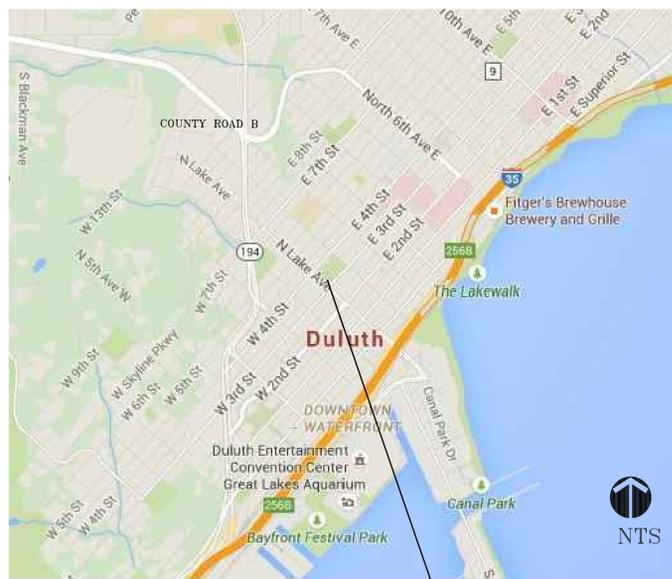


CENTRAL HILLSIDE PARK

DULUTH, MN

PHASE 1

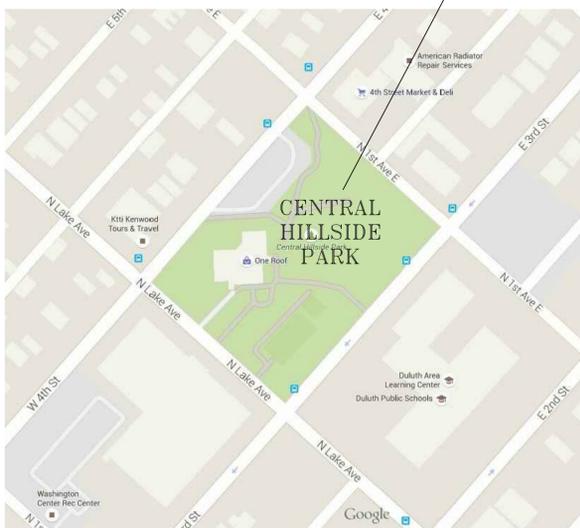
VICINITY MAP



SITE LOCATION

SITE DETAIL

PROJECT LOCATION



CONTACT LIST

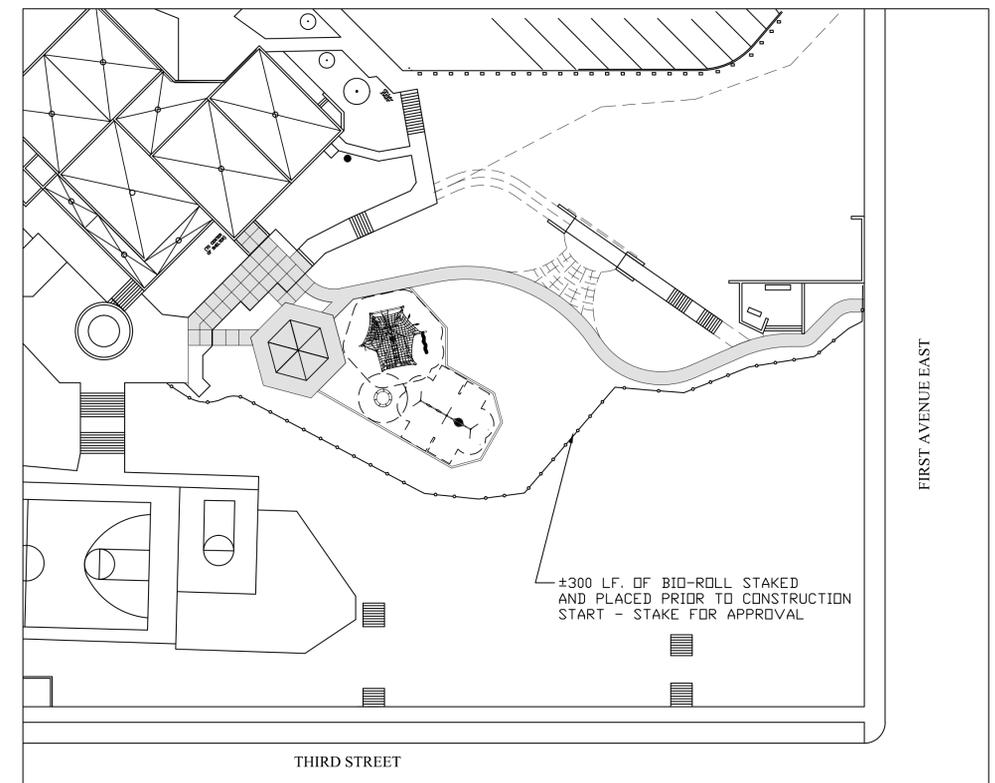
OWNER
 CITY OF DULUTH
 411 WEST FIRST STREET
 DULUTH, MN 55802
 COUNTY CONTACT
 TEL. (218)730-4303
 EMAIL DSELLNER@DULUTHMN.GOV
 CONTACT: DALE SELLNER
 BUILDING AND GROUNDS SUPERVISOR:

LANDSCAPE ARCHITECT
 SAS+ASSOCIATES
 219 WEST FIRST STREET, SUITE 350
 DULUTH, MN 55802
 TEL. (218)391-1335
 FAX (218)722-6697
 EMAIL MAIL@SASLANDARCH.COM
 CONTACT: LUKE SYDOW, RLA

SHEET INDEX

S1.1	SITE PLAN
S1.2	LAYOUT PLAN
S1.3	LIGHTING PLAN
S1.4	DETAILS
S1.5	DETAILS

EROSION CONTROL



6/2/2015

SAS PROJECT NUMBER: 15320

FOURTH STREET

NOTES:

1) CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES, SUCH AS EXISTING GRADES AT THE PROPOSED WALKS. PRIOR TO THE START OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE, AND THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR VARIATIONS FROM PLANS.

