City of EL MIRAGE Arizona
GRAND HERITAGE, BRIGHT FUTURE

CITY OF EL MIRAGE

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PRE-APPLICATION FORM

Official Use

Case No: PZ-11-23 Date Received: 11/19/19 TAC Meeting: 12/3/19

PURPOSE

The primary purpose of a Pre-Application review and meeting is to provide an applicant with site specific information and to discuss comments and redlines on requirements for the proposed development from the Technical Advisory Committee (TAC). Pre-Application Meetings are mandatory and will be scheduled at the next available TAC Meeting. Please note that there may be up to three weeks between the date that the Pre-Application Meeting form is filed and the date of the Pre-Application Meeting (Pre-Application Meetings are held Tuesday afternoons).

ACTION REQUESTED (Check one)

___ Conditional Use Permit
___ General Plan Amendment: ___ Major ___ Minor
___ Planned Area Development (PAD)
___ Planned Area Development Amendment
___ Rezoning
___ Site Plan
___ Site Plan Amendment
___ Preliminary Plat
___ Final Plat
___ Other: _____

PROPERTY INFORMATION:

Name of Project: CAVCO WEST Acreage: 38.5±
Property Address/Location: South side of Joe R. Ramirez, West of Dysart.
Assessor's Parcel Number: 509-18-970B

APPLICANT / OWNER INFORMATION:

Applicant:	Dustin Chisum	Owner:	Scott Chambers
Address:	4600 E. Indian School Rd	Address:	1366 S. Litchfield Rd #6
City/ST/Zip:	Phoenix AZ 85018	City/ST/Zip:	Goodyear, AZ 85338
Phone:	602-840-2929 #116	Phone:	623-882-2803
Email:	DChisum@2929.com	Email:	scott@cavco.com
Signature:	DC	Signature:	DC

(Agreement to act as agent for owner) (Authorization for agent to act for owner)

Applicants will receive comments from each TAC Member at the Pre-Application Meeting. Pre-Application Meetings are only valid for a period of twelve (12) months, after which, a new Pre-Application Meeting will be required with new fees.

X Application Form
X Project Narrative
X Site Plan
X Exterior Elevations
X Drainage Statement
X Traffic Impact Statement
X Preliminary Sewer Report
X Preliminary Water Report
X Filing Fee: $500.00

ARCHITECTURE GROUP 4600 East Indian School Road Phoenix, Arizona 85018 P|602.840.2929 F|602.840.6646 www.2929.com

City of El Mirage Pre-Ap Submittal

11/15/19

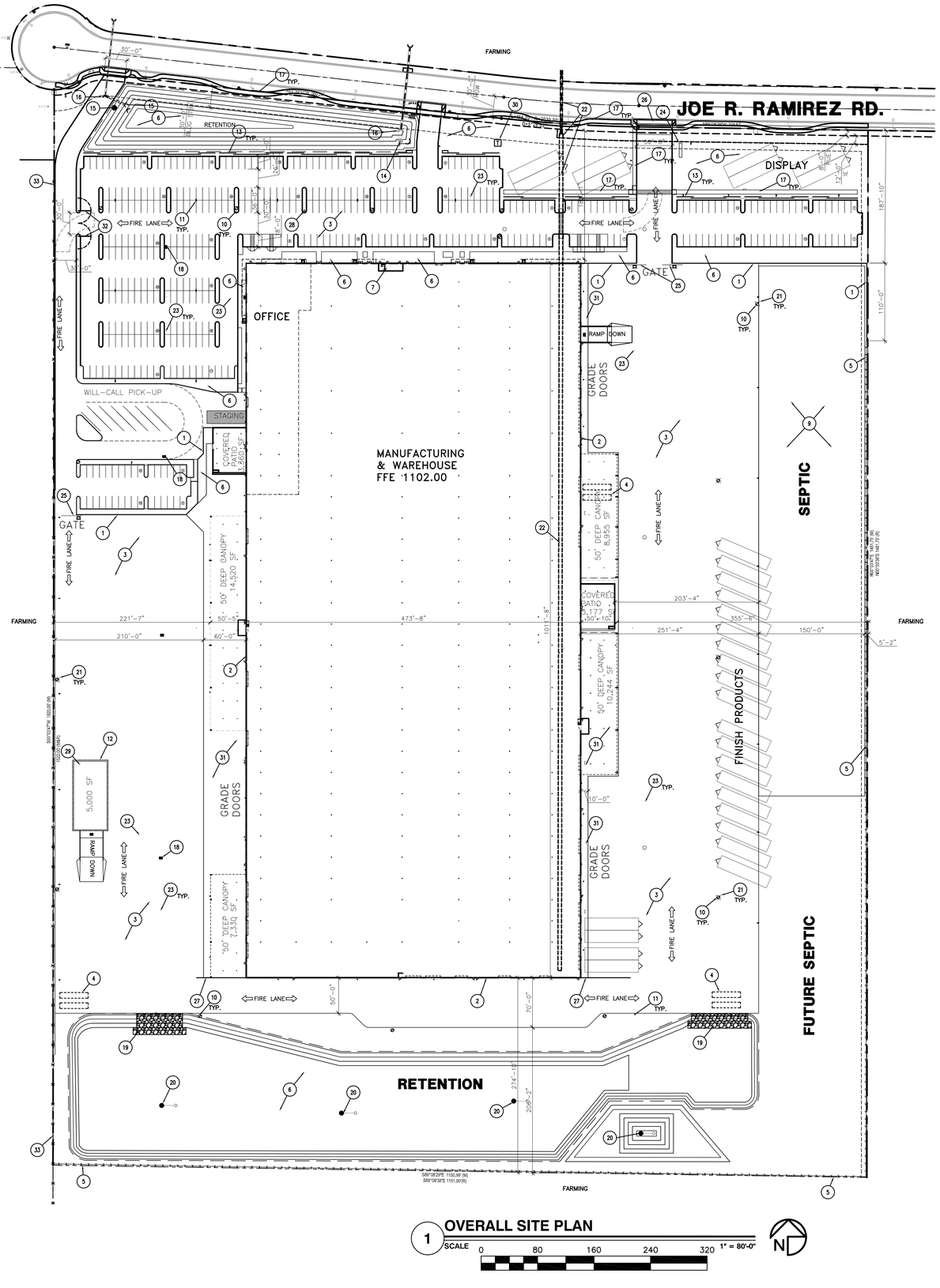
Cavco Industries - Project Narrative

Deutsch Project #: 18129.00

Cavco Industries is a designer and builder of systems-built structures including manufactured homes, modular homes, commercial buildings, park model RF's, and vacation cabins. Cavco currently has 19 manufacturing facilities nationwide. The proposed El Mirage manufacturing facility will be its newest addition. The building will house Cavco West Manufacturing, warehouse, and offices.

This 485,00 +/- SF new ground-up building will be located on the south side of Joe R. Ramirez Road between Peoria Ave. and Olive Ave. The site is approximately 38.5 acres. The building will be concrete tilt panel walls with hybrid roof system. There will be work platforms and bridge cranes within the manufacturing spaces. The main entry and employee entries are on the north elevation, facing the street frontage. The main entry and employee entries are highlighted with a decorative integral color masonry element, storefront, and canopies. There are several exterior canopies on the east and west side of the building, located behind masonry screen walls.

The site will provide surface parking and truck maneuvering area. Storm water will be managed with surface retention. Sanitary waste will be treated with an on-site septic system until sanitary sewer is available to the area. There is an area along the street frontage where finished products will be located for display.



1 OVERALL SITE PLAN

SCALE 0 80 160 240 320 1" = 80'-0"

N

PROJECT CODE DATA

PROJECT:
CAVCO WEST

ADDRESS: **APN:** 509-18-970B
S/W CORNER OF
JOE R RAMIREZ RD. AND DYSART RD.
EL MIRAGE, AZ 85338

GOVERNING MUNICIPALITY:
CITY OF EL MIRAGE

APPLICABLE CODES:
2012 INTERNATIONAL BUILDING CODES
2012 INTERNATIONAL MECHANICAL CODE
2012 INTERNATIONAL PLUMBING CODE
2011 NATIONAL ELECTRICAL CODE
2012 INTERNATIONAL FIRE CODE
2012 INTERNATIONAL ENERGY CONSERVATION CODE
2010 ADA GUIDLINES

PROJECT DESCRIPTION:
GROUND UP BUILDING FOR CAVCO WEST MANUFACTURING, WAREHOUSE AND OFFICE. CONCRETE TILT CONSTRUCTION WITH HYBRID ROOF, WORK PLATFORMS AND BRIDGE CRANES. SITE PARKING AND TRUCK MANEUVERING WITH SURFACE RETENTION.

OCCUPANCY(IES):

B	OFFICE	25,230 SF±
S-1	WAREHOUSE	454,431 SF±
F-1	MANUFACTURING	

OCCUPANCY SEPARATION WALLS:
ARE NOT REQUIRED AT THIS TIME.

CONSTRUCTION TYPE(S):
V-B TYPE, UNLIMITED BUILDING PER 507

TYPES OF CONSTRUCTION
FIRE RESISTIVE REQUIRMENTS: PER IBC TABLE 601

BUILDING ELEMENT	REQUIRED RATING
STRUCTURAL FRAME	0
BEARING WALLS	
EXTERIOR	0
INTERIOR	0
NON-BEARING WALLS - EXTERIOR	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION	0

FIRE PROTECTION SYSTEM:
FIRE SPRINKLER TYPE PER IBC CHAPTER 9 AND NFPA 13

EXIT ACCESS TRAVEL DISTANCE
400 LF PER 2018 IBC 1017.2.2.

CURRENT ZONING:
EI

SITE AREA:
NET AREA: 1,729,767.6 SF (39.71 AC)

LOCATION ON PROPERTY:
NORTH = 182'-1"±
SOUTH = 274'-10"±
EAST = 355'-6"±
WEST = 221'-7" ±

PARKING CALCULATIONS: PER CITY OF EL MIRAGE ZONING CODE
PARKING CALCULATIONS BASED ON GROSS FLOOR AREA

USE	S.F.	FACTOR	SPACES REQ'D
B	25,000 SF	1 SP/ 300 SF	84
S-1 F-1	480,661 SF	1 SP/ 1.5 EMPLOYEES 300 EMPLOYEES	200
TOTAL SPACES REQUIRED			284

TOTAL NUMBER OF SPACES	REQ'D	PROV
STANDARD PARKING SPACES:	277	414
ACCESSIBLE PARKING REQUIRED:	7	8
TOTAL SPACES PROVIDED		455

KEYNOTES

1. 8' HIGH MASONRY WALL.
2. CONCRETE TILT PANEL BUILDING.
3. PAVEMENT PER CIVIL DWGS.
4. PRELIMINARY LOCATIONS OF TRASH 40 YARD DUMPSTERS BY OWNER
5. 8' HIGH CHAIN LINK FENCE.
6. PRELIMINARY LANDSCAPE AREAS
7. PRELIMINARY SES ROOM, FIRE RISER ROOM AND ROOF ACCESS
9. SEPTIC FIELDS, COVER WITH DG.
10. PRELIMINARY FIRE HYDRANT LOCATIONS
11. PRELIMINARY LED LIGHT POLES.
12. DELIVERY CANOPY
13. PARKING SCREEN WALL, 3-4" AFF
14. EXISTING DRYWELL TO REMAIN
15. EXISTING DRYWELL TO BE REMOVED
16. EXISTING HEADWALL TO BE REMOVED/UNDERGROUND STORMWATER PIPING TO BE MODIFIED, SEE CIVIL
16. EXISTING HEADWALL TO REMAIN
17. NEW ACCESSIBLE SIDEWALK
18. CATCH BASIN, SEE CIVIL
19. RIP-RAP, SEE CIVIL
20. NEW DRYWELL, SEE CIVIL
21. 6" PIPE BOLLARD
22. EXISTING IRRIGATION TO BE REALIGNED, SEE CIVIL
23. UNDERGROUND STORMWATER PIPING, SEE CIVIL
24. PROPOSED MONUMENT SIGN-SEPARATE PERMIT
25. MOTORIZED SLIDING GATE WITH FIRE DEPARTMENT ACCESS PER CITY OF EL MIRAGE STANDARDS
26. NEW DRIVEWAY
27. RETAINING SITE WALL, SEE CIVIL
28. PROPOSED REMOTE FIRE DEPARTMENT CONNECTION
29. CONCRETE PAD
30. PROPOSED TRANSFORMER LOCATION
31. CONCRETE PAVING
32. EMERGENCY FIRE DEPARTMENT ACCESS GATE
33. EXISTING CHAINLINK FENCE

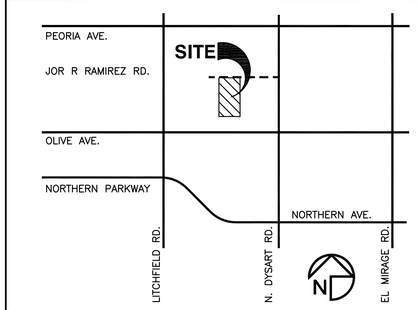
PROJECT TEAM

OWNER:
CAVCO WEST
1366 S. LITCHFIELD ROAD, BLDG 6
GOODYEAR, AZ 85338
PHONE: 623882-2803
FAX:
E-MAIL: SCOTTC@CAVCO.COM
CONTACT: SCOTT CHAMBERS

ARCHITECT
DEUTSCH ASSOCIATES
4600 E. INDIANSCHOOL RD.
PHOENIX, AZ 85016
PHONE: 602-840-2929
FAX:
E-MAIL: DEUTSCH@2929.COM
CONTACT: DUSTIN CHISUM

CIVIL ENGINEER:
WOOD-PATEL
2051 W. NORTHERN AVE, STE 100
PHOENIX, AZ 85021
PHONE: 602-335-8500
FAX:
E-MAIL: DCRONIN@WOODPATEL.COM
CONTACT:DAN CRONIN

VICINITY MAP



CITY TRACKING NUMBERS

2929.COM
DEUTSCH ARCHITECTURE GROUP
11377 BERNARD DEUTSCH 1/21/20
Date Signed
ARIZONA U.S.A.
EXPIRES ON 09/30/20

4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
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CHK'D BY: DCAL
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OVERALL SITE PLAN

AS-110

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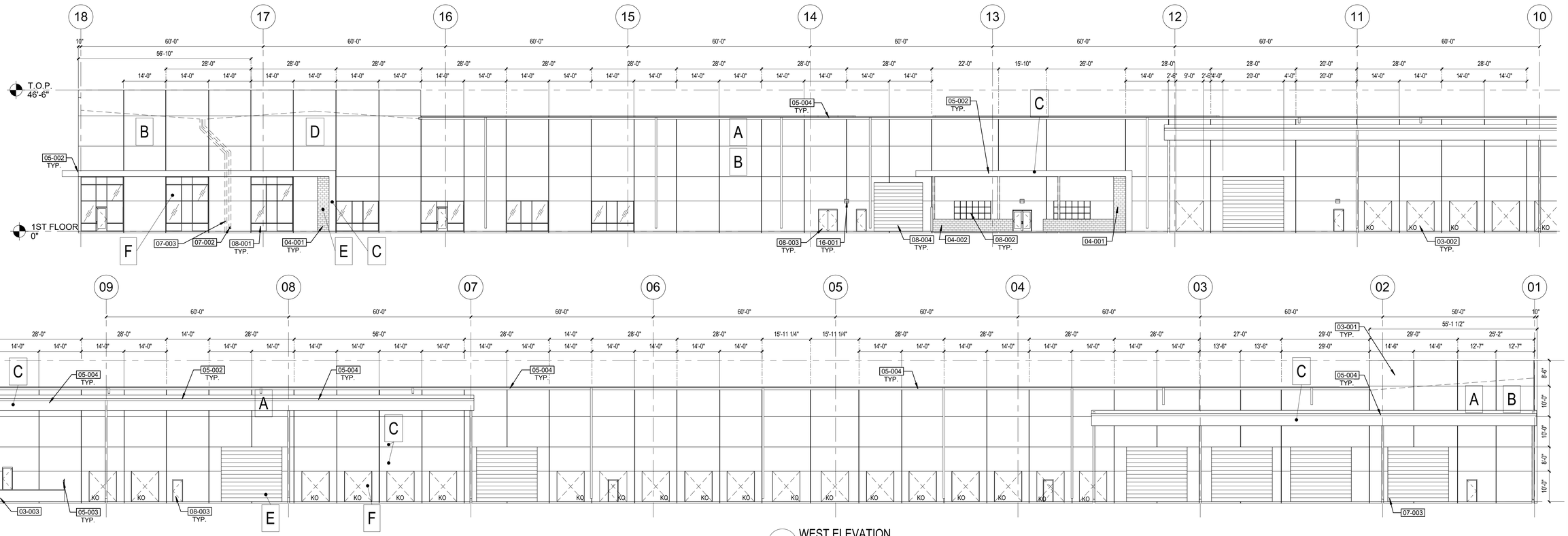
N:\2018\18129.00 Cavco El Mirage\3. Design\4. Drawings\AutoCAD\18129-00_AS-101.dwg, 1/21/2020 3:07:07 PM

EXTERIOR MATERIAL LEGEND

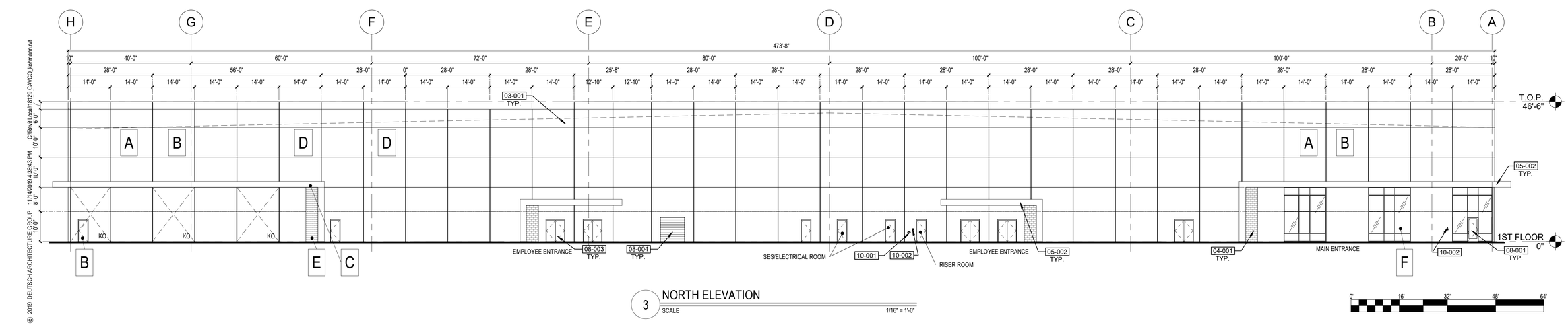
A	DE6365	COLD MORNING
B	DEC750	BISON BEIGE
C	DE6063	BLACK WALNUT
D	DEA149	SPICED BERRY
E	TRENDSTONE GROUND FACE CMU - BLACK MOUNTAIN	
F	STOREFRONT SYSTEM: 1" INSULATED GLAZING UNITS - SOLARBRONZE IN CLEAR ANNODIZED ALUMINUM FRAME	

KEYNOTES

03-001	CONCRETE TILT PANEL, PAINTED
03-002	KNOCK-OUT PANEL
03-003	RAISED LOADING DOCK
04-001	INTEGRAL COLOR CMU ACCENT FEATURE
04-002	INTEGRAL COLOR CMU WALL
05-002	CANOPY WITH STANDING SEAM METAL ROOFING
05-003	GUARDRAIL, 42" AFF
05-004	GUTTER AND DOWNSPOUT
07-002	OVERFLOW DRAIN LEADER OUTLET
07-003	ROOF DRAIN CONTINUES UNDERGROUND-SEE CIVIL
08-001	ALUMINUM STOREFRONT SYSTEM
08-002	GLASS GARAGE DOOR
08-003	HOLLOW METAL DOOR AND FRAME
08-004	OVERHEAD SECTIONAL DOOR
10-001	BUILDING-MOUNTED FIRE DEPARTMENT CONNECTION
10-002	FIRE DEPARTMENT KNOX BOX
16-001	WALL-MOUNTED LIGHT FIXTURE



1 WEST ELEVATION
SCALE 1/16" = 1'-0"



3 NORTH ELEVATION
SCALE 1/16" = 1'-0"

0' 16' 32' 48' 64'

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PHOENIX, ARIZONA 85018
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JOE R. RAMIREZ RD AND DYSART RD
EL MIRAGE, AZ

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EXTERIOR ELEVATIONS

A-210S

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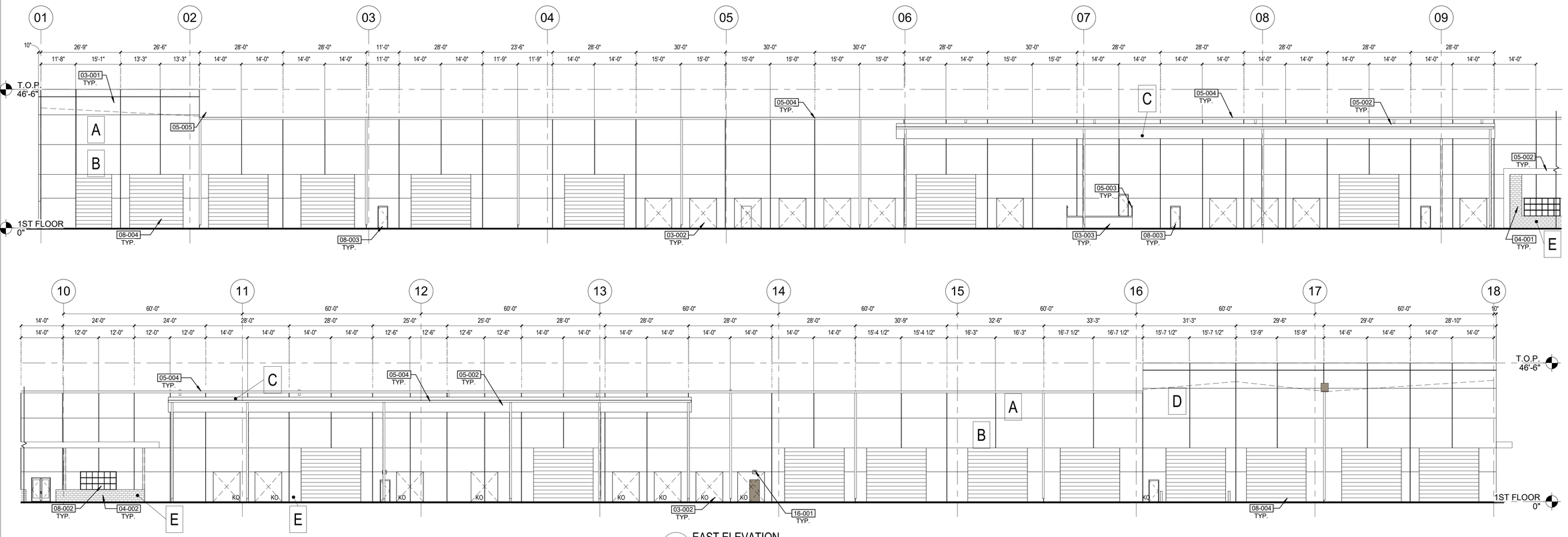

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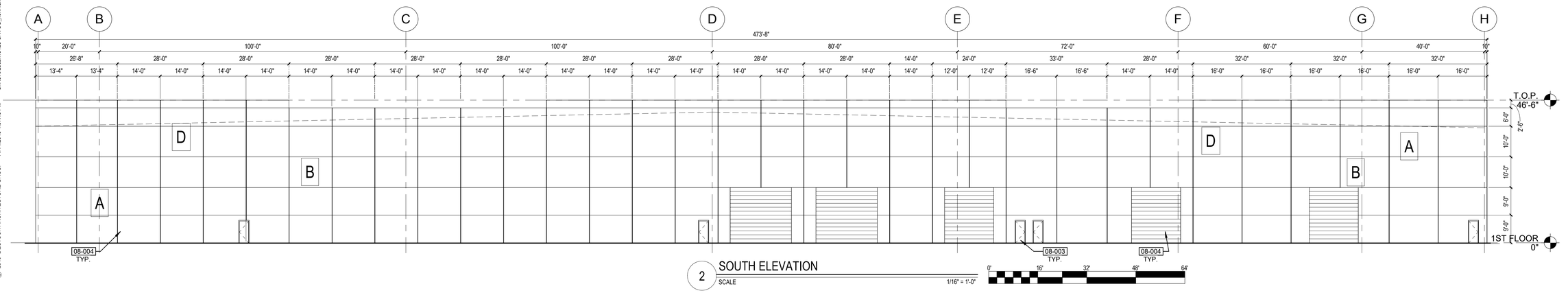

2 SOUTH ELEVATION
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PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD
EL MIRAGE, AZ

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A-211S

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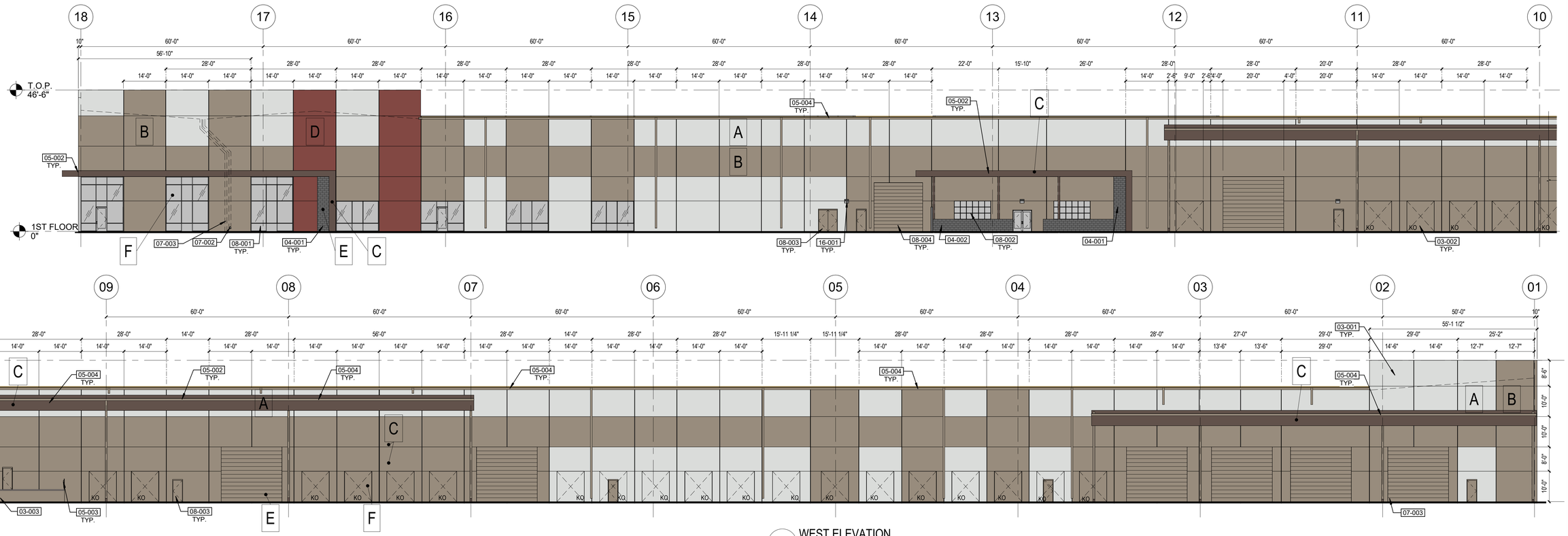

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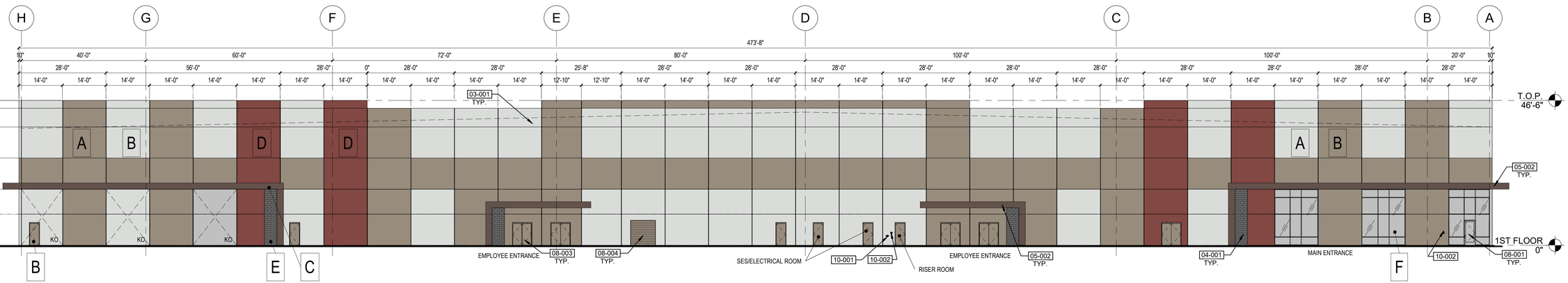

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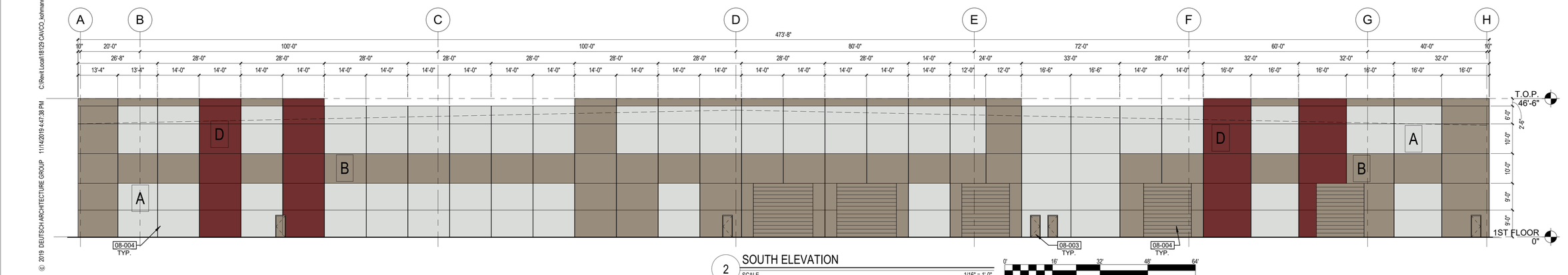

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EXTERIOR ELEVATIONS

A-211S

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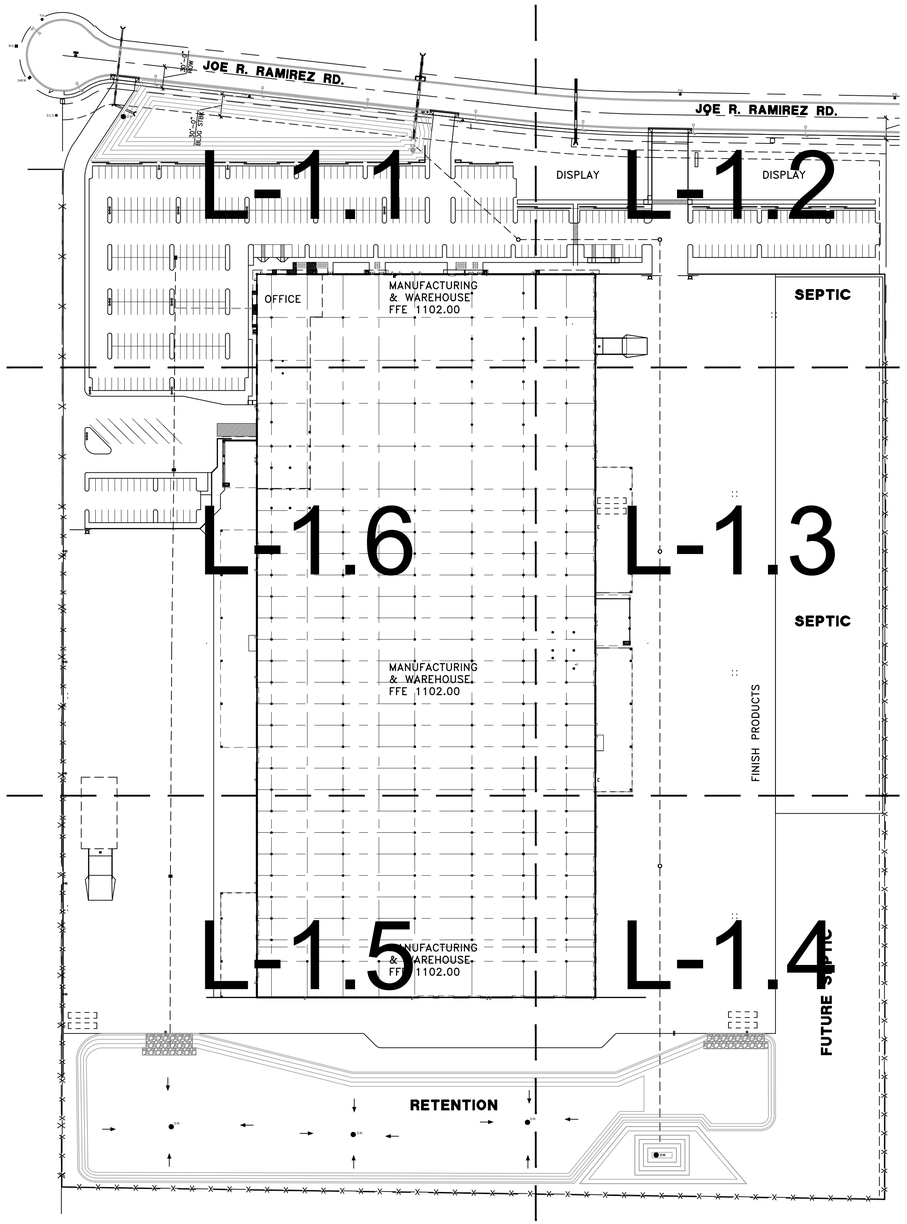

LANDSCAPE COVER SHEET

SCALE: NTS

Ref. North

CONCEPTUAL PLANT PALETTE

	TREES	SIZE/ COMMENTS/ QUANTITY
✳	WASHINGTONIA FILIFERA CALIFORNIA FAN PALM	6' CLEAR TRUNK / MATCHED / 11 QTY
⊕	AZT HYBRID PALO BREA PARKINSONIA PRAECOX 'AZT #5'	36" BOX / LOW BREAKING / MATCHED / 34 QTY
△	PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	36" BOX / LOW BREAKING / MATCHED / 15 QTY
+	ULMUS PARVIFLORA EVERGREEN ELM	24" BOX / LOW BREAKING / MATCHED / 31 QTY
•	PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	24" BOX / LOW BREAKING / MATCHED / 38 QTY
	SHRUBS	
⊖	LEUCOPHYLLUM LANGMANIAE RIO BRAVO SAGE	5 GAL, 19 QTY
⊙	JUSTICIA CALIFORNICA CHUPAROSA	5 GAL, 68 QTY
◔	LEUCOPHYLLUM ZYGOPHYLLUM CIMARRON SAGE	5 GAL, 75 QTY
✳	HESPERALO PARVIFOLIA RED YUCCA	5 GAL, 24 QTY
⊕	JOJOBA SIMMONDSIA CHINENSIS	5 GAL, 90 QTY
⊙	RUELLIA PENINSULARIS BAJA RUELLIA	5 GAL, 36 QTY
⊙	OLEA EUROPAEA 'LITTLE OLLIE' LITTLE OLLIE DWARF OLIVE	5 GAL, 236 QTY
	GROUNDCOVERS	
A	LANTANA 'NEW GOLD' TRAILING YELLOW LANTANA	1 GAL @ 3' O.C., 87 QTY
B	ROSMARINUS 'HUNTINGTON CARPET' TRAILING ROSEMARY	1 GAL @ 3' O.C., 280 QTY
C	EREMOPHILA GLABRA 'OUTBACK SUNRISE' OUTBACK SUNRISE EMU	1 GAL @ 4' O.C., 202 QTY
D	BOUTELOUA 'BLONDE AMBITION' BLONDE AMBITION GRAMA	5 GAL @ 2.5' O.C., 99 QTY
E	ALOE BARBADENSIS MEDICINAL ALOE	5 GAL @ 3' O.C., 60 QTY
F	EREMOPHILA CARNOSA 'WINTER BLAZE' WINTER BLAZE EMU	5 GAL @ 3' O.C., 47 QTY
	INERT MATERIALS	
DG	DECOMPOSED GRANITE ARIZONA GOLD	1/4" MINUS, 2" DEPTH, TYP.
FG	FRACTURED GRANITE TABLE MESA BROWN	1"-3" SCREENED, 2" DEPTH, TYP.
———	STEEL HEADER 3/16" COLD ROLLED STEEL	

GENERAL NOTES

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2. VERIFY ALL CONDITIONS IN FIELD PRIOR TO BIDDING/ INSTALLATION. DISCREPANCIES SHALL BE BROUGHT TO THE LANDSCAPE ARCHITECT'S ATTENTION IN WRITING.
3. NO PLANT SUBSTITUTION ALLOWED UNLESS APPROVED BY L/S ARCHITECT.
4. L/S ARCHITECT TO APPROVE ALL TREES PRIOR TO DELIVERY TO SITE.
5. LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE RESERVE THE RIGHT TO REFUSE ANY PLANT HE/SHE DEEMS UNACCEPTABLE.
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9. FINISHED GRADE BELOW ALL PLANTERS SHALL BE 1" BELOW ADJACENT HEADER, PAVING, CURBING, ETC.
10. GROUNDCOVER AND/OR DG SHALL EXTEND UNDER SHRUBS UNLESS NOTED.
11. ALL EARTHWORK IS TO BE DONE SO THAT ALL WATER DRAINS AWAY FROM ALL STRUCTURES.
12. ALL UNDERGROUND CONDUITS/PIPES/UTLITIES ARE TO BE LOCATED PRIOR TO DIGGING.
13. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SLEEVING WHETHER IT IS SHOWN ON THE PLANS OR NOT.
14. ADJUST NEW LANDSCAPE TO ACCOMMODATE EXISTING LANDSCAPE TO REMAIN.
15. LANDSCAPE CONTRACTOR RESPONSIBLE TO MAINTAIN EXISTING PLANT MATERIAL TO REMAIN IN GOOD, HEALTHY CONDITION DURING CONSTRUCTION.
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ARCHITECTURE GROUP
REGISTERED LANDSCAPE ARCHITECT
20086
GREGORY CALVIN
FLANAGAN
NOT FOR CONSTRUCTION
EXPIRES 12/31/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
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CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

PROJECT NO: 18129
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CHK'D BY: DCAL
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PLANTING PLAN
01.17.20

