0		0		99,760	
Total D11 Site Development				90,900		60,420		162,800		99,760	
D13 Electrical Site Services											
Site Lighting & Services											
PH1 pole light, 18' - modular columns with power/data		20,000.00 /no	*	0		0	16	320,000	2	40,000	
PH2 pole light, 30' - temporary truss tower, power/data at base		17,000.00 /no	*	0		0		0	6	102,000	
clampable spot lights onto PH2 truss/pole, allow 3 each		2,000.00 /no		0		0		0	18	36,000	
PH3 pole light, 20' - decorative pedestrian scale art pole		16,500.00 /no	*	0		0	15	247,500		0	
PH4 pole light, 30' - adjustable heads, power/data at base		28,000.00 /no	*	8	224,000	0		0		0	
new pole base		950.00 /no		8	7,600		0	31	29,450	8	7,600
AS1 - roof mounted image projectors		3,000.00 /no		0		6	18,000		0	0	
AS2 - roof mounted spotlights		1,500.00 /no		0		7	10,500		0	0	
GH1 - linear wall wash uplights		140.00 /lf		0		120	16,800		0	0	
wiring to façade/roof mounted fixtures		550.00 /no	*	0		17	9,350		0	0	
in-ground dedicated receptacle		1,800.00 /no		0		1	1,800		0	1	1,800
NEMA 4 rated power/wifi enclosure, relocate existing		3,800.00 /no		0		0	0		0	1	3,800
replace plantings around new NEMA enclosure		1.00 /ls		0		0	0		0	1,600	1,600
lighting controls		1.00 /ls		12,000	12,000	6,500	6,500	30,000	30,000	12,000	12,000
excavation, wiring, trenching, ground repair - direct buried conduit		35.00 /lf		295	10,325	36	1,260	660	23,100	365	12,775
Subtotal Site Lighting & Services				253,925		64,210		650,050		217,575	
Total D13 Electrical Site Services				253,925		64,210		650,050		217,575	
TOTAL D1 SITE WORK				344,825		124,630		812,850		317,335	

ELEMENTAL ESTIMATE

Description	Trade	Rate	Wilhelmina's Grove		Fine Arts Courtyard		SERC Courtyard		Cullen Family Plaza	
			Quantity	\$	Quantity	\$	Quantity	\$	Quantity	\$
D2 ANCILLARY WORK										
D21 Demolition										
Demolition										
demolish concrete sidewalks		5.50 /sf	1,700	9,350	0		335	1,843		0
demolish catenary lighting poles, foundations, fixtures		5,000.00 /no	9	45,000	0			0		0
demolish power receptacles		350.00 /no		0	10	3,500		0		0
demolish benches		1,500.00 /no		0		0	8	12,000		0
demolish all existing lighting at SERC, tbd		1.00 /ls		0		0	25,000	25,000		0
demolish light poles, foundations, fixtures		5,000.00 /no		0		0		0	1	5,000
demolish power/data assembly, unistrut, foundations		3,000.00 /no		0		0		0	1	3,000
Subtotal Demolition				54,350		3,500		38,843		8,000
Total D21 Demolition				54,350		3,500		38,843		8,000
TOTAL D2 ANCILLARY WORK				54,350		3,500		38,843		8,000

ELEMENTAL ESTIMATE

Description	Trade	Rate	Wilhelmina's Grove		Fine Arts Courtyard		SERC Courtyard		Cullen Family Plaza	
			Quantity	\$	Quantity	\$	Quantity	\$	Quantity	\$
DIRECT CONSTRUCTION COST				399,175		128,130		851,693		325,335
Z1 GENERAL REQUIREMENTS										
Z11 General Requirements										
General Conditions										
General Conditions		/ls +	4.5%	17,963	4.5%	5,766	4.5%	38,326	4.5%	14,640
Subtotal General Conditions				17,963		5,766		38,326		14,640
General Requirements										
General Requirements		/ls +	4.2%	16,765	4.2%	5,381	4.2%	35,771	4.2%	13,664
Subtotal General Requirements				16,765		5,381		35,771		13,664
Insurance, P&P Bond										
Insurance, P&P Bond		/ls +	1.5%	5,988	1.5%	1,922	1.5%	12,775	1.5%	4,880
Subtotal Insurance, P&P Bond				5,988		1,922		12,775		4,880
Subcontractor Bonding										
Subcontractor Bonding		/ls +	1.3%	4,990	1.3%	1,602	1.3%	10,646	1.2%	4,067
Subtotal Subcontractor Bonding				4,990		1,602		10,646		4,067
Total Z11 General Requirements				45,706		14,671		97,519		37,251
Z12 CM/GC Fee										
Profit/Fee/Risk										
Profit/Fee/Risk		/ls +	7.5%	29,938	7.5%	9,610	7.5%	63,877	7.5%	24,400
Subtotal Profit/Fee/Risk				29,938		9,610		63,877		24,400
Total Z12 CM/GC Fee				29,938		9,610		63,877		24,400
TOTAL Z1 GENERAL REQUIREMENTS				75,644		24,281		161,396		61,651

ELEMENTAL ESTIMATE

Description	Trade	Rate	Wilhelmina's Grove		Fine Arts Courtyard		SERC Courtyard		Cullen Family Plaza	
			Quantity	\$	Quantity	\$	Quantity	\$	Quantity	\$
Z2 CONTINGENCIES										
Z21 Design Contingency										
Design Stage Contingency										
Design Stage Contingency		/ls +	12.0%	47,901	12.0%	15,376	12.0%	102,203	12.0%	39,040
Subtotal Design Stage Contingency				47,901		15,376		102,203		39,040
Total Z21 Design Contingency				47,901		15,376		102,203		39,040
Z22 Escalation Contingency - Q3 2023										
Escalation Contingency										
Escalation Contingency		/ls +	3.0%	11,975	3.0%	3,844	3.0%	25,551	3.0%	9,760
Subtotal Escalation Contingency				11,975		3,844		25,551		9,760
Bidding Contingency										
Bidding Contingency		/ls +	2.5%	9,979	2.5%	3,203	2.5%	21,292	2.5%	8,133
Subtotal Bidding Contingency				9,979		3,203		21,292		8,133
Total Z22 Escalation Contingency - Q3 2				21,955		7,047		46,843		17,893
Z23 Construction Contingency										
Construction Contingency										
Construction Contingency		/ls +	3.0%	11,975	3.0%	3,844	3.0%	25,551	3.0%	9,760
Subtotal Construction Contingency				11,975		3,844		25,551		9,760
Total Z23 Construction Contingency				11,975		3,844		25,551		9,760
TOTAL Z2 CONTINGENCIES				81,831		26,267		174,597		66,694