2) CONTRACTOR SHALL CONTACT MINNESOTA ONE CALL CENTER 811 FOR UTILITY LOCATIONS 72 HOURS PRIOR TO EXCAVATION/CONSTRUCTION.

3) ALL EROSION CONTROL MEASURES AND TREE PROTECTION MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING OPERATIONS AND MAINTAINED UNTIL ALL AREAS ALTERED ON THE SITE HAVE BEEN REPAIRED. ONCE DISTURBED AREAS HAVE BEEN STABILIZED, INSPECTED AND ACCEPTED IN WRITING BY THE OWNER OR OWNER'S REPRESENTATIVE, ALL MEASURES OF EROSION CONTROL MUST BE PROMPTLY REMOVED FROM THE SITE. NO SILT FENCING, CHECK DAMS, ETC., MAY BE LEFT ON SITE.

4) REFER TO LAYOUT PLAN FOR MOST CURRENT HORIZONTAL SITE DIMENSIONS AND LAYOUT.

5) CONTRACTOR TO PROVIDE MIN. 4" SETTLED DEPTH OF TOPSOIL TO ALL DISTURBED AREAS WHICH ARE TO BE SODDED OR SEEDDED.

6) EXISTING TOPOGRAPHY PROVIDED BY ST LOUIS COUNTY.

7) GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL ROUGH GRADE TO SUBGRADE ELEVATION, LEAVE SITE READY FOR SUBBASE. STOCKPILE TOPSOIL AND GRANULAR FILL AT LOCATIONS DIRECTED BY THE OWNER OR OWNERS REPRESENTATIVE.

8) ALL EXCESS OR EXCAVATED MATERIAL NOT DESIGNATED FOR PLACEMENT ON THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF THE CONSTRUCTION SITE.

9) WHEN PLACING NEW SURFACE NEXT TO EXISTING PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF THE EXISTING PAVEMENT.

10) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL ONCE THE ALIGNMENT HAS BEEN ESTABLISHED IN THE FIELD.

11) CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CLEARING AND GRUBBING AS MAY BE REQUIRED FOR FINAL FINAL CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL VEGETATIVE MATERIAL REMOVED AS PART OF THIS PROJECT.

12) CONTRACTOR SHALL STAKE THE LIMITS OF SITE DISTURBANCE, PROPOSED GRADING, LOCATION AND THE ALIGNMENT OF ALL NEW WALKS AND SURFACES, FOR INSPECTION AND APPROVAL BY OWNER OR OWNERS REPRESENTATIVE PRIOR TO ANY CONSTRUCTION ACTIVITY. REQUEST FOR INSPECTION MUST BE MADE A MINIMUM OF 24 HOURS IN ADVANCE.

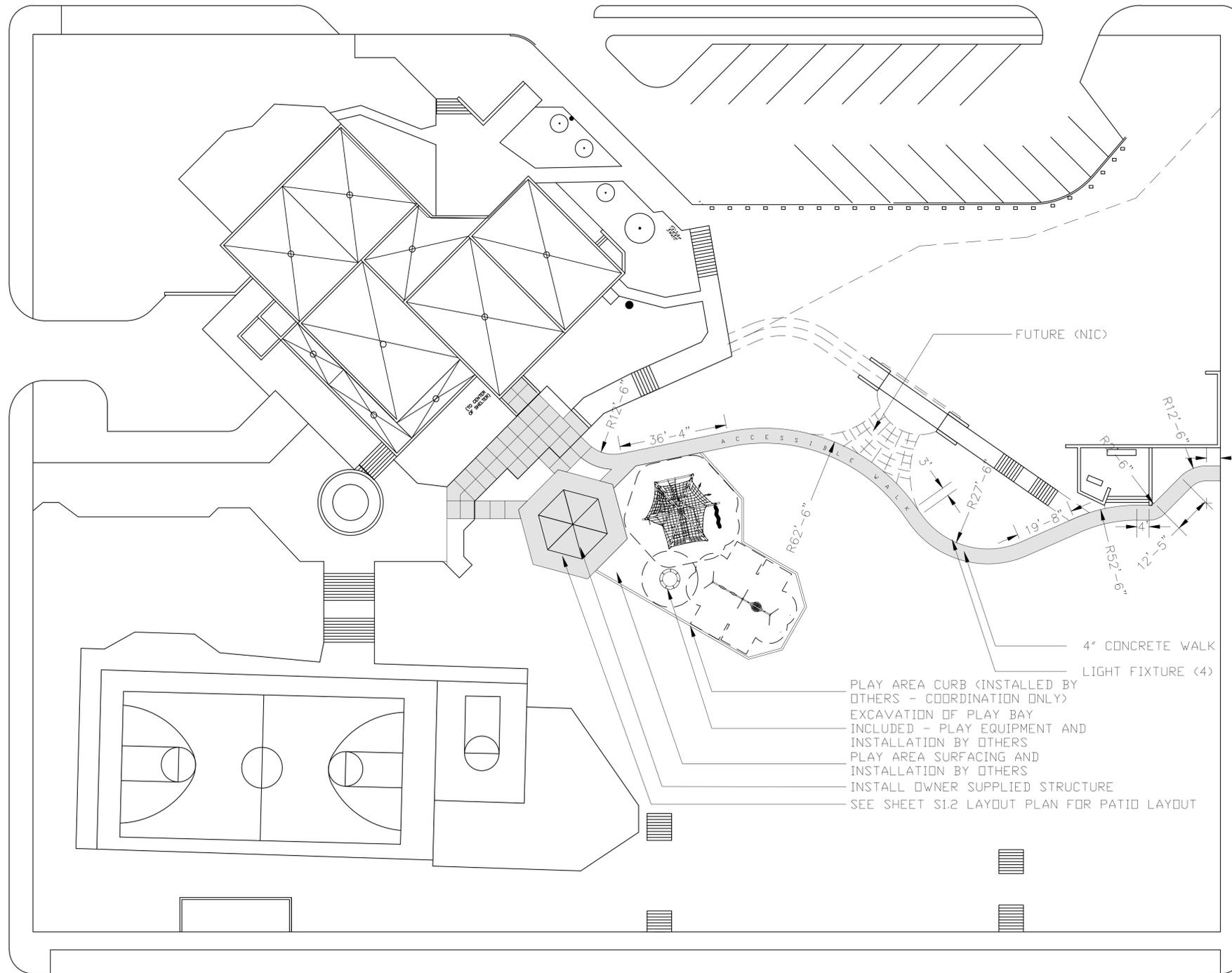
13) REPAIR ALL DAMAGED AREAS WITH SOD AND TOPSOIL.