L-1.0

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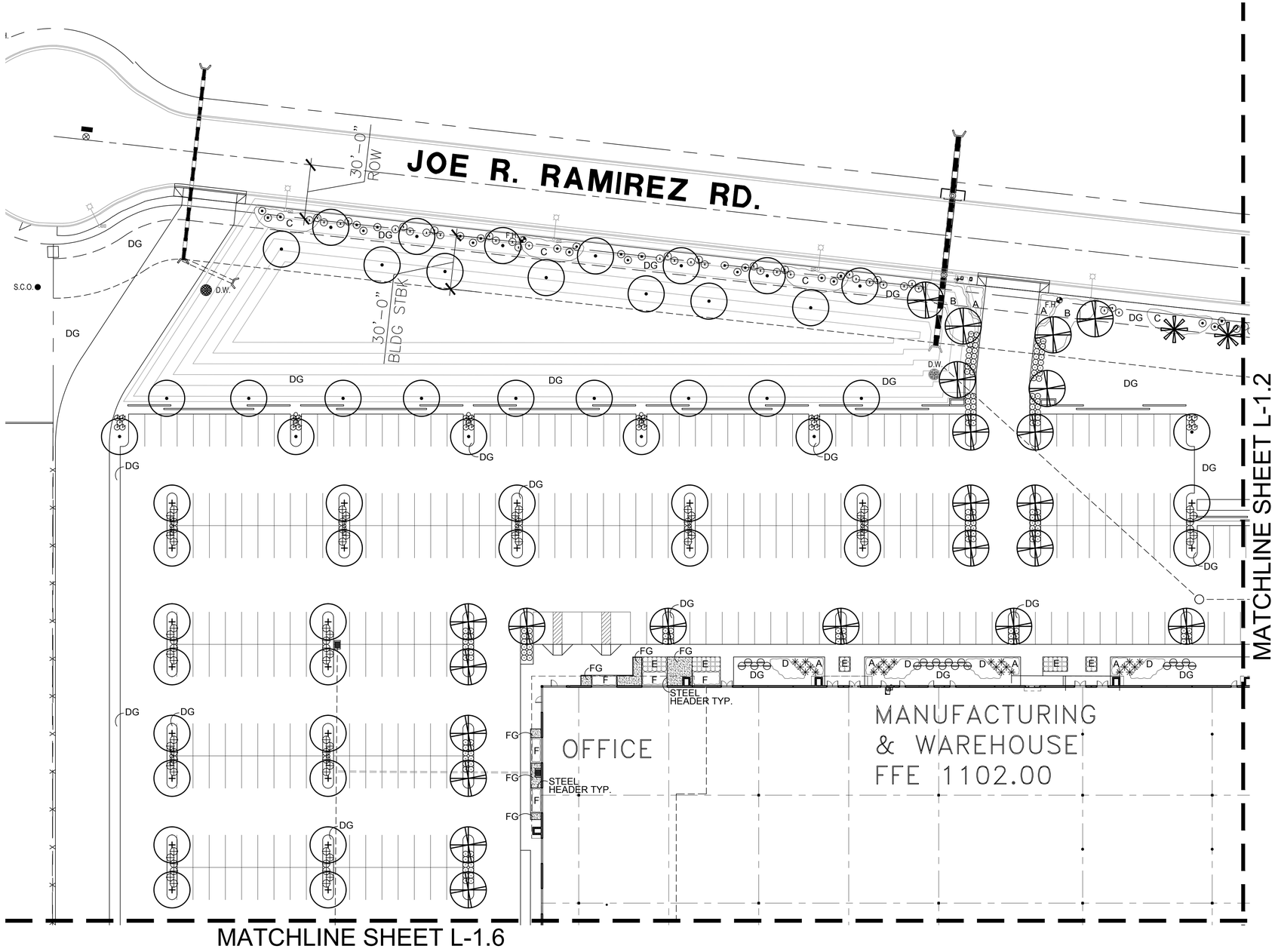

PLANTING PLAN

SCALE: 1"=30'-0"

0 15' 30' 60' Ref. North

CONCEPTUAL PLANT PALETTE

	TREES	SIZE/ COMMENTS/ QUANTITY
✱	WASHINGTONIA FILIFERA CALIFORNIA FAN PALM	6' CLEAR TRUNK / MATCHED / 11 QTY
	AZT HYBRID PALO BREA PARKINSONIA PRAECOX 'AZT #5'	36" BOX / LOW BREAKING / MATCHED / 34 QTY
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A	LANTANA 'NEW GOLD' TRAILING YELLOW LANTANA	1 GAL @ 3' O.C., 87 QTY
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DG	DECOMPOSED GRANITE ARIZONA GOLD	1/4" MINUS, 2" DEPTH, TYP.
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REGISTERED LANDSCAPE ARCHITECT CERTIFICATE 20086 GREGORY CALVIN FLANAGAN STATE OF ARIZONA, U.S.A.
MEYER CONSTRUCTION
EXPIRES 12/31/2020

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CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

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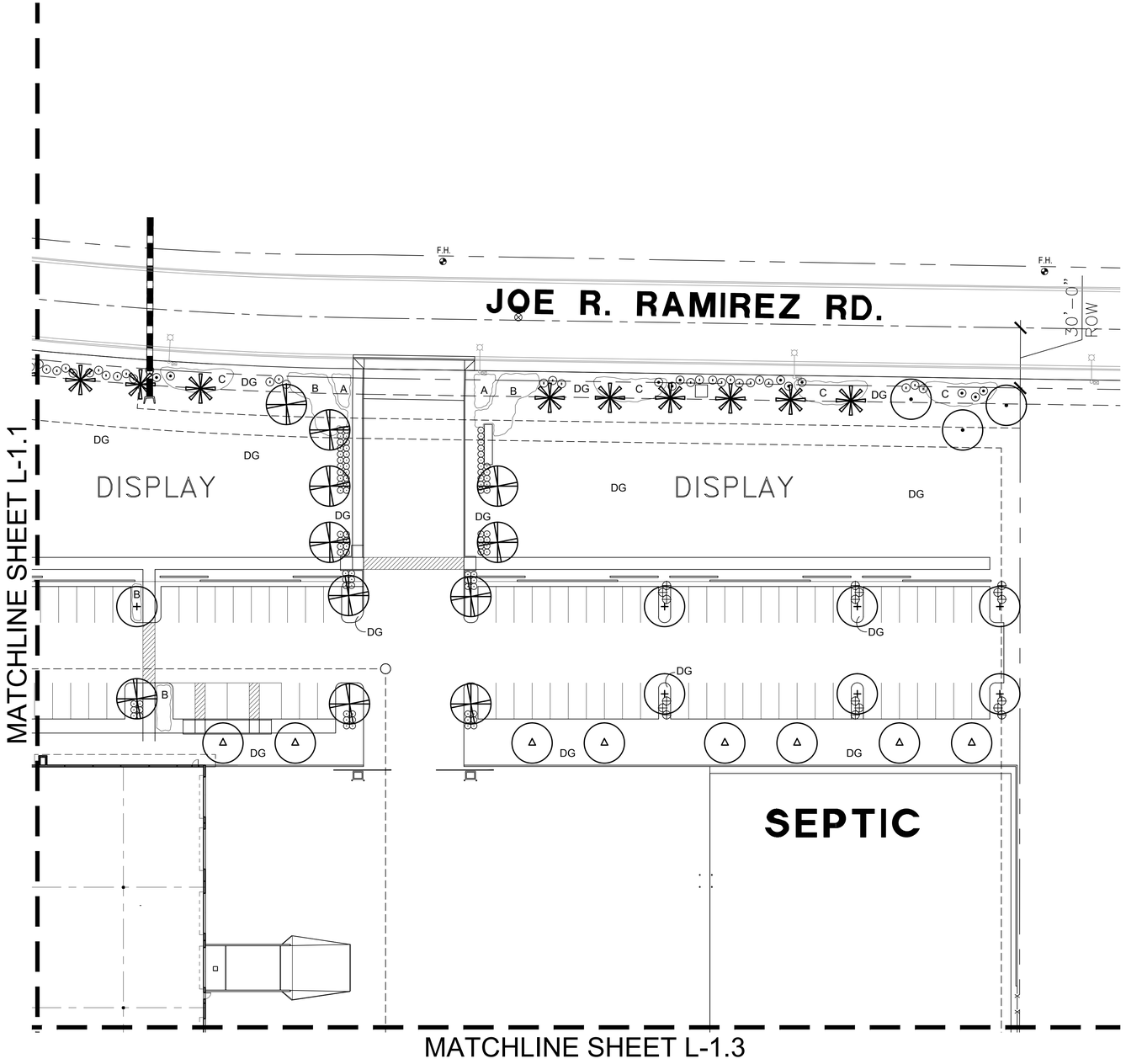
PLANTING PLAN
01.17.20

L-1.1



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PLANTING PLAN
01.17.20

L-1.2

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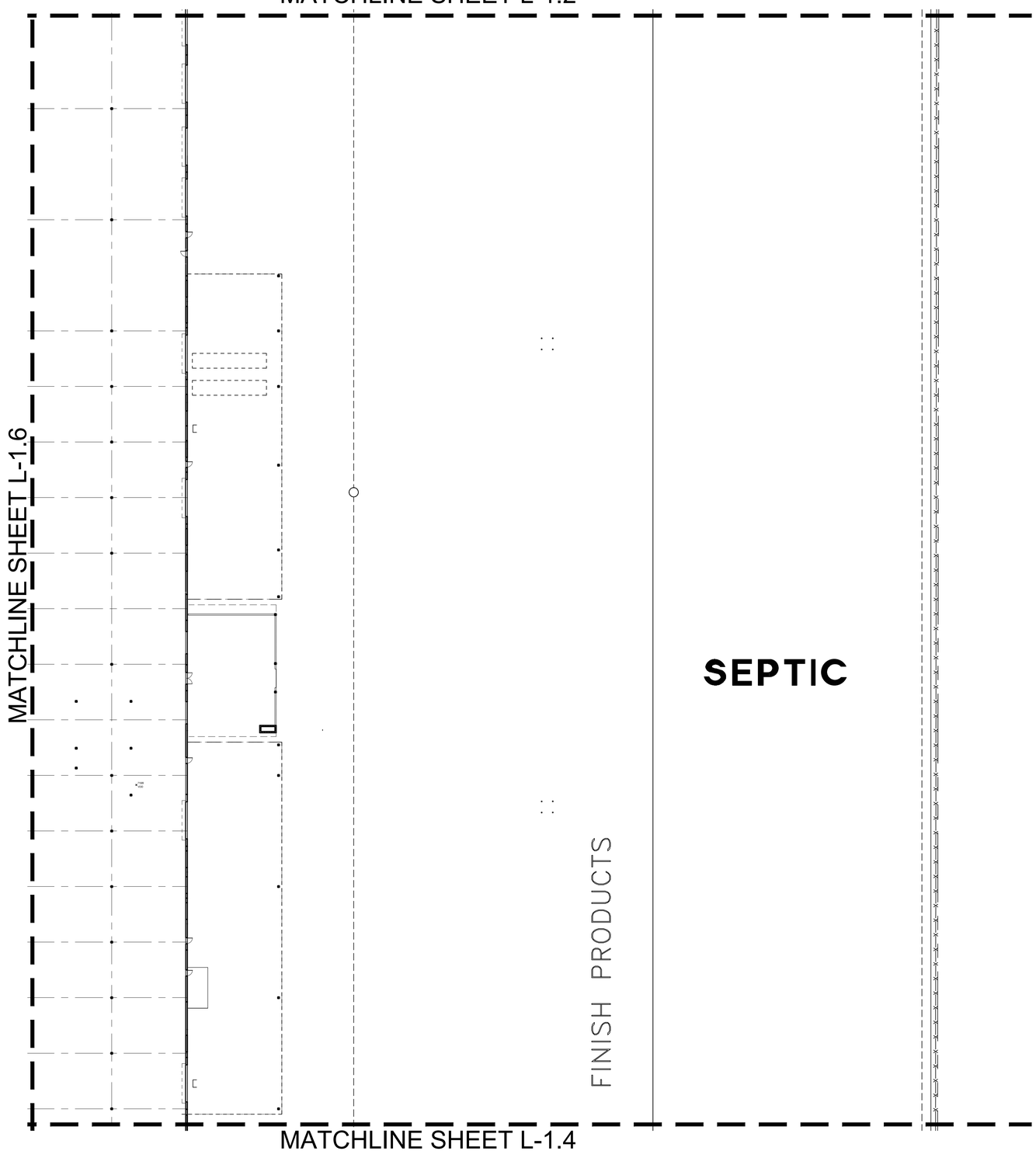

PLANTING PLAN

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PLANTING PLAN
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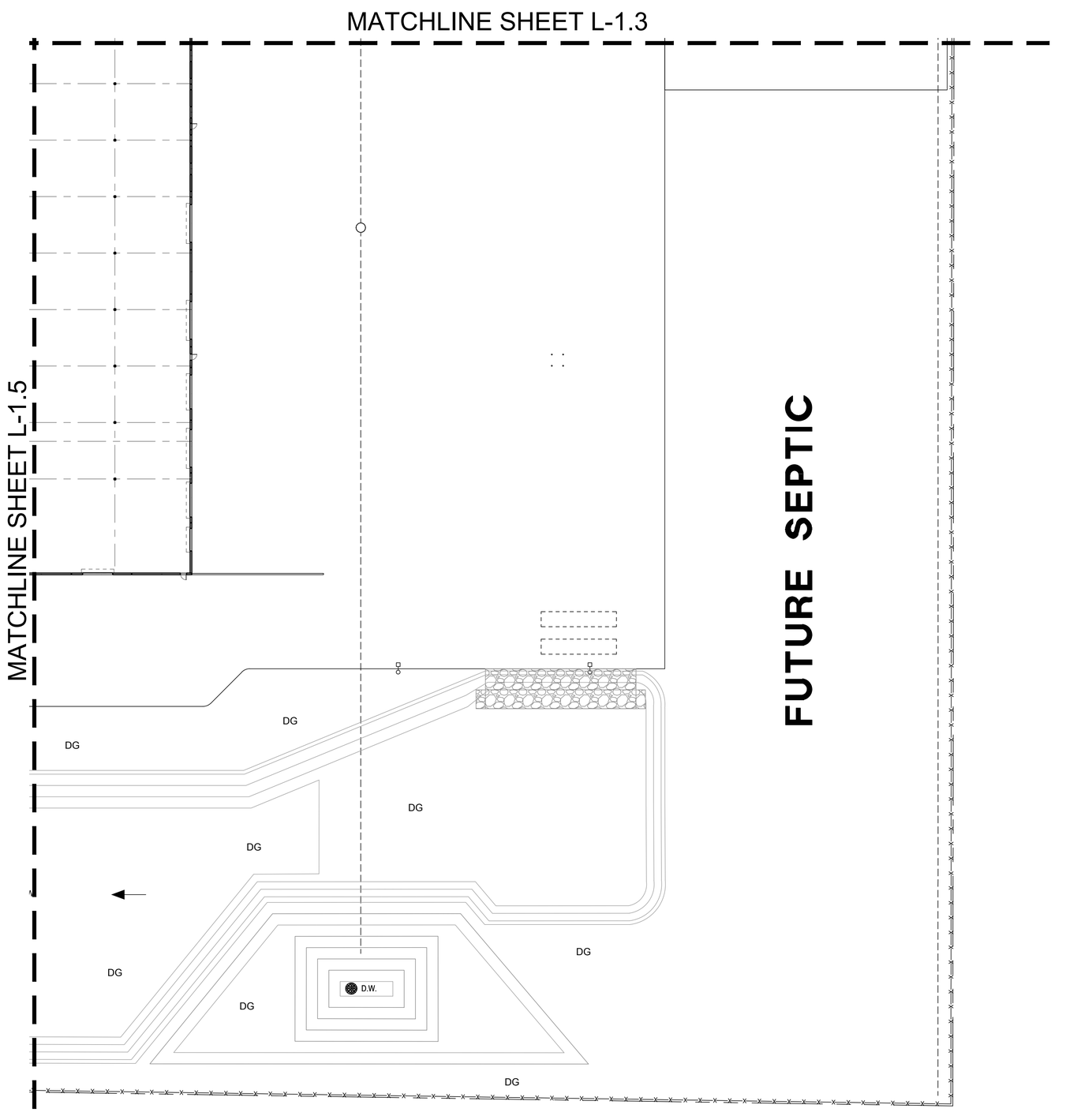

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5. LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE RESERVE THE RIGHT TO REFUSE ANY PLANT HE/SHE DEEMS UNACCEPTABLE.
6. FOR CLARIFICATION OF DISCREPANCIES BETWEEN THE DRAWINGS AND THE SITE, THEY SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING WORK.
7. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO TAKE PRECAUTIONS TO PROTECT ANY EXISTING IMPROVEMENTS.
8. PLANT LIST/QTY'S PROVIDED FOR CONTRACTOR'S CONVENIENCE ONLY. PLANS TAKE PRECEDENCE.
9. FINISHED GRADE BELOW ALL PLANTERS SHALL BE 1" BELOW ADJACENT HEADER, PAVING, CURBING, ETC.
10. GROUNDCOVER AND/OR DG SHALL EXTEND UNDER SHRUBS UNLESS NOTED.
11. ALL EARTHWORK IS TO BE DONE SO THAT ALL WATER DRAINS AWAY FROM ALL STRUCTURES.
12. ALL UNDERGROUND CONDUITS/PIPES/UTLITIES ARE TO BE LOCATED PRIOR TO DIGGING.
13. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SLEEVING WHETHER IT IS SHOWN ON THE PLANS OR NOT.
14. ADJUST NEW LANDSCAPE TO ACCOMMODATE EXISTING LANDSCAPE TO REMAIN.
15. LANDSCAPE CONTRACTOR RESPONSIBLE TO MAINTAIN EXISTING PLANT MATERIAL TO REMAIN IN GOOD, HEALTHY CONDITION DURING CONSTRUCTION.
16. ANY EXISTING PLANT MATERIAL NOT SHOWN TO REMAIN IS TO BE REMOVED BY CONTRACTOR.
17. ALL STEEL HEADER TO BE 3/16" THICK COLD ROLL STEEL 4" DEPTH STEEL HEADER TO SEPERATE ALL DECOMPOSE GRANITE AND FRACTURED GRANITE BANDS.

G.K. FLANAGAN ASSOCIATES
4626 N. 44th Street
PHOENIX, AZ 85018
602 . 912 . 9691
602 . 912 . 9693 fax

2929.COM
DEUTSCH ARCHITECTURE GROUP
REGISTERED LANDSCAPE ARCHITECT CERTIFICATE 20086 GREGORY CALVIN FLANAGAN U.S.A.
MESA, ARIZONA
EXPIRES 12/31/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 30 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR

Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
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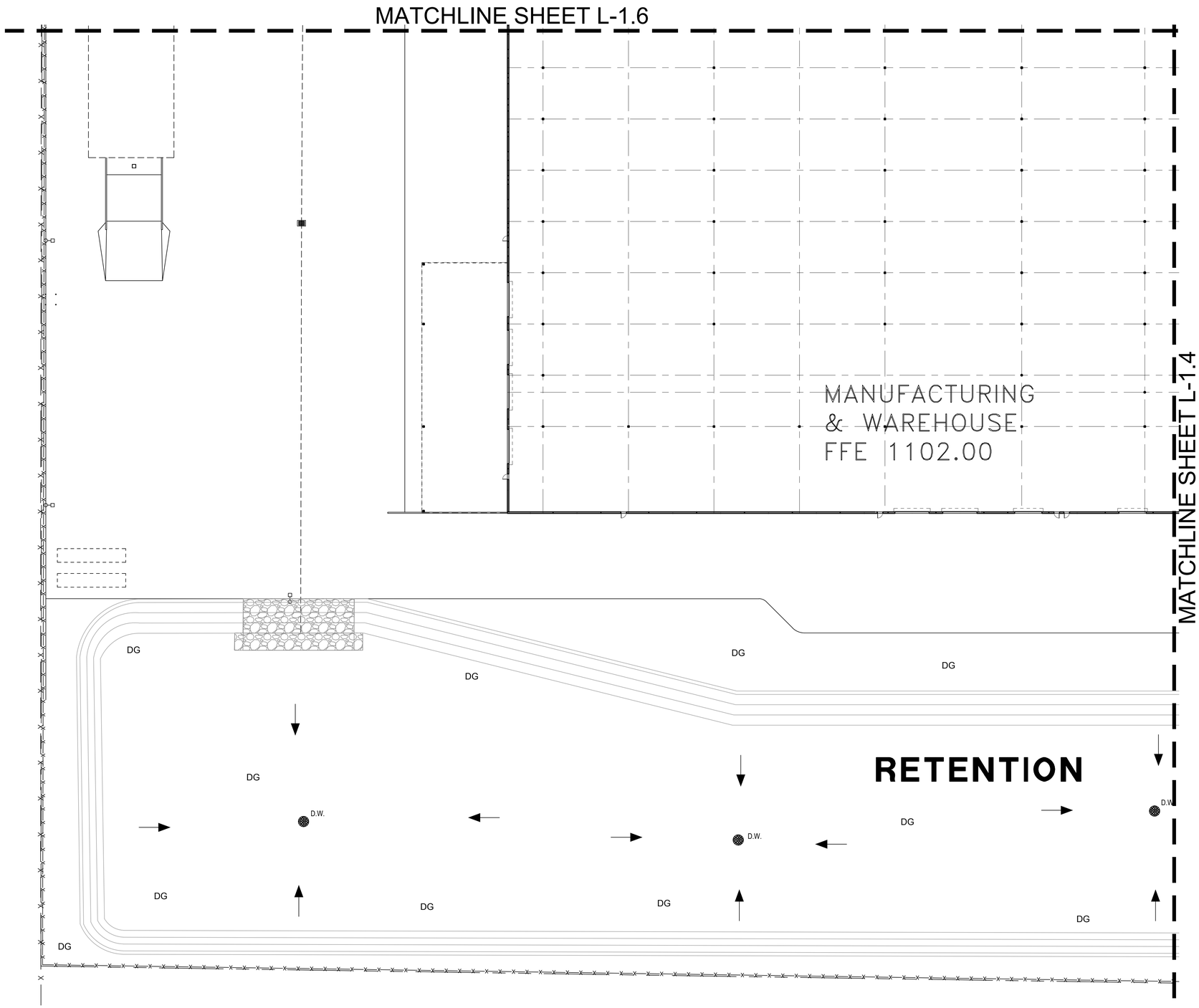
PLANTING PLAN
01.17.20

L-1.4



PLANTING PLAN

SCALE: 1"=30'-0"

0 15' 30' 60' Ref. North

CONCEPTUAL PLANT PALETTE

		TREES	SIZE/ COMMENTS/ QUANTITY
✳		WASHINGTONIA FILIFERA CALIFORNIA FAN PALM	6' CLEAR TRUNK / MATCHED / 11 QTY
⊕		AZT HYBRID PALO BREA PARKINSONIA PRAECOX 'AZT #5'	36" BOX / LOW BREAKING / MATCHED / 34 QTY
△		PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	36" BOX / LOW BREAKING / MATCHED / 15 QTY
+		ULMUS PARVIFLORA EVERGREEN ELM	24" BOX / LOW BREAKING / MATCHED / 31 QTY
•		PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	24" BOX / LOW BREAKING / MATCHED / 38 QTY
		SHRUBS	
⊖		LEUCOPHYLLUM LANGMANIAE RIO BRAVO SAGE	5 GAL, 19 QTY
⊙		JUSTICIA CALIFORNICA CHUPAROSA	5 GAL, 68 QTY
◔		LEUCOPHYLLUM ZYGOPHYLLUM CIMARRON SAGE	5 GAL, 75 QTY
✳		HESPERALO PARVIFOLIA RED YUCCA	5 GAL, 24 QTY
⊕		JOJOBA SIMMONDSIA CHINENSIS	5 GAL, 90 QTY
⊙		RUELLIA PENINSULARIS BAJA RUELLIA	5 GAL, 36 QTY
⊙		OLEA EUROPAEA 'LITTLE OLLIE' LITTLE OLLIE DWARF OLIVE	5 GAL, 236 QTY
		GROUNDCOVERS	
	A	LANTANA 'NEW GOLD' TRAILING YELLOW LANTANA	1 GAL @ 3' O.C., 87 QTY
	B	ROSMARINUS 'HUNTINGTON CARPET' TRAILING ROSEMARY	1 GAL @ 3' O.C., 280 QTY
	C	EREMOPHILA GLABRA 'OUTBACK SUNRISE' OUTBACK SUNRISE EMU	1 GAL @ 4' O.C., 202 QTY
	D	BOUTELOUA 'BLONDE AMBITION' BLONDE AMBITION GRAMA	5 GAL @ 2.5' O.C., 99 QTY
	E	ALOE BARBADENSIS MEDICINAL ALOE	5 GAL @ 3' O.C., 60 QTY
	F	EREMOPHILA CARNOSA 'WINTER BLAZE' WINTER BLAZE EMU	5 GAL @ 3' O.C., 47 QTY
		INERT MATERIALS	
	DG	DECOMPOSED GRANITE ARIZONA GOLD	1/4" MINUS, 2" DEPTH, TYP.
	FG	FRACTURED GRANITE TABLE MESA BROWN	1"-3" SCREENED, 2" DEPTH, TYP.
		STEEL HEADER 3/16" COLD ROLLED STEEL	

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G.K. FLANAGAN ASSOCIATES
4626 N. 44th Street
PHOENIX, AZ 85018
602.912.9691
602.912.9693 fax

2929.COM
DEUTSCH ARCHITECTURE GROUP

REGISTERED LANDSCAPE CERTIFICATE 20086 GREGORY CLANAGAN ARIZONA, U.S.A.

NOT FOR CONSTRUCTION

EXPIRES 12/31/2020

4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
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CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

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PLANTING PLAN
01.17.20

L-1.5

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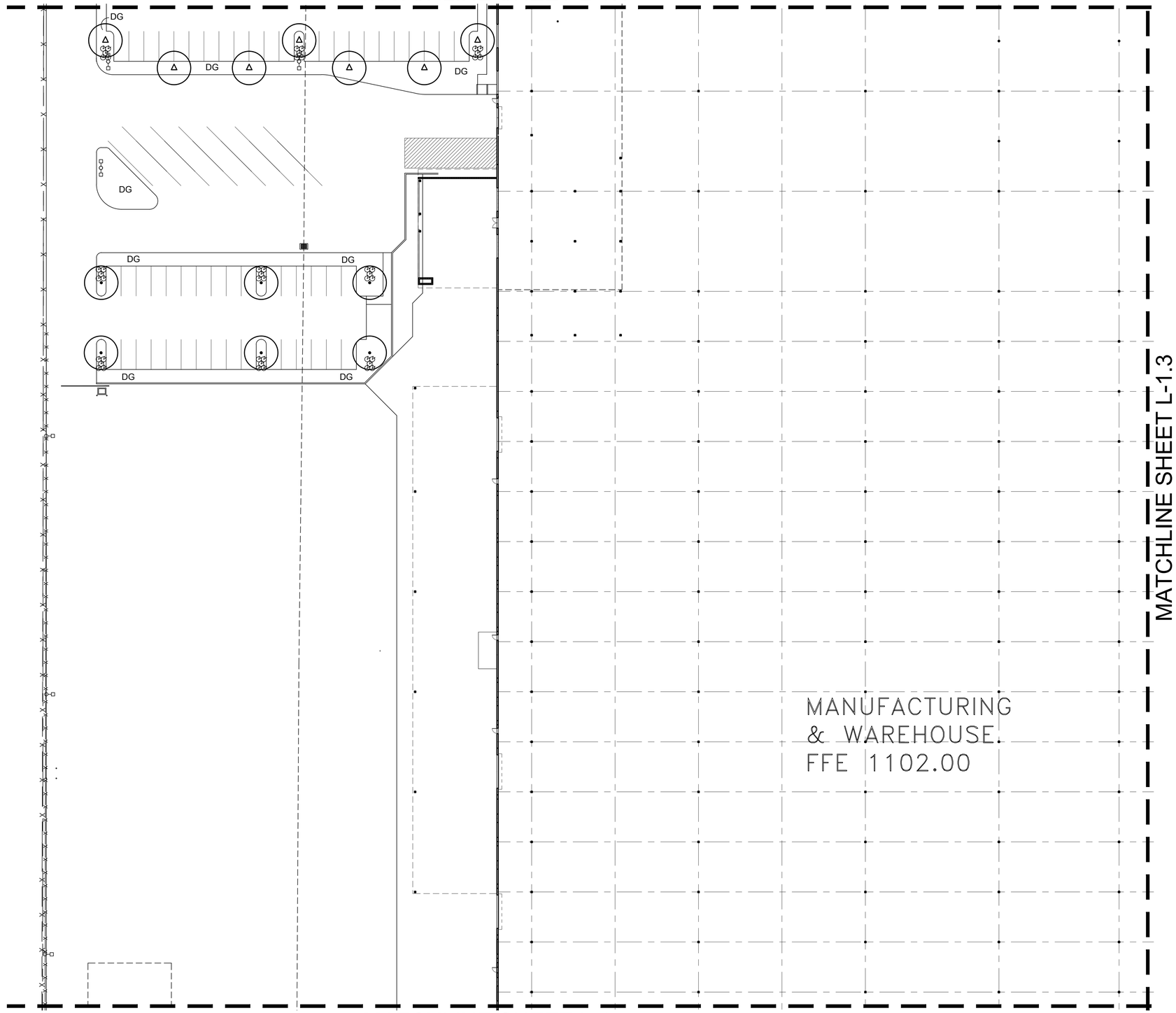

PLANTING PLAN

SCALE: 1"=30'-0"

0 15' 30' 60'

Ref. North

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602 . 912 . 9693 fax

2929.COM
DEUTSCH ARCHITECTURE GROUP
LICENSED LANDSCAPE ARCHITECT CERTIFICATE 20086 GREGORY CLARK FLANAGAN STATE OF ARIZONA U.S.A.
NOT FOR CONSTRUCTION
EXPIRES 12/31/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

PROJECT NO: 18129
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DRAWN BY: DTC
CHK'D BY: DCAL

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PLANTING PLAN
01.17.20

L-1.6

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PREMIER TITLE AGENCY

When Recorded Return to:
Cavco Exchange LLC
3636 N. Central Avenue, Suite 1200
Phoenix, Arizona 85012
Attention: Trent Hall

Escrow No. A-106182

SPECIAL WARRANTY DEED

FOR VALUABLE CONSIDERATION, receipt and sufficiency of which is forever acknowledged, Jacob F. Long, Trustee of the JOHN F. LONG FAMILY REVOCABLE LIVING TRUST under Agreement dated February 26, 2008 (Grantor), conveys to CAVCO EXCHANGE LLC, a Delaware limited liability company (Grantee), the following described real property situated in Maricopa County, Arizona, together with all rights and privileges appurtenant thereto:

See the legal description set forth in Exhibit "1" attached and incorporated by this reference (the Property).

SUBJECT TO all matters of record, as well as all matters that would be shown or discovered by an accurate ALTA/NSPS survey or inspection of the Property, and all laws, ordinances or governmental regulations restricting or regulating the use, occupancy or enjoyment of the Property.

Grantor warrants the title to the Property against all acts of the Grantor and no other.

PURSUANT TO A.R.S. §33-404, THE NAMES AND ADDRESS OF THE BENEFICIARIES OF THE JOHN F. LONG FAMILY REVOCABLE LIVING TRUST ARE MANYA J. LONG, SHIRLEY LONG AND JACOB F. LONG, 1118 E. MISSOURI AVENUE, SUITE A, PHOENIX, AZ 85014.

DATED this 13th day of August, 2019.

[signature page follows]

GRANTOR:

JOHN F. LONG FAMILY REVOCABLE LIVING TRUST under Agreement dated February 26, 2008

By _____
Jacob F. Long, Its Trustee

STATE OF ARIZONA)
) ss.
County of Maricopa)

The foregoing instrument was acknowledged before me this 13th day of August, 2019, by Jacob F. Long, solely in his capacity as Trustee of JOHN F. LONG FAMILY REVOCABLE LIVING TRUST under Agreement dated February 26, 2008, on behalf of the trust.

_____
Notary Public

My Commission expires:

10·13·2019

VALERIE J. RIEDLER
Notary Public - State of Arizona
MARICOPA COUNTY
My Commission Expires Oct. 13, 2019

EXHIBIT "1"
LEGAL DESCRIPTION OF PROPERTY

Lot 4, MINOR LAND DIVISION FOR CENTERPOINT LOGISTICS PARK-P/D WEST, according to the plat of record in the Office of the County Recorder of Maricopa County, Arizona recorded in Book ____ of Maps, Page ____.

Also described as:

A portion of Lot 3 as shown on the Final Plat of CenterPoint Logistics Park-P/D West filed as Book 1399, Page 6 records of Maricopa County, Arizona being situated within a portion of the Southeast Quarter of Section 27, Township 3 North, Range 1 West of the Gila and Salt River Meridian, Maricopa County, Arizona, being more particularly described as follows:

COMMENCING at a found brass cap in hand hole accepted as the South Quarter corner of said Section 27 from which a found aluminum cap accepted as the North Quarter corner of said Section 27 thereof bears North 00°03'38" East, 5269.67 feet;

Thence North 00 degrees 03 minutes 38 seconds East, 747.24 feet along the west line of said Southeast Quarter of Section 27 to the Southwest corner of Lot 2 of said Final Plat;

Thence leaving said west line, South 89 degrees 01 minutes 07 seconds East, 600.08 feet along the south line of said Lot 2 to the Southeast corner of said Lot 2;

Thence leaving said south line, North 00 degrees 03 minutes 38 seconds East, 298.00 feet along the east line of said Lot 2 to the POINT OF BEGINNING;

Thence continuing along said east line, North 00 degrees 03 minutes 38 seconds East, 1522.00 feet to the south Right-of-Way line of Joe R. Ramirez Road as shown on said Final Plat to a non-tangent curve, concave northeasterly, having a radius of 60.00 feet;

THENCE THE FOLLOWING FIVE (5) COURSES ALONG SAID SOUTH LINE;

Thence northeasterly along said curve, through a central angle of 35 degrees 07 minutes 59 seconds, an arc length of 36.79 feet to a point of reverse curvature, concave northeasterly, having a radius of 60.00 feet;

Thence northeasterly along said curve, through a central angle of 41 degrees 24 minutes 35 seconds, an arc length of 43.36 feet to a tangent line;

Thence South 83 degrees 39 minutes 46 seconds East, 560.24 feet to the beginning of a tangent curve, concave northeasterly, having a radius of 2030.00 feet;

Thence southeasterly along said curve, through a central angle of 05 degrees 28 minutes 52 seconds, an arc length of 194.19 feet to a tangent line;

Thence South 89 degrees 08 minutes 38 seconds East, 324.68 feet;

Thence leaving said south line, South 00 degrees 03 minutes 38 seconds West, 1481.75 feet;

Thence North 89 degrees 08 minutes 38 seconds West, 1151.00 feet to a point on the aforesaid east line of said Lot 2 being the POINT OF BEGINNING.

A.L.T.A./N.S.P.S. LAND TITLE SURVEY

OF

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 3 NORTH, RANGE 1 WEST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

TITLE REFERENCE

THIS SURVEY IS BASED UPON THE FOURTH AMENDED TITLE COMMITMENT PREPARED BY PREMIER TITLE AGENCY ORDER NO. A-106182, DATED MAY 2, 2019.

HILGARTWILSON, LLC HAS RELIED SOLELY UPON THE INFORMATION CONTAINED WITHIN THE TITLE COMMITMENT AND SCHEDULE B DOCUMENTS PROVIDED BY PREMIER TITLE AGENCY AS LISTED HEREON. HILGARTWILSON, LLC AND BRIAN J. BENEDICT (RLS) MAKE NO STATEMENT AS TO THE ACCURACY OR COMPLETENESS OF THE SUBJECT REPORT.

LEGAL DESCRIPTION

A PORTION OF LOT 3 AS SHOWN ON THE FINAL PLAT OF CENTERPOINT LOGISTICS PARK-P/D WEST FILED AS BOOK 1399, PAGE 6 RECORDS OF MARICOPA COUNTY, ARIZONA BEING SITUATED WITHIN A PORTION OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 3 NORTH, RANGE 1 WEST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND BRASS CAP IN HAND HOLE ACCEPTED AS THE SOUTH QUARTER CORNER OF SAID SECTION 27 FROM WHICH A FOUND ALUMINUM CAP ACCEPTED AS THE NORTH QUARTER CORNER OF SAID SECTION 27 THEREOF BEARS NORTH 00°03'38"EAST, 5269.67 FEET;
THENCE NORTH 00 DEGREES 03 MINUTES 38 SECONDS EAST, 747.24 FEET ALONG THE WEST LINE OF SAID SOUTHEAST QUARTER OF SECTION 27 TO THE SOUTHWEST CORNER OF LOT 2 OF SAID FINAL PLAT;
THENCE LEAVING SAID WEST LINE, SOUTH 89 DEGREES 01 MINUTES 07 SECONDS EAST, 600.08 FEET ALONG THE SOUTH LINE OF SAID LOT 2 TO THE SOUTHEAST CORNER OF SAID LOT 2;
THENCE LEAVING SAID SOUTH LINE, NORTH 00 DEGREES 03 MINUTES 38 SECONDS EAST, 298.00 FEET ALONG THE EAST LINE OF SAID LOT 2 TO THE **POINT OF BEGINNING**;
THENCE CONTINUING ALONG SAID EAST LINE, NORTH 00 DEGREES 03 MINUTES 38 SECONDS EAST, 1522.00 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF JOE R. RAMIREZ ROAD AS SHOWN ON SAID FINAL PLAT TO A NON-TANGENT CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 60.00 FEET;
THENCE THE FOLLOWING FIVE (5) COURSES ALONG SAID SOUTH LINE;
THENCE NORTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 35 DEGREES 07 MINUTES 59 SECONDS, AN ARC LENGTH OF 36.79 FEET TO A POINT OF REVERSE CURVATURE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 60.00 FEET;
THENCE NORTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 41 DEGREES 24 MINUTES 35 SECONDS, AN ARC LENGTH OF 43.36 FEET TO A TANGENT LINE;
THENCE SOUTH 83 DEGREES 39 MINUTES 46 SECONDS EAST, 560.24 FEET TO THE BEGINNING OF A TANGENT CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 2030.00 FEET;
THENCE SOUTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 05 DEGREES 28 MINUTES 52 SECONDS, AN ARC LENGTH OF 194.19 FEET TO A TANGENT LINE;
THENCE SOUTH 89 DEGREES 08 MINUTES 38 SECONDS EAST, 324.68 FEET;
THENCE LEAVING SAID SOUTH LINE, SOUTH 00 DEGREES 03 MINUTES 38 SECONDS WEST, 1481.75 FEET;
THENCE NORTH 89 DEGREES 08 MINUTES 38 SECONDS WEST, 1151.00 FEET TO A POINT ON THE AFORESAID EAST LINE OF SAID LOT 2 BEING THE **POINT OF BEGINNING**.

SCHEDULE "B" - EXCEPTIONS (#)

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET.

2. ANY ACTION BY THE COUNTY ASSESSOR AND/OR TREASURER, ALTERING THE CURRENT OR PRIOR TAX ASSESSMENT, SUBSEQUENT TO THE DATE OF THE POLICY OF TITLE INSURANCE

3. INTENTIONALLY DELETED – TAXES AND ASSESSMENTS COLLECTIBLE BY THE COUNTY TREASURER, SECOND INSTALLMENT A LIEN PAYABLE BUT NOT YET DUE FOR THE YEAR 2018.

4. RESERVATIONS OR EXCEPTIONS IN PATENT FROM THE UNITED STATES OF AMERICA RECORDED IN BOOK 106 OF DEEDS, PAGE 280 OR IN ACTS AUTHORIZING THE ISSUANCE THEREOF. **(AFFECTS-NOTHING PLOTTABLE)**

5. WATER RIGHTS, CLAIMS OR TITLE TO WATER, AND AGREEMENTS, COVENANTS, CONDITIONS OR RIGHTS INCIDENT THERETO, WHETHER OR NOT SHOWN BY THE PUBLIC RECORDS. THIS EXCEPTION IS NOT LIMITED BY REASON OF THE DISCLOSURE OF ANY MATTER RELATING TO WATER RIGHTS AS MAY BE SET FORTH ELSEWHERE IN SCHEDULE B.