ELEMENTAL ESTIMATE

Description	Trade	Rate	Wilhelmina's Grove		Fine Arts Courtyard		SERC Courtyard		Cullen Family Plaza	
			Quantity	\$	Quantity	\$	Quantity	\$	Quantity	\$
INDIRECT CONSTRUCTION COST				157,475		50,547		335,993		128,345
TOTAL COSTS				556,650		178,677		1,187,685		453,680

PROPOSED FURNITURE

CUTSHEETS AND PRODUCT INFORMATION

SERC COURTYARD

Landscape Forms - Austin Bench
Backless, wood & aluminum, cantilevered. On
concrete foundation
Qty: 12

PROPOSED LIGHTING

CUTSHEETS AND PRODUCT INFORMATION

The following cutsheets of the proposed light fixtures are provided for reference and pricing. Refer to manufacturer's websites for up to date product information.

WILHELMINA'S GROVE:

Fixture Type: **PH4** - Site Pole Light
Selux - Olivio Grande Sistema 2
Qty:8

LOUISE J. MORAN FINE ARTS COURTYARD

Fixture Type: **GH1** - Linear Wall Wash
Lumenpulse - Lumenfacade
Qty:4

Fixture Type: **AS1** - Roof Mounted Projector
Selux - Olivio Grande LED Universal
Qty:6

Fixture Type: **AS2** - Roof Mounted Spot Light
Selux - Olivio Grande LED Universal
Qty:7

Legrand - Wiremold Outdoor Ground Box
Qty:1

SERC COURTYARD

Fixture Type: **PH3** - Decorative Pole Light
Neri - Nebula L
Qty: 15

Fixture Type: **PH1** - Site Pole Lighting
Selux - Modular Columns
Qty: 16

CULLEN FAMILY PLAZA

Fixture Type: **PH1** - Site Pole Lighting
Selux - Modular Columns
Qty: 2

Fixture Type: **PH2** - Temporary Lighting
we-ef FLC230 LED Floodlights
Qty:6

Legrand - Wiremold Outdoor Ground Box
Qty:1

Date: _____ Customer: _____
 Project: _____
 Type: _____ Qty: _____

selux

Olivio Medio LED - Sistema 2 Arm Mount

selux

Olivio Medio LED
 Sistema 2 Arm Mount



Order Code:

#1	OLML	-	-	-	-	-	-	-
#2	OLML	-	-	-	-	-	-	-
#3	OLML	-	-	-	-	-	-	-
#4	OLML	-	-	-	-	-	-	-

Fixture # **Series** **Optics** **Mounting** **Light Engine** **CCT** **Finish** **Voltage** **Options**

Pole Order Code: _____ **Series** _____ **Height** _____ **Finish** _____ **Rivnut Pairs** _____ **Options** _____ ***Rivnut Locations** _____ *Refer to chart on page 4 for Rivnut locations

OLML	Series	OLML Olivio Medio LED						
	Optics	S09 Spot, 9°	S20 Spot, 20°	F40 Flood medium, 41°	F80 Flood wide, 78°	ASM Asymmetric (no SLH or SLV option)		
	Mounting	SBx Specify Arm Locations (x = number of luminaires per pole.)						
	Light Engine	2G350 15W / 1325lm	2G525 23W / 1978lm	2G700 31W / 2361lm	2G105 46W / 3941lm	*Based on F80 distribution and 3000K CCT.		
	CCT	27* 2700K	30' 3000K	35* 3500K	40 4000K	50* 5000K	¹ Dark Sky approved with (8i) option only. * Consult factory	
	Finish	WH White	BK Black	BL Semi-Matte Black	BZ Bronze	SV Silver	SP Specify Premium Color	
	Voltage	UNV 120-277V	120 120V	208 208V	240 240V	277 277V		
	Options	DS² Dark Sky 0° Tilt Option	DM Dimming, 0-10V	SLH Spread Lens Horizontal (fixed)	SLV Spread Lens Vertical (fixed)	PC Photocell (consult factory)	HL50 ³⁻⁵ Hi-Lo Switching Low Output 50%	HX* Micro Hexcell Honeycomb Louver (consult factory)
								CF Color Filter (consult factory)

Product Modifications
 Please list modification requirements for review by factory:

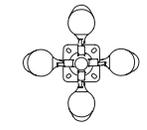
Approvals

Date: _____

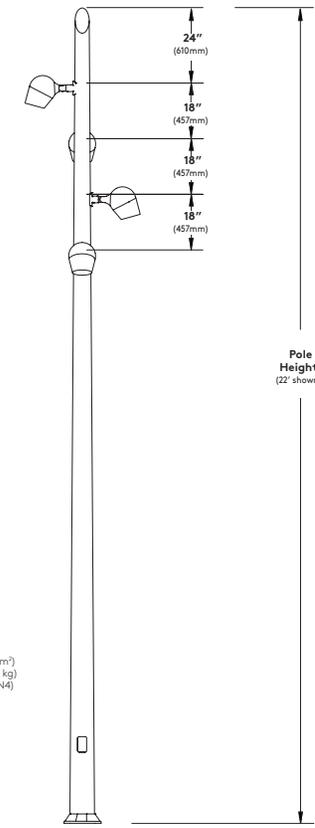
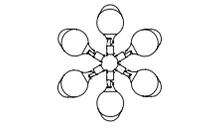
Mounting

Mounting Details

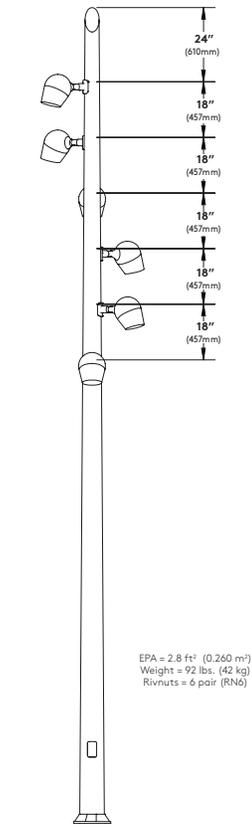
Quadruple Pole Arms stepped at 90°
 (Arm Location: 0G-1M-2S-3A)