NOTES:

- 1) FENCE ALL PORTIONS OF THE PROJECT FOR SAFETY, WITH A 4'-0" ORANGE SNOW FENCE. SIGN THE CONSTRUCTION ENTRY POINTS DURING CONSTRUCTION.
- 2) IDENTIFY STAGING AREA FOR APPROVAL BY OWNERS REPRESENTATIVE.
- 3) PROTECT ALL TREES TO REMAIN.
- 4) ELECTRICAL CONTRACTOR TO PROVIDE SIGNED ENGINEERED PLANS FOR APPROVAL, INCLUDING ELECTRICAL AND FOOTING DESIGN.
- 5) FIELD LAYOUT WALK FOR APPROVAL.

LAKE AVENUE

FIRST AVENUE EAST



THIRD STREET

MATERIALS LIST:

- 2190 SF CONCRETE WALK W/EXCAVATION
- 930 SF CONCRETE SHELTER PAD W/EXCAVATION
- 115 L.F. OF 8" CONCRETE CURBING (INSTALLED BY OTHERS - COORDINATION ONLY)
- 4 LIGHT FIXTURES WITH FOUNDATIONS AND CONDUIT
- 1 LS EXCAVATION OF PLAY BAY (APPROX 200CY) (INSTALLED BY OTHERS - COORDINATION ONLY)
- 50 CY OF BERM REMOVAL
- ±100 SY SOD RESTORATION WITH 4" TOPSOIL (AREAS DISTURBED BY CONTRACTOR)
- 1 SHELTER INSTALLATION (OWNER SUPPLIED)
- 1 PLAY EQUIPMENT (INSTALLED BY OTHERS - COORDINATION ONLY)
- 1 PLAY SURFACING (INSTALLED BY OTHERS - COORDINATION ONLY)



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+ ASSOCIATES

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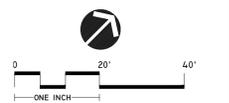
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DULUTH, MN 55802
(P) 218.391.1335
(F) 218.722.6697

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ISSUE RECORD/REVISION

PURPOSE	DATE

CENTRAL HILLSIDE
PARK IMPROVEMENTS
CITY OF DULUTH, MINNESOTA



SHEET KEY

SHEET TITLE

SITE PLAN

DATE: 6/2/15

DRAWN BY: LWS

CHECKED BY: LWS

PROJECT NUMBER: 15320

SHEET NUMBER

S I I



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+ ASSOCIATES

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 (F) 218.722.6697

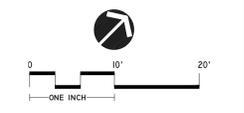
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ISSUE RECORD/REVISION