6. EASEMENT FOR ELECTRIC TRANSMISSION LINE, AND RIGHTS INCIDENT THERETO, TERMS, CONDITIONS, LIABILITIES AND/OR OBLIGATIONS, AS SET FORTH IN INSTRUMENT RECORDED IN BOOK 200 OF DEEDS, PAGE 505, AS AFFECTED BY QUIT CLAIM DEED RECORDED IN DOCKET 2241, PAGE 586 AND PARTIAL RELEASE RECORDED IN DOCUMENT NO. 2018-524116. **(OUTSIDE SUBJECT PROPERTY)**

7. EASEMENT FOR RIGHT OF WAY FOR TELEPHONE AND TELEGRAPH LINES, AND RIGHTS INCIDENT THERETO, TERMS, CONDITIONS, LIABILITIES AND/OR OBLIGATIONS, AS SET FORTH IN INSTRUMENT RECORDED IN BOOK 56 OF MISCELLANEOUS, PAGE 444. **(INDETERMINATE LOCATION-NOTHING PLOTTABLE)**

8. RECORDED DISCLOSURE FOR TERRITORY IN THE VICINITY OF A MILITARY AIRPORT, RECORDED IN DOCUMENT NO. 2001-743413, WHICH RECITES THAT THE SUBJECT PROPERTY MAY BE SUBJECT TO INCREASED NOISE AND ACCIDENT POTENTIAL. **(AFFECTS-NOTHING PLOTTABLE)**

9. EASEMENTS, RESTRICTIONS, RESERVATIONS, CONDITIONS, SET BACK LINES AND ALL OTHER MATTERS AS SET FORTH ON THE PLAT OF CENTERPOINT LOGISTICS PARK – P/D WEST, RECORDED IN BOOK 1399 OF MAPS, PAGE 6 AND AFFIDAVIT OF CORRECTION RECORDED IN DOCUMENT NO. 2018-785791, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN. **(SHOWN)**

10. RIGHTS OF PARTIES IN POSSESSION.
NOTE: THIS EXCEPTION MAY BE MADE MORE SPECIFIC UPON OUR EXAMINATION OF DOCUMENTS, WHICH ENTITLE THE OCCUPANTS TO POSSESSION.

11. THE FOLLOWING MATTERS AS DISCLOSED BY AN INSPECTION OF SAID LAND:
A. FARM ROADS THROUGHOUT THE PROPERTY.
B. IRRIGATION DITCHES THROUGHOUT THE PROPERTY.
(SHOWN)

12. NEW ITEM – TAXES AND ASSESSMENTS COLLECTIBLE BY THE COUNTY TREASURER, A LIEN NOT YET DUE AND PAYABLE FOR THE YEAR 2019.

13. NEW ITEM – EASEMENT FOR ELECTRIC LINES AND APPURTENANT FACILITIES, AND RIGHTS INCIDENT THERETO, TERMS, CONDITIONS, LIABILITIES AND/OR OBLIGATIONS, AS SET FORTH IN INSTRUMENT RECORDED IN DOCKET 10733, PAGE 1370. **(NOT SHOWN-OUTSIDE SUBJECT PROPERTY-POSSIBLE ERROR IN LEGAL DESCRIPTION)**

SCHEDULE "B" - EXCEPTIONS CONTINUED (#)

14. NEW ITEM – LIABILITIES AND OBLIGATION IMPOSED UPON SAID LAND BY REASON OF ITS INCLUSION WITHIN CENTERPOINT LOGISTICS PARK – P/D WEST ASSOCIATION.

15. NEW ITEM – RESTRICTIONS, CONDITIONS, COVENANTS, RESERVATIONS, LIABILITIES AND OBLIGATIONS, INCLUDING BUT NOT LIMITED TO ANY RECITALS CREATING EASEMENTS OR PARTY WALLS, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN CONTAINED IN INSTRUMENT RECORDED IN DOCUMENT NO. 2019-89939. **(AFFECTS-NOTHING PLOTTABLE)**

16. NEW ITEM – RESTRICTIONS, CONDITIONS, COVENANTS, RESERVATIONS, INCLUDING BUT NOT LIMITED TO ANY RECITALS CREATING EASEMENTS, LIABILITIES, OBLIGATIONS OR PARTY WALLS, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN CONTAINED IN INSTRUMENT RECORDED IN DOCUMENT NO. 2019-310970. **(AFFECTS-NOTHING PLOTTABLE)**

BASIS OF BEARING

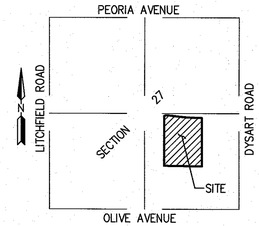
BASIS OF BEARING IS N00°03'38"E ALONG THE WEST LINE OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 3 NORTH, RANGE 1 WEST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, BETWEEN THE MONUMENTS AS SHOWN HEREON.

FLOOD ZONE DESIGNATION

THE SUBJECT PROPERTY LIES WITHIN SHADED ZONE "X" WITH A DEFINITION OF: AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD. DESIGNATION DETERMINED BY FEMA FLOOD ZONE MAP 04013C1680L, PANEL NUMBER 1680 OF 4425, EFFECTIVE DATE OCTOBER 16, 2013.

REFERENCE DOCUMENTS

1. FINAL PLAT PER BOOK 1139, PAGE 26 MCR
2. MAP OF DEDICATION PER BOOK 1243, PAGE 13 MCR
3. FINAL PLAT PER BOOK 1399, PAGE 06 MCR



VICINITY MAP

NOT TO SCALE

OWNER/CLIENT

CAVCO INDUSTRIES, INC., A DELAWARE CORPORATION
32636 N CENTRAL AVE., SUITE 1200
PHOENIX, ARIZONA 85012
CONTACT: STEVEN K. LIKE

SURVEYOR

HILGARTWILSON, LLC
2141 E. HIGHLAND AVE., STE. 250
PHOENIX, ARIZONA 85016
PHONE: (602) 490-0535
CONTACT: BRIAN J. BENEDICT, RLS

NOTES

1. AREA IS 1,729,983 SQ. FT. OR 39.715 ACRES MORE OR LESS.
2. THIS SURVEY REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES. THE SURVEYOR MAKES NO GUARANTEE THAT ALL OF THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION PROVIDED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED UNDERGROUND UTILITIES. (TABLE A, ITEM #11, & 21 IN REFERENCE TO VISIBLE SURFACE UTILITIES)
3. DECLARATION IS MADE TO THE ORIGINAL PURCHASER OF SURVEY AND ALL PARTIES LISTED IN THE SURVEYORS CERTIFICATION. IT IS NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS WITHOUT WRITTEN PERMISSION OF THE SURVEYOR.
4. THIS SURVEY IS VALID ONLY WHEN BEARING SEAL AND SIGNATURE OF SURVEYOR.
5. THIS SURVEY IS BASED ON FIELD WORK LAST PERFORMED BY HILGARTWILSON, LLC IN MAY, 2019. SITE CONDITIONS THAT MAY HAVE CHANGED SUBSEQUENT TO FIELD WORK WILL NOT BE REFLECTED HEREON.
6. THE INTENT OF THIS SURVEY IS NOT TO CREATE AN ILLEGAL LAND SPLIT PER THE APPLICABLE ARIZONA LAW AND/OR STATUTES.
7. THE POTENTIAL BUYER(S) OF THIS SITE IS HEREBY ADVISED THAT THIS SITE MAY BE SUBJECT TO ARIZONA PLATTING LAWS PRIOR TO THE DEVELOPMENT OF THIS SITE.
8. SITE ADDRESS IS UNKNOWN AT THE TIME OF SURVEY (TABLE A, ITEM #2)
9. THERE IS OBSERVED EVIDENCE OF CURRENT EARTH MOVING WORK ALONG JOE R. RAMIREZ ROAD. (TABLE A ITEM #16)

SURVEYOR'S CERTIFICATION:

TO:
1. CAVCO INDUSTRIES, INC., A DELAWARE CORPORATION
2. JACOB F. LONG, TRUSTEE OF THE JOHN F. LONG FAMILY REVOCABLE LIVING TRUST DATED FEBRUARY 26, 2008
3. PREMIER TITLE AGENCY
4. FIRST AMERICAN TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR A.L.T.A./N.S.P.S. LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 11, 13, 16 & 21 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED IN MAY, 2019.

BRIAN J. BENEDICT
RLS# 32222
HILGARTWILSON, LLC
2141 E. HIGHLAND AVE., STE. 250
PHOENIX, ARIZONA 85016
P: 602.490.0535
bbenedict@hilgartwilson.com

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
32222
BRIAN J.
BENEDICT
Date Signed 6-7-19
ARIZONA U.S.A.

NOTE:
A.R.S. 32-151 STATES THAT THE USE OF THE WORD "CERTIFY" OR "CERTIFICATION" BY A PERSON OR FIRM THAT IS REGISTERED OR CERTIFIED BY THE BOARD IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING FACTS OR FINDINGS THAT ARE SUBJECT OF THE CERTIFICATION AND DOES NOT CONSTITUTE AN EXPRESS OR IMPLIED WARRANTY OR GUARANTEE.

REV.:

HILGARTWILSON
ENGINEER | PLAN | SURVEY | MANAGE
2141 E. HIGHLAND AVE., STE. 250 | P: 602.490.0535 / F: 602.368.2436
PHOENIX, AZ 85016
www.hilgartwilson.com

CAVCO
NORTHWEST OF THE NORTHWEST CORNER OF DYSART ROAD & OLIVE AVENUE
EL MIRAGE, ARIZONA

A.L.T.A./N.S.P.S. LAND TITLE SURVEY

HILGARTWILSON	
PROJ NO.:	1680
DATE:	MAY 2019
SCALE:	NTS
DRAWN:	DSP
DESIGNED:	HW
APPROVED:	KJP

DWG. NO.
SV-1
SHT. 1 OF 2

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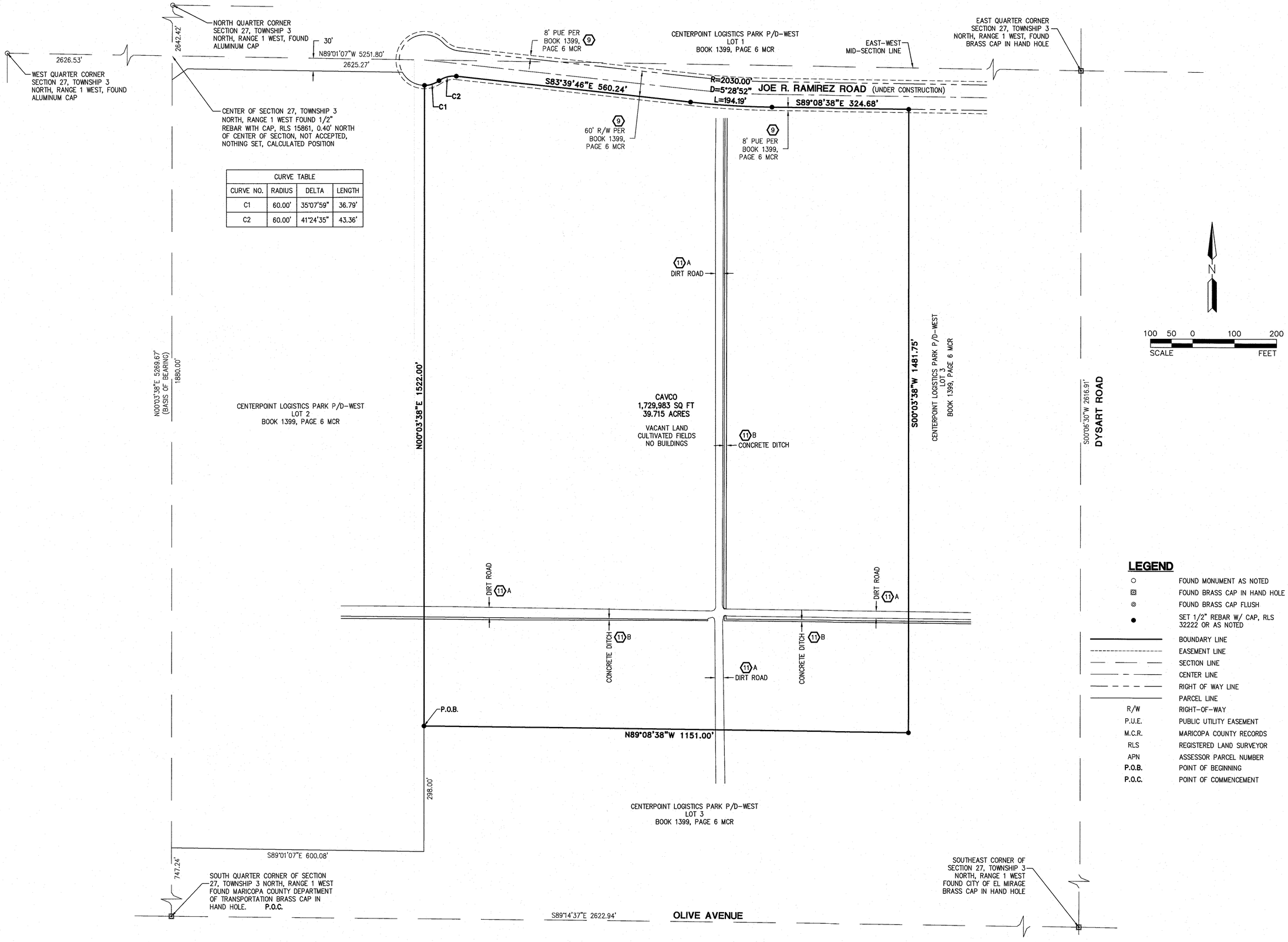

CURVE TABLE			
CURVE NO.	RADIUS	DELTA	LENGTH
C1	60.00'	35°07'59"	36.79'
C2	60.00'	41°24'35"	43.36'

LEGEND

○	FOUND MONUMENT AS NOTED
⊠	FOUND BRASS CAP IN HAND HOLE
◎	FOUND BRASS CAP FLUSH
●	SET 1/2" REBAR W/ CAP, RLS 32222 OR AS NOTED
———	BOUNDARY LINE
- - - -	EASEMENT LINE
———	SECTION LINE
———	CENTER LINE
———	RIGHT OF WAY LINE
———	PARCEL LINE
R/W	RIGHT-OF-WAY
P.U.E.	PUBLIC UTILITY EASEMENT
M.C.R.	MARICOPA COUNTY RECORDS
RLS	REGISTERED LAND SURVEYOR
APN	ASSESSOR PARCEL NUMBER
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT

REV.:

HILGARTWILSON
ENGINEER | PLAN | SURVEY | MANAGE
2141 E. HIGHLAND AVE. STE 250 | P: 602.490.0535 / F: 602.368.2436
PHOENIX, AZ 85016 www.hilgartwilson.com

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
32222
BRIAN J.
BENEDICT
Date Signed 6-7-19
ARIZONA U.S.A.

CAVCO

NORTHWEST OF THE NORTHWEST CORNER OF DYSART ROAD & OLIVE AVENUE
EL MIRAGE, ARIZONA

A.L.T.A./N.S.P.S. LAND TITLE SURVEY

HILGARTWILSON
PROJ NO.: 1680
DATE: MAY 2019
SCALE: NTS
DRAWN: DSP
DESIGNED: HW
APPROVED: KJP

DWG. NO.
SV-2
SHT. 2 OF 2

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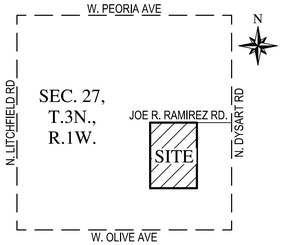
CAVCO WEST

PRELIMINARY GRADING, DRAINAGE, WATER & SEWER PLAN
EL MIRAGE, ARIZONA

A PORTION OF SECTION 27, TOWNSHIP 3 NORTH, RANGE 1 WEST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



VICINITY MAP
N.T.S.

OWNER / DEVELOPER
CAVCO WEST
1366 SOUTH LITCHFIELD ROAD
BUILDING 6
GOODYEAR, ARIZONA 85338
CONTACT: PAUL DeROO
PHONE: (602) 283-9316
FAX: (623) 882-2810

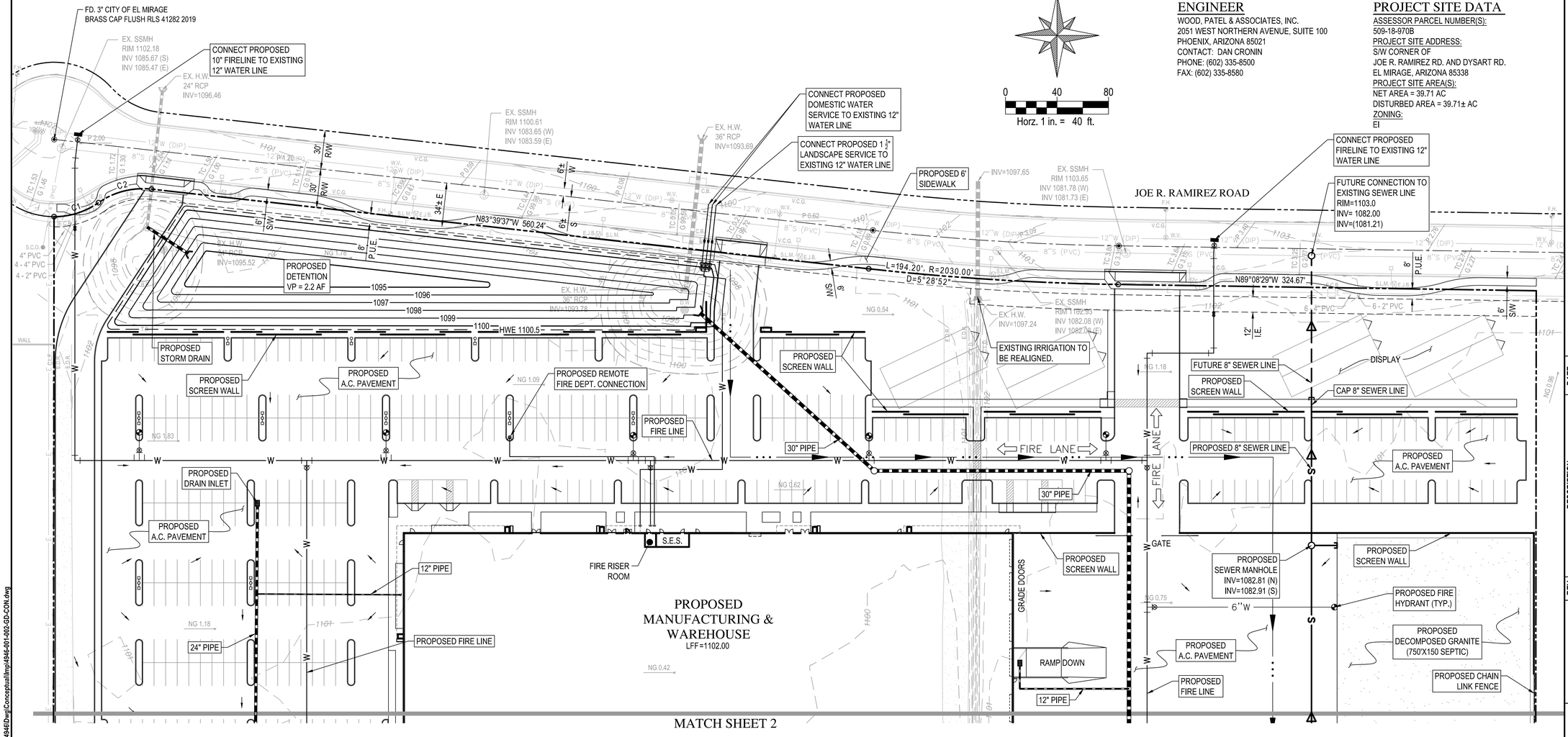
ARCHITECT
DEUTSCH ARCHITECTURE GROUP
4600 E INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
CONTACT: DUSTIN CHISUM
PHONE: (602) 840-2929

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

PROJECT SITE DATA
ASSESSOR PARCEL NUMBER(S):
509-18-970B
PROJECT SITE ADDRESS:
S/W CORNER OF
JOE R. RAMIREZ RD. AND DYSART RD.
EL MIRAGE, ARIZONA 85338
PROJECT SITE AREA(S):
NET AREA = 39.71 AC
DISTURBED AREA = 39.71± AC
ZONING:
EI

N

0 40 80
Horz. 1 in. = 40 ft.



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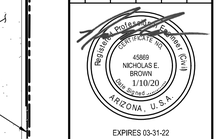
CAVCO WEST
PRELIMINARY GRADING, DRAINAGE, WATER & SEWER PLAN
EL MIRAGE, ARIZONA

REV	DESCRIPTION	DATE



EXPIRES 03-31-22

SCALE (HORIZ.)	1" = 40'
SCALE (VERT.)	N/A
DATE	01/10/2020
JOB NUMBER	184946
SHEET	1 OF 3

CHECKED BY: DC DESIGNED BY: DC DRAFTED BY: JRS

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N

0 40 80

Horz. 1 in. = 40 ft.

MATCH SHEET 1

MATCH SHEET 3

PROPOSED MANUFACTURING & WAREHOUSE
LFF=1102.00

24" PIPE
STAGING
PROPOSED DRAIN INLET
6"W
COVERED PATIO
GATE
PROPOSED SCREEN WALL
NG 0.09
FIRE LANE
30" PIPE
PROPOSED CHAIN LINK FENCE
CANOPY
PROPOSED A.C. PAVEMENT
PROPOSED DRAIN INLET
PROPOSED FIRE HYDRANT (TYP.)
6"W
PROPOSED FIRE LINE
NG 98.89
36" PIPE
PROPOSED COVERED CONCRETE PAD
FIRE LANE
12" PIPE
S00°03'47"W 1820.00' (M)
S00°03'38"W 1820.00' (R)
1522.00' (M&R)

NG 98.58
NG 99.42
NG 98.13

GRADE DOORS
36" PIPE
PROPOSED FIRE LINE
NG 0.16
INV = 1091.54
PROPOSED 6" SEWER LINE
CANOPY
FIRE LANE
COVERED PATIO
PROPOSED A.C. PAVEMENT
CANOPY
NG 99.29
INV = 1095.06
PROPOSED 6" SEWER LINE
36" PIPE
PROPOSED FIRE LINE
PROPOSED 8" SEWER LINE
PROPOSED FIRE HYDRANT (TYP.)
PROPOSED SEWER MANHOLE INV=1084.15 (N) INV=1084.25 (S)
PROPOSED DECOMPOSED GRANITE (750'X150 SEPTIC)
PROPOSED 8" SEWER LINE
PROPOSED FIRE HYDRANT (TYP.)
PROPOSED CHAIN LINK FENCE
PROPOSED SEWER MANHOLE INV=1085.52 (N) INV=1085.62 (S)
PROPOSED 8" SEWER LINE
750'X150 FUTURE SEPTIC

N00°03'47"E 1481.75' (M)
N00°03'38"E 1481.75' (R)

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In Maricopa County: (602) 263-1100

CAVCO WEST

PRELIMINARY GRADING, DRAINAGE, WATER & SEWER PLAN

EL MIRAGE, ARIZONA

REV	DESCRIPTION	DATE

Registered Professional Engineer
CERTIFICATE NO.
45869
NICHOLAS E. BROWN
1/10/20
ARIZONA, U.S.A.

EXPIRES 03-31-22

SCALE (HORIZ.)	1" = 40'
SCALE (VERT.)	N/A
DATE	01/10/2020
JOB NUMBER	184946
SHEET	2 OF 3

CHECKED BY: DC DESIGNED BY: DC DRAFTED BY: JRS

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N

0 40 80

Horz. 1 in. = 40 ft.

MATCH SHEET 2

RAMP DOWN

PROPOSED DRAIN INLET

6"W

PROPOSED CHAIN LINK FENCE

36" PIPE

FIRE LANE

PROPOSED FIRE LINE

PROPOSED A.C. PAVEMENT

PROPOSED MANUFACTURING & WAREHOUSE
LFF=1102.00

INV = 1090.67

GRADE DOORS

PROPOSED 6" SEWER LINE

PROPOSED 8" SEWER LINE

PROPOSED FIRE HYDRANT (TYP.)

PROPOSED SEWER MANHOLE
INV=1086.38 (N)
INV=1086.48 (W)

PROPOSED A.C. PAVEMENT

PROPOSED FIRE LINE

INV=1096.46

24" CMP INV=1096.40

36" CMP INV=1094.68

36" CMP INV=1094.34

PROPOSED RIP RAP APRON

PROPOSED FIRE HYDRANT (TYP.)

PROPOSED CHAIN LINK FENCE

36" PIPE

750'X150 FUTURE SEPTIC

PROPOSED RETENTION
VR = 6.8 AF
VP = 9.0 AF

PROPOSED DRYWELL

PROPOSED DRYWELL

PROPOSED DRYWELL

PROPOSED DRYWELL

HWE 1096.5

S89°08'29"E 1150.99' (M)
S89°08'38"E 1151.00'(R)

PROPOSED CHAIN LINK FENCE

298.00' (M&R)

APN: 509-18-970A
CENTERPOINT
LOGISTICS PARK
P/D WEST LOT 3 MLD

NG 97.53 NG 96.81 NG 96.90 NG 96.55 NG 98.40 NG 97.93 NG 96.58 NG 96.22 NG 96.18 NG 96.30 NG 96.64 NG 96.27 NG 96.58 NG 96.26 NG 95.82 NG 95.61 NG 95.80

1098 1097 1096 1095 1094 1093 1092 1091 1090

C.L.F. E.D.R. C.L.D. T.B. B.E.

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EL MIRAGE, ARIZONA

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO.
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NICHOLAS E. BROWN
1/10/20
ARIZONA, U.S.A.

EXPIRES 03-31-22

SCALE (HORIZ.)	1" = 40'
SCALE (VERT.)	N/A
DATE	01/10/2020
JOB NUMBER	184946
SHEET	3 OF 3

CHECKED BY: DC DESIGNED BY: DC DRAFTED BY: JRS

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PHASE I ENVIRONMENTAL SITE ASSESSMENT

Parcel 509-18-970
Joe R. Ramirez Road and North Dysart Road
El Mirage, Arizona 85335

Prepared for:
Cavco Industries, Inc.
3636 N. Central Ave. Ste. 1200
Phoenix, Arizona 85012

Prepared by:
Strata Environmental Services, Inc.
110 Perimeter Park Road, Suite E
Knoxville, Tennessee 37922

December 2018

Strata ENVIRONMENTAL

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COMMON ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Description
AAI	All Appropriate Inquiry
ACM	Asbestos-Containing Material
AST	Aboveground Storage Tank
bgs	Below Ground Surface
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS-NFRAP	Comprehensive Environmental Response, Compensation, and Liability Information System – No Further Remedial Action Planned
CORRACTS	Corrective Action Report
ECHO	Enforcement & Compliance History Information
EDR	Environmental Data Resources, Inc.
EDR MGP	EDR Manufactured Gas Plant – Suspected coal gas plants operating from the 1800s to 1950s to produce gas using whale oil, rosin, coal, or a mixture of coal, oil, and water.
EDR Hist Auto	EDR Historic Auto Gas Stations – Suspected gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.
EDR Hist Cleaner	EDR Historic Dry Cleaner – Suspect dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.
ENG CONTROLS	Engineering Controls
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
FINDS	Facility Index System/Facility Registry System
HIST	Historical
HMIRS	Hazardous Materials Incident Reporting System
HWS	Hazardous Waste Site
INST CONTROL	Institutional Controls
LUST	Leaking Underground Storage Tank
MANIFEST	Hazardous Waste Manifest
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
OSHA	Occupational Health and Safety Administration
RCRA-CESQG	Resource Conservation Recovery Act – Conditionally Exempt Small Quantity Generator
RCRA-LQG	Resource Conservation Recovery Act – Large Quantity Generator
RCRA NonGen/NLR	Resource Conservation Recovery Act – Non Generators/No Longer Regulated
RCRA-SQG	Resource Conservation Recovery Act – Small Quantity Generator
RCRA-TSDF	Resource Conservation Recovery Act – Treatment Storage and Disposal
RGA	Recovered Government Archives
SHWS	State Hazardous Waste Site
SWF/LF	Solid Waste Facility/Landfill
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program

SECTION 1.0 INTRODUCTION AND EXECUTIVE SUMMARY

Cavco Industries, Inc., (Cavco) authorized Strata Environmental Services, Inc. (Strata) to perform a Phase I Environmental Site Assessment (ESA) of the real property of Parcel 509-18-970 located at Joe R. Ramirez Road and North Dysart Road, El Mirage, Maricopa County, Arizona (the Property). John F. Long Family Revocable Living Trust owns the Property. Cavco will only operate on a section of Parcel 509-18-970 (parent parcel) that runs 1400 feet south and 1300 feet east from the northwest corner of the parcel. For the purposes of the ESA, Strata considers the Property to be only those areas that will be under Cavco's operational control as further described in Section 2.0. Mr. James G. Maynes of Strata, conducted the site reconnaissance on December 13, 2018, and fulfilled other necessary research, interviews, and reviews. Mr. Steven Like, Cavco Senior Vice President and Mr. Jacob F. Long, John F. Long Family Revocable Living Trust Trustee (Site Contacts), provided knowledge of the uses and physical characteristics of the Property.

1.1 Purpose

The primary purpose of the Phase I ESA is to identify recognized environmental conditions (RECs) in connection with the Property in conformance with American Society for Testing and Materials (ASTM) Practice E1527-13, and the U.S. Environmental Protection Agency (EPA) Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312). ASTM defines REC as the "presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release [as defined by CERCLA 42 U.S.C. § 9601] to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." RECs in connection with a property include the presence and/or migration of hazardous substances or petroleum products in any form including solid and liquid at the surface or subsurface, and vapor in the subsurface. The definition of an REC does not include de minimis conditions that generally do not present a material risk of harm to public health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The Phase I ESA also serves to identify any known or suspect controlled recognized environmental conditions (CRECs), or historical recognized environmental conditions (HRECs) in connection with the Property. ASTM defines CREC as an "REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by the regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls." ASTM defines an HREC as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority (using current criteria), or meeting unrestricted use criteria established by the regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)".

1.2 Findings and Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527 of the Vacant Lot within CenterPoint Logistics Park located at Joe R. Ramirez Road and North Dysart Road, El Mirage, Maricopa County, Arizona, the Property. Any exceptions to, or deletions from, this practice are described in Sections 2 through 5 of this report. This assessment has revealed no evidence of recognized environmental conditions, controlled recognized environmental conditions, or historical recognized environmental conditions in connection with the Property.

1.3 Non-Scope Considerations

The scope of this ESA did not include any environmental aspects in addition to those required by ASTM and AAI (non-scope considerations).

SECTION 2.0 PROPERTY DESCRIPTION

The Property is located in the Bumstead community within city limits of El Mirage, Arizona, approximately three miles southwest of downtown. A portion of a U.S. Geological Survey Topographic Map in Figure 1, located in Appendix A, shows the location and topographic features of the Property. Figure 2 in Appendix A presents the property layout and surrounding land use. Appendix B includes photographs taken during the site reconnaissance. Table 1 summarizes pertinent Property information.

Table 1. Property Information

Feature	Description
Property size:	41.78
Property shape:	Rectangular
Legal description:	Parcel Number 509-18-970, as recorded with the Maricopa County Assessor
Property topography:	Relatively flat with a gentle slope to the southeast
Groundwater flow:	Generally to the southeast toward the Aqua Fria River
Surface water features:	Concrete irrigation channels flow east and south along the dirt roads on or border the Property; in the rose fields, water flows south through the rows of rose bushes
Building description and use:	Vacant/Undeveloped
Building size:	N/A
Building age:	N/A
Building construction:	N/A
Other structures:	N/A
Heating system(s):	N/A
Cooling system(s):	N/A
Landscaped or unimproved areas:	Entire Property is agricultural rose fields with the exception of dirt access roads
On-site roads/ parking/paved areas:	Dirt access roads border the existing agricultural fields
Potable water source:	N/A
Wells on-site:	None observed by Strata or reported by the Site Contacts
Sanitary sewer:	N/A
Storm sewer:	N/A
Zoning:	EI – Employment/Industry

2.1 Current Uses of the Property

The Property is developed in agricultural rose fields operated by Santa Lucia Farms with the exception of dirt access roads along the borders of each field. See Section 4.0 for further information regarding Strata's site reconnaissance.

2.2 Current Uses of the Adjoining Properties

Strata evaluated the current uses of adjoining properties. The property vicinity is located in an area of agricultural development in El Mirage, Arizona. Table 2 summarizes the current uses of adjoining properties, as observed by Strata from property boundaries or reported by the Site Contacts.

Table 2. Surrounding Properties

Direction	Occupant and/or Use	Potential Impact to the Property
North	Agricultural/rose field	None Likely
South	Agricultural/rose field	None Likely
East	Agricultural/rose field and Santa Lucia Farms/farming vehicle and equipment storage	None Likely
West	Agricultural/fallow field	None Likely

Although Strata did not observe evidence of significant environmental impacts to the Property from past uses and operations, historical cultivation of agricultural land may have been associated with the use of pesticides and herbicides and may have resulted in releases on the Property; however, pesticides used in accordance with labeling instructions are generally not considered a release of a hazardous substance under the ASTM Phase I ESA standard. Therefore, while potential impacts to the environmental condition of the Property from historical agricultural activities cannot be ruled out, Strata does not consider such potential impacts an REC in connection with the Property. Further information regarding site observations is presented in Section 4.0.

Strata did not observe evidence of environmental contamination (e.g., spills, stained soils, groundwater monitoring wells) or any pits, ponds, or lagoons at any of the adjoining properties or other activities indicative of releases that could potentially impact the Property.

SECTION 3.0 RECORDS REVIEW

Strata obtained and reviewed historical sources and environmental records pertaining to the Property and vicinity. This section discusses the various sources and records Strata reviewed and relevant findings.

3.1 Historical Use Information

Strata reviewed reasonably ascertainable, standard historical sources including aerial photographs, historical topographic maps, city street directories, and interviewed the Site Contacts. Sanborn® fire insurance maps were not available for the Property.

3.1.1 The Property

Strata investigated past uses of the Property from the present back to the Property's first developed use or 1940, whichever was earlier. Table 3 summarizes the Property history. Appendix C provides historical research documentation.

Table 3. Property History

Time Period/Date	Occupant/Use	Source(s) of Information
Prior to ~1940	Agricultural/Undeveloped	Aerial photographs
~1940 to Present	Agricultural	Aerial photographs, Site Contacts

Based on historical information reviewed, reported uses, and the site walkdown, Strata discovered no evidence for significant environmental impact to the Property from past uses and operations. Further information regarding site observations is presented in Section 4.0.

3.1.2 Adjoining Properties

Strata's review of the historical sources indicates that past uses on adjoining properties have generally been the same as those Strata observed. Strata discovered no evidence for environmental contamination of the Property by historical activities on the adjoining properties.

3.2 Environmental Records Information

Strata evaluated available records information from government agencies and other sources obtained from Environmental Data Resources, Inc. (EDR). EDR searched (1) ASTM standard federal, state and tribal environmental record sources; (2) reasonably ascertainable local records and/or additional federal, state or tribal records provided to enhance and supplement the ASTM standard environmental record sources; and (3) EDR's proprietary collection of potential historical auto stations, dry cleaners, and manufactured gas plants. EDR Radius Map Report, dated December 3, 2018, and provided in Appendix D presents the Property and adjoining properties information identified within approximate minimum search distances from the Property, as defined by ASTM Standard E1527-13, unless stated otherwise.

The database review did not identify the Property or surrounding properties in the databases that were searched. Based on the information reviewed, there are no records of regulated activities or contamination of the Property from present or past activities.

3.3 Additional Records

According to ASTM E1527-13 Section 8.2, pertinent regulatory agency files and/or records from an alternative source should be reviewed if the Property or any adjoining property is identified on one or more of the standard federal, state, or tribal environmental record sources as listed in Section 8.2.1. Strata determined the standard environmental record sources described in Section 3.2 were sufficient to meet the objectives of this ESA and that a file review was unnecessary. As such, Strata did not use additional environmental records sources during this assessment.

SECTION 4.0 PROPERTY RECONNAISSANCE

According to ASTM, "The objective of the site reconnaissance is to obtain information indicating the likelihood of recognized environmental conditions (RECs) in connection with the Property." Strata interviewed the Site Contacts and inspected the Property to evaluate property uses, activities, procedures, and practices. The site reconnaissance included an inspection of the property grounds. Access was provided to all areas considered necessary to perform this assessment. Strata encountered no limiting conditions. This section summarizes Strata's observations and findings.

4.1 Hazardous Substances and Petroleum Products

Strata did not observe any hazardous substances or petroleum products on-site. Strata did not observe any stressed vegetation, discolored or stained soil or pavement, areas of corrosion, pools of liquid, or other signs of historical spills, releases, or environmental damage on the Property related to the use, handling, or storage of hazardous substances or petroleum products, and the Site Contacts did not report any such incidences. Based on site observations and available information from the Site Contacts, Strata discovered no evidence for significant contamination of the Property from the handling and storage of hazardous substances or petroleum products.

4.2 Storage Tanks

Determining the presence of aboveground storage tanks (ASTs) and underground storage tanks (USTs) is considered essential in assessing potential contamination sources. Strata used visual inspection and tank registration records to determine the possible existence of past and present storage tanks on the Property.

4.2.1 Aboveground Storage Tanks

Strata did not identify any evidence of the existence of ASTs on the Property, past or present. Strata did not identify any outstanding issues regarding the potential impact from ASTs to the environmental condition of the Property.

4.2.2 Underground Storage Tanks

Strata did not identify any evidence of the existence of USTs on the Property, past or present. Strata did not identify any outstanding issues regarding the potential impact from USTs to the environmental condition of the Property.

4.3 Solid and Hazardous Waste

Strata interviewed the Site Contacts and surveyed the Property to evaluate wastes generated on the Property. Strata did not observe, nor did the Site Contacts report, any solid or hazardous wastes to be currently generated on the Property. Based on observations, Strata discovered no evidence for significant contamination of the Property from the generation or storage of solid or hazardous wastes.

4.4 Polychlorinated Biphenyls (PCBs) and Oil-Filled Equipment

Because of their nonflammable characteristics, polychlorinated biphenyls (PCBs) may be found in oil-filled electrical equipment such as transformers, capacitors, switches, compressors, and heat transfer equipment. U.S. EPA regulation 40 CFR, Part 761 identifies three categories for classifying electrical equipment: less than 50 ppm of PCBs, "Non-PCB"; between 50 and 500 ppm, "PCB-Contaminated"; and greater than 500 ppm, "PCB". PCBs can also be found in hydraulic lift systems such as vehicle lifts, hoists, and elevators. Strata inspected the Property for the presence of liquid-cooled electrical and hydraulic equipment, which could be potential sources of PCBs and/or petroleum impacts to the Property.

Strata did not observe any transformers or other potential sources of PCBs on the Property. Strata did not identify any outstanding issues regarding the potential impact of PCBs to the environmental condition of the Property.

4.5 Air Emissions

Based on observed and reported activities, Strata did not identify any air emissions sources currently at the Property. Strata did not identify any issues relating to odors or fumes from facility operations, and Site Contacts did not report any historic or current complaints from neighbors or regulatory agencies. Strata did not identify any issues regarding air emissions.

4.6 Storm Water and Wastewater

Because the Property is developed as agricultural farm land, most storm water infiltrates the ground surface. Excess storm water from the grounds flows over land across the Property along the crop rows to the south. Concrete irrigation channels convey water east and south along the dirt roads that separate the fields. Strata did not observe any sheens or other signs of contamination associated with any of the storm water drainage features. Strata did not identify any issues related to storm water.

Because the site is undeveloped, Strata did not observe any sanitary or process wastewater discharges. Strata did not identify any evidence of the existence of any septic tanks located on the Property, past or present. Strata did not identify any outstanding issues regarding the potential impact of wastewater to the environmental condition of the Property.

4.7 Non-Scope Considerations

This section discusses any additional environmental aspects associated with the Property outside the scope of ASTM E1527-13 that were investigated by Strata at the client's request for the purpose of assessing additional relevant environmental liabilities that could result in future costs associated with the Property's use or redevelopment, and to identify factors to comply with certain environmental laws.

SECTION 5.0 INTERVIEWS AND USER-PROVIDED INFORMATION

Strata conducted interviews and obtained information from the user as required by the AAI and ASTM standards to identify Recognized Environmental Conditions (RECs) in connection with the Property. The interviews and user provided information are discussed in this section.