Sextuple Pole Arms stepped at 60°
 (Arm Locations: 0E-1I-2M-3Q-4U-5A)



EPA = 1.9 ft² (0.177 m²)
 Weight = 62 lbs. (28 kg)
 Rivnuts = 4 pair (RN4)



EPA = 2.8 ft² (0.260 m²)
 Weight = 92 lbs. (42 kg)
 Rivnuts = 6 pair (RN6)



WILHELMINA'S GROVE
 CUTSHEETS - FIXTURE TYPE: PH4

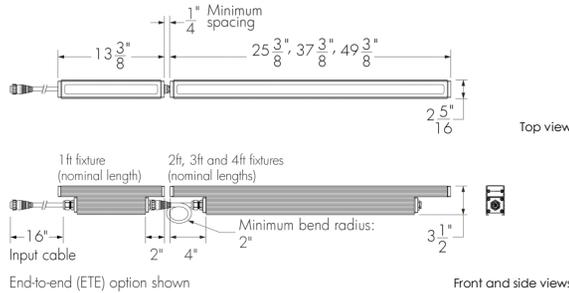
Specification Sheet

lumenfacade
LOG

WHITE AND STATIC COLORS

Project Name _____ Qty _____

Type _____ Catalog / Part Number _____

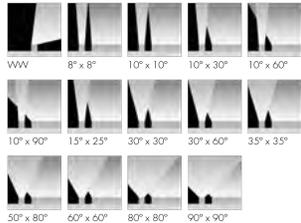


Photometric Summary

	Delivered output (lm)	Intensity (peak cd)
WW	3,592	5,159
8°x8°	4,045	77,896
10°x10°	3,830	38,346
10°x30°	3,885	30,056
10°x60°	3,984	17,736
10°x90°	3,576	7,897
15°x25°	3,880	24,730
30°x30°	3,765	14,726
30°x60°	3,848	5,106
35°x35°	3,921	9,999
50°x80°	3,767	3,449
60°x60°	3,435	3,007
80°x80°	3,881	2,530
90°x90°	3,588	1,886

Based on HO 4000K, 4ft [1219mm] configuration. Photometric performance is measured in compliance with IESNA LM-79-08.

Optics



Description

The Lumenfacade is a high-performance linear LED luminaire for grazing or floodlighting exterior walls and facades. Featuring second generation LED technology, the luminaire is available in 12 in, 24 in, 36 in or 48 in sections, and can be configured with a wide number of options, including: optics for grazing or flood lighting; a choice of outputs (ASHRAE 5 W/ft, RO 8.5 W/ft or HO 15.25 W/ft); various color temperatures or static colors; various mounting options, finishes, accessories and controls. The Lumenfacade is also available with a unique asymmetric wallwash distribution, providing exceptional uniformity and brightness for walls and signage.

Features

Color and Color Temperature	2200K, 2700K, 3000K, 3500K, 4000K, Red, Green, Blue
Length (nominal)	12 in, 24 in, 36 in, 48 in
Optics	Asymmetric Wallwash, 8° x 8°, 10° x 10°, 10° x 30°, 10° x 60°, 10° x 90°, 15° x 25°, 30° x 30°, 30° x 60°, 35° x 35°, 50° x 80°, 60° x 60°, 80° x 80°, 90° x 90°
Options	End-to-end configuration (factory installed 16 in black input cable included), Corrosion-resistant coating for hostile environments, 3G ANSI C136.31-2010 Vibration Rating for bridge applications, CE (certification covers European Economic Area)
Power Consumption	5 W/ft (meets ASHRAE standards for linear lighting on building facades - not available for 12 in fixture lengths), 8.5 W/ft (RO version), 15.25 W/ft (HO version), Typically 20% higher for 12 in fixture lengths
Warranty	5-year limited warranty
Performance	
Illuminance at Distance	Minimum 1 fc at 133 ft (HO 4000K, 48 in fixture, 10° x 60°, DMX/RDM)
Color Consistency	2 SDCM, 3 SDCM (2200K)

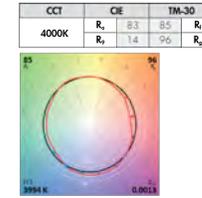
Specification Sheet

lumenfacade
LOG

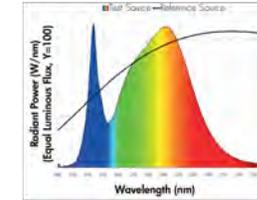
WHITE AND STATIC COLORS

Chromaticity Data

TM-30 - 4000K



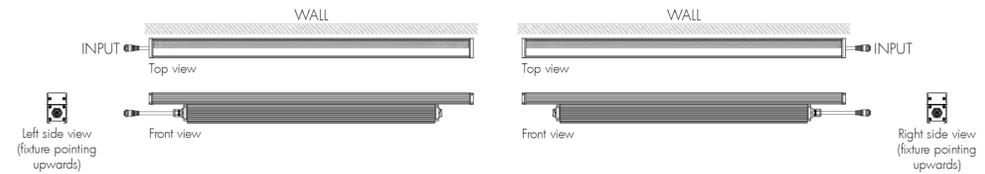
Spectral Power Distribution



Asymmetric wallwash optic details

WWLF - Asymmetric wallwash optic, left feed

WWRF - Asymmetric wallwash optic, right feed

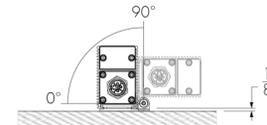


- Always position frosted side toward the wall.
- Fixture's feeding side is based on upright installations. Feeding sides are reversed when fixture is used in a downlight application.
- Recommended setback from wall is 1/10 of the wall height. Example: 2 ft setback for a 20 ft wall.