PURPOSE	DATE

CENTRAL HILLSIDE PARK IMPROVEMENTS

CITY OF DULUTH, MINNESOTA



SHEET KEY

SHEET TITLE
LAYOUT PLAN

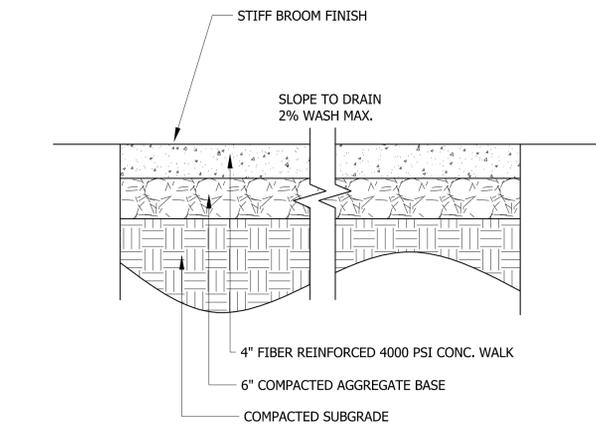
DATE: 6/2/15

DRAWN BY: LWS

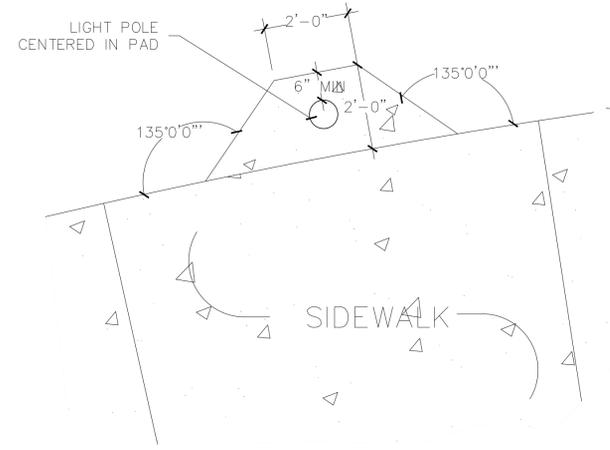
CHECKED BY: LWS

PROJECT NUMBER: 15320

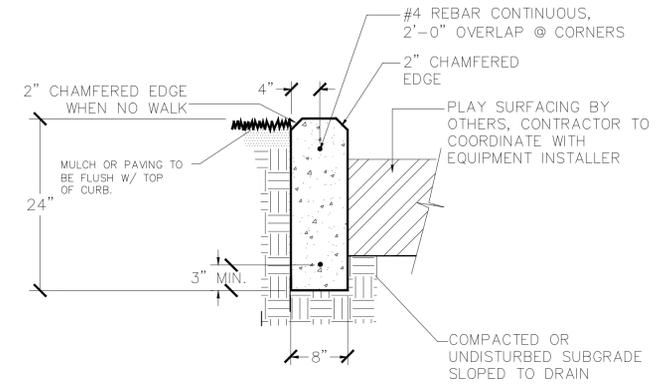
SHEET NUMBER: S 1.2



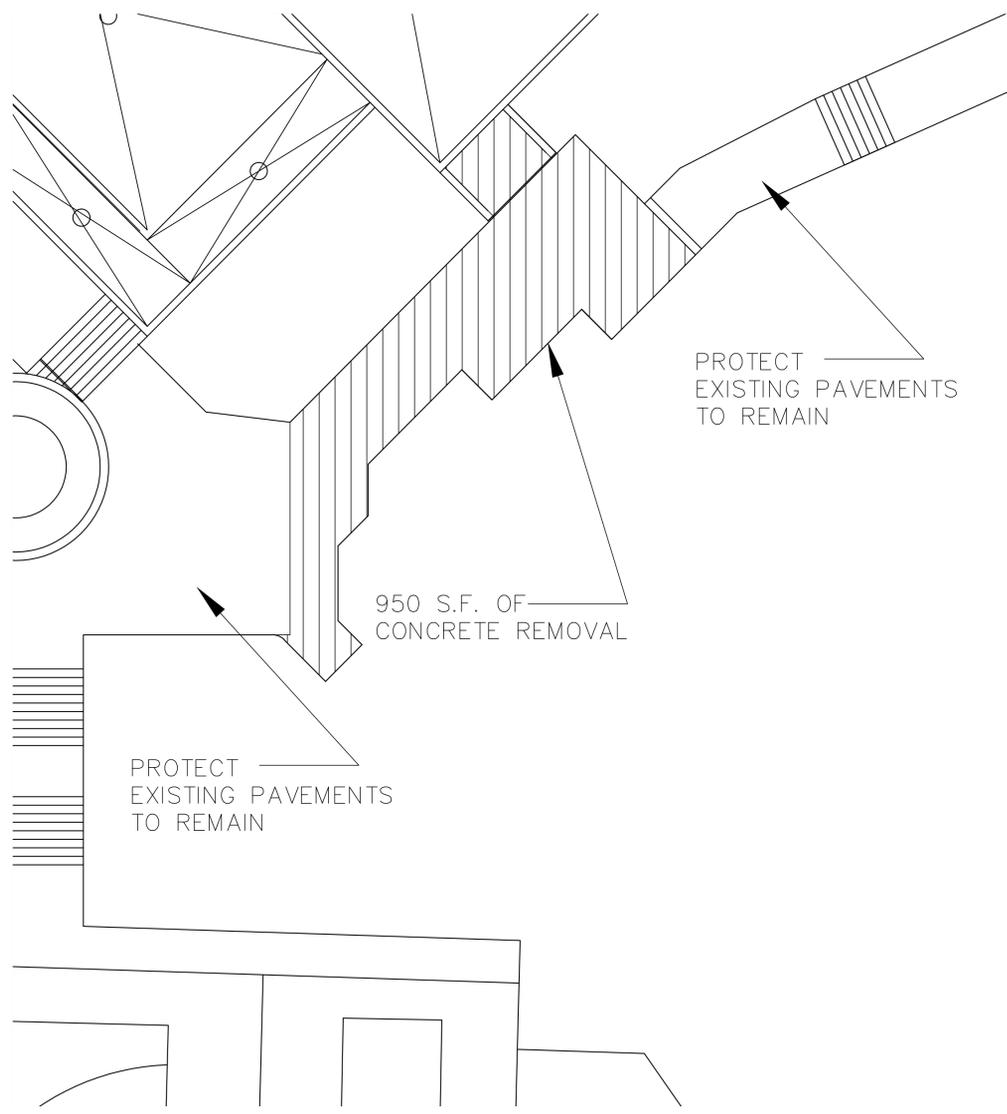
1 CONCRETE WALK
 SCALE: NTS



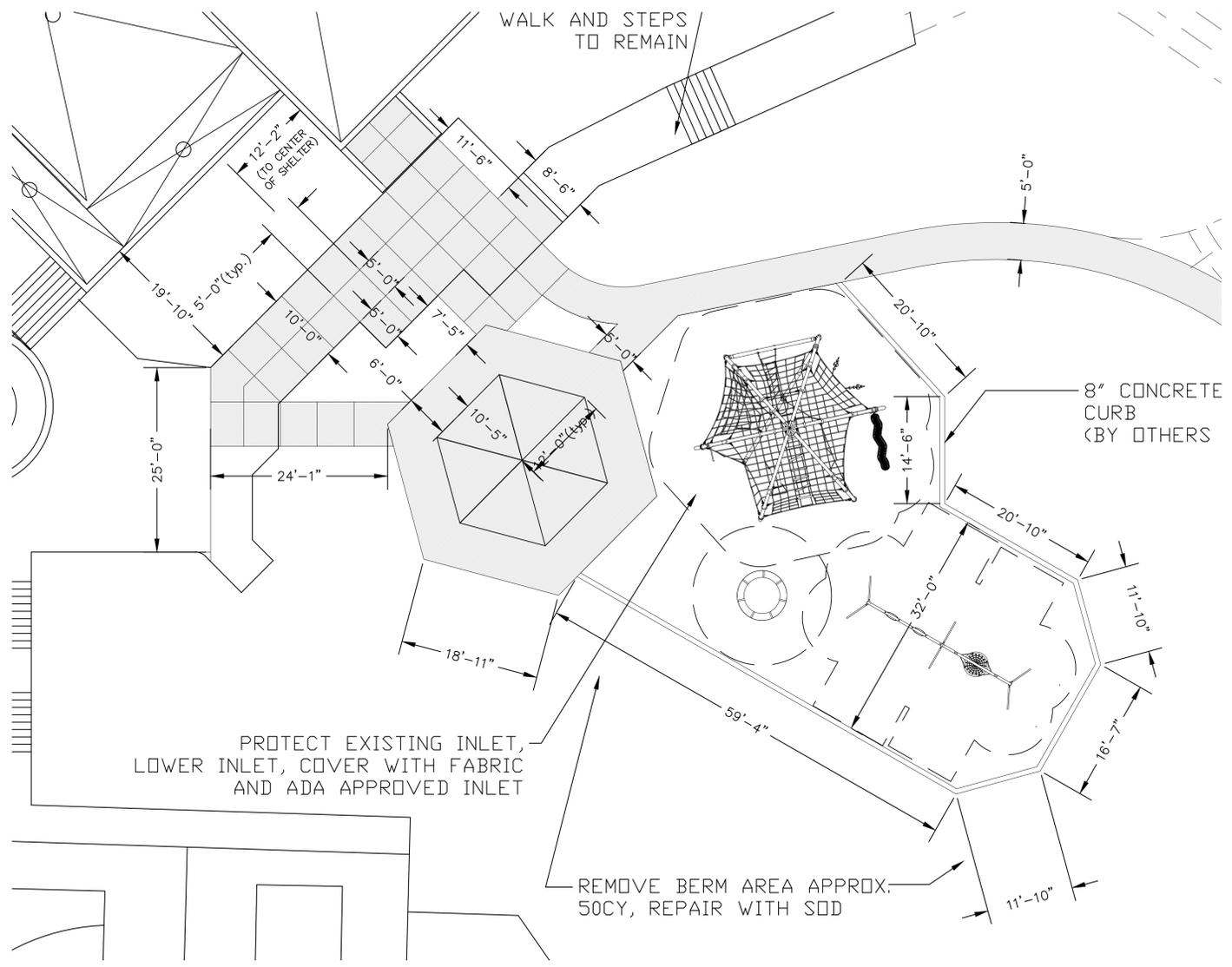
2 LIGHT POLE PAD DETAIL
 SCALE: 1/2" = 1'-0"