5.1 Interviews

Table 4 lists the interviews Strata conducted with present owners and occupants. All pertinent information relating to the environmental condition of the Property revealed in the interviews is discussed in the previous sections of this report. Also, a summary of information provided by the user is presented in Section 5.2.

Table 4. Interviews

Date	Name	Title or Position	Organization
November 30, 2018	Mr. Steven Like	Senior Vice President	Cavco
December 10, 2018	Mr. Jacob F. Long	Trustee	John F. Long Family Revocable Living Trust Trustee
December 11, 2018	Ms. Kathy Delp	Farmer	Santa Lucia Farms

5.2 User Provided Information

For Landowner Liability Protections (LLP) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the Brownfields Amendments), the user, defined by ASTM as the party on whose behalf the ESA of the Property is prepared, must provide certain information, if available. The user for this ESA is Cavco Industries, Inc. (the client). This section is based on a user questionnaire, which includes the key user-provided information necessary to meet the AAI standard.

5.2.1 Environmental Cleanup Liens or Activity and Use Limitations (40 CFR 312.25, 312.26)

The client is not aware of any environmental cleanup liens against the Property that are filed or recorded under federal, tribal, state or local law, or any activity or use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the Property and/or have been filed or recorded in a registry.

5.2.2 Specialized Knowledge or Experience (40 CFR 312.28)

The client does not have any specialized knowledge or experience related to the Property or nearby properties with respect to the chemicals and processes used thereon.

5.2.3 Valuation Reduction for Environmental Issues (40 CFR 312.29)

The client believes the purchase price to be paid for this Property reasonably reflects the fair market value of the Property.

5.2.4 Commonly Known or Reasonably Ascertainable Information (40 CFR 312.30)

The client was not aware of the past uses of the Property, which are discussed in Section 3.0 of this report. The client does not know of any specific chemicals that are present or were once present at the Property, as discussed in Section 4.1 of this report. The client does not know of any spills or other chemical releases that have taken place at the Property. The client does not know of any environmental cleanups that have taken place at the Property.

5.2.5 Obvious Indicators of Contamination (40 CFR 312.31)

The client does not know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the Property. The client does not know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Property. The client does not know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. Therefore, as the user of this ESA, the client believes, based on knowledge and experience related to the Property, there are no obvious indicators that point to the presence, or likely presence of contamination of the Property.

SECTION 6.0 SOURCES

American Society for Testing and Materials Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-13).

Cavco Industries, "Proposed Site Plan," Drawing No. A-1, Sheet 1, November 21, 2018.

"Chemical Record for Long Properties – Santa Lucia Farms," January – November 2018.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund), as amended by Superfund Amendments and Reauthorization Act of 1986 (SARA) and Small Business Liability Relief and Brownfields Revitalization Act of 2002 (Brownfield Amendments), 42 U.S.C. §§9601, et. Seq.

Environmental Data Resources, Inc., "Certified Sanborn® Map Report – Vacant Lot within Centerpoint Logistics Park, 10000 North Dysart Road, El Mirage, AZ 85335 – Unmapped Property," Inquiry No. 5500068.3, December 3, 2018.

Environmental Data Resources, Inc., "EDR Historical Topo Map Report – Vacant Lot within Centerpoint Logistics Park, 10000 North Dysart Road, El Mirage, AZ 85335 – 1957, 1971, 1974, 1982, and 2014," No. 5500068.4, December 3, 2018.

Environmental Data Resources, Inc., "The EDR Aerial Photo Decade Package –Vacant Lot within Centerpoint Logistics Park, 10000 North Dysart Road, El Mirage, AZ 85335 – 1940, 1949, 1954, 1958, 1964, 1976, 1979, 1981, 1986, 1992, 1997, 2007, 2010, 2013, and 2017," Inquiry No. 5500068.8, December 3, 2018.

Environmental Data Resources, Inc., "The EDR-City Directory Image Report – Vacant Lot within Centerpoint Logistics Park, 10000 North Dysart Road, El Mirage, AZ 85335," Inquiry No. 5500068.5, December 5, 2018.

Environmental Data Resources, Inc., "The EDR Radius Map™ Report with GeoCheck®– Vacant Lot within Centerpoint Logistics Park, 10000 North Dysart Road, El Mirage, AZ 85335," Inquiry No. 5500068.2s, December 3, 2018.

Maricopa County Assessor's Office, "Parcel and Owner Information – Parcel ID 509-18-970," December 3, 2018.

U.S. Geological Survey Topographic Map, El Mirage Quadrangle, Dated 2014.

SECTION 7.0 SCOPE AND LIMITATIONS

Cavco Industries, Inc. authorized Strata to conduct a Phase I Environmental Site Assessment (ESA) of the real property of Parcel 509-18-970 located at Joe R. Ramirez Road and North Dysart Road, El Mirage, Maricopa County, Arizona referred to in this report as "the Property". John F. Long Family Revocable Living Trust owns the Property. This ESA was performed in accordance with the American Society for Testing and Materials (ASTM Practice E1527-13) and the U.S. Environmental Protection Agency (EPA) Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312).

7.1 Purpose

The general purpose of this Phase I ESA is to provide an objective, independent evaluation and professional opinion regarding environmental conditions, if any, associated with the Property. Strata reviewed available environmental records maintained by the company and interviewed persons knowledgeable about the Property. The services performed and outlined in this report were based, in part, upon visual observations of the Property and attendant structures.

7.2 Scope of Services

The scope of work for this assessment was in general accordance with the ASTM Standard Practice for ESAs: Phase I ESA Process (ASTM Designation: E1527-13) and the EPA Standards and Practices for AAI. These methodologies are described as representing good commercial and customary practice for conducting an ESA of a property for the purpose of identifying Recognized Environmental Conditions (RECs).

7.3 Significant Assumptions

While this report may provide an overview of potential environmental concerns, both past and present, the ESA is limited by the availability of information at the time of the assessment. It is possible that unreported disposal of waste or illegal activities impairing the environmental status of the Property may have occurred which could not be identified. The conclusions and recommendations regarding environmental conditions that are presented in this report are based on a scope of work authorized by the client. Note, that virtually no scope of work, no matter how exhaustive, can identify all contaminants or all conditions above and below ground.

7.4 Limitations and Exceptions

The report has been prepared in accordance with generally accepted environmental methodologies referred to in ASTM E1527-13 and AAI, and contains all of the limitations inherent in these methodologies. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

Strata conducted this assessment using standard engineering and scientific judgment, principles, and practices. Written qualifications of the assessor to perform this environmental review have been

presented to the authorizing party. The ESA is based on visual observations recorded by the assessor and information provided by personal interviews and records reviews from reasonably ascertainable/standard sources that were practically reviewable, which information is assumed to be correct. Strata has made no independent investigation as to the accuracy or completeness of the information gained from secondary sources or personal interviews, and Strata also cannot guarantee the accuracy or interpretations by others except where evidence suggested such information to be incomplete or inaccurate and such information had significant bearing on matters under assessment.

This ESA does not include any intrusive sampling of soils or subsurface materials. Materials and conditions that are concealed or inaccessible may not have been discovered during this ESA. The ESA may include an evaluation of the nature and extent of potential contamination, but this evaluation is a professional judgment based on interpretation of available investigations, geological and hydrogeological reports for the Property and vicinity, experience with apparently similar properties, and other relevant information. The information contained in this report is deemed reliable; however, there cannot be a guarantee that all hazardous or potentially hazardous conditions have been identified or located.

All findings and conclusions stated in this report are based on facts and circumstances as they existed during the site reconnaissance and during the time period of preparation of this report and are further limited by the mutually agreed upon Scope of Work, budget, and schedule. The objective of this report was to assess environmental conditions at the Property, within the context of our contract and existing environmental regulations within the applicable jurisdiction. Evaluating compliance of past or future owners with applicable local, provincial and federal government laws and regulations was not included in our contract for services. The report is not intended to be exhaustive in scope or imply a risk-free property. Any change in fact or circumstance upon which this report is based may affect the expressed findings and conclusions of this report. Should this occur, Strata reserves the right to modify its opinion(s), as necessary.

Strata makes no warranties, expressed or implied, as to marketability of the Property or fitness for a particular use. This report is intended to be used in its entirety; taking or using excerpts from this report is not permitted and any party doing so does at its own risk. Information in this report is not to be construed as legal advice. All data, maps, field notes, report drafts, and other related information held by the consultant are confidential and restricted, and are only available to the client, and upon written approval from client, to client's attorney or designated agents, unless otherwise required by law.

7.5 Special Terms and Conditions

There were no special terms or contractual conditions for this ESA.

7.6 User Reliance

This report may be distributed and relied upon by Cavco Industries, Inc., its successors and assigns. Reliance on the information and conclusions in this report by any other person or entity is not authorized without the written consent of Strata.

7.7 Data Gaps and Deviations

Strata identified no data gaps that affected the ability to identify RECs associated with the Property.

7.8 Signatures of Environmental Professional(s)

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared by:

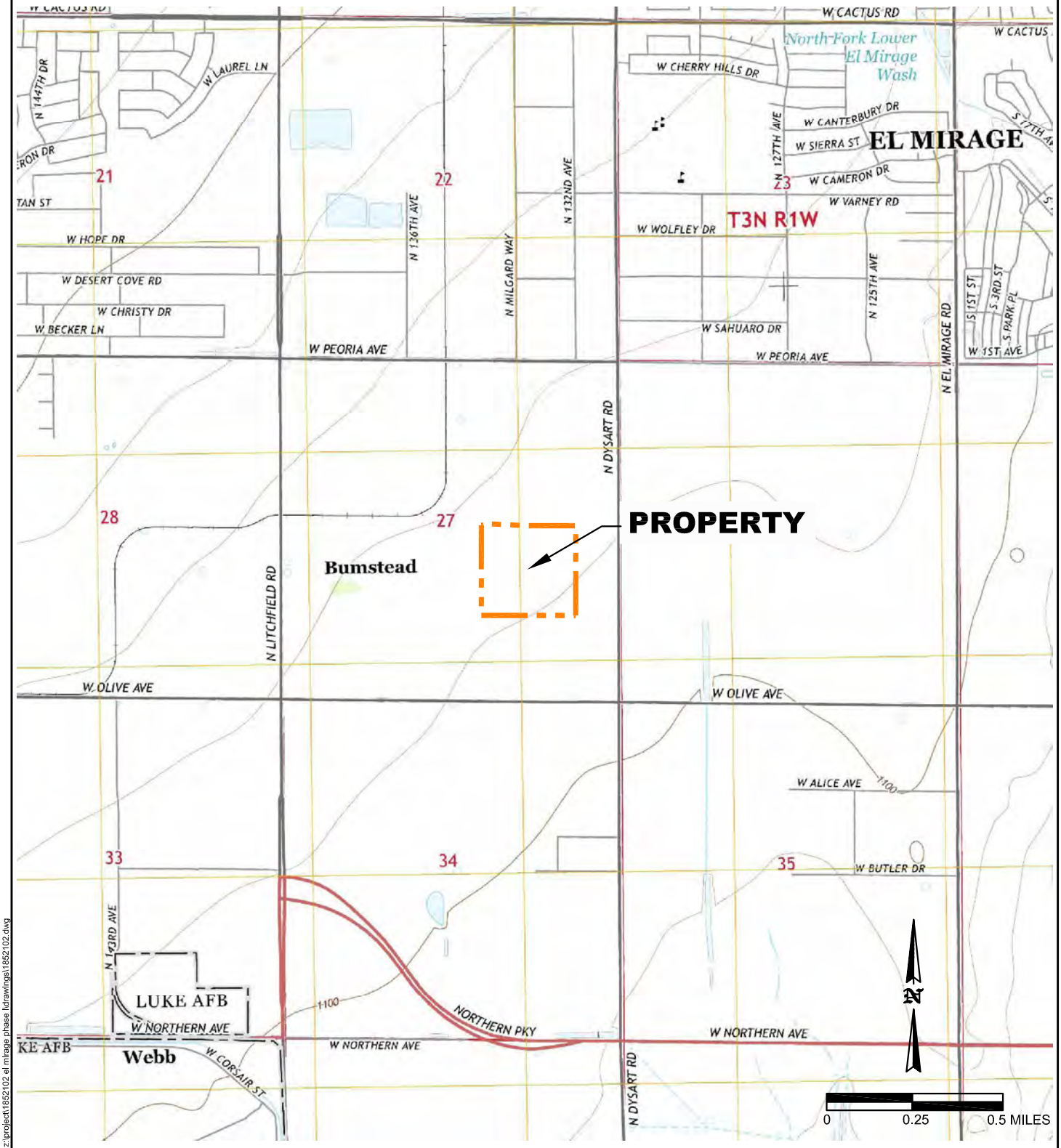
James G. Maynes, P.E.
Engineer

Charles W. Ferst, PE, CPEA, REPA

7.9 Qualifications of Environmental Professionals

The qualifications of the environmental professional(s) and personnel conducting the site reconnaissance and interviews (if conducted by someone other than an environmental professional) are provided in Appendix E.

APPENDIX A
FIGURES



z:\project\1852102 el mirage phase ii\drawings\1852102.dwg

LEGEND

- PROPERTY BOUNDARY
- PRIMARY ROADS
- TOPOGRAPHY
- WATERWAY

SOURCE: USGS 2014

Strata ENVIRONMENTAL

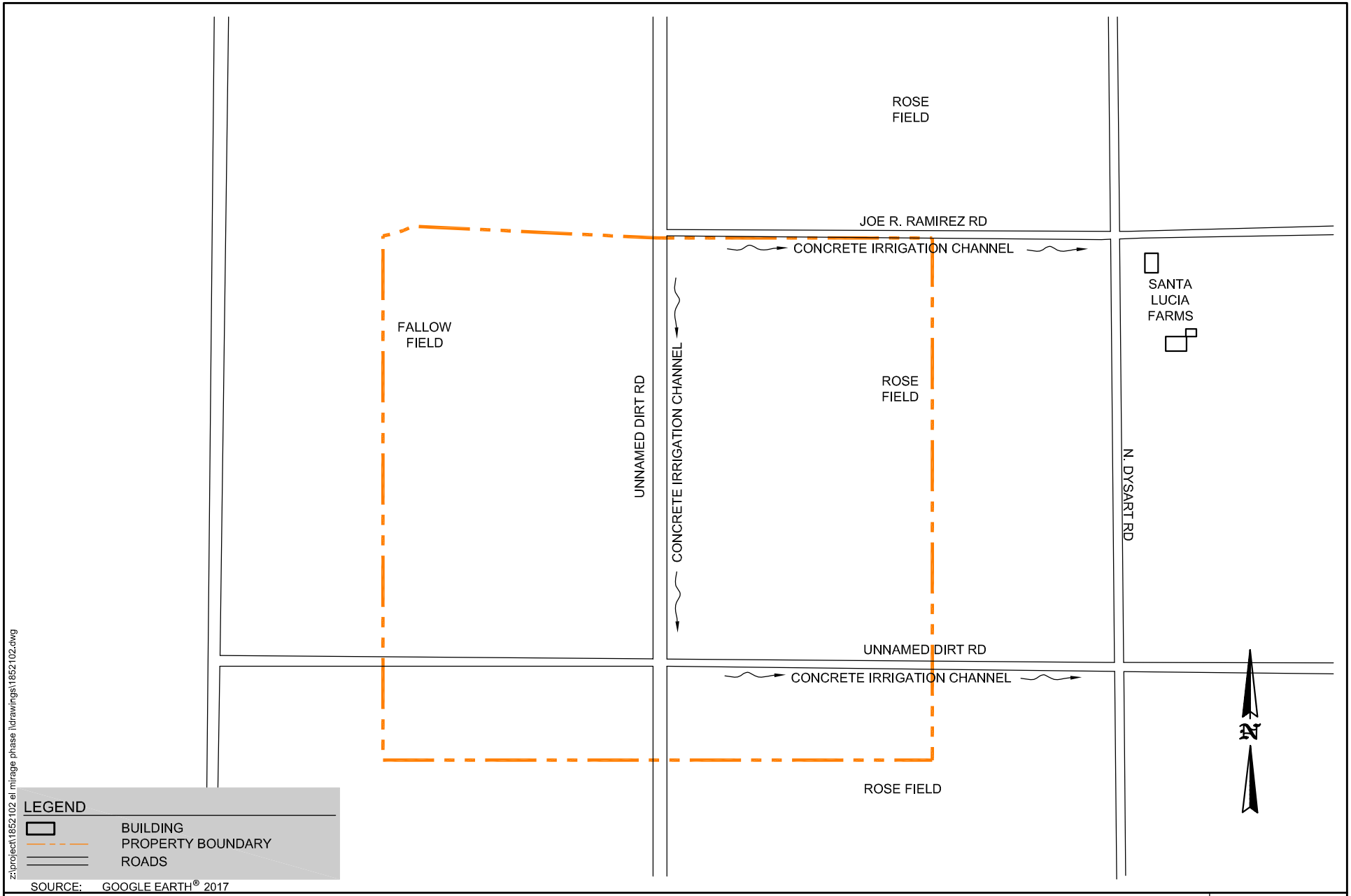
110 PERIMETER PARK ROAD
SUITE E
KNOXVILLE, TN 37922
PHONE (865) 539-2077
FAX (865) 539-3970

PROJECT NUMBER	DATE
1852102	December 2018

Topographic Map
El Mirage Quadrangle 2014

Parcel 509-18-970
Joe R. Ramirez Road, El Mirage, AZ

FIGURE 1



Strata ENVIRONMENTAL
110 PERIMETER PARK ROAD
SUITE E
KNOXVILLE, TN 37922
PHONE (865) 539-2077
FAX (865) 539-3970

PROJECT NUMBER 1852102

DATE December 2018

Property Layout

Parcel 509-18-970
Joe R. Ramirez Road, El Mirage, AZ

FIGURE 2

APPENDIX B
PHOTOGRAPHS

Photograph 1: View of the Property from the northeast corner

Photograph 2: View to the west along the northern property boundary

Photograph 3: Concrete irrigation channel along the northern property boundary

Photograph 4: View to the south along the dirt road separating the rose field from the western fallow field

Photograph 5: View to the east from the approximate northwest corner of the Property

Photograph 6: View to the south from the approximate northwest corner of the Property

Photograph 7: Rose bush harvest on the southern portion of the Property

Photograph 8: View to the west along the dirt road separating the northern and southern portions of the Property

Photograph 9: Santa Lucia Farms vehicle and equipment storage property to the east

APPENDIX C
HISTORICAL RESEARCH DOCUMENTATION

Vacant Lot Within Centerpoint Logistics Park
10000 North Dysart Road
El Mirage, AZ 85335

Inquiry Number: 5500068.4
December 03, 2018

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

12/03/18

Site Name:

Vacant Lot Within Centerpoint I
10000 North Dysart Road
El Mirage, AZ 85335
EDR Inquiry # 5500068.4

Client Name:

STRATA Environmental Serv Inc.
110 Perimeter Park
Knoxville, TN 37922
Contact: James Maynes

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by STRATA Environmental Serv Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: 1852102

Coordinates:

Latitude:	33.571055 33° 34' 16" North
Longitude:	-112.346018 -112° 20' 46" West
UTM Zone:	Zone 12 North
UTM X Meters:	375072.36
UTM Y Meters:	3715408.60
Elevation:	1112.00' above sea level

Maps Provided:

2014
1982
1974
1971
1957

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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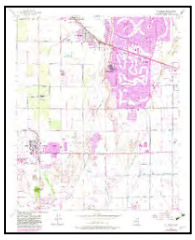
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2014 Source Sheets

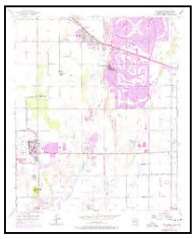
El Mirage
2014
7.5-minute, 24000

1982 Source Sheets



El Mirage
1982
7.5-minute, 24000
Aerial Photo Revised 1978

1974 Source Sheets



El Mirage
1974
7.5-minute, 24000
Aerial Photo Revised 1974

1971 Source Sheets

El Mirage
1971
7.5-minute, 24000
Aerial Photo Revised 1971

Topo Sheet Key

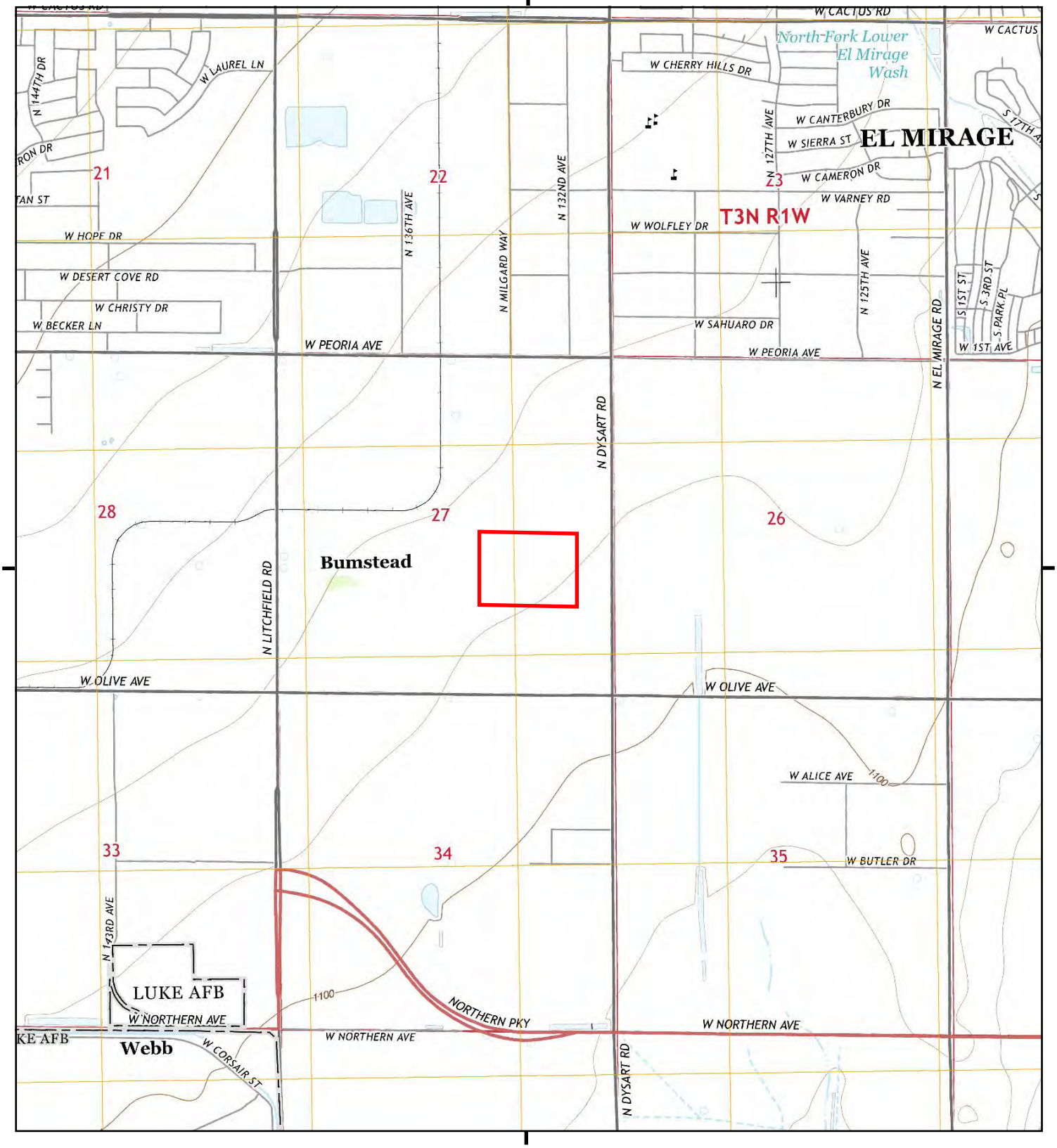
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1957 Source Sheets

El Mirage
1957
7.5-minute, 24000
Aerial Photo Revised 1954

Historical Topo Map

2014



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

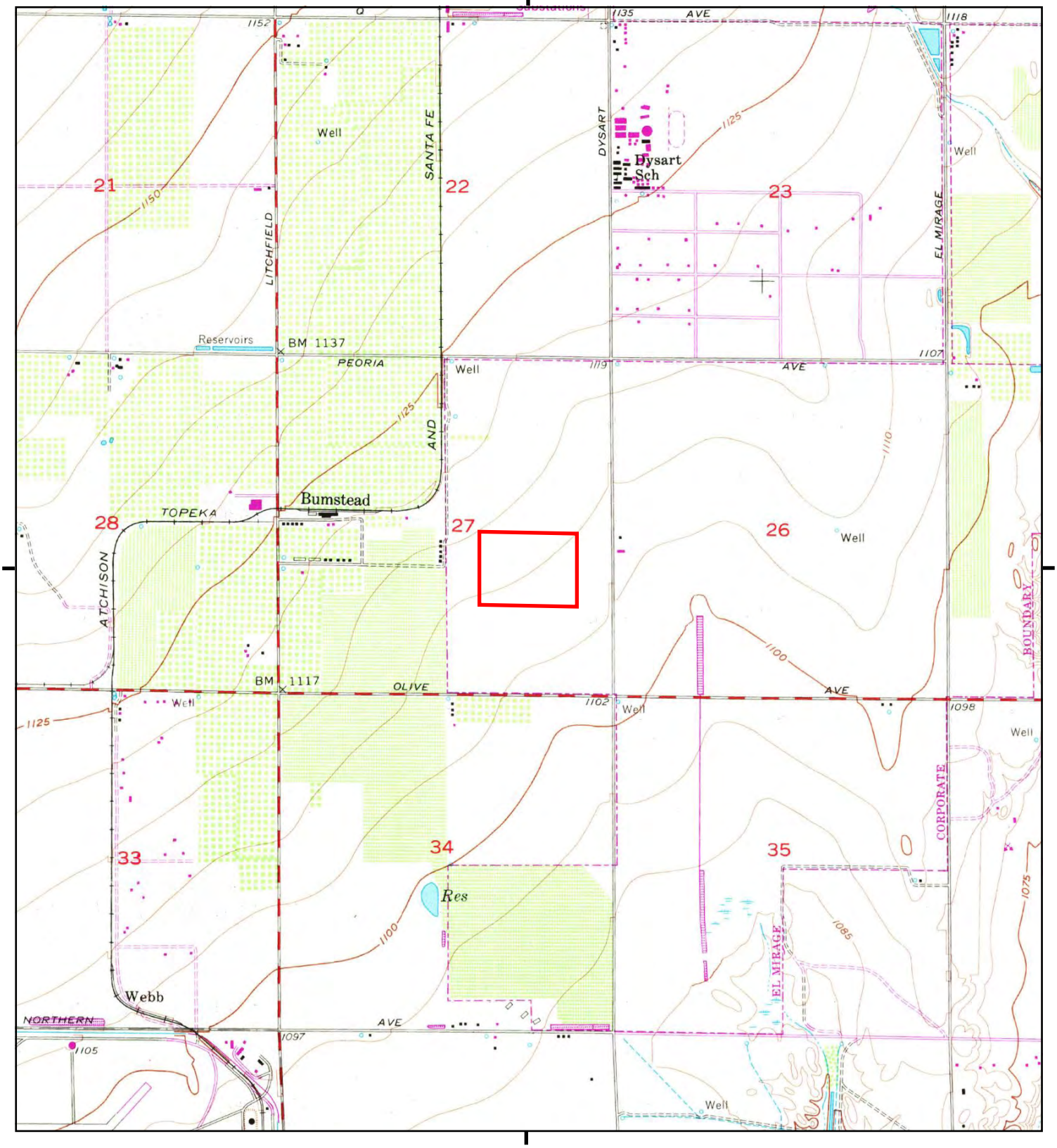
TP, El Mirage, 2014, 7.5-minute

SITE NAME: Vacant Lot Within Centerpoint Logistics P
ADDRESS: 10000 North Dysart Road
El Mirage, AZ 85335
CLIENT: STRATA Environmental Serv Inc.

N

Historical Topo Map

1982



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

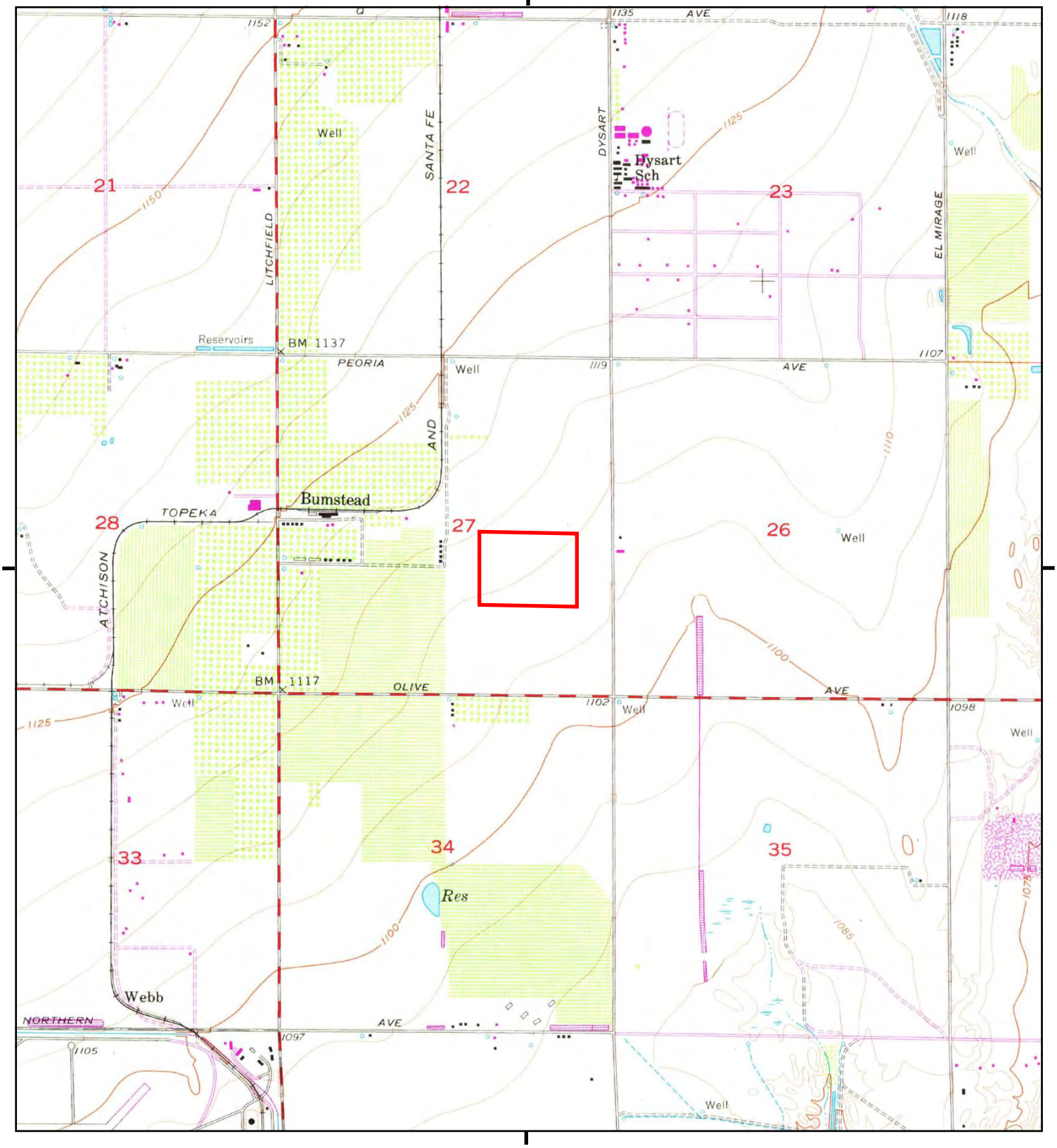
TP, El Mirage, 1982, 7.5-minute

SITE NAME: Vacant Lot Within Centerpoint Logistics P
ADDRESS: 10000 North Dysart Road
El Mirage, AZ 85335
CLIENT: STRATA Environmental Serv Inc.

N

Historical Topo Map

1974



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

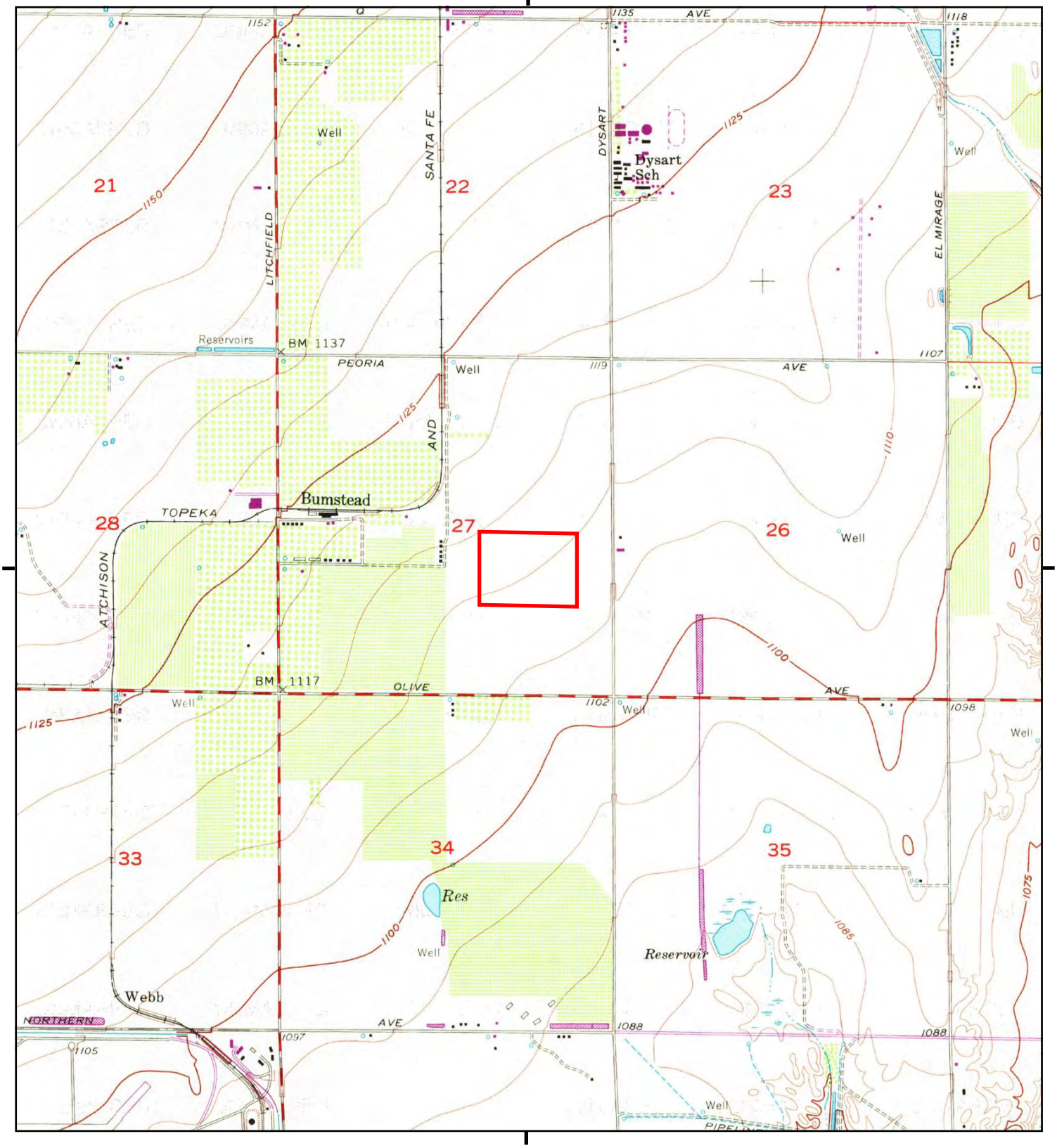
TP, El Mirage, 1974, 7.5-minute

SITE NAME: Vacant Lot Within Centerpoint Logistics P
ADDRESS: 10000 North Dysart Road
El Mirage, AZ 85335
CLIENT: STRATA Environmental Serv Inc.

N

Historical Topo Map

1971



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

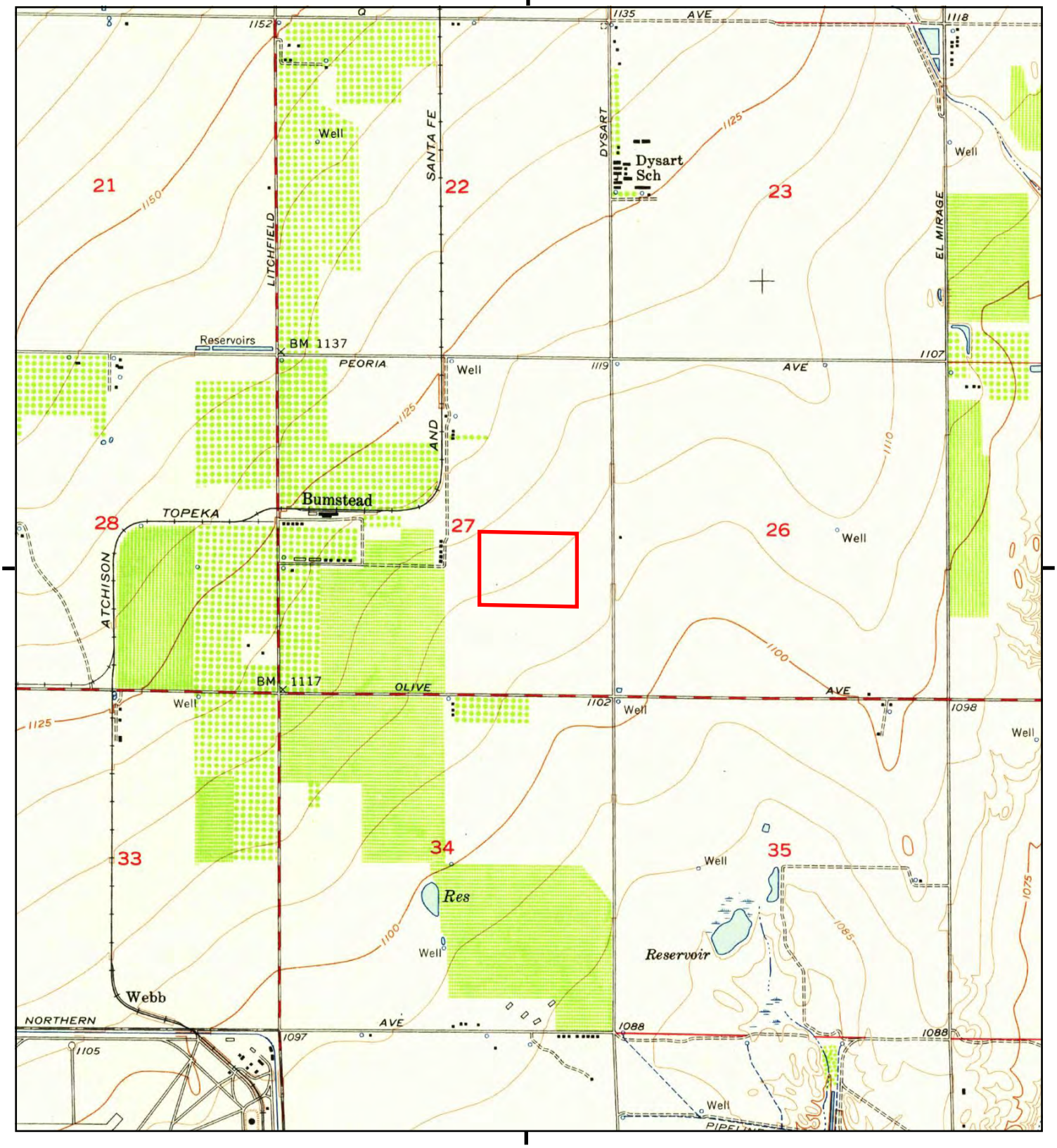
TP, El Mirage, 1971, 7.5-minute

SITE NAME: Vacant Lot Within Centerpoint Logistics P
ADDRESS: 10000 North Dysart Road
El Mirage, AZ 85335
CLIENT: STRATA Environmental Serv Inc.