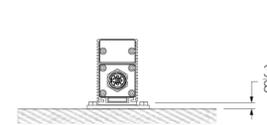
Mounting options

Surface Mount

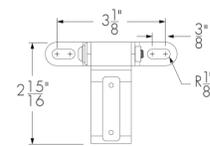
SAM - Slim Adjustable Mounting



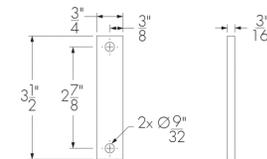
UMP - Fixed Mounting



SAM - Mounting hole pattern



UMP - Mounting hole pattern



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LOUISE J MORAN FINE ARTS COURTYARD

CUTSHEETS - FIXTURE TYPE: GH1

Date: _____ Customer: _____
 Project: _____
 Type: _____ Qty: _____

selux

Olivio Grande Gobo Projector - Universal Mount

selux

Olivio Grande Gobo Projector
 Universal Mount



Fixture Order Code: OLGGP - _____

Pole Order Code: _____
 Series Height Finish Options

OLGGP	Series	OLGGP Olivio Grande Gobo Projector				
	Optics	N19 Narrow Spot 19°	M25 Medium Spot 25°	W30 Wide Spot 30°		
	Mounting	U Universal (surface mount)	T1 Single Pole Top			
	Light Engine	L45 45W nominal				* On/Off - no dimming
	CCT	30 3000K	55 5500K			
	Finish	WH White	BK Black	BL Semi-Matte Black	BZ Bronze	SV Silver
	Voltage	UNV 120-277V				
	Options	HT Hi-Temp DMX Projector good to 40°C (consult factory)				* For Gobo options visit www.rosco.com

Product Modifications
 Please list modification requirements for review by factory:

Approvals

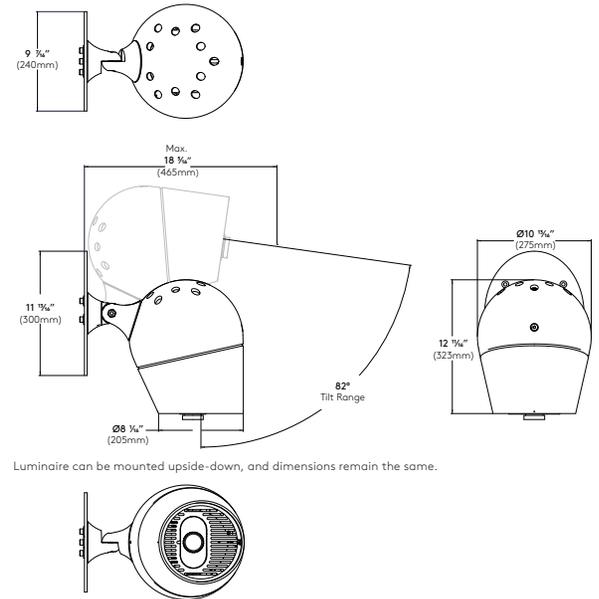
Date:

ASTM & PCI FINISH IP65

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Page 1 of 9
 (Rev. 03/2022)
 OLGGP-U_SS_v1.8

OLGGP-XX-U



Luminaire can be mounted upside-down, and dimensions remain the same.

Specifications

Luminaire Housing - Two-piece high-pressure die-cast housing, made of low-copper aluminum alloy. Single recessed captive screw allows easy access to projector.

Gasketing - UV and ozone-resistant, silicone gasket between fixture housing parts.

Lens - Lens optics provide Narrow spot (N19 / 19°), Medium spot (M25 / 25°), or Wide spot (W30 / 30°) distributions. Refer to photometrics page 8 for more details.

Light Engine - 45W nominal max power image spot projector operates at 120-277VAC. CCT options include 3000K (96CRI) and 5500K (80CRI). Lifetime 50,000hrs at 35°C.

Projector - Rosco image spot projector. 45W in cool white (5500K) and warm white (3000K). Projector rated to IP65 standard for ingress protection. Suitable for ambient temperatures from -25C to +35C. Projector comes with a choice of 3 lenses, 19°, 25°, or 30° spot. For projector Gobo options and accessories visit www.rosco.com.

Power Cord - Pre-installed at factory and hidden through the luminaire hinge and hinge arm. Power cords are specified to fit the length of the pole specified with the luminaire.

Exterior Luminaire Finish - Selux utilizes a high quality Polyester Powder Coating. All Selux luminaires and poles are finished in our Tiger Drylac certified facility and undergo a five stage intensive pretreatment process where product is thoroughly cleaned, phosphated and sealed. Selux powder coated products provide excellent salt and humidity resistance as well as ultraviolet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Semi-Matte Black (BL), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide.

3 Year Limited LED Luminaire Warranty - Selux offers a 3 Year Limited Warranty to the original purchaser that the Olivio Gobo Projector luminaire shall be free from defects in material and workmanship for up to three (3) years from date of shipment. This limited warranty covers the housing and Gobo Projector when installed and operated according to Selux instructions.

Listings and Ratings: Gobo projector carries IP65 rating from original manufacturer.

Visit selux.us for our LED End of Life recycling policy.

For Buy American compliance, please consult the factory.