3 PLAY AREA CONCRETE CURB (BY OTHERS)
 SCALE: 1" = 1'-0"



4 REMOVALS
 SCALE: 1" = 10'-0"



5 SHELTER/PLAY AREA PLAN
 SCALE: 1" = 10'-0"

JUL 02, 2015, 11:58am
 P:\15320-Central Hillside Improvements\64-15320-Central Hillside Improvements.dwg



LANDSCAPE ARCHITECTURE

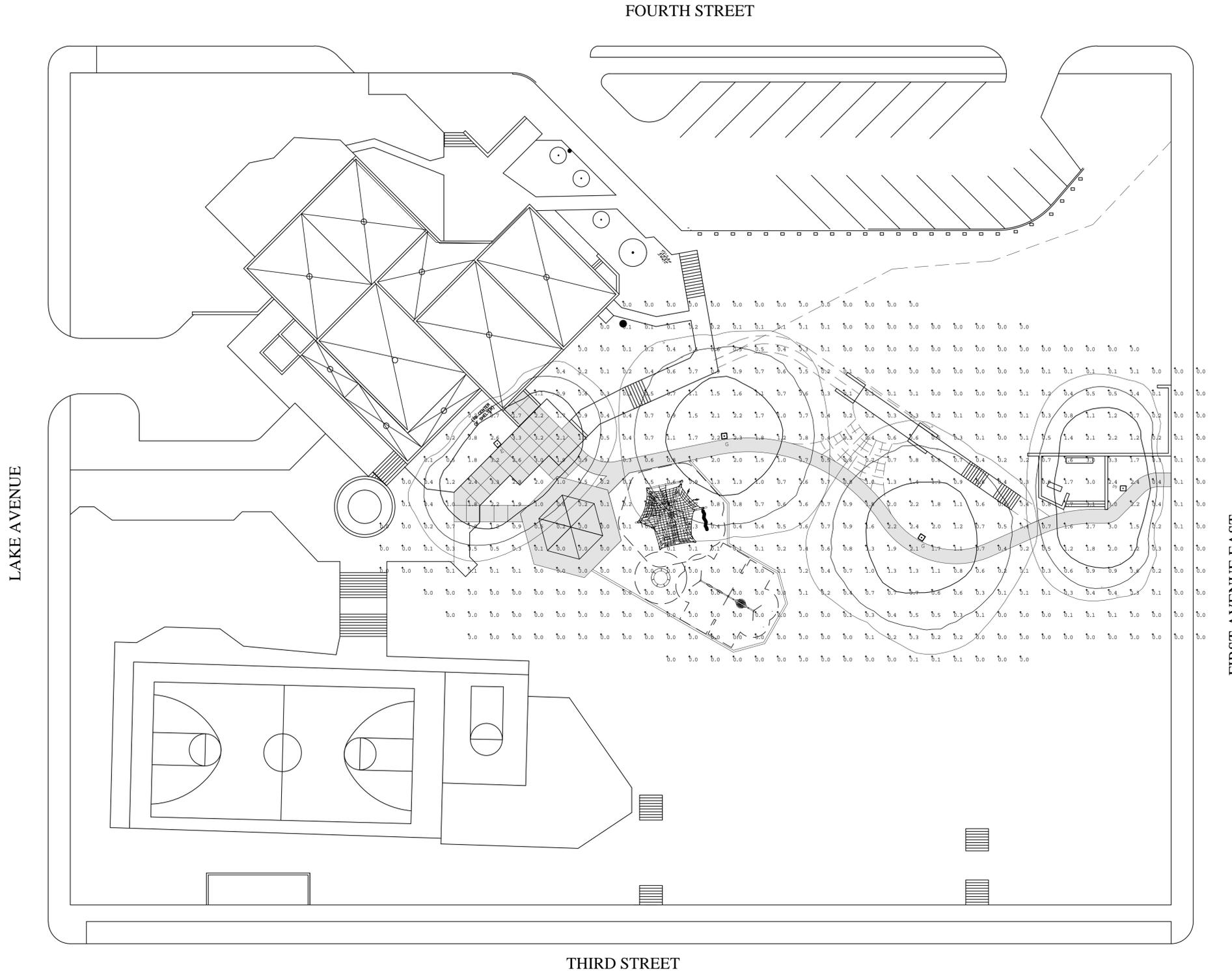
+ ASSOCIATES

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PURPOSE	DATE



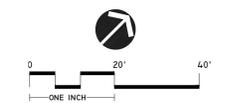
FIRST AVENUE EAST

LAKE AVENUE

FOURTH STREET

THIRD STREET

ALD, Inc.
 ARCHITECTURAL LIGHTING DESIGNS, INC.
 2920 ANTHONY LANE
 ST. ANTHONY, MN 55418
 612-252-4100, 612-252-4141 fax
 CONTACT: SCOTT HARMES
 shames@aldmpls.com