N

Historical Topo Map

1957



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, El Mirage, 1957, 7.5-minute

SITE NAME: Vacant Lot Within Centerpoint Logistics P
ADDRESS: 10000 North Dysart Road
El Mirage, AZ 85335
CLIENT: STRATA Environmental Serv Inc.

N

Vacant Lot Within Centerpoint Logistics Park

10000 North Dysart Road

El Mirage, AZ 85335

Inquiry Number: 5500068.8

December 03, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

12/03/18

Site Name:

Vacant Lot Within Centerpoint I
10000 North Dysart Road
El Mirage, AZ 85335
EDR Inquiry # 5500068.8

Client Name:

STRATA Environmental Serv Inc.
110 Perimeter Park
Knoxville, TN 37922
Contact: James Maynes

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2017	1"=500'	Flight Year: 2017	USDA/NAIP
2013	1"=500'	Flight Year: 2013	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2007	1"=500'	Flight Year: 2007	USDA/NAIP
1997	1"=750'	Flight Date: April 30, 1997	USGS
1992	1"=500'	Acquisition Date: September 28, 1992	USGS/DOQQ
1986	1"=500'	Flight Date: December 30, 1986	EDR Proprietary Landiscor
1981	1"=500'	Flight Date: May 17, 1981	USDA
1979	1"=500'	Flight Date: May 13, 1979	USDA
1976	1"=500'	Flight Date: December 28, 1976	EDR Proprietary Landiscor
1964	1"=500'	Flight Date: January 21, 1964	USDA
1958	1"=500'	Flight Date: February 01, 1958	USDA
1954	1"=500'	Flight Date: January 14, 1954	USDA
1949	1"=500'	Flight Date: March 27, 1949	USDA
1940	1"=500'	Flight Date: September 13, 1940	USDA

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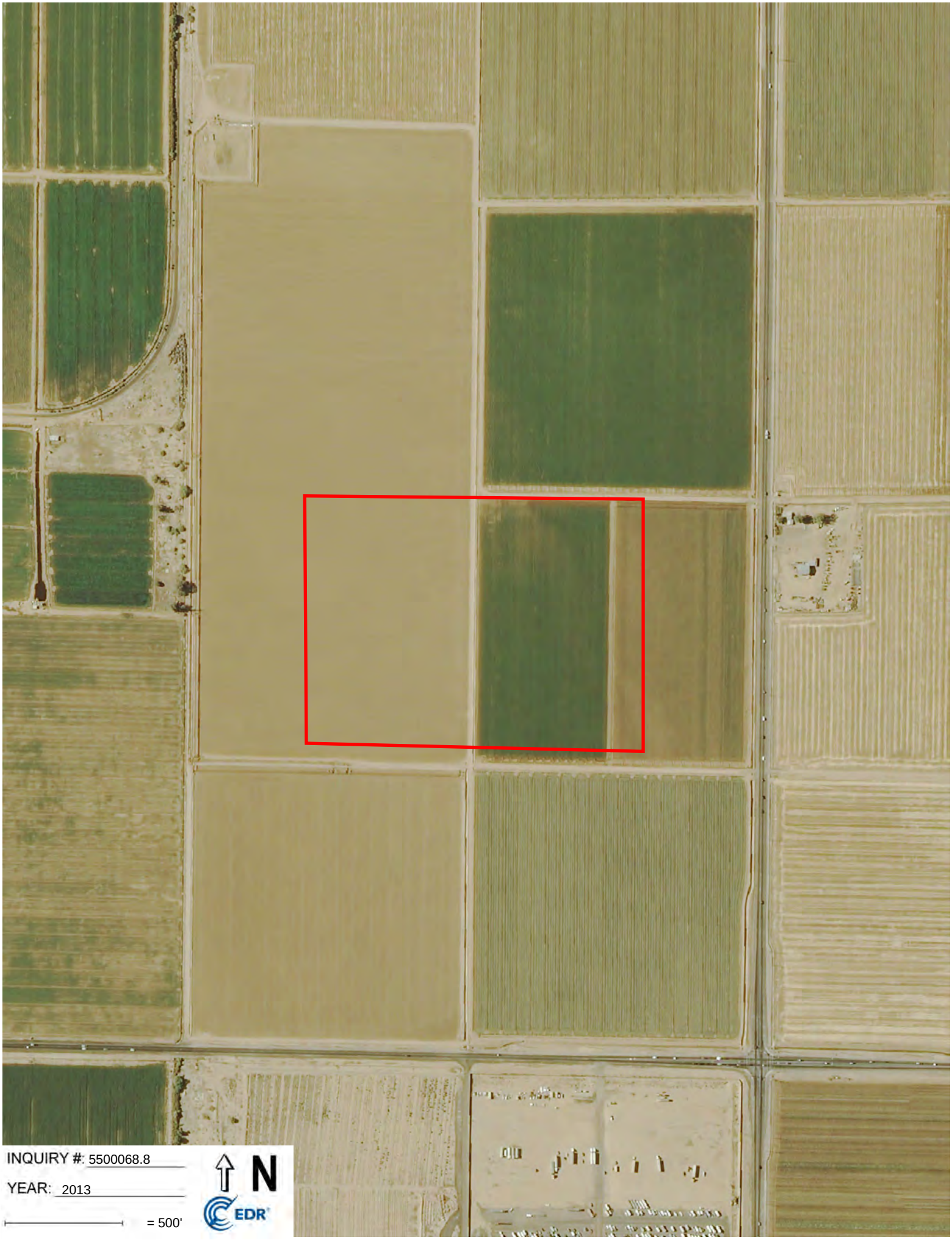
INQUIRY #: 5500068.8
YEAR: 2017
= 500'
N
EDR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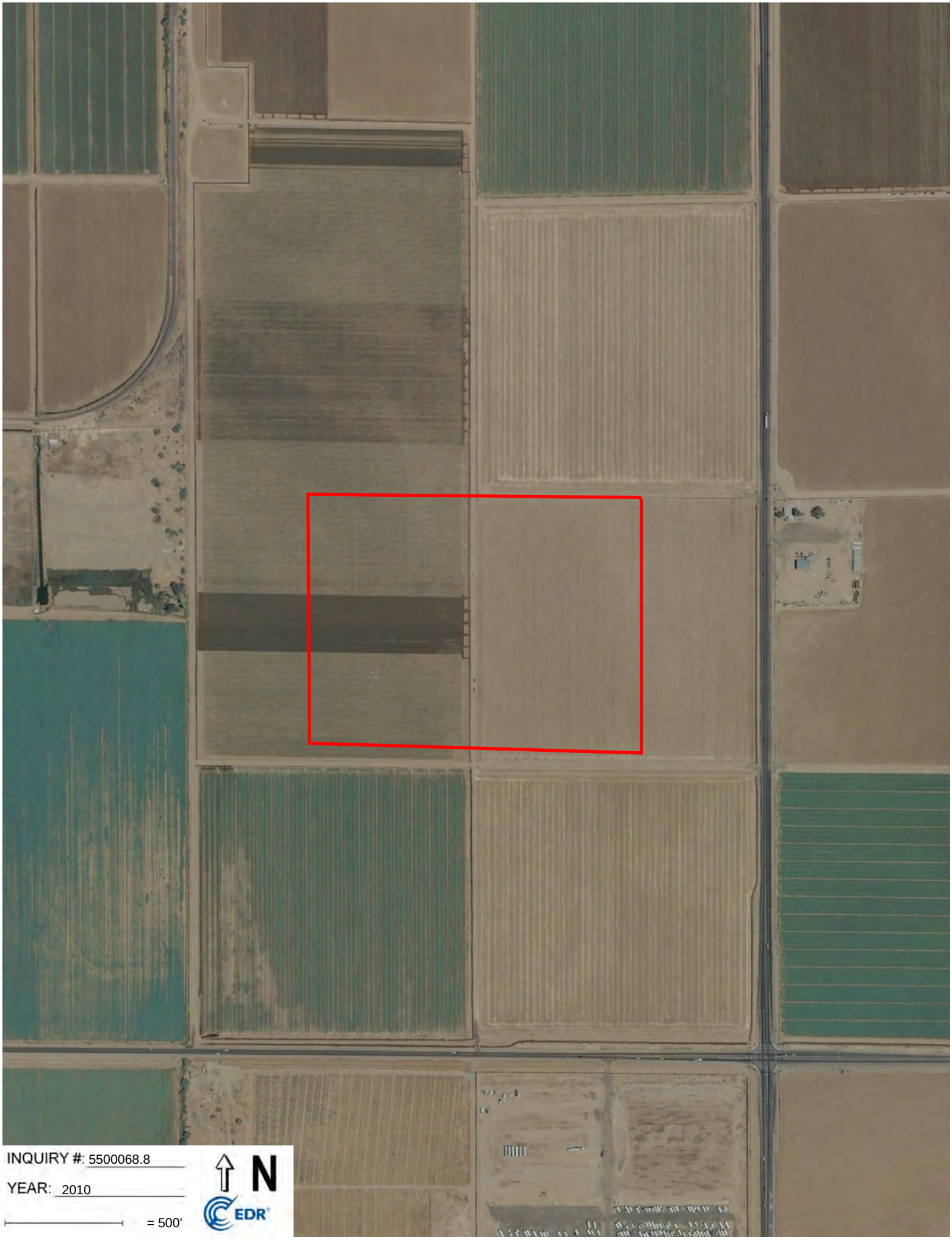
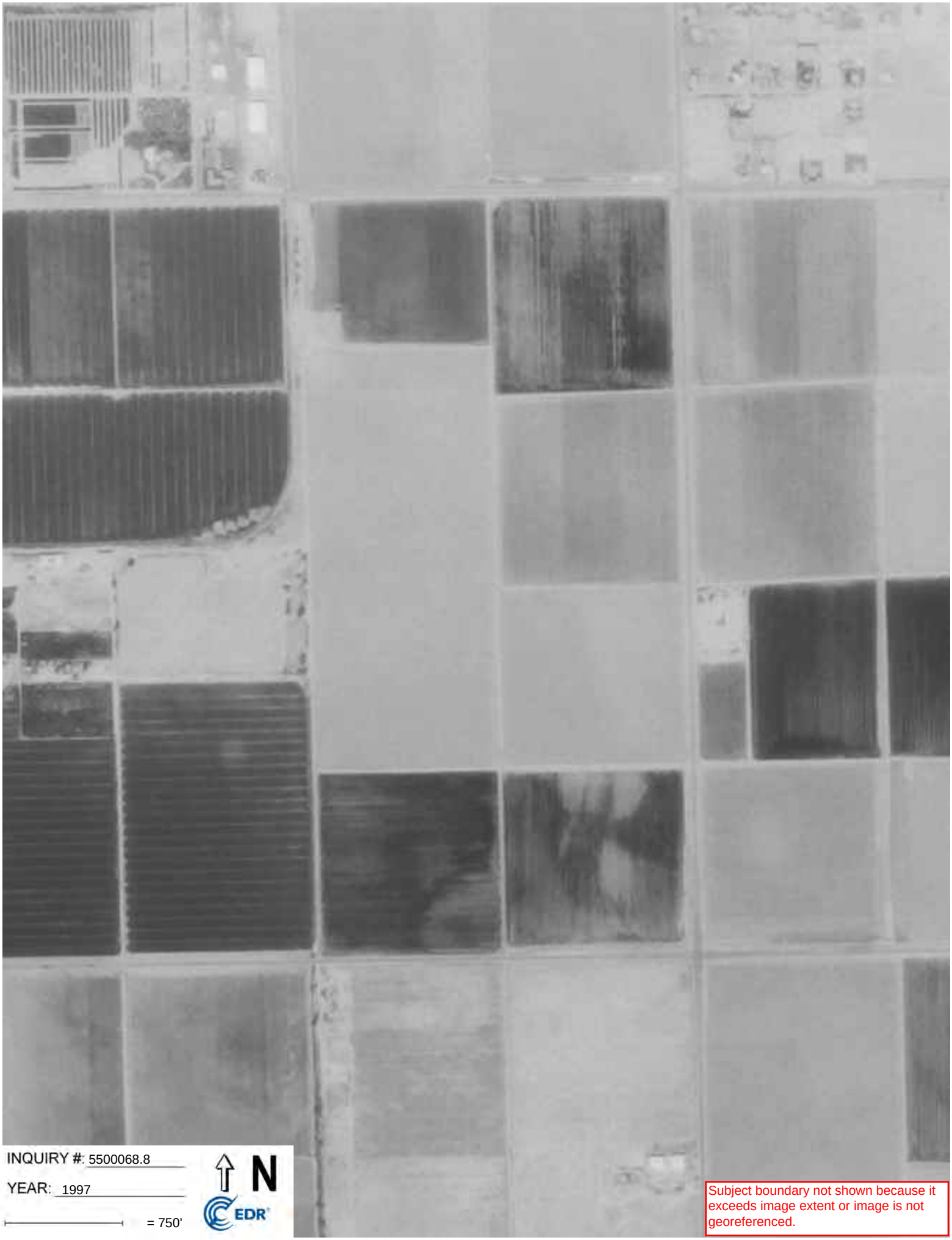
YEAR: 2013
= 500'
N
EDR


INQUIRY #: 5500068.8
YEAR: 2010
= 500'
N
EDR

INQUIRY #: 5500068.8
YEAR: 2007
= 500'
N
EDR



INQUIRY #: 5500068.8

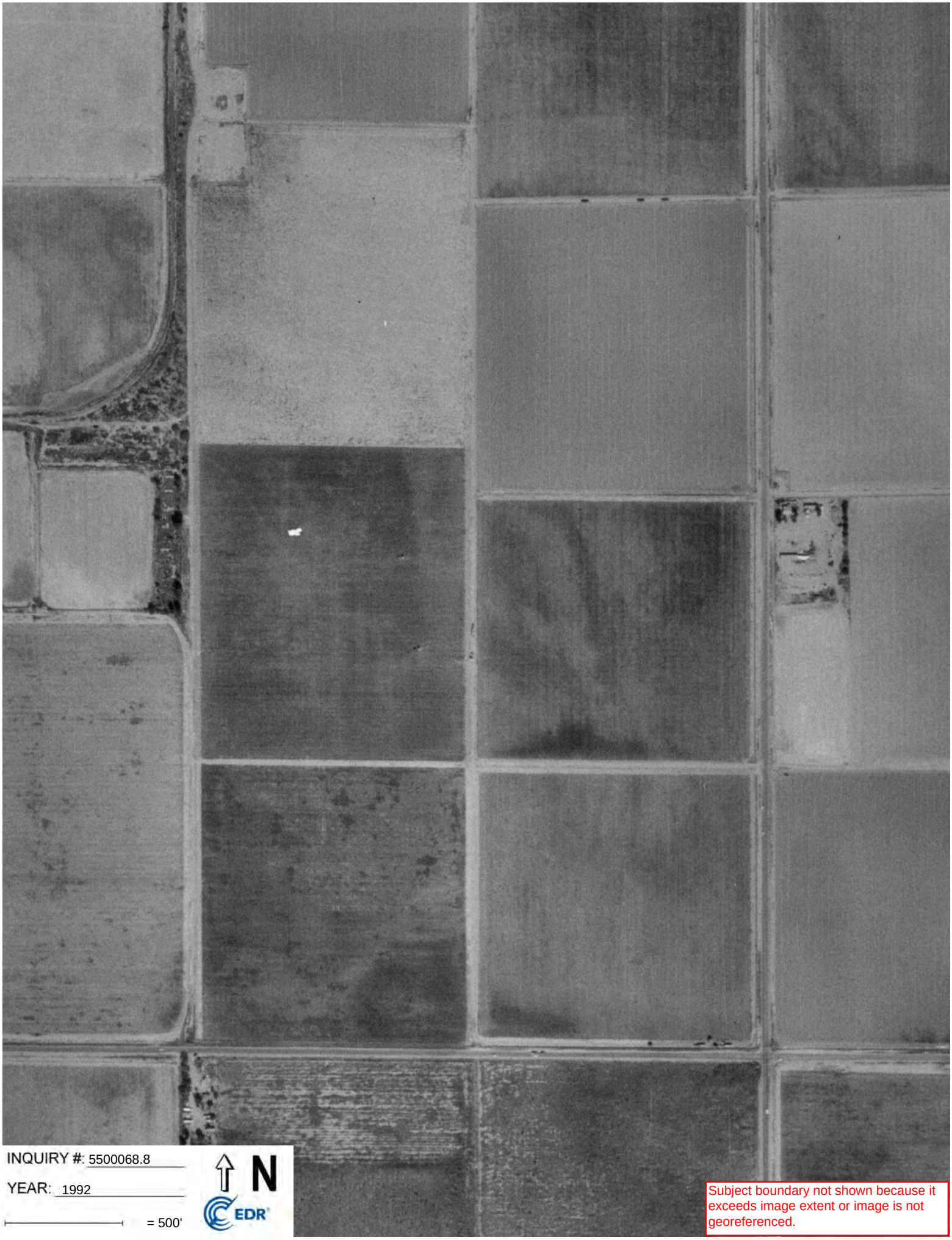
YEAR: 1997

= 750'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 5500068.8

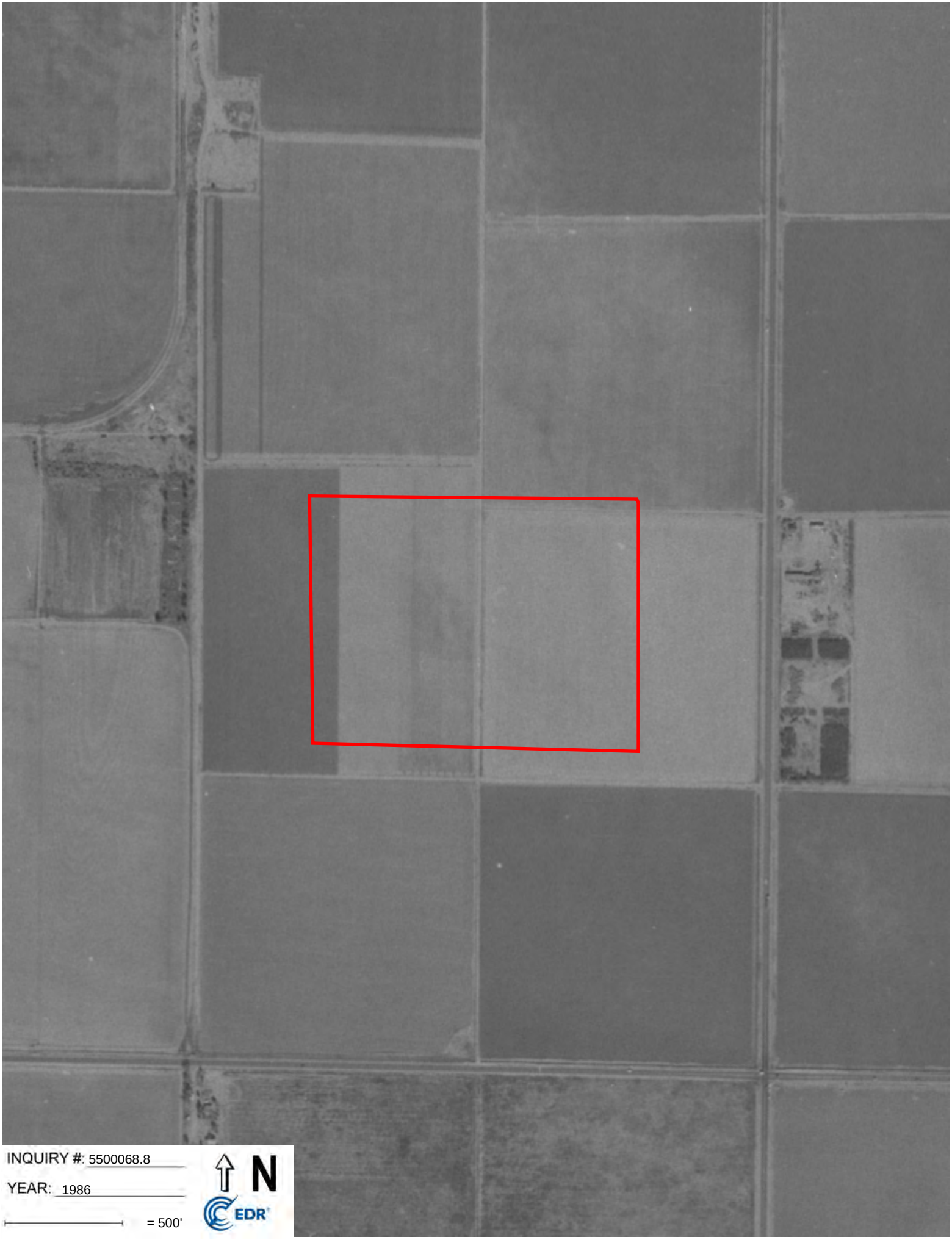
YEAR: 1992

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.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YEAR: 1986
= 500'
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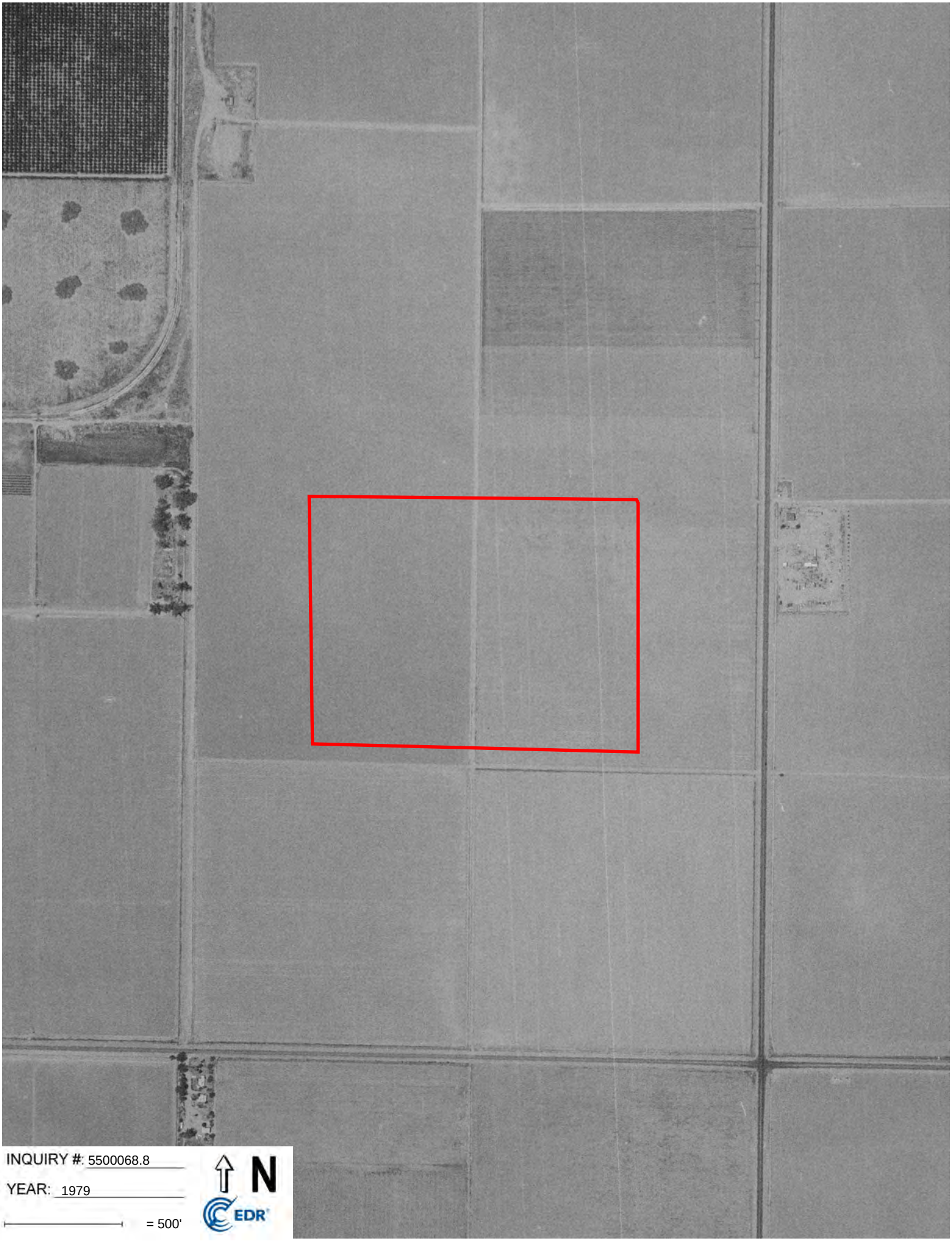
EDR

INQUIRY #: 5500068.8
YEAR: 1981
= 500'
N
EDR



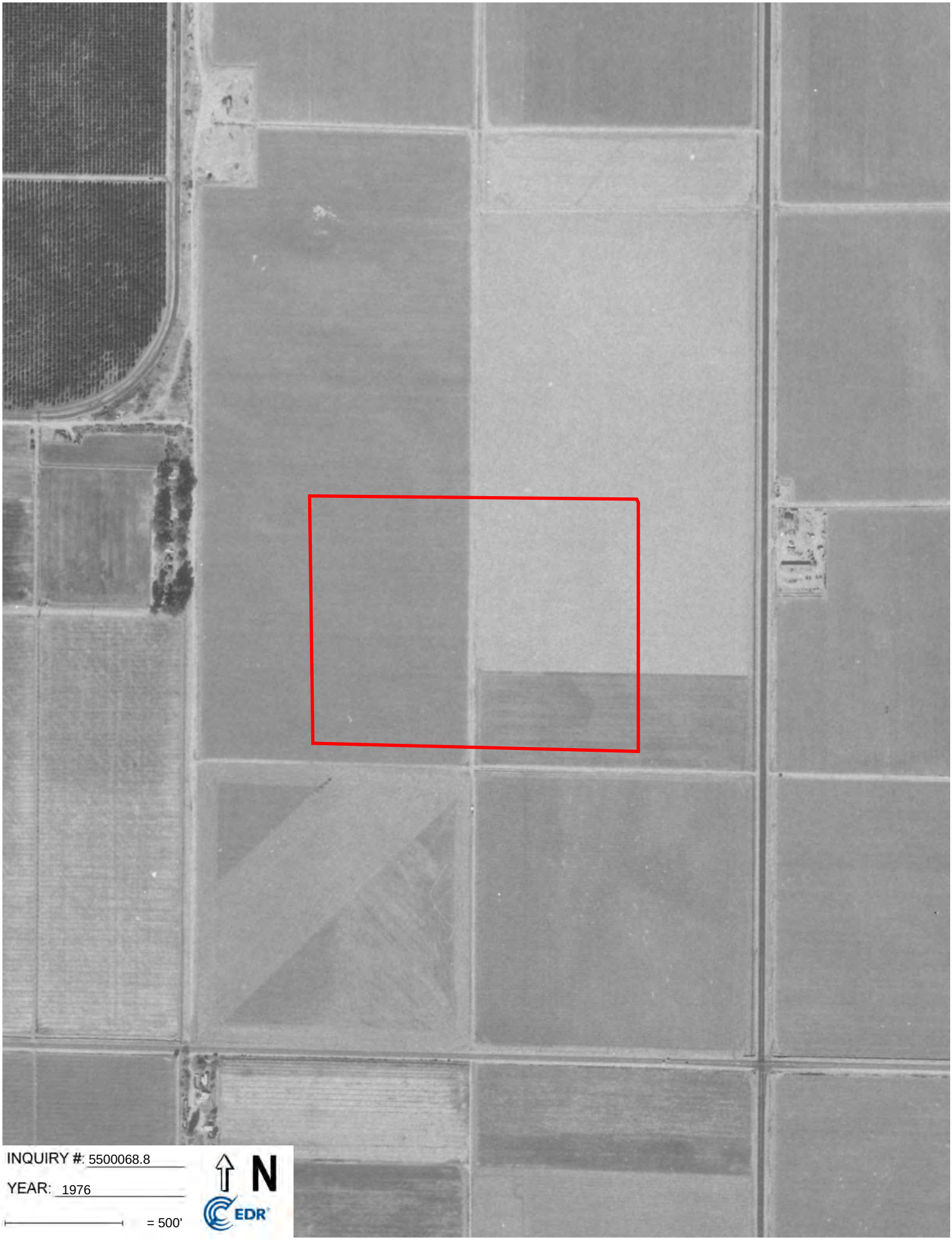
INQUIRY #: 5500068.8

YEAR: 1979

= 500'

N

EDR


INQUIRY #: 5500068.8
YEAR: 1976
= 500'
N
EDR

INQUIRY #: 5500068.8

YEAR: 1964

= 500'

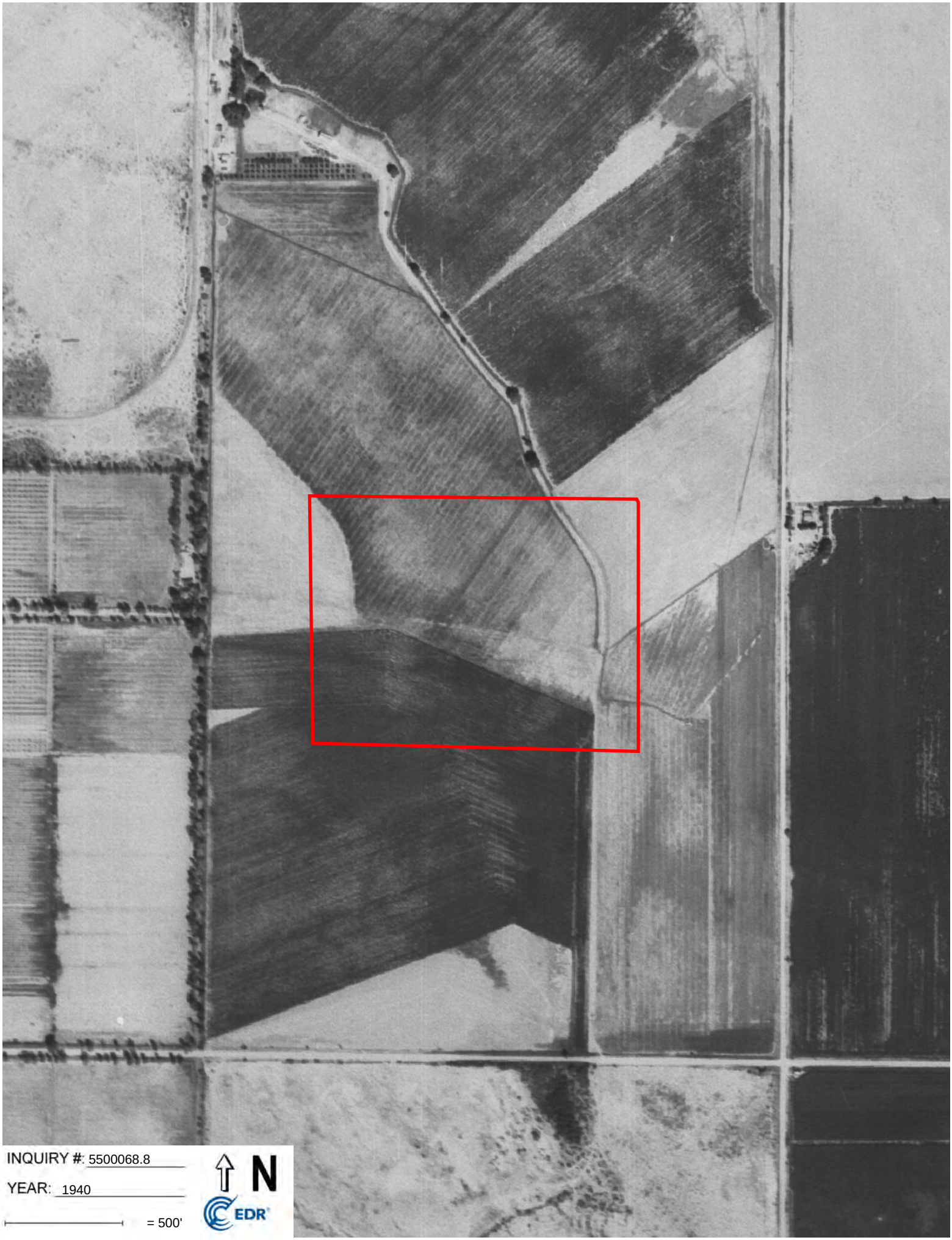
N

EDR

INQUIRY #: 5500068.8
YEAR: 1958
= 500'
N
EDR

INQUIRY #: 5500068.8
YEAR: 1954
= 500'
N
EDR

INQUIRY #: 5500068.8
YEAR: 1949
= 500'
N
EDR



INQUIRY #: 5500068.8

YEAR: 1940

= 500'

N

EDR

Vacant Lot Within Centerpoint Logistics Park

10000 North Dysart Road

El Mirage, AZ 85335

Inquiry Number: 5500068.3

December 03, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/03/18

Site Name:

Vacant Lot Within Centerpoint I
10000 North Dysart Road
El Mirage, AZ 85335
EDR Inquiry # 5500068.3

Client Name:

STRATA Environmental Serv Inc.
110 Perimeter Park
Knoxville, TN 37922
Contact: James Maynes

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by STRATA Environmental Serv Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # B25A-4780-94FB

PO # NA

Project 1852102

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: B25A-4780-94FB

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Vacant Lot Within Centerpoint Logistics Park
10000 North Dysart Road
El Mirage, AZ 85335

Inquiry Number: 5500068.5
December 05, 2018

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

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Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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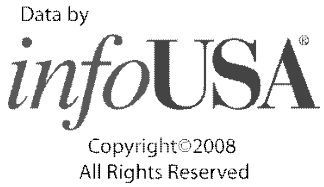

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1987	☐	☐	Cole Criss-Cross Directory
1982	☑	☐	Cole Criss-Cross Directory
1977	☑	☐	Cole Criss-Cross Directory
1972	☑	☐	Cole Criss-Cross Directory
1968	☐	☐	Cole Criss-Cross Directory
1964	☐	☐	Cole Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

10000 North Dysart Road
El Mirage, AZ 85335

Year	*CD Image*	*Source*	
N DYSART RD			
2014	pg A1	EDR Digital Archive	
2010	pg A2	EDR Digital Archive	
2005	pg A3	EDR Digital Archive	
2000	pg A4	EDR Digital Archive	
1995	pg A5	EDR Digital Archive	
1992	pg A6	EDR Digital Archive	
1987	-	Cole Criss-Cross Directory	Street not listed in Source
1982	pg A7	Cole Criss-Cross Directory	
1977	pg A8	Cole Criss-Cross Directory	
1972	pg A9	Cole Criss-Cross Directory	
1968	-	Cole Criss-Cross Directory	Street not listed in Source
1964	-	Cole Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

N DYSART RD 2014

8552	A TO Z TRANSMISSIONS
	DESERT STREAM PROPERTIES LLC
	FAST TRAXS TIRE COMPANY
	HELTONS EXCAVATING INC
	SIROCCO WEST INC
	SUPERIOR PLATING LLC
	VETERAN AUTOMOTIVE CARE
8628	ADC MOTORSPORTS & TIRE SP LLC
	GIBSON, ROBERT
	METAL KRAFT DESIGNS
8750	BUDGET TRUCK RENTAL
	DBRV LLC
	DYSART R V & BOAT STORAGE
	JANTZEN HEATHER
10803	WARD, BRIAN
10833	DESERT COVE ASSEMBLY INC
10837	MARTINEZ NOAH
11001	FIDELIS CONSTRUCTION LLC
	KNAPP, MARGARET M
11017	OCCUPANT UNKNOWN,
11029	HULSE, ROBERT G
11291	OCCUPANT UNKNOWN,
11405	EL MIRAGE ELEMENTARY SCHOOL
11425	DYSART UNIFIED SCHOOL DST 89
13777	VALERO CORNER STORE 1669
13915	LUPITAS MEXICAN RESTAURANT
	METRO PCS
	SMOKE AWAY LLC
14085	VALLEY CHILDCARE & LRNG CTR
15385	WALGREEN ARIZONA DRUG CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

N DYSART RD 2010

8552	A TO Z TRANSMISSIONS
	DEERWESTER PAVING CO
	DESERT STREAM PROPERTIES LLC
	HELTONS EXCAVATING INC
	PITCH COMPONENT SYSTEMS LLC
	SUPERIOR PLATING LLC
8628	BABY BULL ENTERPRISES LLC
	CUSTOM COACH WORKS
	EL MIRAGE BODY N COLLISSION
	METAL KRAFT DESIGNS
	SHERMANS FABRICATION
8750	BUDGET TRUCK RENTAL
	DYSART R V & BOAT STORAGE
	JANTZEN HEATHER
10803	GENDER, STEVE W
10833	DESERT COVE ASSEMBLY INC
11001	FIDELIS CONSTRUCTION LLC
	SMITH, JILL D
11017	RIVADENEYRA, ROBERT J
11029	HULSE, NICOLASA H
11425	DHS ATHLETIC BOOSTERS CLUB
	DYSART UNIFIED SCHOOL DST 89
13915	ANYTIME FITNESS
	CASTILLOS MEXICAN FOOD
	DESERT WEST MANAGEMENT
	RIFF RAFF BAR AND GRILL
	WVSA BOOSTER CLUB
14085	VALLEY CHILD CARE & LRNG CTR
15385	WALGREEN ARIZONA DRUG CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

N DYSART RD 2005

8552	BENCHMARK MARBLE CORP
	DEERWESTER PAVING CO
	DESERT STREAM PROPERTIES LLC
	GLOBAL MACHINERY
	GLOBAL MACHINERY BROKERS INC
	SIROCCO WEST INC
	SUPERIOR PLATING LLC
	SWITZER, RAY E
	WEST VALLEY PROPANE INC
8628	DEL MARTENSON DEVELOPMENT CORP
10803	ODELL, TERRY
10833	DESERT COVE ASSEMBLY INC
	JOHNSTON, DAVE
11001	ISLES, IDRIS A
	LEGRAND JIM
	TRI STATE MOBILE
11017	CONNER, HATSUKO A
11029	HULSE, DONALD K
11291	WOLFLEY, VERN A
11405	DYSART MIGRANT HEAD START PRGM
	DYSART UNIFIED SCHOOL DST 89
14085	VALLEY CHILD CARE & LEARNING C
15385	WALGREEN CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

N DYSART RD 2000

8552	ALLIED COMPONENTS INC
	BENCHMARK MARBLE CORP
	ROYS CUSTOM WOODWORK
	RYAN LUMBER COMPANY
	WEST VALLEY PROPANE INC
10803	WORTH, KAREN
10833	DESERT COVE ASSEMBLY INC
	JOHNSTON, DAVE
11001	LEGRAND, KAREN
11017	CONNER, LUTHER
11291	WOLFLEY, VERN A
11405	DYSART UNIFIED SCHOOL DST 89
	KINGSWOOD ELEM SCHOOL

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

N DYSART RD 1995

8552	BENCHMARK MARBLE CORP
	ROYS CUSTOM WOODWORK & RMDLG
9801	GARCIA, H
11405	DYSART UNIFIED DISTRICT 89
	DYSART UNIFIED SCHOOL DIST 89

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

N DYSART RD 1992

11405 DYSART UNIFIED DISTRICT 89

N DYSART RD 1982

2 Residence

CUSTER LN **EL MRGE**
New Street-1972.
. . . . . **85335**
048480
No # Onofre Delgado . . . . . .– 584-5837
1 Residence

DALE W **EL MRGE**
New Street-1980.
. . . . . **85335**
048490
16725 Brian Murray 80 584-2348
1 Residence

DESERT COVE RD W **EL MRGE**
New Street-1980.
. . . . . **85335**
12800-13099 TZ 610 **$B..C 2**
048500
13018 Clay Worthy 80 583-8233
1 Residence

DYSART RD N **EL MRGE**
. . . . . **85335**
11000-13899 TZ 610 **$B..C 2**
048510
11001 Donald Allen Bryan 80 933-5052
11002 11029 . . . . . .NP
11405 ★Dysart Elemtry Sch 977-7281
★El Mirage Elem Sch . . . .¤ 977-7281
★Dusd 89 Elem Admin . . . 977-7281
★Dusd 89 High Schoo . . . 977-7281
★Dusd 89 Jr Hi Schl 977-7281
★Dysart Elemtry Sch 977-7281
★Dysart High School 977-7281
★Dysart Jr Hi Schl 977-7281
★Surprise Elem Schl . . . .– 977-7281
13802 ★McNeley Aviation 979-7120
No # Eulalio Nagera 81 583-8252
No # Esmael Romero 80 583-9198
5 Residence 10 Business

EL FRIO **EL MRGE**
. . . . . **85335**
1- 299 TZ 609 **$E..A 7**
11900-14099 TZ 609 **$E..A 7**
048520

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

N DYSART RD 1977

EL MIRAGE

No # J Socorro Rivera 3 977-4443
4 Residence

CUSTER LN

EL MRGE
85335

No # Larry D Baker 3 583-0453
1 Residence

DYSART RD N

EL MRGE
85335

13800-13899 TZ 610 $B..C 2

11029 E J Stanley – 977-5576
11405 ★Dysart Schl Admnst 977-7281
★Dysart High Schl 977-7281
★Dysart Jr High Sch 977-7281
★Dysart Elemtry Sch 977-7281
13802 ★McNeley Aviation 979-7120
No # Russell Anderson ¤ 977-8291
No # Louis G Chappell 2 583-0136
3 Residence 5 Business

EL FRIO

EL MRGE
85335

1- 299 TZ 609 $E..A 7
11900-14099 TZ 609 $E..A 7

4 NP
8 NP
9 NP
10 NP
½ NP
11 NP
12 NP
13 NP
14 NP
15 NP

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

N DYSART RD 1972

207 POPE L JOHNSON 9771063
13201 DOMINGO F GONZALES-9331804
16 RESIDENCE

CHURCH N EL MRGE

85335
1- END T 609 $E..A 7
16050 ROSE HETH 5830786
1 RESIDENCE

COTTON LN EL MRGE

....WADDELL PO.... 85355
NO # JOE JOHNSON -5830435
NO # JAMES F TOON ¤5830339
2 RESIDENCE

CUSTER LN EL MRGE

85335
NO # JOHN T GREEN ¤9772648
1 RESIDENCE

DYSART RD EL MRGE

85335
1-13799 T 610 $A..C 2
NO # LOUIS G CHAPPELL ¤5830136
NO # JAKE C DEWITT 0 9337019
NO # DONALD J MCCOY 1 5830323
3 RESIDENCE

EL FRIO EL MRGE

85335
1- 299 T 609 $E..A 7
4 GUS GRADILLAS ¤5830174
8 NP
9 OFELIA ANTUNEZ 0 9337052
TRINIDAD LEDESMA 8 9337864
10 WILLIAM BATES -5830047
½JULIUS BARRETT ¤5830769
11 JOSE REDONDO 0 5830885
12 DOROTHY RIOS ¤5839826
14 NP
15 KENNETH FREEMAN 6 5839805
16 ROSALIO L ACOSTA 0 9337650
ROSALIO L ACOSTA 8 9333751
FLOSSIE GRAY ¤9770408
17 LUIS AVILA 1 5830806
19 PABLO G NAVARRETTE 9 5839678
20 NP
21 WILSON A FIELDS -5830867
23 RUDOLFO S RAMIREZ9 5830831
30 NP
103 NP
20 RESIDENCE

EL MIRAGE ARIZ 85335

*ARIZ PUBLIC SERV 9331331

APPENDIX D
REGULATORY RECORDS DOCUMENTATION

Vacant Lot Within Centerpoint Logistics Park
10000 North Dysart Road
El Mirage, AZ 85335

Inquiry Number: 5500068.2s
December 03, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

10000 NORTH DYSART ROAD
EL MIRAGE, AZ 85335

COORDINATES

Latitude (North):	33.5710550 - 33° 34' 15.79''
Longitude (West):	112.3460180 - 112° 20' 45.66''
Universal Tranverse Mercator:	Zone 12
UTM X (Meters):	375069.6
UTM Y (Meters):	3715215.5
Elevation:	1112 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	6718613 EL MIRAGE, AZ
Version Date:	2014

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20150529
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
10000 NORTH DYSART ROAD
EL MIRAGE, AZ 85335

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Reg	LUKE AIR FORCE BASE		DOD	Same	1 ft.