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 OLGGP-U_SS_v1.8



LOUISE J MORAN FINE ARTS COURTYARD

CUTSHEETS - FIXTURE TYPE: AS1

Date: _____ Customer: _____
 Project: _____
 Type: _____ Qty: _____

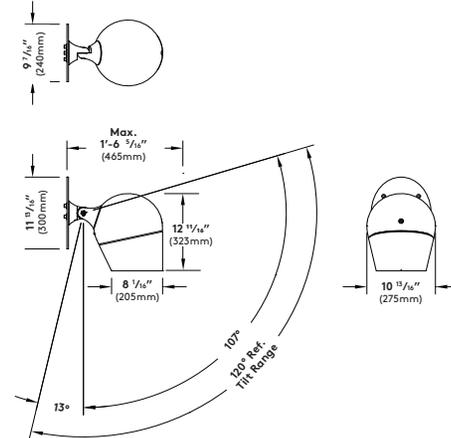
selux

Olivio Grande LED Universal

OLGL-U

selux

Olivio Grande LED Universal



Order Code: OLGL

Pole Order Code: _____
 Series Height Finish Options

<u>OLGL</u>	Series	OLGL Olivio Grande LED					
	Optics	S09 Spot, 9°	F40 Flood Medium, 44°	F80 Flood, 78°	ASM Asymmetric (no SLH or SLV option)		
	Mounting	U Universal (surface mount)	T1 Single Pole Top				
	Light Engine	2G350 14W / 1190lm	2G725 28W / 2380lm	2G130 58W / 4905lm	*Based on F80 distribution and 3000K CCT.		
	CCT	27* 2700K	30* 3000K	35* 3500K	40 4000K	50* 5000K	*Dark Sky approved with (ds) option only. *Consult factory
	Finish	WH White	BK Black	BL Semi-Matte Black	BZ Bronze	SV Silver	SP Specify Premium Color
	Voltage	UNV 120-277V	120	208	240	277	347
	Options	DS ² Dark Sky 0° Tilt Option	DM Dimming, (0-10V)	HL50 ^{3,5} High-Low switching Low Output 50%	SLH Spread Lens Horizontal (fixed)	SLV Spread Lens Vertical (fixed)	*Dark Sky approved with (DS) option only, and 3000K CCT. *Only available with 120V, 240V, or 277V *Cannot be combined with SLH, SLV or ASM options. *Cannot be combined with DM option
		HX ⁴ Micro honey comb louver	CF Color Filter (consult factory)				

Product Modifications
 Please list modification requirements for review by factory:

Approvals

Date:

Specifications

- Luminaire Housing** - Two-piece high-pressure die-cast housing, made of low-copper aluminum alloy. Single recessed captive screw allows easy access to light engine & gear tray components.
- Gasketing** - (not shown) UV and ozone-resistant silicone gasket between fixture housing and lens base provide IP67 level ingress protection. IP rated micro-membrane ensures pressure compensation.
- Lens** - (not shown) Tempered clear glass lens.
- LED Light Engine** - (not shown) made from high flux COB and vacuum metalized aluminum reflectors. Selux is using brand name LED manufacturers. Available in 3000K and 4000K, CRI minimum 80. Reflectors made from high purity aluminum to ensure high efficiencies throughout lifetime. Complete light engine can be removed easily for future upgrade. LED light engine provides a reported lumen maintenance of 84.3% at 60,000 hours. L70 calculated greater than 60,000 hours.
- LED Driver** - (not shown) Selux uses brand name high efficiency LED drivers. LEDs are driven by RoHS compliant high-efficiency driver. Excellent for cold temperature starting and instant on. Min. operating temperature -40°C/ -40°F.

- Surge Protector** - (not shown) Designed to protect luminaire from electrical surge (20kA).
- Power Cord** - (not shown) Pre-installed at factory and hidden through the luminaire hinge and hinge arm. Power cords are specified to fit the length of the pole specified with the luminaire.

Exterior Luminaire Finish - Selux utilizes a high quality Polyester Powder Coating. All Selux luminaires and poles are finished in our Tiger Drylac certified facility and undergo a five stage intensive pretreatment process where product is thoroughly cleaned, phosphated and sealed. Selux powder coated products provide excellent salt and humidity resistance as well as ultraviolet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Semi-Matte Black (BL), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide. Hot Dip Galvanized finish (GV) on all steel parts also available.

5 Year Limited LED Luminaire Warranty - Selux offers a 5 Year Limited Warranty to the original purchaser that the OLIVIO LED luminaire shall be free from defects in material and workmanship for up to five (5) years from date of shipment. This limited warranty covers the LED driver and LED Light engine when installed and operated according to Selux instructions. For details, see "Selux Terms and Condition of Sale."

Listings and Ratings: Luminaire and LED tested to IP67 and IESNA LM-79-08 standards. LED tested to LM-80 standards. Luminaire and LED tested at 25°C ambient temperature.

OLIVIO LED suitable for ambient temperatures of 40°C (104°F). Minimum operating temperature of luminaire at -40°C (-40°F).

NRTL Listed for wet location (i.e. UL, CSA)

Visit selux.us for our LED End of Life recycling policy.



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 OLGL-U_SS_5.2



LOUISE J MORAN FINE ARTS COURTYARD

CUTSHEETS - FIXTURE TYPE: AS2



Outdoor Ground Box, part of the Outdoor Power offering from Legrand

Ground Breaking Innovation

As the popularity of outdoor activities grows, so does the demand for connected outdoor spaces that include power, communications and A/V.

The Outdoor Ground Box from Legrand is the first product designed with power and safety in mind. It's the first in-ground product on the market that will deliver permanent power and uses a UL50E Type 6P rated wiring enclosure and has been tested and evaluated by Underwriters Laboratories, Inc. for safe operation year round.

The Outdoor Ground Box is designed to handle the requirements of the outdoor space while blending into the landscape. It's perfect for spaces such as: outdoor retail shopping centers, corporate campuses, amusement parks, sports fields, hospitality, or any outdoor space where power is required.

Features & Benefits

- **Air Pocket Design** - This innovative design traps and maintains an air pocket protecting the devices, plugs and connections from water, snow, and ice. Allows for safer operation year round.
- **Outdoor-Rated Construction** - UV and chemical-resistant F1 rated nonmetallic material, allow the box to hold up for years to come.
- **Three Durable, Premium Finishes** - Outdoor-rated finishes to complement your space design. Choose from black, brown, or gray.
- **Holds up to 5000 lbs** - Has an ANSI/SCTE 77 Tier 5 rating and can hold up to 5,000 lbs of load allowing for the occasional tractor or non-deliberate vehicular traffic.
- **Anti-Float Clips** - Prevents the cover from floating up when flooded. This preserves the air pocket and ensures safe operation.
- **Smart egress door** - Egress door auto adjusts to the size of cable, as well as locking in the closed position when not in use. Prevents cable damage and maintains a safer user experience.
- **Secure** - Includes tamper-resistant lock to prevent unauthorized access.
- **Service feed flexibility** - Each box comes with two (2) locations that will accept up to 1 1/4" trade size nonmetallic conduit, allowing for services to feed the box as well as to daisy chain to other boxes.
- **Modular design** - Boxes are designed to interlock allowing an endless number of boxes in the same location. Provides service separation, everything in one location, and easier installation.
- **Flush to the finished ground** - The buried box can be made flush with any surface, grass, walkways (brick, pavers, concrete, etc). Reduces trip hazards and allows it to blend in with its surroundings.
- **ADA compliant** - Meets all specifications for ADA guidelines.
- **cULus listed to UL50E Type 6P and IP68 requirements while in use** - Tested and listed by Underwriters Laboratories, Inc. to UL2996 and ULC/ORD-C2996:2017 for use in the ground in all weather conditions.