SHEET KEY

SHEET TITLE

LIGHTING PLAN

DATE: 6/2/15

DRAWN BY: LWS

CHECKED BY: LWS

PROJECT NUMBER: 15320

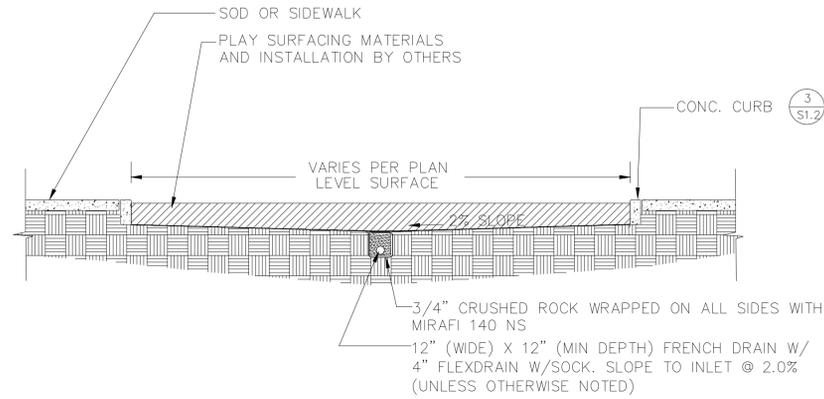
SHEET NUMBER

S 1.3

FIXTURES MUST BE THE FOLLOWING:				Filename: I:\SAS\CENTRAL HILLSIDE\ALDLTG.AGI					
Qty	Symbol	Label	Description	Date: 5/29/2015	Arrangement	LLF	Lum. Watts	Lum. Lumens	BUG Rating
2	☐	G	LEOTEK AR13-6M-MV-NW-5-DB-700		SINGLE	0.808	52	5529	B3-U0-G1
2	☐	E	LEOTEK AR13-6M-MV-NW-3-DB-700		SINGLE	0.855	52	5451	B1-U0-G1

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SIDEWALK	Illuminance	Fc	0.59	3.2	0.0	N.A.	N.A.

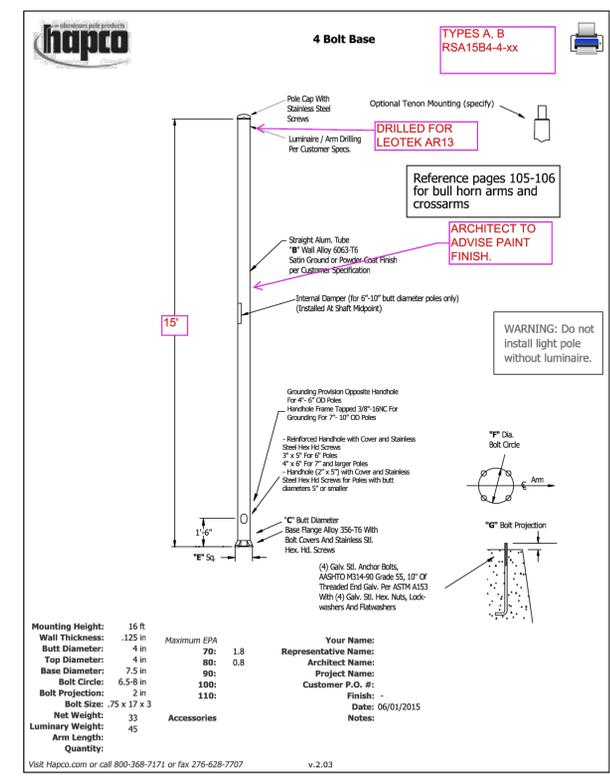
USING LEOTEK LED FIXTURES(4000k LED COLOR TEMP)
 MOUNTED ON 15' TALL POLES.
 6" CONCRETE BASE



1 PLAY AREA DRAINAGE SYSTEM (BY OTHERS)
SCALE: 1/4" = 1'-0"



2 ACCESSIBLE SIDEWALK (TYP.)
SCALE: NTS



3 LIGHT FIXTURE - OR APPROVED EQUAL
SCALE: NTS

LEOTEK
LITE-ON GROUP

Project: CENTRAL HILLSIDE
Type: Catalog No.

ARIETA™13 LED Area Luminaire AR13

Luminaire Data
Weight: 15.4 lbs (7 kg)
EPA: 0.47 ft²

Ordering Information
Sample Catalog No. AR13 6M MV NW 5 BK 700 MSL3

Product	LED No. & Type	Voltage	Nominal Color Temperature	Distribution	Finish¹	Drive Current²	Options
AR13	4M	MV 120-277V	NW 4000K	2 Type 2	BK Black	350	BSK Bird Spider Kit
	6M	HV 347-480V	CW 5000K	3 Type 3	DB Dark Bronze	530	BPA Round Pole Adaptor
	10M			4 Type 4	WH White	700	BPS House Side Shield
	15M			5 Type 5			FDC Fixed Drive Current
	18M						PCR NEMA Photocontrol Receptacle
	20M						PCRS ANSI 5-wire Photocontrol Receptacle
							PCR7 ANSI 7-wire Photocontrol Receptacle
							SC PCR Shorting Cap
							MSL2 Motion Sensor with L7 Lens
							MSL3 Motion Sensor with L3 Lens
							FSR100 Motion Sensor Configuration Tool
							PPSP Programmable Power Supply
							ORR Optics Rotated Right
							ORL Optics Rotated Left
							WL Utility Warning Label

Notes:
1. 200K available with MV only.
2. 4000K AND 5000K standard, consult factory for other color temperatures.
3. Black, Dark Bronze or White standard, consult factory for other finishes.
4. Factory set drive current; field adjustable standard. Refer to performance data on page 3.
5. Flush mounted shield factory installed, also available for field installation. House Side Shield cuts light off at 1/2 mounting height behind luminaire.
6. Non-field adjustable drive current. Specify 350mA, 530mA or 700mA setting.
7. Motion Sensor available with MV only. Motion Sensor default setting dims luminaire to 50% when no motion detected for 5 minutes. Field adjustable using FSR100 for alternate settings. See L7 or L3 Lens Coverage details on page 4. Consult factory for MS specified with ANSI 5-wire or 7-wire Photocontrol Receptacle. Luminaire warranty is limited to 5 years with a Motion Sensor. P.O. is required for On/Off control using light detection.
8. Consult factory for programming.

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AR13_051915 Specifications subject to change without notice

4 LIGHT FIXTURE - OR APPROVED EQUAL
SCALE: NTS

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ARIETA™13 LED Area Luminaire AR13

Motion Sensor (Optional) Specifications

Description
Digital passive infrared luminaire integrated outdoor occupancy sensor provides high/low/off control based on motion detection. Initial setup and subsequent sensor adjustments are made using a handheld configuration tool. POC option is required for On/Off control using light detection.