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List

US INST CONTROL ..... Sites with Institutional Controls

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

AZ NPL ..... NPL Detail Listing
AZ WQARF ..... Water Quality Assurance Revolving Fund Sites

State- and tribal - equivalent CERCLIS

SPL ..... Superfund Program List
SHWS ..... ZipAcids List

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Directory of Solid Waste Facilities

State and tribal leaking storage tank lists

LUST ..... Leaking Underground Storage Tank Listing
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
UST ..... Underground Storage Tank Listing
AST ..... List of Aboveground Storage Tanks
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

AZURITE ..... Remediation and DEUR/VEMUR Tracking System
AUL ..... DEUR Database

State and tribal voluntary cleanup sites

VCP ..... Voluntary Remediation Program Sites
INDIAN VCP ..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ..... Brownfields Tracking System

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWTIRE ..... Solid Waste Tire Facilities

INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	Open Dump Inventory
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
CDL	Clandestine Drug Labs
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	Hazardous Material Logbook
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines

FINDS ---------- Facility Index System/Facility Registry System
UXO ---------- Unexploded Ordnance Sites
DOCKET HWC ---------- Hazardous Waste Compliance Docket Listing
ECHO ---------- Enforcement & Compliance History Information
FUELS PROGRAM ---------- EPA Fuels Program Registered Listing
AIRS ---------- Arizona Airs Database
Aquifer ---------- Waste Water Treatment Facilities
AZ DOD ---------- Department of Defense Sites
Dry Wells ---------- Drywell Registration
DRYCLEANERS ---------- Drycleaner Facility Listing
EMAP ---------- All Places of Interest Listing
Enforcement ---------- Enforcement and Violation Listing
Financial Assurance ---------- Financial Assurance Information Listing
MANIFEST ---------- Facility and Manifest Data
VAPOR ---------- Vapor Intrusion
UIC ---------- Underground Injection Control Wells
SPDES ---------- NPDES
WWFAC ---------- Waste Water Treatment Facilities

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS ---------- Recovered Government Archive State Hazardous Waste Facilities List
RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

DOD: Consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

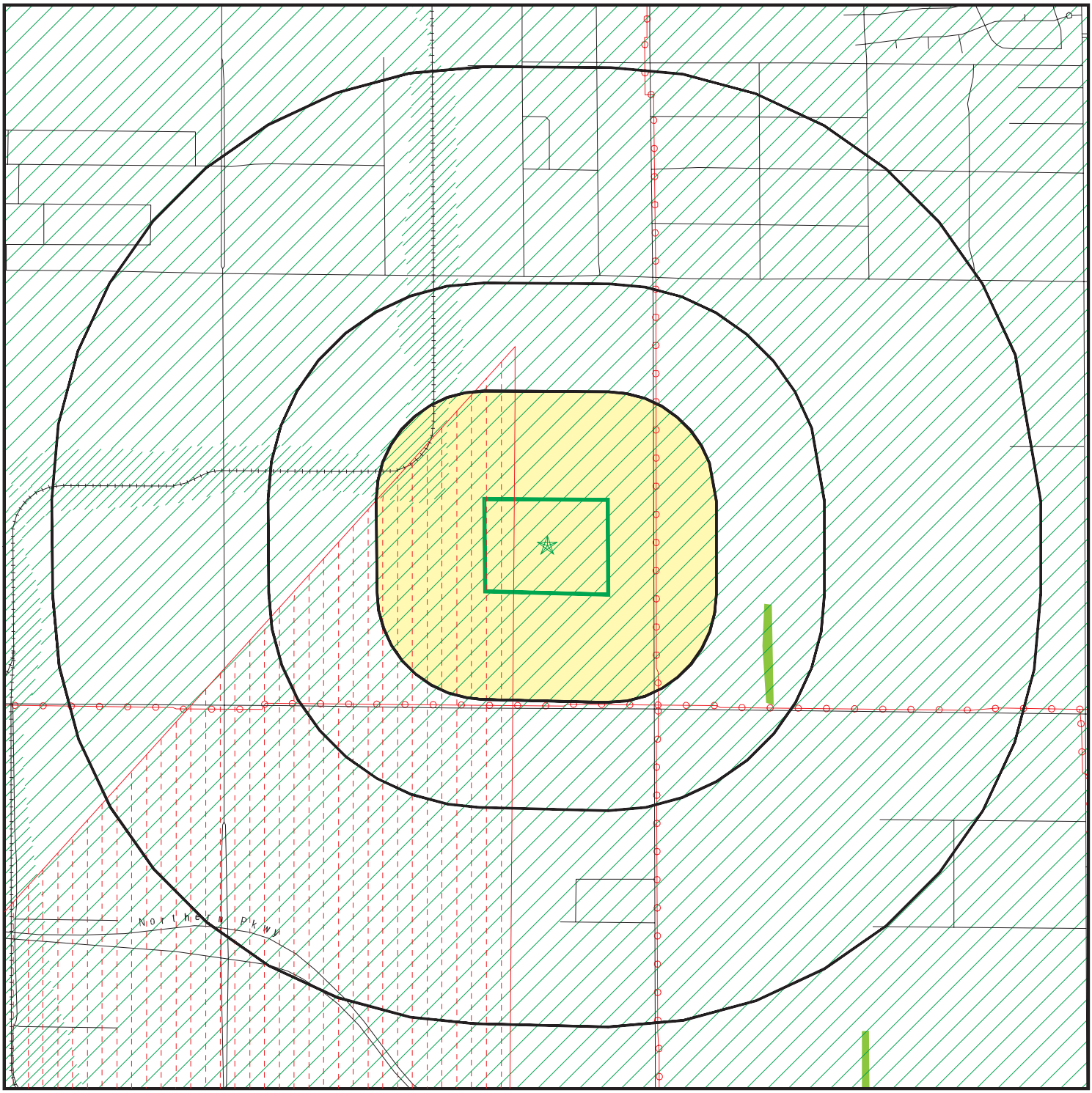
A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LUKE AIR FORCE BASE		0 - 1/8 (0.000 mi.)	0	8

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 5500068.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- DOD Sites: AZ DEQ
- Water Quality Assurance Revolving Fund Areas
- AZ NPL

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Vacant Lot Within Centerpoint Logistics Park	CLIENT:	STRATA Environmental Serv Inc.
ADDRESS:	10000 North Dysart Road El Mirage AZ 85335	CONTACT:	James Maynes
LAT/LONG:	33.571055 / 112.346018	INQUIRY #:	5500068.2s
		DATE:	December 03, 2018 10:19 am

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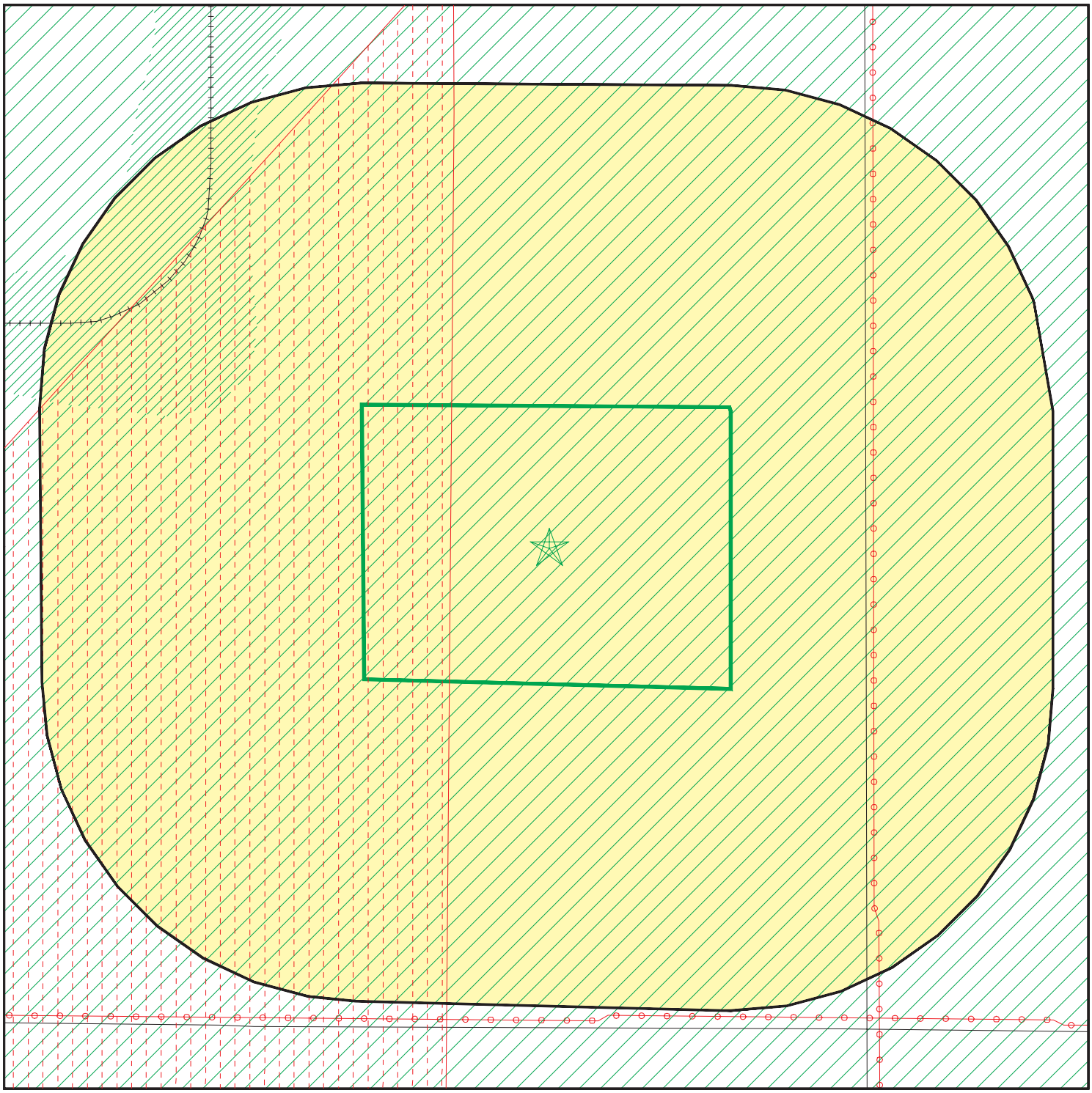
DETAIL MAP - 5500068.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

DOD Sites: AZ DEQ

Water Quality Assurance Revolving Fund Areas

AZ NPL

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Vacant Lot Within Centerpoint Logistics Park	CLIENT:	STRATA Environmental Serv Inc.
ADDRESS:	10000 North Dysart Road El Mirage AZ 85335	CONTACT:	James Maynes
LAT/LONG:	33.571055 / 112.346018	INQUIRY #:	5500068.2s
		DATE:	December 03, 2018 10:25 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
AZ NPL	1.000		0	0	0	0	NR	0
AZ WQARF	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
SPL	1.000		0	0	0	0	NR	0
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
AZURITE	0.500		0	0	0	NR	NR	0
AUL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWTIRE	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DOD	1.000		1	0	0	0	NR	1
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
Aquifer	0.001		0	NR	NR	NR	NR	0
AZ DOD	0.500		0	0	0	NR	NR	0
Dry Wells	0.001		0	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMAP	0.001		0	NR	NR	NR	NR	0
Enforcement	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
VAPOR	0.500		0	0	0	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
SPDES	0.001		0	NR	NR	NR	NR	0
WWFAC	0.500		0	0	0	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	1	0	0	0	0	1

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

DOD **LUKE AIR FORCE BASE** **DOD** **CUSA144174**
Region **N/A**

LUKE AIR FORCE BASE (County), AZ

< 1/8
1 ft.

DOD:
Feature 1: Air Force DOD
Feature 2: Not reported
Feature 3: Not reported
URL: Not reported
Name 1: Luke Air Force Base
Name 2: Not reported
Name 3: Not reported
State: AZ
DOD Site: Yes
Tile name: AZMARICOPA

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/06/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/28/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/31/2018
Date Data Arrived at EDR: 08/28/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/28/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/31/2018
Date Data Arrived at EDR: 08/28/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/28/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 45

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

AZ NPL: NPL Detail Listing

Detailed site information for NPL sites from the Arizona Department of Environmental Quality.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 10/16/2018
Number of Days to Update: 0

Source: Department of Environmental Quality
Telephone: 602-771-4609
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

WQARF: Water Quality Assurance Revolving Fund Sites

Sites which may have an actual or potential impact upon the waters of the state, cause by hazardous substances. The WQARF program provides matching funds to political subdivisions and other state agencies for clean-up activities.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 10/16/2018
Number of Days to Update: 0

Source: Department of Environmental Quality
Telephone: 602-771-4360
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SPL: Superfund Program List

The list is representative of the sites and potential sites within the jurisdiction of the Superfund Program Section. It is comprised of the following elements: 1) Water Quality Assurance Revolving Fund Registry Sites; 2) Potential WQARF Registry sites; 3) NPL sites; and 4) Department of Defense sites requiring SPS oversight.

Date of Government Version: 08/25/2004
Date Data Arrived at EDR: 04/04/2018
Date Made Active in Reports: 05/17/2018
Number of Days to Update: 43

Source: Department of Environmental Quality
Telephone: 602-771-4360
Last EDR Contact: 10/25/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: No Update Planned

SHWS: ZipAcids List

The ACIDS list consists of more than 750 locations subject to investigation under the State Water Quality Assurance Revolving Fund (WQARF) and Federal CERCLA programs. The list is no longer updated by the state.

Date of Government Version: 01/03/2000
Date Data Arrived at EDR: 04/11/2000
Date Made Active in Reports: 05/16/2000
Number of Days to Update: 35

Source: Department of Environmental Quality
Telephone: 602-771-4360
Last EDR Contact: 09/17/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: No Update Planned

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Directory of Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 08/30/2018
Date Made Active in Reports: 10/01/2018
Number of Days to Update: 32

Source: Department of Environmental Quality
Telephone: 602-771-2300
Last EDR Contact: 10/05/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Listing

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 09/07/2018
Date Data Arrived at EDR: 10/10/2018
Date Made Active in Reports: 10/31/2018
Number of Days to Update: 21

Source: Department of Environmental Quality
Telephone: 602-771-4345
Last EDR Contact: 10/10/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/10/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Varies

UST: Underground Storage Tank Listing
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 09/07/2018
Date Data Arrived at EDR: 09/17/2018
Date Made Active in Reports: 09/18/2018
Number of Days to Update: 1
Source: Department of Environmental Quality
Telephone: 602-771-4345
Last EDR Contact: 10/12/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Annually

AST 2: Aboveground Storage Tank Listing
A listing of aboveground storage tank site locations.

Date of Government Version: 08/30/2018
Date Data Arrived at EDR: 09/05/2018
Date Made Active in Reports: 09/28/2018
Number of Days to Update: 23
Source: Department of Environmental Quality
Telephone: 602-771-4380
Last EDR Contact: 09/05/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Varies

AST: List of Aboveground Storage Tanks
Aboveground storage tanks that the Dept. of Building & Fire Safety have permitted.

Date of Government Version: 08/15/2018
Date Data Arrived at EDR: 09/28/2018
Date Made Active in Reports: 10/31/2018
Number of Days to Update: 33

Source: Department of Building & Fire Safety
Telephone: 602-364-1003
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: No Update Planned

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

AZURITE: Remediation and DEUR/VEMUR Tracking System

ADEQ maintains a repository listing sites remediated under programs administered by the department.

Date of Government Version: 11/19/2018
Date Data Arrived at EDR: 11/19/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 11

Source: Department of Environmental Quality
Telephone: 602-771-4397
Last EDR Contact: 09/17/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

AUL: DEUR Database

Activity and use limitations include both engineering controls and institutional controls. DEUR and VEMUR sites. DEUR: Declaration of Environmental Use Restriction. A restrictive land use covenant that is required when a property owner elects to use an institutional (i.e., administrative) control or engineering (i.e., physical) control as a means to meet remediation goals. The DEUR runs with and burdens the land, and requires maintenance of any institutional or engineering controls. VEMUR: Voluntary Environmental Mitigation Use Restriction. A restrictive land use covenant that, prior to July 18, 2000, was required when a property owner elected to remediate the property to non-residential uses. Effective July 18, 2000, the DEUR replaced the VEMUR as a restrictive use covenant.

Date of Government Version: 11/19/2018
Date Data Arrived at EDR: 11/19/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 11

Source: Department of Environmental Quality
Telephone: 602-771-4397
Last EDR Contact: 09/17/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Varies

VCP: Voluntary Remediation Program Sites
Sites involved in the Voluntary Remediation Program.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 08/28/2018
Date Made Active in Reports: 09/28/2018
Number of Days to Update: 31
Source: Department of Environmental Quality
Telephone: 602-771-4411
Last EDR Contact: 10/01/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Tracking System
Information relating to Brownfields sites in Arizona.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 08/28/2018
Date Made Active in Reports: 09/28/2018
Number of Days to Update: 31
Source: Department of Environmental Quality
Telephone: 602-771-4401
Last EDR Contact: 10/01/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/18/2018
Date Data Arrived at EDR: 09/18/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/18/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWTIRE: Solid Waste Tire Facilities
A waste tire "facility" means a solid waste facility at which waste tires are stored outdoors on any day.

Date of Government Version: 10/12/2018
Date Data Arrived at EDR: 11/01/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 29
Source: Department of Environmental Quality
Telephone: 602-771-4132
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/25/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 11/02/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/21/2018
Date Data Arrived at EDR: 09/21/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 49
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs
A listing of drug lab seizures in Arizona.

Date of Government Version: 10/24/2018
Date Data Arrived at EDR: 10/25/2018
Date Made Active in Reports: 10/31/2018
Number of Days to Update: 6
Source: Board of Technical Registration
Telephone: 602-364-4931
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/21/2018
Date Data Arrived at EDR: 09/21/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 49

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

SPILLS: Hazardous Material Logbook

Chemical spills and incidents referred to the Emergency Response Unit.

Date of Government Version: 11/15/2001
Date Data Arrived at EDR: 06/28/2007
Date Made Active in Reports: 07/24/2007
Number of Days to Update: 26

Source: Department of Environmental Quality
Telephone: 602-771-4153
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2001
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/19/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/12/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/12/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 08/31/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/05/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/09/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/21/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/24/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/23/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/04/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/11/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/11/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/07/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/04/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2018
Date Data Arrived at EDR: 10/03/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/03/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/30/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/17/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 80

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/01/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2018
Date Data Arrived at EDR: 08/29/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 37

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/10/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/07/2018
Date Data Arrived at EDR: 09/05/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 30

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/18/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2018
Date Data Arrived at EDR: 09/05/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/05/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 06/19/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 87

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Quarterly

AIRS: Arizona Airs Database
Arizona major (has the potential to emit over 100 tons of criteria pollutant) and minor (below 100 tons) sources.

Date of Government Version: 10/26/2018
Date Data Arrived at EDR: 10/30/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 31

Source: Department of Environmental Quality
Telephone: 602-771-2344
Last EDR Contact: 10/01/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Semi-Annually

AQUIFER: Waste Water Treatment Facilities
Waste Water Treatment Facilities with APP (Aquifer Protection Permits.)

Date of Government Version: 09/04/2018
Date Data Arrived at EDR: 09/06/2018
Date Made Active in Reports: 10/01/2018
Number of Days to Update: 25

Source: Department of Environmental Quality
Telephone: 602-771-4623
Last EDR Contact: 11/12/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Semi-Annually

DOD: Department of Defense Sites
These sites are federal facilities that are either being assessed for potential contamination, or have active remediation taking place on them.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 10/31/2018
Number of Days to Update: 15

Source: Department of Environmental Quality
Telephone: 602-771-4360
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

DRY WELLS: Drywell Registration
A drywell is a bored, drilled, or driven shaft or hole whose depth is greater than its width and is designed and constructed specifically for the disposal of storm water.

Date of Government Version: 09/12/2018
Date Data Arrived at EDR: 09/13/2018
Date Made Active in Reports: 10/01/2018
Number of Days to Update: 18

Source: Department of Environmental Quality
Telephone: 602-771-4686
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Semi-Annually

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaner facilities in Arizona.

Date of Government Version: 04/11/2014
Date Data Arrived at EDR: 04/15/2014
Date Made Active in Reports: 05/12/2014
Number of Days to Update: 27

Source: Department of Environmental Quality
Telephone: 602-771-4335
Last EDR Contact: 09/17/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

EMAP: All Places of Interest Listing
A listing of all places of interest to the Department of Environmental Quality, including air, waste and water sites.

Date of Government Version: 10/11/2018
Date Data Arrived at EDR: 10/12/2018
Date Made Active in Reports: 10/31/2018
Number of Days to Update: 19

Source: Department of Environmental Quality
Telephone: 602-771-4380
Last EDR Contact: 09/04/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENF: Enforcement and Violation Listing
A listing of enforcement and violation cases in the state of Arizona.

Date of Government Version: 11/19/2018
Date Data Arrived at EDR: 11/19/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 11

Source: Department of Environmental Quality
Telephone: 602-771-4424
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial assurance information for ust sites.

Date of Government Version: 10/17/2018
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 10/31/2018
Number of Days to Update: 8

Source: Department of Environmental Quality
Telephone: 602-771-4258
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Varies

AZ MANIFEST: Manifest Information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 07/17/2018
Date Made Active in Reports: 09/05/2018
Number of Days to Update: 50

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 09/17/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Annually

VAPOR: Vapor Intrusion
A listing of vapor intrusion site locations

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 10/01/2018
Number of Days to Update: 6

Source: Department of Environmental Quality
Telephone: 602-771-4197
Last EDR Contact: 09/17/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

UIC: Underground Injection Control Wells
Underground injection control wells.

Date of Government Version: 09/30/2015
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 60

Source: Arizona Geological Survey
Telephone: 520-770-3500
Last EDR Contact: 10/25/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

NPDES: Notice of Intent Construction Stormwater General Permits Database
NPDES permit sites

Date of Government Version: 09/04/2018
Date Data Arrived at EDR: 09/06/2018
Date Made Active in Reports: 10/01/2018
Number of Days to Update: 25

Source: Department of Environmental Quality
Telephone: 602-771-4424
Last EDR Contact: 10/05/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Varies

WWFAC: Waste Water Treatment Facilities
Statewide list of waste water treatment facilities.

Date of Government Version: 07/09/2012
Date Data Arrived at EDR: 07/23/2012
Date Made Active in Reports: 09/06/2012
Number of Days to Update: 45

Source: Department of Environmental Quality
Telephone: 602-771-4623
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Arizona.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 185

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Arizona.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/15/2014
Number of Days to Update: 198

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Arizona.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 185

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/10/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 09/10/2018
Number of Days to Update: 31

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/01/2018
Date Data Arrived at EDR: 08/01/2018
Date Made Active in Reports: 08/31/2018
Number of Days to Update: 30

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/31/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Quarterly

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 07/09/2018
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/06/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facilities & Group Homes
Source: Department of Health Services
Telephone: 602-674-4220

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Riparian Vegetation Associated with Perennial Waters
Source: State Land Department
Telephone: 602-542-4094

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

VACANT LOT WITHIN CENTERPOINT LOGISTICS PARK
10000 NORTH DYSART ROAD
EL MIRAGE, AZ 85335

TARGET PROPERTY COORDINATES

Latitude (North):	33.571055 - 33° 34' 15.80''
Longitude (West):	112.346018 - 112° 20' 45.66''
Universal Tranverse Mercator:	Zone 12
UTM X (Meters):	375069.6
UTM Y (Meters):	3715215.5
Elevation:	1112 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	6718613 EL MIRAGE, AZ
Version Date:	2014

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

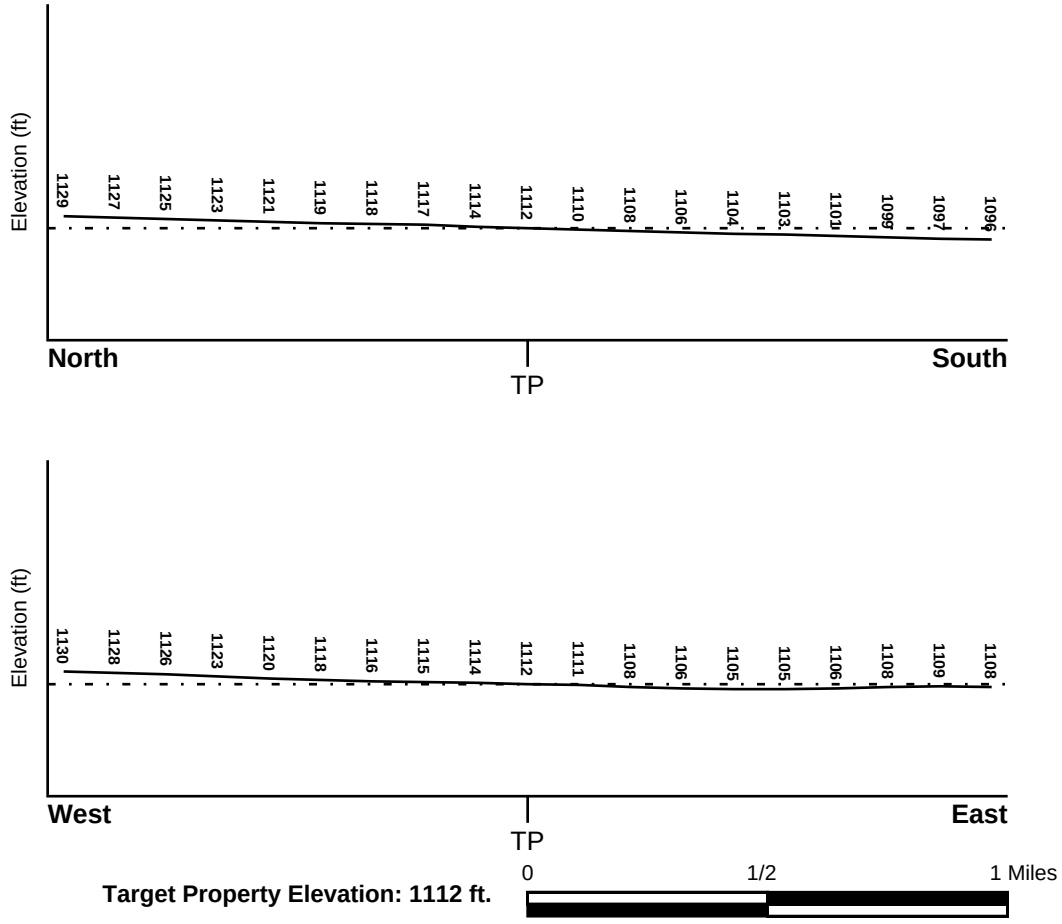
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
04013C1680L	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
04013C1690L	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

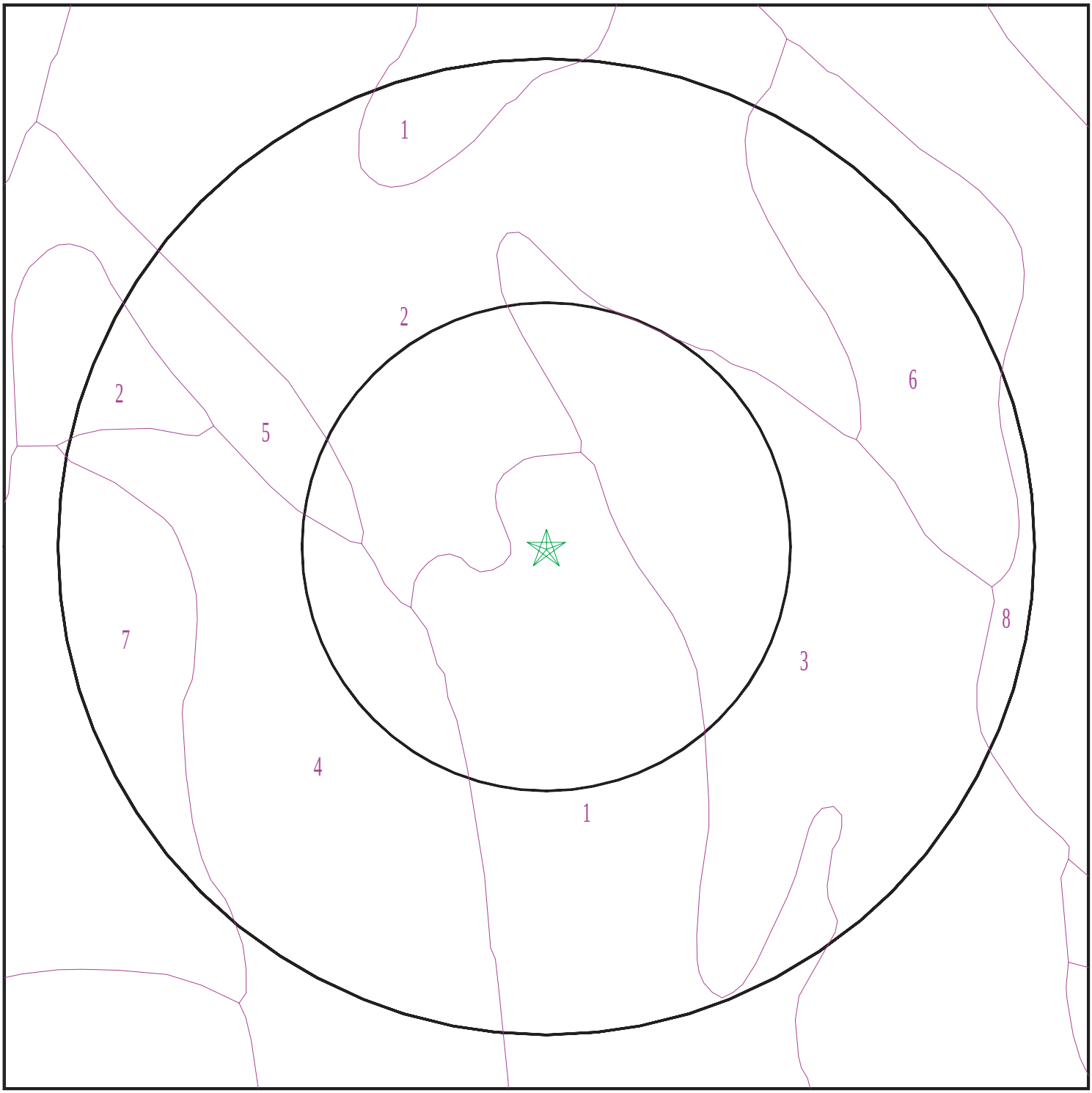
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5500068.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Vacant Lot Within Centerpoint Logistics Park	CLIENT:	STRATA Environmental Serv Inc.
ADDRESS:	10000 North Dysart Road	CONTACT:	James Maynes
	El Mirage AZ 85335	INQUIRY #:	5500068.2s
LAT/LONG:	33.571055 / 112.346018	DATE:	December 03, 2018 10:26 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: ESTRELLA

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	11 inches	24 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	24 inches	48 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
4	48 inches	59 inches	gravelly clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: GILMAN

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	18 inches	37 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	37 inches	64 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: ANTHO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 7.9
2	12 inches	35 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 7.9

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	35 inches	46 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 7.9
4	46 inches	59 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 7.9

Soil Map ID: 4

Soil Component Name: MOHALL

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	11 inches	25 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	35 inches	42 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
4	42 inches	59 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
5	25 inches	35 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 5

Soil Component Name: BRIOS

Soil Surface Texture: sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9
2	14 inches	22 inches	coarse sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9
3	22 inches	59 inches	stratified gravelly coarse sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9

Soil Map ID: 6

Soil Component Name: LAVEEN

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	14 inches	50 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
3	50 inches	72 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 7

Soil Component Name: VALENCIA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	9 inches	25 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	25 inches	59 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 8

Soil Component Name: LAVEEN

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	14 inches	50 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
3	50 inches	72 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	USGS40000055723	1/4 - 1/2 Mile ENE
A3	USGS40000055726	1/4 - 1/2 Mile ENE
B5	USGS40000055658	1/4 - 1/2 Mile SSW
C6	USGS40000055724	1/4 - 1/2 Mile West
B9	USGS40000055659	1/4 - 1/2 Mile SSW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
D10	USGS40000055749	1/4 - 1/2 Mile NNW
D11	USGS40000055750	1/4 - 1/2 Mile NNW
E16	USGS40000055744	1/2 - 1 Mile NW
F21	USGS40000055767	1/2 - 1 Mile North
G22	USGS40000055759	1/2 - 1 Mile NNW
G24	USGS40000055768	1/2 - 1 Mile NNW
H25	USGS40000055766	1/2 - 1 Mile NNE
I33	USGS40000055714	1/2 - 1 Mile West
I34	USGS40000055719	1/2 - 1 Mile West
J38	USGS40000055765	1/2 - 1 Mile NE
K40	USGS40000030855	1/2 - 1 Mile WSW
L42	USGS40000055597	1/2 - 1 Mile SSW
M43	USGS40000055771	1/2 - 1 Mile NW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

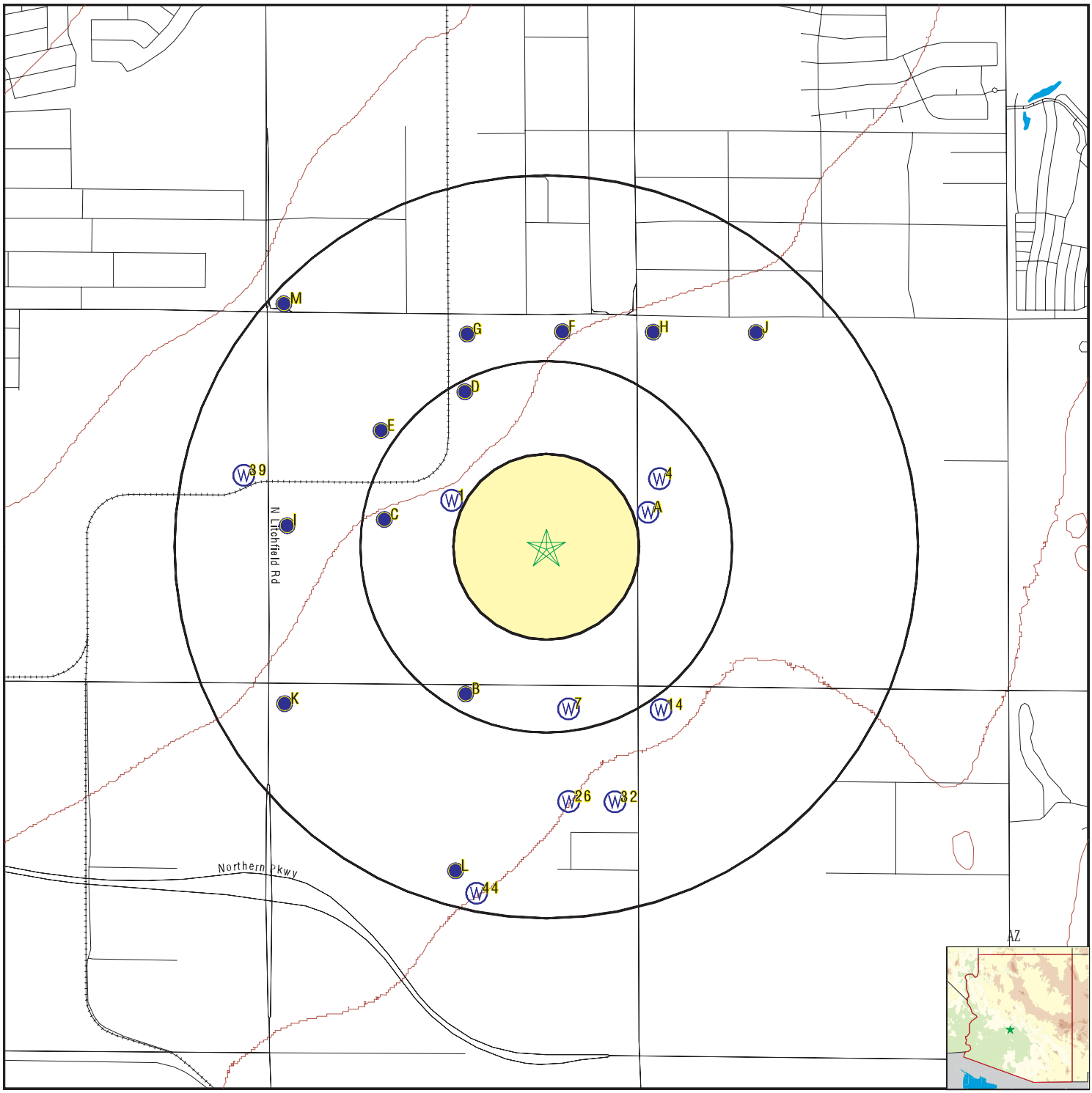
MAP ID	WELL ID	LOCATION FROM TP
1	AZ8000000202786	1/4 - 1/2 Mile WNW
4	AZ8000000128024	1/4 - 1/2 Mile ENE
7	AZ8000000012293	1/4 - 1/2 Mile South
C8	AZ8000000128781	1/4 - 1/2 Mile West
B12	AZ8000000116078	1/4 - 1/2 Mile SSW
D13	AZ8000000128021	1/4 - 1/2 Mile NNW
14	AZ8000000128028	1/2 - 1 Mile SE
E15	AZ8000000128783	1/2 - 1 Mile NW
F17	AZ8000000128026	1/2 - 1 Mile North
G18	AZ8000000021189	1/2 - 1 Mile NNW
G19	AZ8000000028260	1/2 - 1 Mile NNW
G20	AZ8000000128020	1/2 - 1 Mile NNW
H23	AZ8000000128022	1/2 - 1 Mile NNE
26	AZ8000000045008	1/2 - 1 Mile South
I27	AZ8000000116758	1/2 - 1 Mile West
I28	AZ8000000128784	1/2 - 1 Mile West
I29	AZ8000000116757	1/2 - 1 Mile West
I30	AZ8000000104236	1/2 - 1 Mile West
I31	AZ8000000116756	1/2 - 1 Mile West
32	AZ8000000047196	1/2 - 1 Mile SSE
J35	AZ8000000128023	1/2 - 1 Mile NE
K36	AZ8000000000929	1/2 - 1 Mile WSW
K37	AZ8000000128785	1/2 - 1 Mile WSW
39	AZ8000000146257	1/2 - 1 Mile WNW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
L41	AZ8000000201155	1/2 - 1 Mile SSW
44	AZ8000000128025	1/2 - 1 Mile SSW
M45	AZ8000000091376	1/2 - 1 Mile NW

PHYSICAL SETTING SOURCE MAP - 5500068.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

SITE NAME:	Vacant Lot Within Centerpoint Logistics Park	CLIENT:	STRATA Environmental Serv Inc.
ADDRESS:	10000 North Dysart Road El Mirage AZ 85335	CONTACT:	James Maynes
LAT/LONG:	33.571055 / 112.346018	INQUIRY #:	5500068.2s
		DATE:	December 03, 2018 10:26 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
WNW
1/4 - 1/2 Mile
Higher

AZ WELLS **AZ8000000202786**

Registry ID:	909845	Well Type:	SPCL - GEOTECHNICAL
Well Type Group:	OTHER	Owner Name:	CITY OF PHOENIX AVIATION DEPT.
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	78
Installed:	200810 7	Well Depth:	125
Water Level:	0	Casing Depth:	0
Casing Diameter:	6	Casing Type:	Not Reported
RGR Pump Data:	NO	Pump Type:	Not Reported
Pump Power:	Not Reported	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	200810 3
Approved:	200810 3	Completion:	A
Well Cancelled:	Y		

A2
ENE
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000055723**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 26CBB2	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	195707
Well Depth:	1000	Well Depth Units:	ft
Well Hole Depth:	1000	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	7	Level reading date:	1991-11-06
Feet below surface:	404.20	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1984-12-18	Feet below surface:	384.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-12-20	Feet below surface:	400.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-01-17	Feet below surface:	396.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-01-13	Feet below surface:	359.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1962-12-31	Feet below surface:	288.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1962-02-20	Feet below surface:	271.74
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A3
ENE
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000055726**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 26CBB1	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

4
ENE
1/4 - 1/2 Mile
Lower

AZ WELLS **AZ8000000128024**

Registry ID:	610629	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	1957 724	Well Depth:	950
Water Level:	520	Casing Depth:	950
Casing Diameter:	20	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	1600
Tested Rate:	1600	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 6 4
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

B5
SSW
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000055658**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 34ABB2	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	196204
Well Depth:	975	Well Depth Units:	ft
Well Hole Depth:	975	Well Hole Depth Units:	ft

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C6
West
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000055724**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27CAA	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	196004
Well Depth:	1000	Well Depth Units:	ft
Well Hole Depth:	1000	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	3	Level reading date:	1991-11-06
Feet below surface:	407.80	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1988-11-29	Feet below surface:	406.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-07-26	Feet below surface:	628.00
Feet to sea level:	Not Reported	Note:	The site was being pumped.