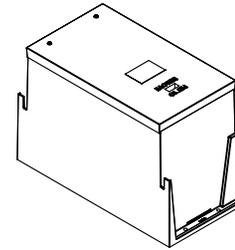
Vertical Markets

- | | | | |
|---------------|-------------|-----------------|-----------|
| • Commercial | • Education | • Entertainment | • Retail |
| • Hospitality | • Parks | • Healthcare | • Transit |

Compliance

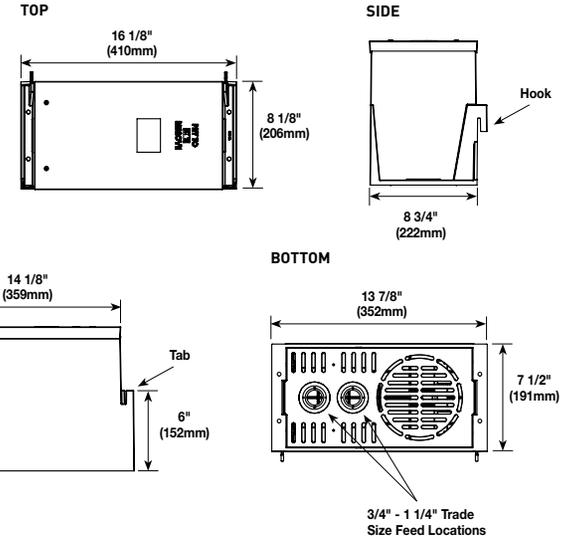
cULus Listed, File Number E486738. Guide QCNL/QCNL7.
Outdoor Ground Boxes (Power Applications) are UL Listed to meet UL50E Type 6P and IP68 requirements.
Outdoor Ground Boxes (Low Voltage Applications) are UL Listed to meet UL50E Type 4X and IP65 requirements.

XB814



Exterior Ground Box - Single service 2-gang nonmetallic ground box. The box is made from F1 rated nonmetallic material and has been designed to withstand harsh outdoor environments. The box can accept up to (2) 1 1/4" trade size PVC conduit feeds. Boxes are designed to be installed separately or ganged together, for greater capacity and flexibility. Works with XB814 cover assembly [sold separately]. These boxes are perfect for grass, sidewalks, patio, or any other location where permanent power is needed.

Country of Origin: China



Outdoor Ground Box, exterior view, view installed with bricks, and a cross-sectional view of a Ground Box installation.

LOUISE J MORAN FINE ARTS COURTYARD & CULLEN FAMILY PLAZA

CUTSHEETS - WIREMOLD OUTDOOR IN-GROUND BOX

Date: _____ Customer: _____
 Project: _____
 Type: _____ Qty: _____

selux

Date: _____ Customer: _____
 Project: _____
 Type: _____ Qty: _____

selux

Modular Column



Order Code: MCB _____

MCB	Series	MCB Modular Column											
Column Body Height	7 7ft	8 8ft	9 9ft	10 10ft	11 11ft	12 12ft	13 13ft	14 14ft	15' 15ft	16' 16ft	17' 17ft	18' 18ft	¹ Nominal overall height cannot exceed 18ft ² For use with TC option only ³ Refer to page 2 for mounting option details
Column Features	CMxx Camera	SPxx Speaker	FMSxx ^{3,4,6} Facade Module Small Opening	FMLxx ^{3,4,6} Facade Module Large Opening	TMSxx ^{3,5,6} Twin Spot Module Single	TMDxx ^{3,5,6} Twin Spot Module Double	³ Cannot be mounted within 8 ft of ground ⁴ Select up to 2 FMS and FML combined ⁵ Select up to 3 TMS or up to 1 TMD and 1 TMS ⁶ Select up to 1 FMS/FML and 1 TMS/TMD combined ⁷ Not field adaptable for modules ⁸ Refer to page 2 for mounting option details						
Finish	WH White	BK Black	BZ Bronze	SV Silver	BL Semi-Matte Black	SP Specify Premium Color							
Options	REC 120V GFCI Receptacle with weather- proof cover	REC2 120V GFCI Receptacle with in-use cover	REC3 USB & Duplex Receptacle with weather- proof cover	REC4 USB & Duplex Receptacle with weather- proof pedallockable in-use cover	TC ⁹ Top Cover (non-lit)	PC ¹⁰ Button- style photocell	MSxx ^{8,10} Motion Sensor with optional photocell (Meets Title 24 requirements) See p. 8 for order code	⁹ Include angular orientation on page 8 ¹⁰ Not field adaptable to a lit top ¹¹ DM, HLXX, or MS only. Cannot be combined. PC or MS only. Cannot be combined.					

Product Modifications

Please list modification requirements for review by factory:

Approvals

Date: _____



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 MC_ss_v1.7

Twin Spot Module



Order Code: TM _____

TM	Series	TMS Twin Spot Module (Single)	TMD Twin Spot Module (Double)
Optics	SB Spot Beam 12°	MB Medium Beam 24°	WB Wide Beam 36°
Light Engine	L44 44W (Single)		
CCT	30 3000K	40 4000K	
Finish	BL Semi-Matte Black		
Voltage	UNV (120-277V)		
Options	DM Dimming (0-10V)	HS Horizontal Spread Lens	VS Vertical Spread Lens
	HX Honey Comb Louver	BL Blue Lens	GL Green Lens
	RL Red Lens	DS Diffused Lens	

Product Modifications

Please list modification requirements for review by factory:

Approvals

Date: _____



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 TM_ss_v2.3



SERC COURTYARD & CULLEN FAMILY PLAZA

CUTSHEETS - FIXTURE TYPE: PH1

NERI

Nebula L

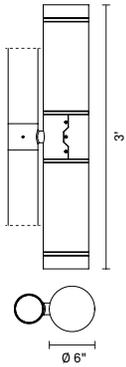
Source	LED
Weight	26,4lb
Height	3' 0"
Diameter	6"
EPA	-

Nebula luminaire heads are composed by two light sources. They can be both switched on or just one.