Operation
Standard factory setting will dim the luminaire to 50% until motion is sensed and then it will power to 100%. When motion is not detected for five minutes, the luminaire will dim back to 50%. Ramp up and fade down times are adjustable, but initially set to NONE. The percent dimming and time durations may be field adjusted as required using FSR-100 configuration tool. FSR-100 user guide available at: www.wallstoppers.com.

Optical System
Multi-cell, multi-lens Fresnel lens with a 360 degree view detects unobstructed motion within one mounting height, up to 20M maximum (standard). Consult factory for higher mounting height requirements.

Finish
Sensor exterior ring and lens are white polycarbonate, UV and impact resistant.

Listings/Ratings
Sensor is UL, UL-c and cUL listed, IP66 rated and CE compliant.

Warranty
5-year limited warranty on luminaires and components with a motion sensor.

Motion Sensor (Optional) Data

L3 Lens Dimensions

L7 Lens Dimensions

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ARIETA™13 LED Area Luminaire AR13

Performance Data
All data nominal, consult factory for IES files or LM-79 reports.

No. of LEDs & Type	Drive Current (mA)	System Wattage (W)	Delivered Lumens (lm)	Type 5	
				Efficacy (lm/W)	BUG Rating
4M	350*	18	2170	121	B2 U0 G1
	530	28	3080	110	B2 U0 G1
	700	37	3850	104	B2 U0 G1
6M	350	26	3120	120	B2 U0 G1
	530	39	4430	114	B2 U0 G1
	700	52	5530	106	B3 U0 G1
10M	350	43	5190	121	B3 U0 G1
	530	65	7380	114	B3 U0 G1
	700	86	9210	107	B3 U0 G2
15M	350	65	7790	120	B3 U0 G1
	530	97	11080	114	B3 U0 G2
	700	129	13818	107	B4 U0 G2
18M	350	78	9340	120	B3 U0 G2
	530	116	13290	115	B4 U0 G2
	700	155	16580	107	B4 U0 G2
20M	350*	87	10380	119	B3 U0 G2
	530	129	14770	114	B4 U0 G2
	700	172	18420	107	B4 U0 G2

Note:
* DLC qualification at 350mA limited to 120-240V

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ARIETA™13 LED Area Luminaire AR13

Luminaire Specifications

Housing
Die cast aluminum housing with universal mounting design allows for attachment to existing pole without need for retrofit applications. Square pole mounting standard, round pole adapter option available. Meets 3G vibration per ANSI C136. All hardware is stainless steel. Electrical components are accessed without tools and are mounted on removable power door. Power door features quick electrical disconnects to terminal block and LED board.

Light Emitting Diodes
High-power white LEDs produce a minimum of 95% of initial intensity at 100,000 hours of life. LEDs are tested in accordance with IES LM-80 testing procedures. Mean correlated color temperature of 4000K (standard) and 70 minimum CRI. LEDs are 100% mercury and lead free.

Optical Systems
Micro-lens systems produce IES Type 2, Type 3, Type 4 or Type 5 distributions. Luminaire produces 0% total lumens above 90° (BUG Rating, U=0).

Electrical
Power supply drive current is field adjustable (350mA, 530mA or 700mA). 0-10V dimmable power supply is standard. Power supply features a minimum power factor of .90 and <20% Total Harmonic Distortion (THD). EMC meets or exceeds FCC Part 15. Transient voltage complies with ANSI C62.41 Cat. A. Integral surge protector is tested per ANSI/IEEE C62.45 procedures based on ANSI/IEEE C62.41.2 definitions for standard and optional waveforms for Location Category C High. Photocontrol receptacle or ANSI C136.41 5-wire or 7-wire dimming receptacle is optional. Standard and optional photocontrol receptacles have tool-less rotatable base. Photocontrol or control module is provided by others.

Finish
Housing receives a fade and abrasion resistant, epoxy polyester powder coat.

Listings/Ratings/Labels
Luminaires are UL listed for use in wet locations in the United States and Canada. Optical systems maintain an IP66 rating. Design Lights Consortium qualified 4000K product. Assembled in the United States. Warranty label complies to ANSI C136.15-2011. Luminaire is qualified to operate at ambient temperatures of -40°C to 40°C.

Photometry
Luminaires are photometrically tested by certified independent testing laboratories in accordance with IES LM-79 testing procedures.

Warranty
30-year limited warranty is standard on all luminaires and components. 5-year Limited Warranty on luminaires with a motion sensor.

Performance Data
See next page.