7
South
1/4 - 1/2 Mile
Lower

AZ WELLS **AZ8000000012293**

Registry ID:	209820	Well Type:	EXEMPT
Well Type Group:	EXEMPT	Owner Name:	BUTTRUM DYSART RV & BOAT STORAGE LLC
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	674
Installed:	0	Well Depth:	540
Water Level:	352	Casing Depth:	540
Casing Diameter:	6	Casing Type:	OTHER - BLACK STEEL - IRON - SEAMLESS
RGR Pump Data:	NO	Pump Type:	Not Reported
Pump Power:	Not Reported	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	20051018
Approved:	20051020	Completion:	Not Reported
Well Cancelled:	Not Reported		

C8
West
1/4 - 1/2 Mile
Higher

AZ WELLS **AZ8000000128781**

Registry ID:	609452	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT	Owner Name:	MCKEE,R H
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	97
Installed:	1960 525	Well Depth:	1000

Water Level:	450	Casing Depth:	1000
Casing Diameter:	20	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	YES	Pump Type:	TURBINE
Pump Power:	ELECTRIC MOTOR > 100 HP	Pump Rate:	1700
Tested Rate:	1700	Draw Down:	62
Drill Log:	X	Application Date:	1982 525
Approved:	0	Completion:	X
Well Cancelled:	Not Reported		

B9
SSW
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000055659**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 34ABB1	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	194610
Well Depth:	350	Well Depth Units:	ft
Well Hole Depth:	350	Well Hole Depth Units:	ft

D10
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000055749**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27ABC2	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19720301
Well Depth:	1050	Well Depth Units:	ft
Well Hole Depth:	1050	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	3	Level reading date:	1991-11-06
Feet below surface:	412.80	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1985-07-23	Feet below surface:	604.30
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1977-01-18	Feet below surface:	402.30
Feet to sea level:	Not Reported	Note:	Not Reported

D11
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000055750**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27ABC1	Type:	Well

Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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B12
SSW **AZ WELLS** **AZ8000000116078**
1/4 - 1/2 Mile
Lower

Registry ID:	601589	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT	Owner Name:	OLIVE AND DYSART LLC
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	1947 425	Well Depth:	900
Water Level:	400	Casing Depth:	900
Casing Diameter:	16	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	1500
Tested Rate:	1500	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 114
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

D13
NNW **AZ WELLS** **AZ8000000128021**
1/4 - 1/2 Mile
Higher

Registry ID:	610626	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	1974 1 1	Well Depth:	1050
Water Level:	520	Casing Depth:	1050
Casing Diameter:	20	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	1850
Tested Rate:	1850	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 6 4
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

14
SE **AZ WELLS** **AZ8000000128028**
1/2 - 1 Mile
Lower

Registry ID:	610633	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		

Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	1978 9 9	Well Depth:	1450
Water Level:	520	Casing Depth:	1450
Casing Diameter:	14	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	2100
Tested Rate:	0	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 6 4
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

E15
NW
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000128783**

Registry ID:	609454	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT	Owner Name:	MCKEE,R H
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	97
Installed:	1962 3 5	Well Depth:	1500
Water Level:	410	Casing Depth:	1500
Casing Diameter:	20	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	YES	Pump Type:	SUBMERSIBLE
Pump Power:	ELECTRIC MOTOR > 100 HP	Pump Rate:	2000
Tested Rate:	2000	Draw Down:	90
Drill Log:	X	Application Date:	1982 525
Approved:	0	Completion:	X
Well Cancelled:	Not Reported		

E16
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000055744**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27BDB	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	196201
Well Depth:	1500	Well Depth Units:	ft
Well Hole Depth:	1500	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1962-01-01
Feet below surface:	305.00	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F17
North
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000128026**

Registry ID:	610631	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	197612 5	Well Depth:	1820
Water Level:	520	Casing Depth:	1820
Casing Diameter:	20	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	2400
Tested Rate:	2400	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 6 4
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

G18
NNW
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000021189**

Registry ID:	220643	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	Not Reported
Installed:	0	Well Depth:	1000
Water Level:	380	Casing Depth:	1000
Casing Diameter:	16	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	NO	Pump Type:	Not Reported
Pump Power:	Not Reported	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	2011 620
Approved:	2011 6 3	Completion:	Not Reported
Well Cancelled:	Not Reported		

G19
NNW
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000028260**

Registry ID:	482480	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	77
Installed:	1951 529	Well Depth:	752
Water Level:	415	Casing Depth:	752
Casing Diameter:	20	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING

RGR Pump Data:	NO	Pump Type:	TURBINE
Pump Power:	ELECTRIC MOTOR > 100 HP	Pump Rate:	0
Tested Rate:	1772	Draw Down:	0
Drill Log:	X	Application Date:	2011 620
Approved:	0	Completion:	A
Well Cancelled:	Y		

G20
NNW
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000128020**

Registry ID:	610625	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	77
Installed:	1973 228	Well Depth:	1035
Water Level:	415	Casing Depth:	1085
Casing Diameter:	20	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	YES	Pump Type:	TURBINE
Pump Power:	ELECTRIC MOTOR > 100 HP	Pump Rate:	1650
Tested Rate:	1650	Draw Down:	0
Drill Log:	X	Application Date:	1982 6 4
Approved:	1973 927	Completion:	A
Well Cancelled:	Y		

F21
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000055767**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27AAB	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19761205
Well Depth:	1807	Well Depth Units:	ft
Well Hole Depth:	1807	Well Hole Depth Units:	ft

G22
NNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000055759**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27ABB2	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19730103
Well Depth:	1085	Well Depth Units:	ft

Well Hole Depth:	1085	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	2	Level reading date:	1991-11-06
Feet below surface:	419.00	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1985-07-23	Feet below surface:	551.30
Feet to sea level:	Not Reported	Note:	The site was being pumped.

H23
NNE **AZ WELLS** **AZ8000000128022**
1/2 - 1 Mile
Higher

Registry ID:	610627	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	19501127	Well Depth:	1000
Water Level:	520	Casing Depth:	1000
Casing Diameter:	20	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	1650
Tested Rate:	1650	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 6 4
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

G24
NNW **FED USGS** **USGS40000055768**
1/2 - 1 Mile
Higher

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27ABB1	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	195105
Well Depth:	752	Well Depth Units:	ft
Well Hole Depth:	752	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	4	Level reading date:	1972-01-13
Feet below surface:	382.00	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1962-12-31	Feet below surface:	304.96
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1961-01-16	Feet below surface:	284.19
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1961-01-06	Feet below surface:	284.19
Feet to sea level:	Not Reported	Note:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

H25
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000055766**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 26BBB	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1947
Well Depth:	1000	Well Depth Units:	ft
Well Hole Depth:	1000	Well Hole Depth Units:	ft

26
South
1/2 - 1 Mile
Lower

AZ WELLS **AZ8000000045008**

Registry ID:	516887	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT	Owner Name:	DYSART & OLIVE PRTSP,
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	4
Installed:	0	Well Depth:	0
Water Level:	0	Casing Depth:	0
Casing Diameter:	0	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	NO	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1987 324
Approved:	0	Completion:	Not Reported
Well Cancelled:	Y		

I27
West
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000116758**

Registry ID:	597683	Well Type:	ENV - MONITOR
Well Type Group:	MONITOR	Owner Name:	CITY OF PHOENIX
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	498
Installed:	2003 822	Well Depth:	120
Water Level:	7300	Casing Depth:	40
Casing Diameter:	2	Casing Type:	PLASTIC OR PVC
RGR Pump Data:	NO	Pump Type:	Not Reported
Pump Power:	Not Reported	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	2003 321
Approved:	2003 321	Completion:	A
Well Cancelled:	Y		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

I28
West
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000128784**

Registry ID:	609455	Well Type:	EXEMPT
Well Type Group:	EXEMPT	Owner Name:	MCKEE,R H
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	1945 1 1	Well Depth:	800
Water Level:	400	Casing Depth:	800
Casing Diameter:	14	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	YES	Pump Type:	SUBMERSIBLE
Pump Power:	ELECTRIC MOTOR 1 - 5 HP	Pump Rate:	25
Tested Rate:	600	Draw Down:	0
Drill Log:	X	Application Date:	1982 525
Approved:	0	Completion:	X
Well Cancelled:	Not Reported		

I29
West
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000116757**

Registry ID:	597682	Well Type:	ENV - MONITOR
Well Type Group:	MONITOR	Owner Name:	CITY OF PHOENIX
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	498
Installed:	2003 822	Well Depth:	120
Water Level:	300	Casing Depth:	40
Casing Diameter:	2	Casing Type:	PLASTIC OR PVC
RGR Pump Data:	NO	Pump Type:	Not Reported
Pump Power:	Not Reported	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	2003 321
Approved:	2003 321	Completion:	A
Well Cancelled:	Y		

I30
West
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000104236**

Registry ID:	579041	Well Type:	SPCL - GEOTECHNICAL
Well Type Group:	OTHER	Owner Name:	CITY OF PHOENIX AVIATION DEPARTMENT
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	611
Installed:	0	Well Depth:	0
Water Level:	0	Casing Depth:	0
Casing Diameter:	0	Casing Type:	Not Reported
RGR Pump Data:	NO	Pump Type:	Not Reported
Pump Power:	Not Reported	Pump Rate:	0
Tested Rate:	0	Draw Down:	0

Drill Log:	Not Reported	Application Date:	2000 113
Approved:	0	Completion:	Not Reported
Well Cancelled:	Y		

I31
West
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000116756**

Registry ID:	597681	Well Type:	ENV - MONITOR
Well Type Group:	MONITOR	Owner Name:	CITY OF PHOENIX
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	498
Installed:	2003 627	Well Depth:	0
Water Level:	7300	Casing Depth:	40
Casing Diameter:	2	Casing Type:	PLASTIC OR PVC
RGR Pump Data:	NO	Pump Type:	Not Reported
Pump Power:	Not Reported	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	2003 321
Approved:	2003 321	Completion:	A
Well Cancelled:	Y		

32
SSE
1/2 - 1 Mile
Lower

AZ WELLS **AZ8000000047196**

Registry ID:	517993	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT	Owner Name:	WESTSIDE INDUSTRIAL INVESTMENTS
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	4
Installed:	1987 818	Well Depth:	800
Water Level:	515	Casing Depth:	800
Casing Diameter:	10	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	1987 714
Approved:	0	Completion:	C
Well Cancelled:	Not Reported		

I33
West
1/2 - 1 Mile
Higher

FED USGS **USGS40000055714**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27CBB1	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1926

Well Depth:	257	Well Depth Units:	ft
Well Hole Depth:	257	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1926-02-01
Feet below surface:	76.00	Feet to sea level:	Not Reported
Note:	Not Reported		

I34
West
1/2 - 1 Mile
Higher

FED USGS **USGS40000055719**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27CBB2	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19510101
Well Depth:	800	Well Depth Units:	ft
Well Hole Depth:	800	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	3	Level reading date:	1954-02-08
Feet below surface:	210.68	Feet to sea level:	Not Reported
Note:	A nearby site that taps the same aquifer was being pumped.		

Level reading date:	1952-02-13	Feet below surface:	197.20
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1951-10-01	Feet below surface:	180.00
Feet to sea level:	Not Reported	Note:	Not Reported

J35
NE
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000128023**

Registry ID:	610628	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	0	Well Depth:	1150
Water Level:	520	Casing Depth:	1150
Casing Diameter:	20	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	NO	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	1200
Tested Rate:	1200	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 6 4
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

K36
WSW
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000000929**

Registry ID:	085977	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT	Owner Name:	TAL-WI-WI,
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	37
Installed:	1981 227	Well Depth:	1200
Water Level:	446	Casing Depth:	1200
Casing Diameter:	1	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	NO	Pump Type:	TURBINE
Pump Power:	ELECTRIC MOTOR > 100 HP	Pump Rate:	1660
Tested Rate:	1660	Draw Down:	0
Drill Log:	Not Reported	Application Date:	19801119
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

K37
WSW
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000128785**

Registry ID:	609456	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT	Owner Name:	MCKEE,R H
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	1981 1 1	Well Depth:	1400
Water Level:	460	Casing Depth:	1400
Casing Diameter:	16	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	1700
Tested Rate:	1700	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 525
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

J38
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000055765**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 26BAB	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	826	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	3	Level reading date:	1991-11-06
Feet below surface:	408.70	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1984-12-18	Feet below surface:	384.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-12-20	Feet below surface:	399.10
Feet to sea level:	Not Reported	Note:	Not Reported

39
WNW
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000146257**

Registry ID:	625815	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT	Owner Name:	SUBURBAN LAND RESERVE, INC.
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	1971 1 1	Well Depth:	1170
Water Level:	510	Casing Depth:	1170
Casing Diameter:	18	Casing Type:	STEEL - PERFORATED OR SLOTTED CASING
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 6 9
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

K40
WSW
1/2 - 1 Mile
Higher

FED USGS **USGS40000030855**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 34BBB	Type:	Well
Description:	NAWQA GWSI data entry verified by GEC on 5/22/02		
HUC:	15070102	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Basin and Range basin-fill aquifers
Formation Type:	Basin Fill, Upper and Lower, Undifferentiated		
Aquifer Type:	Unconfined single aquifer	Construction Date:	19810227
Well Depth:	1200	Well Depth Units:	ft
Well Hole Depth:	1200	Well Hole Depth Units:	ft

L41
SSW
1/2 - 1 Mile
Lower

AZ WELLS **AZ8000000201155**

Registry ID:	914107	Well Type:	SPCL - GEOTECHNICAL
Well Type Group:	OTHER	Owner Name:	KLIENFELDER
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	666
Installed:	2012 3 2	Well Depth:	110

Water Level:	0	Casing Depth:	0
Casing Diameter:	0	Casing Type:	Not Reported
RGR Pump Data:	NO	Pump Type:	Not Reported
Pump Power:	Not Reported	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	2012 229
Approved:	2012 229	Completion:	A
Well Cancelled:	Y		

L42
SSW **FED USGS** **USGS40000055597**
1/2 - 1 Mile
Lower

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 34DBB1	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	194307
Well Depth:	350	Well Depth Units:	ft
Well Hole Depth:	350	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	45	Level reading date:	2000-11-06
Feet below surface:	282.8	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1999-11-01	Feet below surface:	298.1
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1998-11-30	Feet below surface:	302.6
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1997-10-20	Feet below surface:	305.9
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1997-01-06	Feet below surface:	307.5
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1995-11-21	Feet below surface:	309.6
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1994-12-21	Feet below surface:	312.0
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		

Level reading date:	1993-11-23	Feet below surface:	315.6
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1992-11-24	Feet below surface:	320.4
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1991-11-05	Feet below surface:	323.50
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1990-12-06	Feet below surface:	326.10
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1989-11-27	Feet below surface:	327.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-12-05	Feet below surface:	326.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-05-31	Feet below surface:	325.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-12-14	Feet below surface:	326.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-06-02	Feet below surface:	326.10
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1986-12-05	Feet below surface:	319.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-06-04	Feet below surface:	326.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-12-10	Feet below surface:	328.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-06-24	Feet below surface:	329.70
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1984-12-18	Feet below surface:	340.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-12-08	Feet below surface:	336.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-01-12	Feet below surface:	337.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-02-03	Feet below surface:	334.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-01-16	Feet below surface:	332.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-01-30	Feet below surface:	331.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-03-07	Feet below surface:	326.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-12-16	Feet below surface:	327.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-02-03	Feet below surface:	323.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-01-10	Feet below surface:	317
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-01-25	Feet below surface:	314.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-01-13	Feet below surface:	311

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-01-27	Feet below surface:	311
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1970-02-16	Feet below surface:	308
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1969-02-11	Feet below surface:	305.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1968-01-18	Feet below surface:	302.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1967-01-30	Feet below surface:	296
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-01-29	Feet below surface:	291.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-01-06	Feet below surface:	286.44
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1962-12-27	Feet below surface:	242.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1962-01-31	Feet below surface:	254.24
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1960-02-09	Feet below surface:	236.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1959-01-20	Feet below surface:	244.57
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1958-01-21	Feet below surface:	237.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1957-01-28	Feet below surface:	224.07
Feet to sea level:	Not Reported	Note:	Not Reported

M43
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000055771**

Organization ID:	USGS-AZ	Organization Name:	USGS Arizona Water Science Center
Monitor Location:	B-03-01 27BBB	Type:	Well
Description:	Not Reported	HUC:	15070102
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1946
Well Depth:	572	Well Depth Units:	ft
Well Hole Depth:	572	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	17	Level reading date:	2000-11-06
Feet below surface:	312.4	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1999-11-03	Feet below surface:	321.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1998-11-30	Feet below surface:	326.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1997-10-22	Feet below surface:	332.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1996-10-31	Feet below surface:	334.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1991-11-06	Feet below surface:	348.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-12-06	Feet below surface:	349.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-11-27	Feet below surface:	349.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-12-05	Feet below surface:	348.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-05-31	Feet below surface:	349.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-12-14	Feet below surface:	348.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-06-02	Feet below surface:	351.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-12-05	Feet below surface:	350.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-06-04	Feet below surface:	352.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-02-25	Feet below surface:	345.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-12-18	Feet below surface:	351.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-12-20	Feet below surface:	362.50
Feet to sea level:	Not Reported	Note:	Not Reported

44
SSW
1/2 - 1 Mile
Lower

AZ WELLS **AZ8000000128025**

Registry ID:	610630	Well Type:	NON-EXEMPT
Well Type Group:	NON-EXEMPT		
Owner Name:	JOHN F LONG FAMILY REVOCABLE LIVING TRUST U/A/D 2/26/2008		
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	0
Installed:	1976 8 9	Well Depth:	1250
Water Level:	520	Casing Depth:	1250

Casing Diameter:	20	Casing Type:	NO CASING CODE LISTED
RGR Pump Data:	YES	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	2000
Tested Rate:	2000	Draw Down:	0
Drill Log:	Not Reported	Application Date:	1982 6 4
Approved:	0	Completion:	Not Reported
Well Cancelled:	Not Reported		

M45
NW
1/2 - 1 Mile
Higher

AZ WELLS **AZ8000000091376**

Registry ID:	564527	Well Type:	ENV - MONITOR OR PIEZOMETER
Well Type Group:	MONITOR	Owner Name:	SURPRISE CITY OF
Basin:	PHOENIX AMA	Subbasin:	WEST SALT RIVER VALLEY
Watershed:	AGUA FRIA RIVER	AMA or INA:	PHOENIX
Program:	55	Driller License #:	473
Installed:	0	Well Depth:	380
Water Level:	335	Casing Depth:	380
Casing Diameter:	10	Casing Type:	PLASTIC OR PVC
RGR Pump Data:	NO	Pump Type:	NO PUMP CODE LISTED
Pump Power:	NO POWER CODE LISTED	Pump Rate:	0
Tested Rate:	0	Draw Down:	0
Drill Log:	X	Application Date:	1997 9 5
Approved:	0	Completion:	N
Well Cancelled:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for MARICOPA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for MARICOPA COUNTY, AZ

Number of sites tested: 695

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.697 pCi/L	93%	7%	0%
Living Area - 2nd Floor	3.640 pCi/L	80%	20%	0%
Basement	2.242 pCi/L	79%	21%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Riparian Vegetation Associated with Perennial Waters
Source: State Land Department
Telephone: 602-542-4094

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Arizona Well Registration Database
Source: Department of Water Resources
Telephone: 602-771-8535
The Wells database contains all wells registered in the state.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database
Source: Arizona Geological Survey
Telephone: 520-770-3500
This database contains Oil and Gas wells in the State of Arizona. Includes all wells that have been permitted by the State Oil and Gas Conservation Commission (OGCC). Gas wells include natural gas, helium, and carbon dioxide wells.

RADON

State Database: AZ Radon
Source: Arizona Radiation Regulatory Agency
Telephone: 602-255-4845
State Indoor Radon Survey

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX E
QUALIFICATIONS

James Maynes, P.E.

Engineer

SUMMARY OF QUALIFICATIONS

- Certified Professional Engineer (P.E.) in the State of Tennessee.
- Provides engineering and compliance support related to stormwater, air emissions, hazardous waste, hazardous materials, due diligence, and environmental management systems for industrial and commercial clients.

EXPERIENCE

Prepared facility Storm Water Pollution Prevention Plans (SWPPP), NPDES permit compliance reviews, and storm water training for industrial clients.

Prepared Spill Prevention, Control and Countermeasure (SPCC) plans and provided training.

Conducted multiple smoke and dye trace drain studies at a variety of industrial facilities.

Conducted environment assessments, record reviews and general environmental compliance training at numerous facilities.

Conducted annual stormwater site compliance evaluations and reporting at NPDES permitted facilities.

Assisted in the development of ISO 14001 documents.

Prepared hazardous waste reports, waste reduction reports, and training.

Performed Phase I environmental site assessments and document reviews for industrial and commercial properties.

Prepared discharge monitoring reports for manufactured housing facilities.

Provided air emissions permitting and compliance services including air emission inventories for criteria and hazardous air pollutants, and air emissions tracking and reporting systems.

Prepared Hazardous Materials Business Plans for facilities in California and Hazardous Substance Information Surveys for facilities in Oregon.

Prepared EPCRA Tier II reports.

EDUCATION

B.S., Civil Engineering, University of Tennessee, 2012.

B.S., Business Administration, Newberry College, 2004.

CHARLES FERST

CEO, STRATA ENVIRONMENTAL

SUMMARY OF QUALIFICATIONS

- Founder of Strata Environmental Services, Inc.
- Bachelor's Degree in Civil Engineering.
- Licensed Professional Engineer.
- Registered Environmental Property Assessor.
- Certified Professional Environmental Auditor.
- Accomplished 35-years plus record of environmental engineering, consulting, and project management experience with the U.S. EPA, the Department of Interior, and private practice.

EXPERIENCE

Technical, project and administrative consultant and project manager for environmental services firm since 1992 providing environmental compliance programs, permitting, regulatory analysis and support, soil/groundwater investigations and remediation and site assessment services.

Provided environmental due diligence consulting on major merger, acquisition and divestiture transactions including Pepsi acquisition of Tropicana, Graybar Building in New York, NBC Studios, Sands Hotel, Excide battery manufacturing, Square D electric, FinnChem manufacturing, Indalex aluminum, Salesforce corporate headquarters, Ghiradelli Square.

Managed litigation technical support teams in the defense of industrial clients including claims of damage to Pensacola pubic groundwater supply by chlorinated solvents, groundwater contamination by a battery manufacturer in Tampa, and contamination of the Biscayne Aquifer by PCB releases from a transformer disposal operation.

Conducted hundreds of compliance investigations and audits for commercial and industrial facilities including the Alyeska Pipeline.

Contributed to the development and implementation of the EPA's first analytical Quality Assurance/Quality Control program and national water quality database (STORET).

Directed development of water quality standards and water quality criteria for EPA Region 4. Developed federal rules to establish water quality standards and determinations of hydrological consequences.

Registered Environmental Assessor in the State of California.

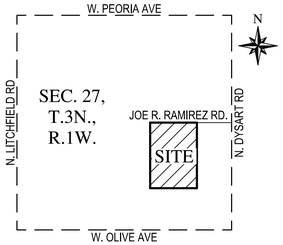
EDUCATION

B.S., Civil Engineering, Virginia Polytechnic Institute, 1969.

CAVCO WEST

PRELIMINARY GRADING, DRAINAGE, WATER & SEWER PLAN
EL MIRAGE, ARIZONA

A PORTION OF SECTION 27, TOWNSHIP 3 NORTH, RANGE 1 WEST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



VICINITY MAP
N.T.S.

OWNER / DEVELOPER
CAVCO WEST
1366 SOUTH LITCHFIELD ROAD
BUILDING 6
GOODYEAR, ARIZONA 85338
CONTACT: PAUL DeROO
PHONE: (602) 283-9316
FAX: (623) 882-2810

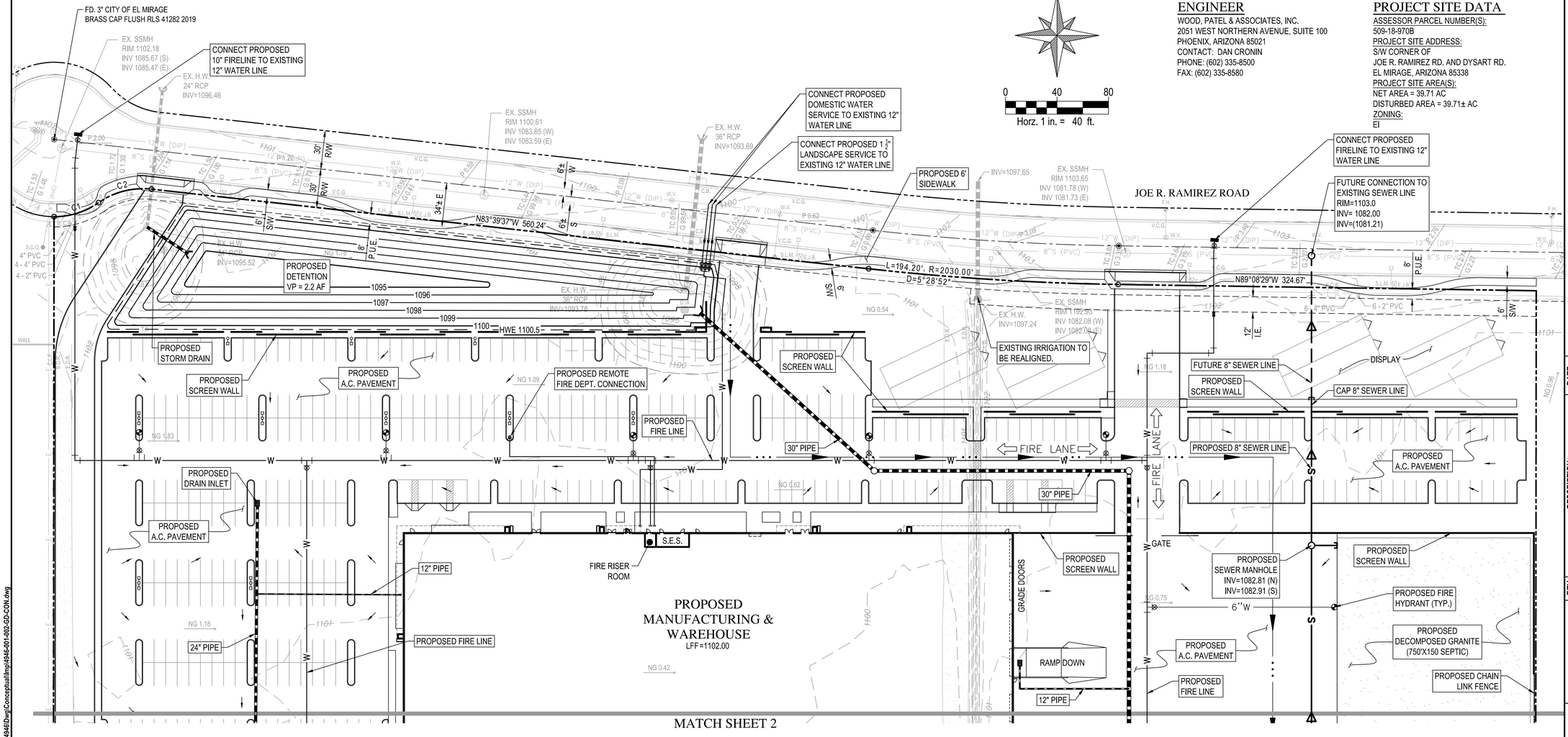
ARCHITECT
DEUTSCH ARCHITECTURE GROUP
4600 E INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
CONTACT: DUSTIN CHISUM
PHONE: (602) 840-2929

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

PROJECT SITE DATA
ASSESSOR PARCEL NUMBER(S):
509-18-970B
PROJECT SITE ADDRESS:
S/W CORNER OF
JOE R. RAMIREZ RD. AND DYSART RD.
EL MIRAGE, ARIZONA 85338
PROJECT SITE AREA(S):
NET AREA = 39.71 AC
DISTURBED AREA = 39.71± AC
ZONING:
EI

N

0 40 80
Horz. 1 in. = 40 ft.



WOOD PATEL

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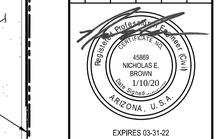
In Maricopa County: (602) 263-1100

CAVCO WEST
PRELIMINARY GRADING, DRAINAGE, WATER & SEWER PLAN
EL MIRAGE, ARIZONA

REV	DESCRIPTION	DATE



EXPIRES 03-31-22

SCALE (HORIZ.)	1" = 40'
SCALE (VERT.)	N/A
DATE	01/10/2020
JOB NUMBER	184946
SHEET	1 OF 3

CHECKED BY: DC DESIGNED BY: DC DRAFTED BY: JRS

Z:\2018\184946\Dwg\Conceptual\limp\4946-001-002-GD-CON.dwg

N

0 40 80

Horz. 1 in. = 40 ft.

MATCH SHEET 1

MATCH SHEET 3

PROPOSED MANUFACTURING & WAREHOUSE
LFF=1102.00

24" PIPE
STAGING
PROPOSED DRAIN INLET
6"W
COVERED PATIO
GATE
PROPOSED SCREEN WALL
NG 0.09
FIRE LANE
30" PIPE
PROPOSED CHAIN LINK FENCE
CANOPY
PROPOSED A.C. PAVEMENT
PROPOSED DRAIN INLET
PROPOSED FIRE HYDRANT (TYP.)
6"W
PROPOSED FIRE LINE
NG 98.89
36" PIPE
PROPOSED COVERED CONCRETE PAD
FIRE LANE
12" PIPE
S00°03'47"W 1820.00' (M)
S00°03'38"W 1820.00' (R)
1522.00' (M&R)

NG 98.58
NG 99.42
NG 98.13

GRADE DOORS
36" PIPE
PROPOSED FIRE LINE
NG 0.16
INV = 1091.54
PROPOSED 6" SEWER LINE
CANOPY
FIRE LANE
COVERED PATIO
PROPOSED A.C. PAVEMENT
CANOPY
NG 99.29
INV = 1095.06
PROPOSED 6" SEWER LINE
36" PIPE
PROPOSED FIRE LINE
PROPOSED 8" SEWER LINE
PROPOSED FIRE HYDRANT (TYP.)
PROPOSED SEWER MANHOLE INV=1084.15 (N) INV=1084.25 (S)
PROPOSED DECOMPOSED GRANITE (750'X150 SEPTIC)
PROPOSED 8" SEWER LINE
PROPOSED FIRE HYDRANT (TYP.)
PROPOSED CHAIN LINK FENCE
PROPOSED SEWER MANHOLE INV=1085.52 (N) INV=1085.62 (S)
PROPOSED 8" SEWER LINE
750'X150 FUTURE SEPTIC

N00°03'47"E 1481.75' (M)
N00°03'38"E 1481.75' (R)

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CAVCO WEST

PRELIMINARY GRADING, DRAINAGE, WATER & SEWER PLAN

EL MIRAGE, ARIZONA

REV	DESCRIPTION	DATE

Registered Professional Engineer
CERTIFICATE NO.
45869
NICHOLAS E. BROWN
1/10/20
ARIZONA, U.S.A.

EXPIRES 03-31-22

SCALE (HORIZ.)	1" = 40'
SCALE (VERT.)	N/A
DATE	01/10/2020
JOB NUMBER	184946
SHEET	2 OF 3

CHECKED BY: DC DESIGNED BY: DC DRAFTED BY: JRS

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N

0 40 80

Horz. 1 in. = 40 ft.

MATCH SHEET 2

RAMP DOWN

PROPOSED DRAIN INLET

6"W

PROPOSED CHAIN LINK FENCE

36" PIPE

FIRE LANE

PROPOSED FIRE LINE

PROPOSED A.C. PAVEMENT

PROPOSED MANUFACTURING & WAREHOUSE
LFF=1102.00

INV = 1090.67

GRADE DOORS

PROPOSED 6" SEWER LINE

PROPOSED 8" SEWER LINE

PROPOSED FIRE HYDRANT (TYP.)

PROPOSED SEWER MANHOLE
INV=1086.38 (N)
INV=1086.48 (W)

PROPOSED A.C. PAVEMENT

PROPOSED FIRE LINE

INV=1096.46

24" CMP INV=1096.40

36" CMP INV=1094.68

36" CMP INV=1094.34

PROPOSED RIP RAP APRON

PROPOSED FIRE HYDRANT (TYP.)

PROPOSED CHAIN LINK FENCE

36" PIPE

750'X150 FUTURE SEPTIC

PROPOSED RETENTION
VR = 6.8 AF
VP = 9.0 AF

PROPOSED DRYWELL

PROPOSED DRYWELL

PROPOSED DRYWELL

PROPOSED DRYWELL

HWE 1096.5

S89°08'29"E 1150.99' (M)
S89°08'38"E 1151.00'(R)

PROPOSED CHAIN LINK FENCE

298.00' (M&R)

APN: 509-18-970A
CENTERPOINT
LOGISTICS PARK
P/D WEST LOT 3 MLD

NG 97.53 NG 96.81 NG 96.90 NG 96.55 NG 98.40 NG 97.93 NG 96.58 NG 96.22 NG 96.18 NG 96.30 NG 96.64 NG 96.27 NG 96.58 NG 96.26 NG 95.82 NG 95.61 NG 95.80

1098 1097 1096 1095 1094 1093 1092 1091 1090

C.L.F. E.D.R. C.L.D. T.B. B.E.

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CAVCO WEST

PRELIMINARY GRADING, DRAINAGE, WATER & SEWER PLAN

EL MIRAGE, ARIZONA

REV	DESCRIPTION	DATE

Registered Professional Engineer (Civil)
CERTIFICATE NO.
45869
NICHOLAS E. BROWN
1/10/20
ARIZONA, U.S.A.