Compliance:
UL Standard 1598 CSA C22.2 no.250.0-8

Project location:		Fixture type:	
Project name:			
Model code #:	Date	Rev.01	02/2020



Luminaire head	Optic system	CCT	Delivered lumen choices	Driver functions	Aperture lens
Up	Type II	2,700K	700	1-10V	Prismatic flat glass
	Type IV	3,000K	1,000	DALI	Transparent flat glass
	Type V	3,500K	2,500	DMX	
	10° Very narrow spot	4,000K	3,500		
	15° Very narrow spot	RGBW	4,500		
	20° Narrow spot	Amber			
	25° Narrow spot				
	35° Medium narrow spot				
Down	Type II	2,700K	700	1-10V	Prismatic flat glass
	Type IV	3,000K	1,000	DALI	Transparent flat glass
	Type V	3,500K	2,500	DMX	
	10° Very narrow spot	4,000K	3,500		
	15° Very narrow spot	RGBW	4,500		
	20° Narrow spot	Amber			
	25° Narrow spot				
	35° Medium narrow spot				

SPECIFICATIONS:

Construction:

- External frame in extruded aluminum.
- Shield in extra-clear transparent or prismatic tempered glass.
- Integrated heat sink in aluminum.
- Wiring plate in galvanized steel sheet.
- Osmotic valve to balance internal/external pressure.
- Dedicated space for any surge protection devices or remote control systems.

Materials:

- Extruded aluminum.
- Galvanized steel.
- Extra clear transparent or prismatic tempered flat glass.
- Stainless steel fasteners.

Finish:

- Powder coating or anodizing.
- Powder coating:
- Neri grey, pure white, white aluminum, grey aluminum, jet black, moss green.
- Anodizing:
- silver anodizing, gold anodizing, bronze anodizing, brown anodizing, black anodizing.
- Information about paint steps used on this product in specific technical sheet.

Fixing:

- Fixing by two headless screws M6 lock nuts with stainless steel.
- Central frame with a tilting system of ± 45°.

Operation and maintenance:

- Please refer to the installation and maintenance manual of the product.
- It is responsibility of the installer the correct installation and electric connection in accordance with applicable regulations.

TECHNICAL DATA:

Electrical and Optical features:

- Voltage: 120-277V (universal).
- Frequency: 50/60Hz.
- Protection rating: IP66, IK08.
- Operating temp.: -31°F/+95°F.
- Lumen output: from 700 to 4,500 lm.
- Color temperature: 2,700K to 4,000K, RGBW and Amber

- Color Rendering Index: CRI > 80 (70 and 90 on demand).

- Electronic power supply with protection against short circuits, overheating and power surges.
- Standard surge protection for differential/common mode up to 10kV/10kV.

DRIVER FUNCTIONS:

Description

1-10 (Analogic control)

DALI (Digital control)

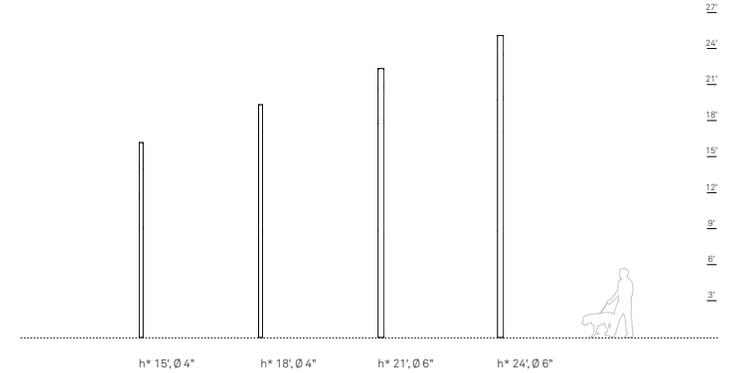
DMX

NERI

3. Pole height and diameter

Choose between four standard pole heights and two pole diameters.

* Mounting height of highest luminaire head.

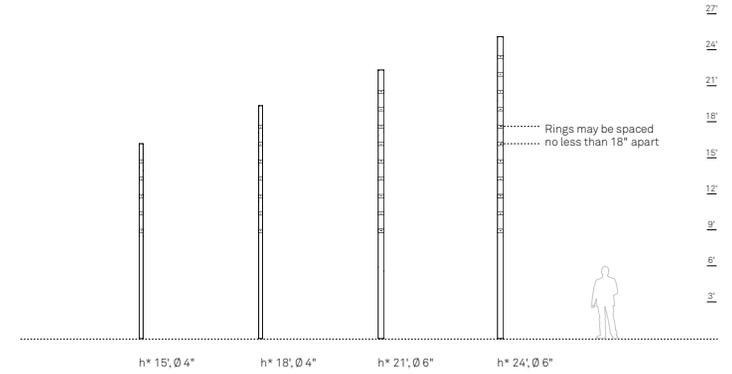


4. Rings

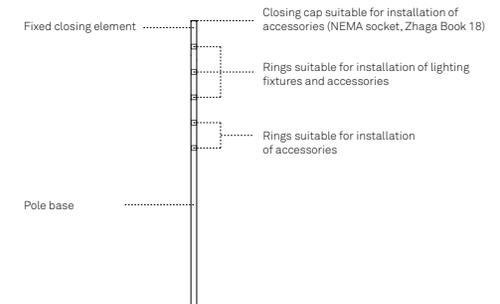
Different heights can accommodate a different number of rings. Rings are the mounting devices designed to hold luminaires or accessories part of the system.

The diagram on the right shows the maximum number of rings per pole. Each ring can accommodate one or two luminaire heads or accessories. Choose the required rings on the specified height and choose type of luminaire head or accessory.

* Mounting height of highest luminaire head.



When positioning luminaire heads and accessories on the pole, the lowest 2 rings may be used only for accessories. The rings above these may be used for luminaire heads or accessories.