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PURPOSE	DATE

**CENTRAL HILLSIDE
PARK IMPROVEMENTS**
CITY OF DULUTH, MINNESOTA

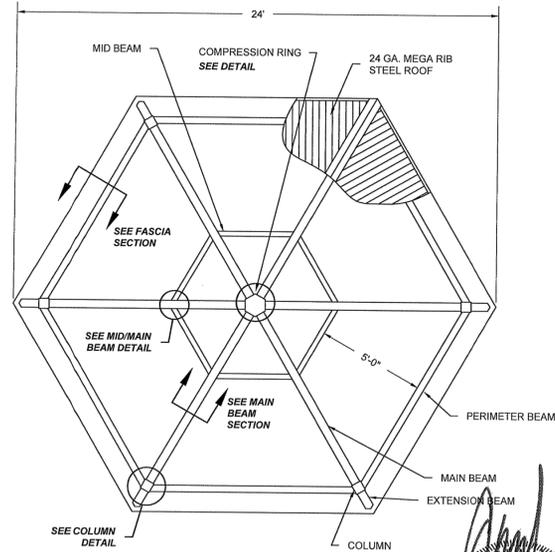
SHEET KEY

SHEET TITLE
DETAILS

DATE: 6/1/15
DRAWN BY: LWS
CHECKED BY: LWS
PROJECT NUMBER: 15320
SHEET NUMBER: S 1.4

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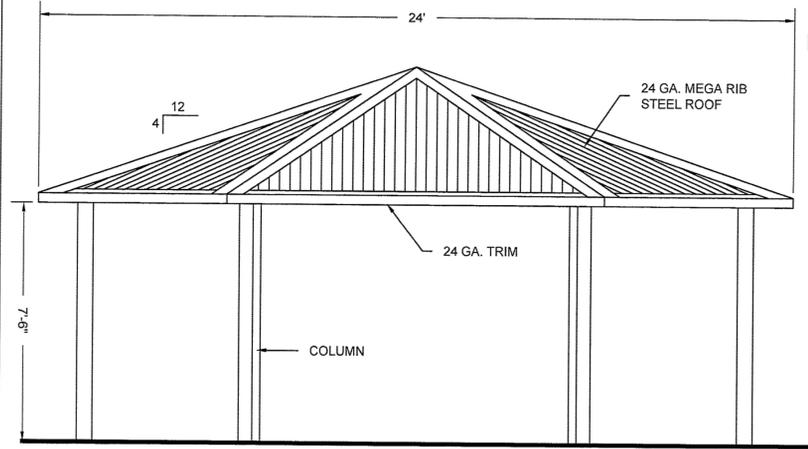
PLAN VIEW 24' CHARLESTON MODEL
NTS

MIDWEST, DULUTH PARK #14234
110 N 42nd AVE WEST.
DULUTH, MN 55807
Detail Sheet 2 of 11

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LICENSED PROFESSIONAL ENGINEER
STATE OF MINNESOTA
51064
OCT 03 2014

MIDWEST, DULUTH PARK #14234
110 N 42nd AVE WEST.
DULUTH, MN 55807

Detail Sheet 3 of 11

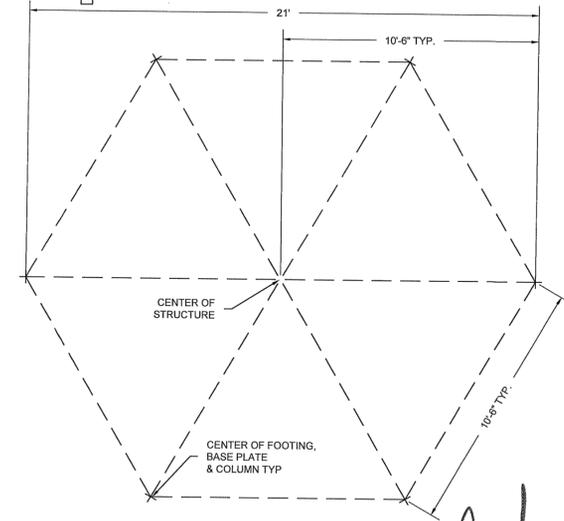


ELEVATION 24' CHARLESTON MODEL
NTS

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51064
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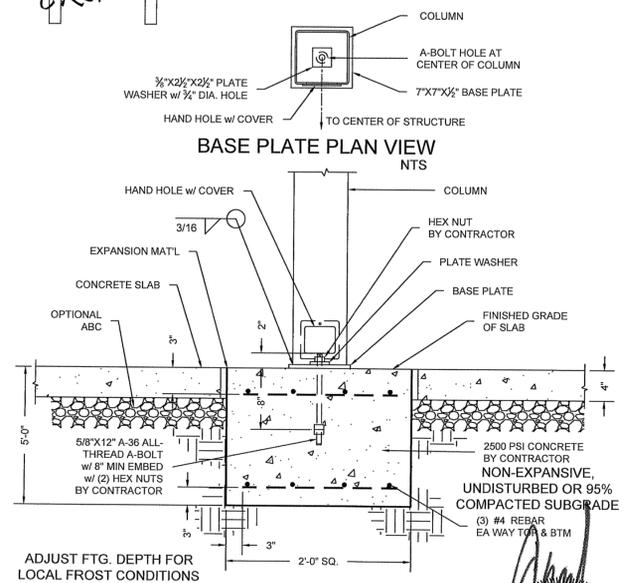


LAYOUT PLAN 24' CHARLESTON MODEL
NTS

MIDWEST, DULUTH PARK #14234
110 N 42nd AVE WEST.
DULUTH, MN 55807
Detail Sheet 4 of 11

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51064
OCT 03 2014

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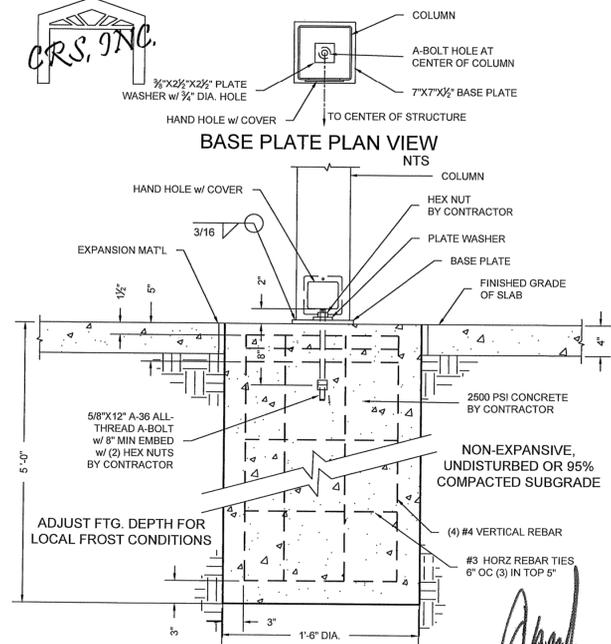


SPREAD FOOTING DETAIL
24' CHARLESTON MODEL
NTS

MIDWEST, DULUTH PARK #14234
110 N 42nd AVE WEST.
DULUTH, MN 55807
Detail Sheet 10 of 11

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CAISSON FOOTING DETAIL
24' CHARLESTON MODEL
NTS

MIDWEST, DULUTH PARK #14234
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DULUTH, MN 55807
Detail Sheet 11 of 11

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OCT 03 2014



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PURPOSE	DATE

CENTRAL HILLSIDE PARK IMPROVEMENTS

CITY OF DULUTH, MINNESOTA

SHEET KEY	
SHEET TITLE	DATE
DETAILS	6/2/15
DRAWN BY:	LWS
CHECKED BY:	LWS
PROJECT NUMBER	15320
SHEET NUMBER	S I.5

4 STRUCTURE - OWNER SUPPLIED
SCALE: NTS