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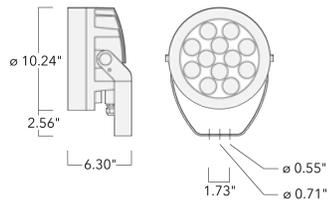
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SERC COURTYARD
CUTSHEETS - FIXTURE TYPE: PH3

FLC230 LED TUNABLE WHITE Floodlights

1/24



Description

Tunable White. IP66. Class 1. IK07. Marine-grade, die-cast aluminum alloy. 5CE superior corrosion protection including PCS hardware. Silicone CCG® Controlled Compression Gasket. Safety glass lens. One cable gland, second gland for through wiring on request. CAD-optimized optics for superior illumination and glare control. Integral driver, thermally separated. QLC® One LED Concept. Factory-installed LED circuit board. Tunable White technology. 0-10V Dimming. 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)



12" SUPERTOWER SYSTEM

The 12" SuperTower square ground support is a system manufactured for the purpose of providing a lifting medium for a variety of Thomas trusses from 20.5" x 20.5". Heavy duty, SuperTruss, and Pre-rig truss to Roof systems. With forked connections, the SuperTower is faster to put together and has a higher load rating than a bolted tower.



The towers will provide the necessary equipment to support a truss rig in venues where the flying points are either not strong enough, or not in the right place. Each tower is capable of lifting 4 tons to a maximum height of 40 feet. However, if you use a CM 1 ton hoist, you will only be able to lift 2 tons (ie. block and fall). The 4 ton weight must include the self weight of the truss rig and the motors. The truss rig is raised and lowered by means of electric chain hoists. The motor is rigged in the truss and works in double fall due to the chain being passed over the roller beam at the top of the tower. The motor is then connected onto the other side of the sleeve block. Below, we list a brief description of the parts that make up a 15' ground support tower.

The base of the tower has 4 screw jack assemblies with 6" diameter foot pads, which are adjustable to enable levelling of the tower. The base also incorporates 4 ball castors, which allow the whole rig to be accurately positioned before the

tower is raised. Once the tower system is ready to be raised, all screw jacks must be adjusted evenly and must take the load off the ball castors.

The hinge section is designed to allow the tower sections to be assembled horizontally at truss top level before being swung and locked in the vertical operating position. The tower sections are manufactured from 6061T6 aluminum 2" x .157" thick wall tube with 1" x .125" wall diagonals. The tower sections are pinned together to allow 30" adjustments in height up to a maximum of 40 feet. Once the tower height has been determined, then the roller beam is fitted at the top of the tower. The roller beam accepts the chain from the chain hoist, which is run over the top of the roller beam and back down to the other side of the sleeve block.

The sleeve block is the interface between the truss rig and the towers. It is designed to create a semi rigid joint between the truss grid and the towers by using 16 heavy duty 4" wheels to guide the rig up each tower.

12" SuperTower

PRODUCT CODE	DESCRIPTION	WT lbs
B4100	Base	52.5 lbs
BO1S012H	1ft Hinge section	16.09 lbs
BO1S036H	3ft Hinge section	29.42 lbs
B4102	Rollerbeam	39.5 lbs
BO1S120	10' Section	79.97 lbs
BO1S060	5' Section	45.49 lbs
BO1S048	4' Section	28.95 lbs
E20-12SP	Tower sleeve plate for 20.5" truss	32 lbs

James Thomas Engineering

67

WE-EF LIGHTING USA LLC
410-D Keystone Drive | Warrendale PA 15086 | U.S.A. | Tel +1 724 742 0030 | Fax +1 724 742 0035 | info.usa@we-ef.com | www.we-ef.com | 25-11-2021 09:21
Technical modifications and errors excepted



CULLEN FAMILY PLAZA

CUTSHEETS - FIXTURE TYPE: PH2

Austin

Product Data Sheet

landscapeforms



Austin blends modernist inspiration into a new interpretation that's as timely as today. The Austin Bench, designed by landscape architect Robert Chipman, is a study in beautiful balance. Inspired by architecture of the 20s and classic modern furniture of the 50s, it expresses familiar themes in thoroughly contemporary terms. Austin balances lightness and substance, is relaxed, yet refined, poised but never boring. The cantilever version is a natural for minimalist spaces, the four-legged version a fine fit within a range of architectural styles. Composed of minimal parts, (just two extrusions create the seat and back in all versions) Austin masters the details, from its tapered slats to the lovely winged shape of its end piece. In aluminum or wood Austin is a high-design solution — and a breath of fresh air — for corporate and healthcare courtyards, atria, small-scale public places, and private retail space.

Seat

- Austin benches are available in backed or backless, and in a selection of interior and exterior woods, as well as aluminum extruded boards.
- Unique cantilever style or freestanding/surface mount supports are cast iron.

Arm Options

- Optional arms may be added to both ends, as well as the center position.
- Arms are available for either backed or backless benches.
- All arms are cast aluminum and attached to the seat boards.

Mounting Options

- Austin benches with freestanding/surface mount supports ship with glides which may be removed for surface mounting.
- All cantilever supports must be surface mounted into concrete.

Standing Height (Rectangle)	Style	Depth	Length	Height	Weight
	cantilever backed	23"	72"	33"	Alum: 118 lb Wood: 150 lb
	cantilever backless	22"	72"	18"	Alum: 68 lb Wood: 120 lb
	Freestanding/ Surface Mount backed	24"	72"	33"	Alum: 100 lb Wood: 130 lb
	Freestanding/ Surface Mount backless	22"	72"	18"	Alum: 66 lb Wood: 90 lb
Arm Options					
end and center position			end arms		
Mounting Options					
cantilever backed	cantilever backless	freestanding / surface mount			

Austin

Product Data Sheet

landscapeforms



Litter Receptacles

- Top and side opening litters are available with or without lock.
- With a 34 gallon capacity, litter can be freestanding or surface mount.
- Fabricated with carbon steel body panels, cast aluminum top, and cast iron base.
- Litter is finished with exclusive Pangard II® powdercoat finish.
- Black polyethylene liner comes standard with litter.
- Shipped with freestanding glides that remain in place for surface mounting.
- Litter ships fully assembled.

Litter	Style	Diameter	Height	Weight
	Top-Opening	24"	35"	172 lb
	Side-Opening	24"	42"	186 lb

Finishes

- All metal is finished with Landscape Forms' proprietary Pangard II® polyester powdercoat, a hard yet flexible finish that resists rusting, chipping, peeling, and fading.
- Call for standard color chart.

To Specify

- Select top or side-opening litter. Specify with or without lock.
- Select powdercoat color.

Designed by Robert Chipman, ASLA

[Click here](#) for patent information related to this product.

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SERC COURTYARD

CUTSHEETS - LANDSCAPE BENCH