EXPIRES 03-31-22

SCALE (HORIZ.)	1" = 40'
SCALE (VERT.)	N/A
DATE	01/10/2020
JOB NUMBER	184946
SHEET	3 OF 3

CHECKED BY: DC DESIGNED BY: DC DRAFTED BY: JRS

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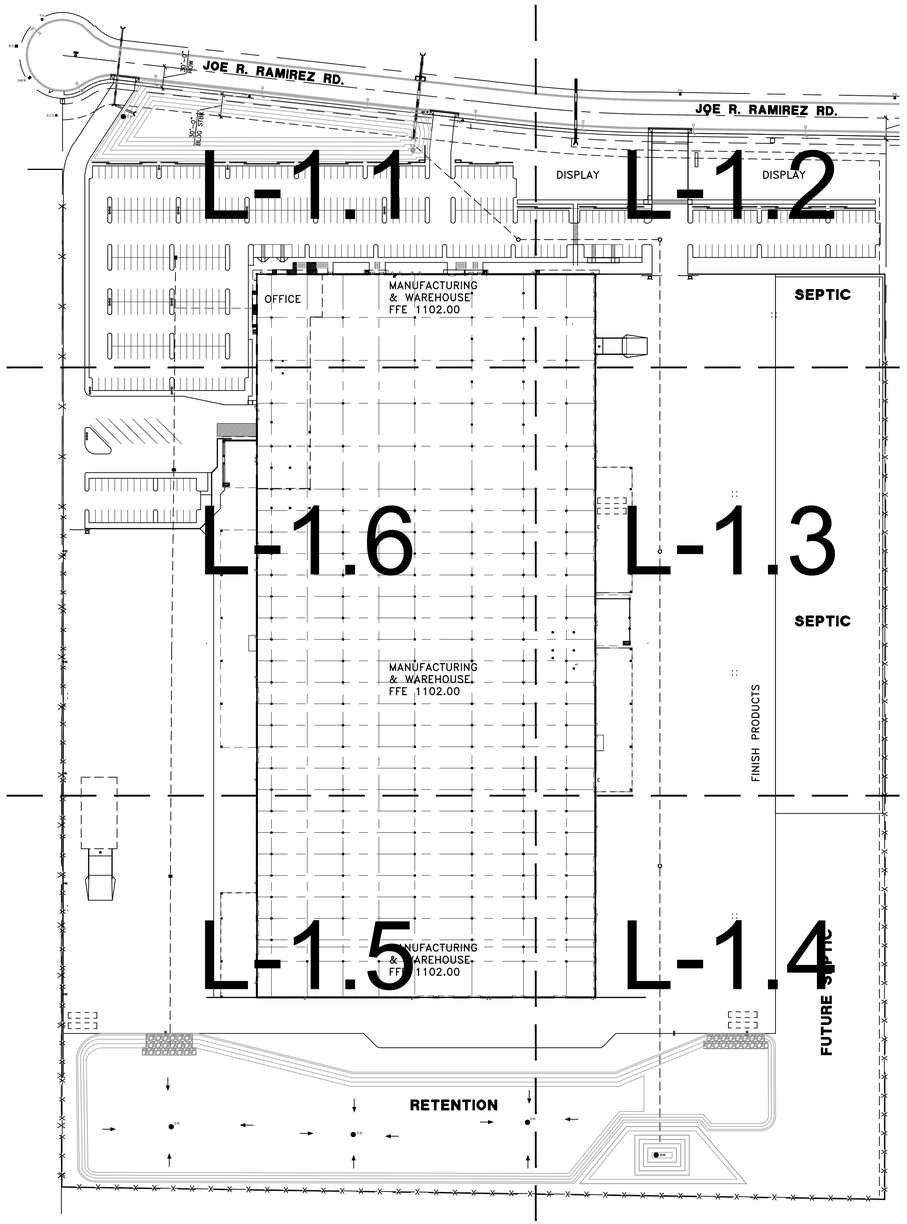

LANDSCAPE COVER SHEET

SCALE: NTS

Ref. North

CONCEPTUAL PLANT PALETTE

	TREES	SIZE/ COMMENTS/ QUANTITY
✳	WASHINGTONIA FILIFERA CALIFORNIA FAN PALM	6' CLEAR TRUNK / MATCHED / 11 QTY
⊕	AZT HYBRID PALO BREA PARKINSONIA PRAECOX 'AZT #5'	36" BOX / LOW BREAKING / MATCHED / 34 QTY
△	PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	36" BOX / LOW BREAKING / MATCHED / 15 QTY
+	ULMUS PARVIFLORA EVERGREEN ELM	24" BOX / LOW BREAKING / MATCHED / 31 QTY
•	PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	24" BOX / LOW BREAKING / MATCHED / 38 QTY
	SHRUBS	
⊖	LEUCOPHYLLUM LANGMANIAE RIO BRAVO SAGE	5 GAL, 19 QTY
⊙	JUSTICIA CALIFORNICA CHUPAROSA	5 GAL, 68 QTY
◔	LEUCOPHYLLUM ZYGOPHYLLUM CIMARRON SAGE	5 GAL, 75 QTY
✳	HESPERALO PARVIFOLIA RED YUCCA	5 GAL, 24 QTY
⊕	JOJOBA SIMMONDSIA CHINENSIS	5 GAL, 90 QTY
⊙	RUELLIA PENINSULARIS BAJA RUELLIA	5 GAL, 36 QTY
⊙	OLEA EUROPAEA 'LITTLE OLLIE' LITTLE OLLIE DWARF OLIVE	5 GAL, 236 QTY
	GROUNDCOVERS	
A	LANTANA 'NEW GOLD' TRAILING YELLOW LANTANA	1 GAL @ 3' O.C., 87 QTY
B	ROSMARINUS 'HUNTINGTON CARPET' TRAILING ROSEMARY	1 GAL @ 3' O.C., 280 QTY
C	EREMOPHILA GLABRA 'OUTBACK SUNRISE' OUTBACK SUNRISE EMU	1 GAL @ 4' O.C., 202 QTY
D	BOUTELOUA 'BLONDE AMBITION' BLONDE AMBITION GRAMA	5 GAL @ 2.5' O.C., 99 QTY
E	ALOE BARBADENSIS MEDICINAL ALOE	5 GAL @ 3' O.C., 60 QTY
F	EREMOPHILA CARNOSA 'WINTER BLAZE' WINTER BLAZE EMU	5 GAL @ 3' O.C., 47 QTY
	INERT MATERIALS	
DG	DECOMPOSED GRANITE ARIZONA GOLD	1/4" MINUS, 2" DEPTH, TYP.
FG	FRACTURED GRANITE TABLE MESA BROWN	1"-3" SCREENED, 2" DEPTH, TYP.
———	STEEL HEADER 3/16" COLD ROLLED STEEL	

GENERAL NOTES

1. ALL PLANTING AREAS TO HAVE TOP DRESSING OF DECOMPOSED GRANITE, SIZE & COLOR AS SPECIFIED, 2" DEPTH TYP. APPLIED OVER PRE-EMERGENT PER MFG. SPECS, 2 APPLICATIONS, MIN.
2. VERIFY ALL CONDITIONS IN FIELD PRIOR TO BIDDING/ INSTALLATION. DISCREPANCIES SHALL BE BROUGHT TO THE LANDSCAPE ARCHITECT'S ATTENTION IN WRITING.
3. NO PLANT SUBSTITUTION ALLOWED UNLESS APPROVED BY L/S ARCHITECT.
4. L/S ARCHITECT TO APPROVE ALL TREES PRIOR TO DELIVERY TO SITE.
5. LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE RESERVE THE RIGHT TO REFUSE ANY PLANT HE/SHE DEEMS UNACCEPTABLE.
6. FOR CLARIFICATION OF DISCREPANCIES BETWEEN THE DRAWINGS AND THE SITE, THEY SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING WORK.
7. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO TAKE PRECAUTIONS TO PROTECT ANY EXISTING IMPROVEMENTS.
8. PLANT LIST/QTY'S PROVIDED FOR CONTRACTOR'S CONVENIENCE ONLY. PLANS TAKE PRECEDENCE.
9. FINISHED GRADE BELOW ALL PLANTERS SHALL BE 1" BELOW ADJACENT HEADER, PAVING, CURBING, ETC.
10. GROUNDCOVER AND/OR DG SHALL EXTEND UNDER SHRUBS UNLESS NOTED.
11. ALL EARTHWORK IS TO BE DONE SO THAT ALL WATER DRAINS AWAY FROM ALL STRUCTURES.
12. ALL UNDERGROUND CONDUITS/PIPES/UTLITIES ARE TO BE LOCATED PRIOR TO DIGGING.
13. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SLEEVING WHETHER IT IS SHOWN ON THE PLANS OR NOT.
14. ADJUST NEW LANDSCAPE TO ACCOMMODATE EXISTING LANDSCAPE TO REMAIN.
15. LANDSCAPE CONTRACTOR RESPONSIBLE TO MAINTAIN EXISTING PLANT MATERIAL TO REMAIN IN GOOD, HEALTHY CONDITION DURING CONSTRUCTION.
16. ANY EXISTING PLANT MATERIAL NOT SHOWN TO REMAIN IS TO BE REMOVED BY CONTRACTOR.
17. ALL STEEL HEADER TO BE 3/16" THICK COLD ROLL STEEL 4" DEPTH STEEL HEADER TO SEPERATE ALL DECOMPOSE GRANITE AND FRACTURED GRANITE BANDS.

G.K. FLANAGAN
ASSOCIATES
4626 N. 44th Street
PHOENIX, AZ 85018
602 . 912 . 9691
602 . 912 . 9693 fax

2929.COM
DEUTSCH
ARCHITECTURE GROUP
REGISTERED LANDSCAPE ARCHITECT
20086
GREGORY CALVIN
FLANAGAN
NOT FOR CONSTRUCTION
EXPIRES 12/31/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
DRAWN BY: DTC
CHK'D BY: DCAL
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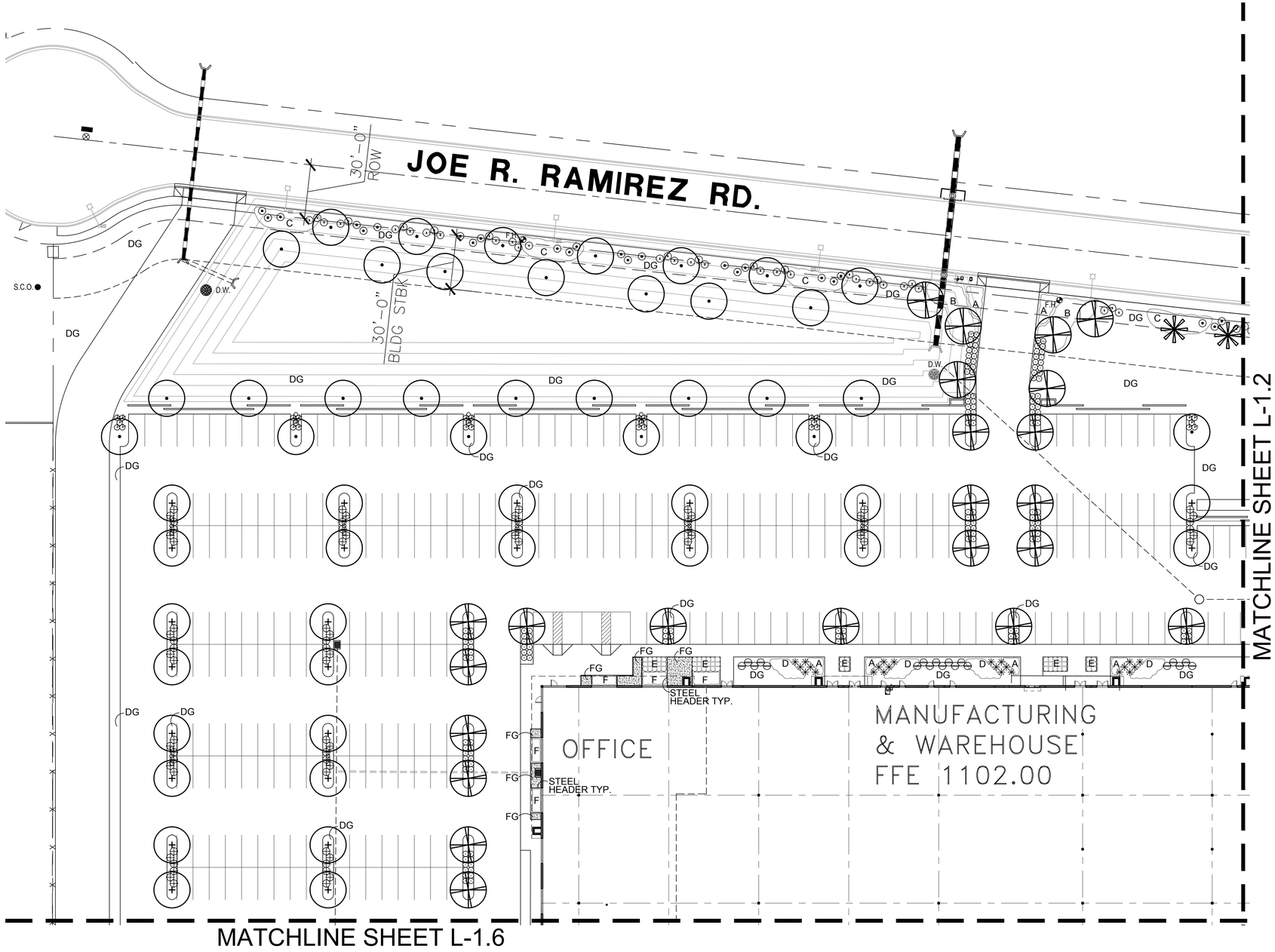
PLANTING PLAN
01.17.20

L-1.0

NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 10 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR



PLANTING PLAN

SCALE: 1"=30'-0"

0 15' 30' 60' Ref. North

CONCEPTUAL PLANT PALETTE

	TREES	SIZE/ COMMENTS/ QUANTITY
✱	WASHINGTONIA FILIFERA CALIFORNIA FAN PALM	6' CLEAR TRUNK / MATCHED / 11 QTY
	AZT HYBRID PALO BREA PARKINSONIA PRAECOX 'AZT #5'	36" BOX / LOW BREAKING / MATCHED / 34 QTY
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⊙	JUSTICIA CALIFORNICA CHUPAROSA	5 GAL, 68 QTY
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⊕	JOJOBA SIMMONDSIA CHINENSIS	5 GAL, 90 QTY
⊙	RUELLIA PENINSULARIS BAJA RUELLIA	5 GAL, 36 QTY
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	STEEL HEADER 3/16" COLD ROLLED STEEL	

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4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

REGISTERED LANDSCAPE ARCHITECT CERTIFICATE 20086 GREGORY CALVIN FLANAGAN STATE OF ARIZONA, U.S.A.
MEYER CONSTRUCTION
EXPIRES 12/31/2020

NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 10 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
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CHK'D BY: DCAL
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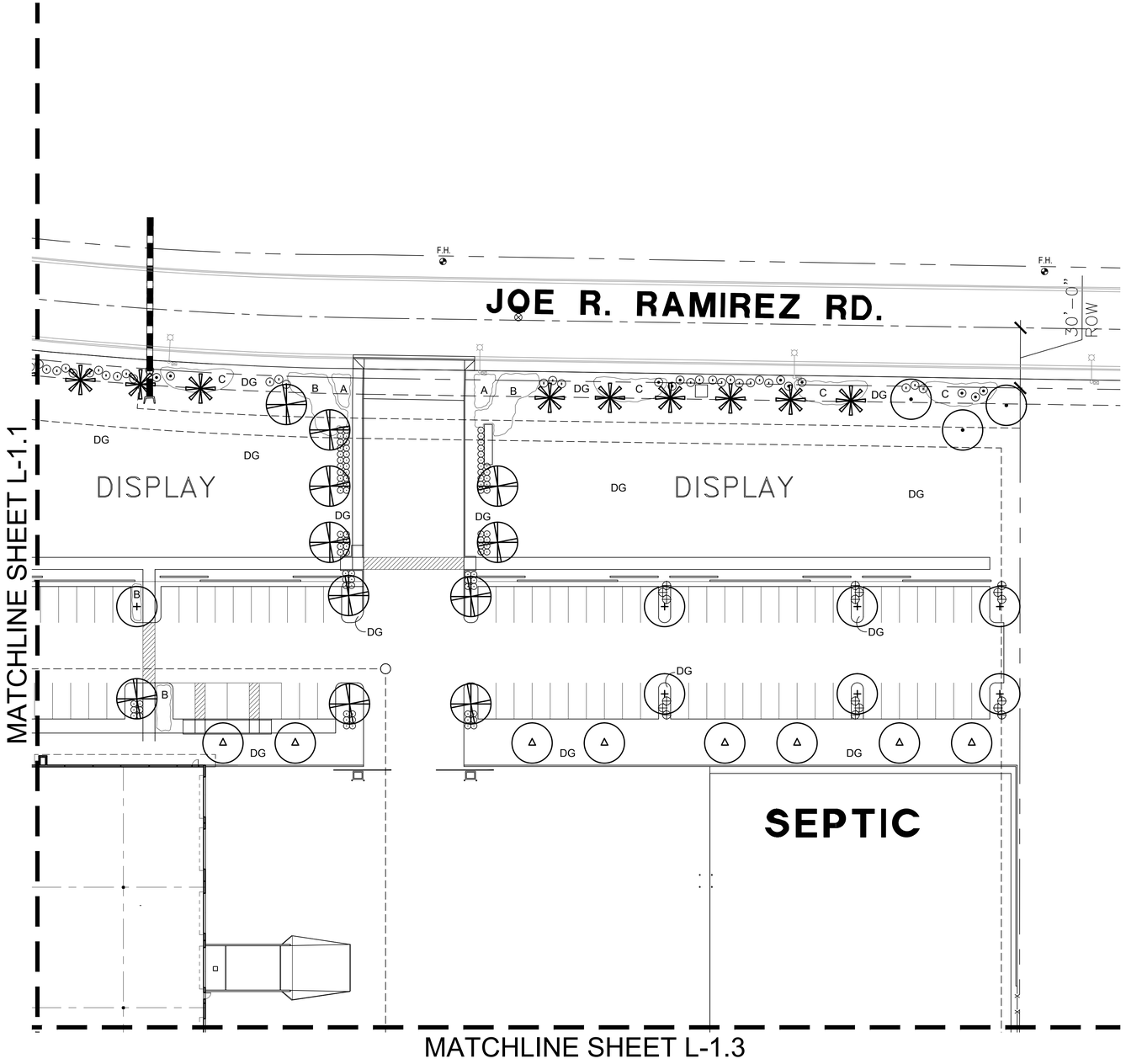
PLANTING PLAN
01.17.20

L-1.1



PLANTING PLAN

SCALE: 1"=30'-0"

0 15' 30' 60' Ref. North

CONCEPTUAL PLANT PALETTE

		TREES	SIZE/ COMMENTS/ QUANTITY
✳		WASHINGTONIA FILIFERA CALIFORNIA FAN PALM	6' CLEAR TRUNK / MATCHED / 11 QTY
		AZT HYBRID PALO BREA PARKINSONIA PRAECOX 'AZT #5'	36" BOX / LOW BREAKING / MATCHED / 34 QTY
△		PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	36" BOX / LOW BREAKING / MATCHED / 15 QTY
+		ULMUS PARVIFLORA EVERGREEN ELM	24" BOX / LOW BREAKING / MATCHED / 31 QTY
•		PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	24" BOX / LOW BREAKING / MATCHED / 38 QTY
		SHRUBS	
⊖		LEUCOPHYLLUM LANGMANIAE RIO BRAVO SAGE	5 GAL, 19 QTY
⊙		JUSTICIA CALIFORNICA CHUPAROSA	5 GAL, 68 QTY
⊘		LEUCOPHYLLUM ZYGOPHYLLUM CIMARRON SAGE	5 GAL, 75 QTY
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⊕		JOJOBA SIMMONDSIA CHINENSIS	5 GAL, 90 QTY
⊙		RUELLIA PENINSULARIS BAJA RUELLIA	5 GAL, 36 QTY
⊙		OLEA EUROPAEA 'LITTLE OLLIE' LITTLE OLLIE DWARF OLIVE	5 GAL, 236 QTY
		GROUNDCOVERS	
	A	LANTANA 'NEW GOLD' TRAILING YELLOW LANTANA	1 GAL @ 3' O.C., 87 QTY
	B	ROSMARINUS 'HUNTINGTON CARPET' TRAILING ROSEMARY	1 GAL @ 3' O.C., 280 QTY
	C	EREMOPHILA GLABRA 'OUTBACK SUNRISE' OUTBACK SUNRISE EMU	1 GAL @ 4' O.C., 202 QTY
	D	BOUTELOUA 'BLONDE AMBITION' BLONDE AMBITION GRAMA	5 GAL @ 2.5' O.C., 99 QTY
		ALOE BARBADENSIS MEDICINAL ALOE	5 GAL @ 3' O.C., 60 QTY
	F	EREMOPHILA CARNOSA 'WINTER BLAZE' WINTER BLAZE EMU	5 GAL @ 3' O.C., 47 QTY
		INERT MATERIALS	
	DG	DECOMPOSED GRANITE ARIZONA GOLD	1/4" MINUS, 2" DEPTH, TYP.
	FG	FRACTURED GRANITE TABLE MESA BROWN	1"-3" SCREENED, 2" DEPTH, TYP.
		STEEL HEADER 3/16" COLD ROLLED STEEL	

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3. NO PLANT SUBSTITUTION ALLOWED UNLESS APPROVED BY L/S ARCHITECT.
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G.K. FLANAGAN ASSOCIATES
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DEUTSCH ARCHITECTURE GROUP
REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 20086 GREGORY FLANAGAN STATE OF ARIZONA U.S.A.
NOT FOR CONSTRUCTION
EXPIRES 12/31/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
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CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

PROJECT NO: 18129
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CHK'D BY: DCAL

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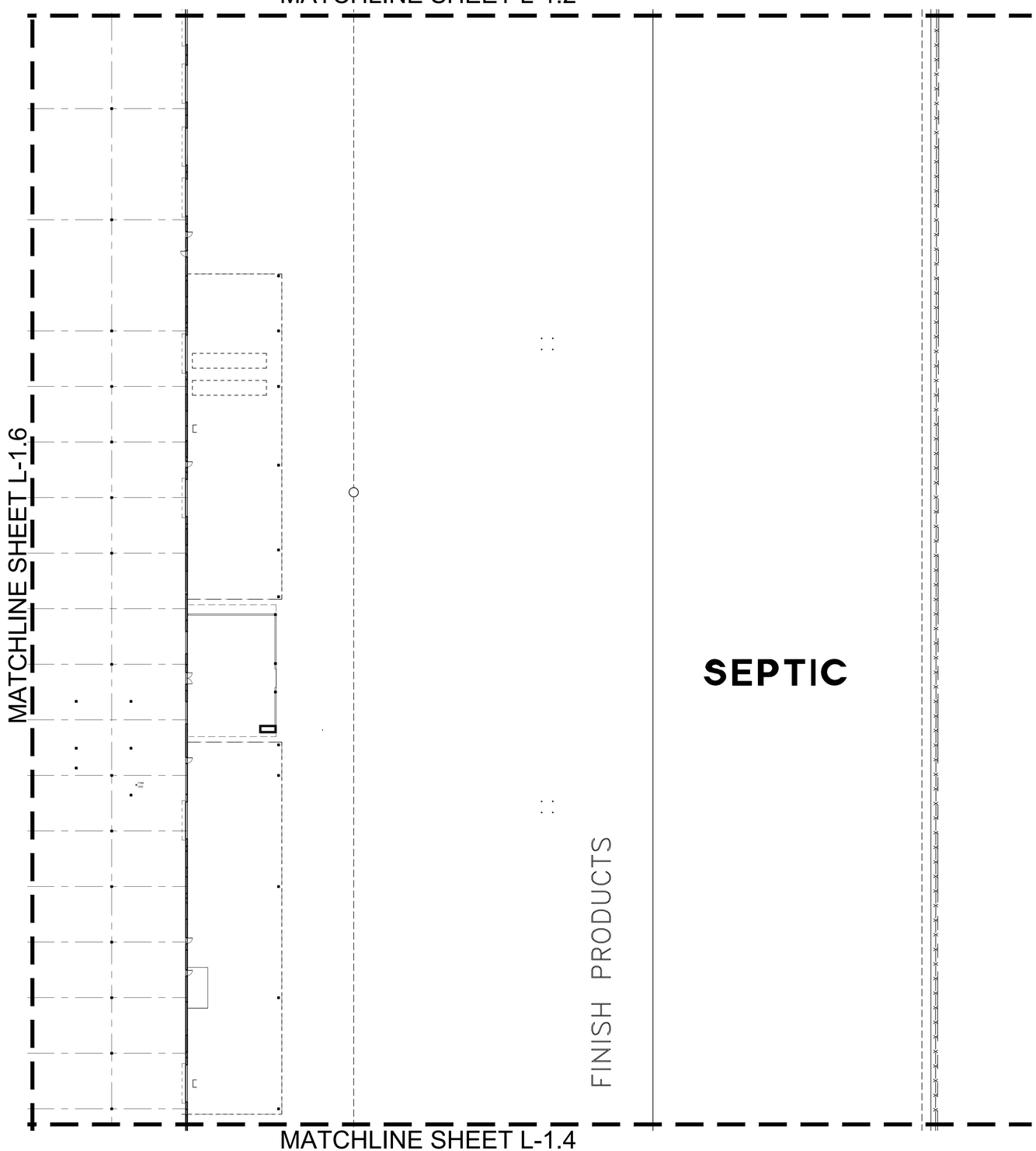
PLANTING PLAN
01.17.20

L-1.2

NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 10 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR



PLANTING PLAN

SCALE: 1"=30'-0"

0 15' 30' 60' Ref. North

CONCEPTUAL PLANT PALETTE

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REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE
20086
GREGORY
FLANAGAN
U.S.A.
NOT FOR CONSTRUCTION
EXPIRES 12/31/2020
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CavcoWest

Revisions

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PLANTING PLAN
01.17.20

L-1.3

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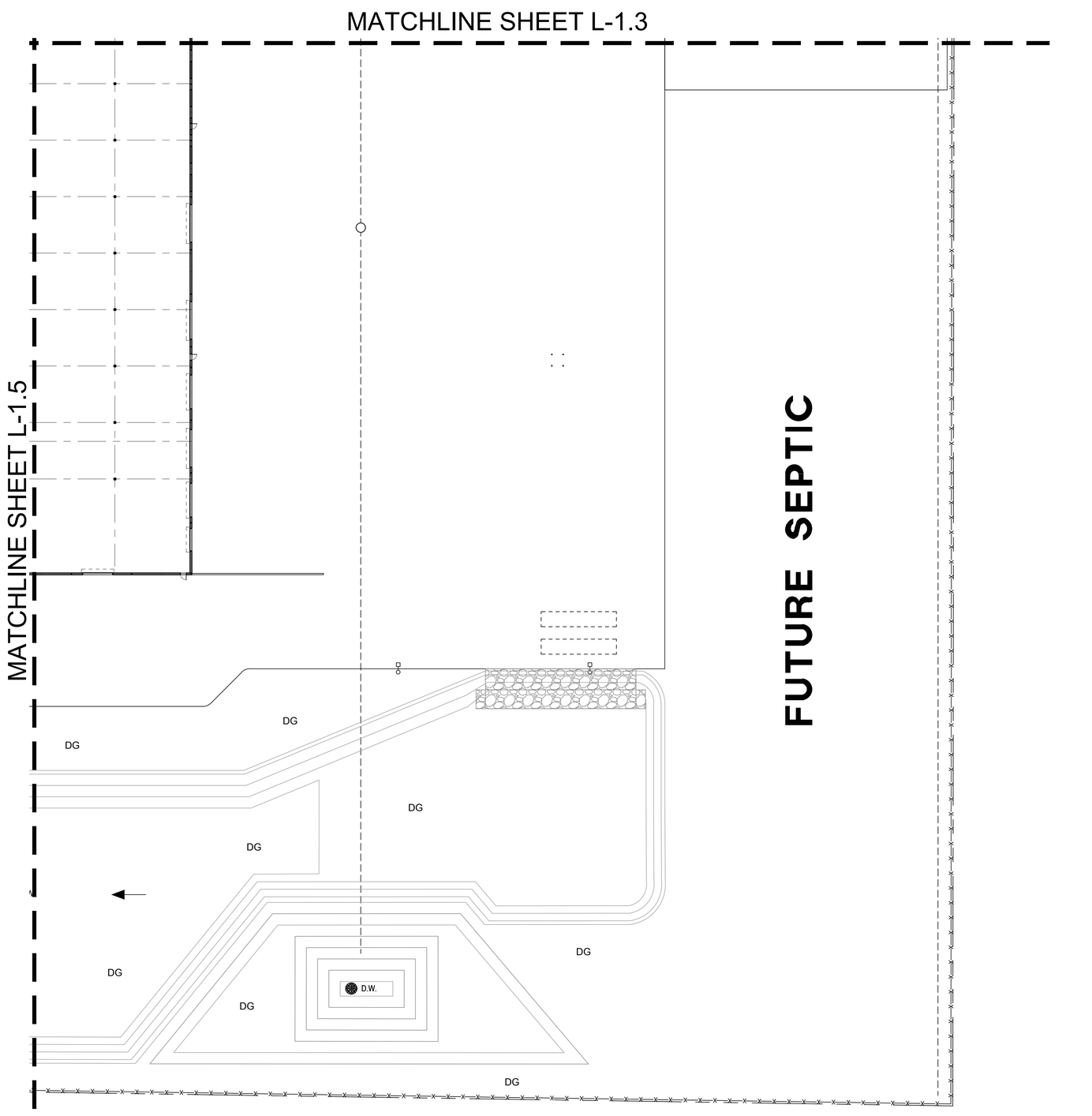

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DEUTSCH ARCHITECTURE GROUP
REGISTERED LANDSCAPE ARCHITECT CERTIFICATE 20086 GREGORY CALVIN FLANAGAN U.S.A.
MESA, ARIZONA
EXPIRES 12/31/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
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CavcoWest

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Revisions

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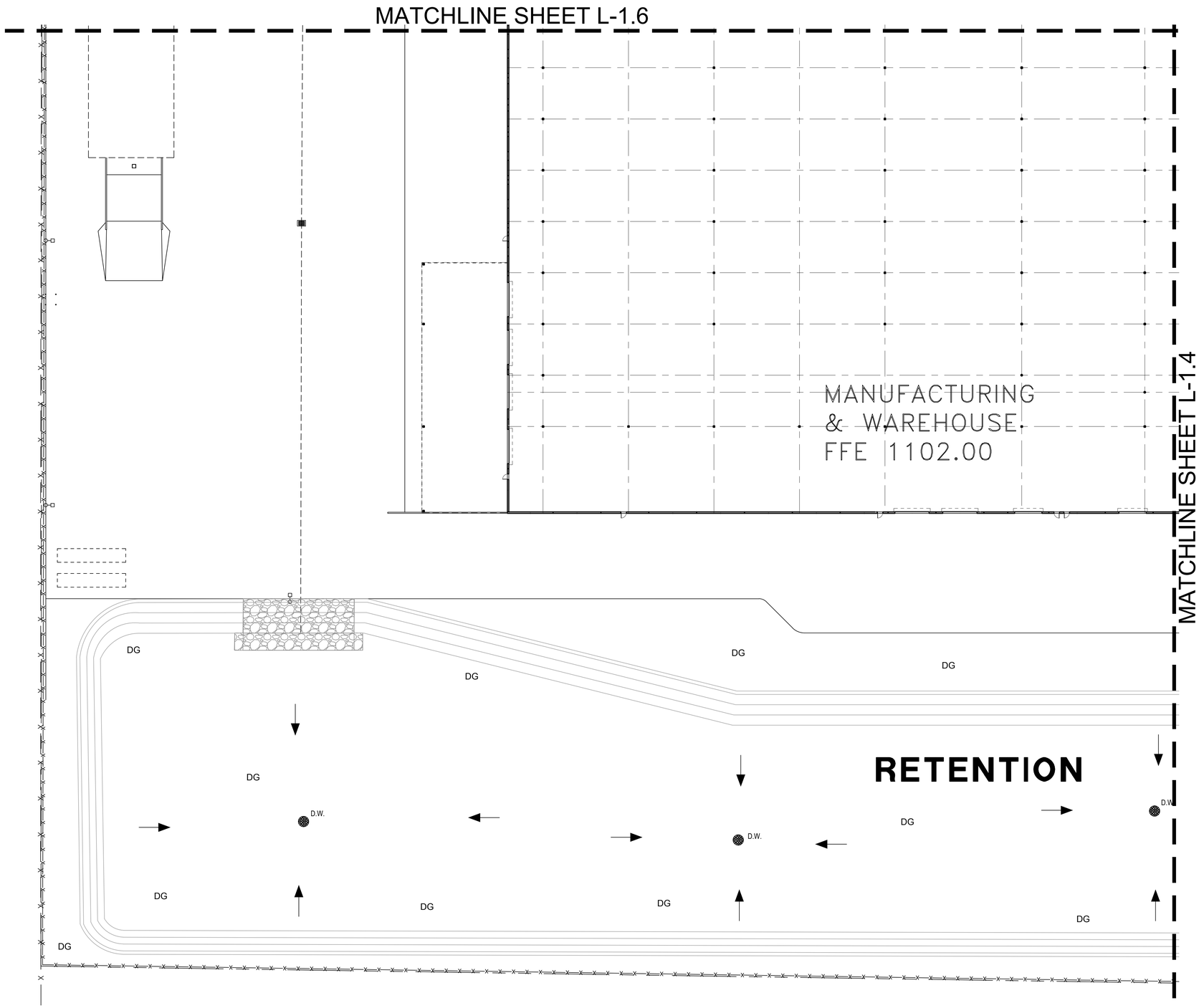
PLANTING PLAN
01.17.20

L-1.4



PLANTING PLAN

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DEUTSCH ARCHITECTURE GROUP

REGISTERED LANDSCAPE CERTIFICATE 20086 GREGORY CLANAGAN ARIZONA, U.S.A.

NOT FOR CONSTRUCTION

EXPIRES 12/31/2020

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PLANTING PLAN
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L-1.5

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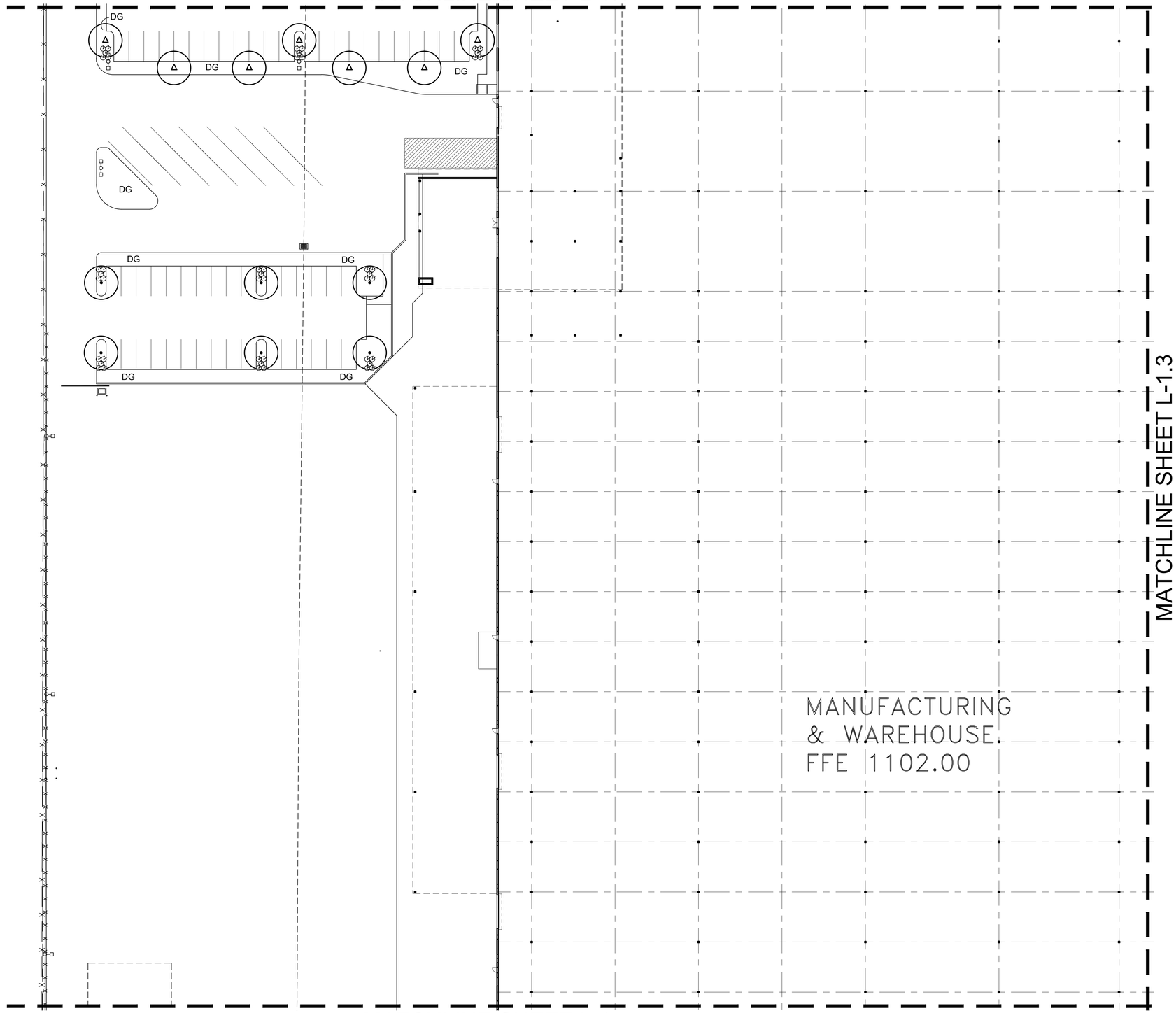

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Ref. North

CONCEPTUAL PLANT PALETTE

	TREES	**SIZE/ COMMENTS/ QUANTITY**
	WASHINGTONIA FILIFERA CALIFORNIA FAN PALM	6' CLEAR TRUNK / MATCHED / 11 QTY
	AZT HYBRID PALO BREA PARKINSONIA PRAECOX 'AZT #5'	36" BOX / LOW BREAKING / MATCHED / 34 QTY
	PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	36" BOX / LOW BREAKING / MATCHED / 15 QTY
	ULMUS PARVIFLORA EVERGREEN ELM	24" BOX / LOW BREAKING / MATCHED / 31 QTY
	PROSOPIS 'AZT PODLESS HYBRID' AZT HYBRID MESQUITE	24" BOX / LOW BREAKING / MATCHED / 38 QTY
	SHRUBS	
	LEUCOPHYLLUM LANGMANIAE RIO BRAVO SAGE	5 GAL, 19 QTY
	JUSTICIA CALIFORNICA CHUPAROSA	5 GAL, 68 QTY
	LEUCOPHYLLUM ZYGOPHYLLUM CIMARRON SAGE	5 GAL, 75 QTY
	HESPERALO PARVIFOLIA RED YUCCA	5 GAL, 24 QTY
	JOJOBA SIMMONDSIA CHINENSIS	5 GAL, 90 QTY
	RUELLIA PENINSULARIS BAJA RUELLIA	5 GAL, 36 QTY
	OLEA EUROPAEA 'LITTLE OLLIE' LITTLE OLLIE DWARF OLIVE	5 GAL, 236 QTY
	GROUNDCOVERS	
A	LANTANA 'NEW GOLD' TRAILING YELLOW LANTANA	1 GAL @ 3' O.C., 87 QTY
B	ROSMARINUS 'HUNTINGTON CARPET' TRAILING ROSEMARY	1 GAL @ 3' O.C., 280 QTY
C	EREMOPHILA GLABRA 'OUTBACK SUNRISE' OUTBACK SUNRISE EMU	1 GAL @ 4' O.C., 202 QTY
D	BOUTELOUA 'BLONDE AMBITION' BLONDE AMBITION GRAMA	5 GAL @ 2.5' O.C., 99 QTY
E	ALOE BARBADENSIS MEDICINAL ALOE	5 GAL @ 3' O.C., 60 QTY
F	EREMOPHILA CARNOSA 'WINTER BLAZE' WINTER BLAZE EMU	5 GAL @ 3' O.C., 47 QTY
	INERT MATERIALS	
DG	DECOMPOSED GRANITE ARIZONA GOLD	1/4" MINUS, 2" DEPTH, TYP.
FG	FRACTURED GRANITE TABLE MESA BROWN	1"-3" SCREENED, 2" DEPTH, TYP.
	STEEL HEADER 3/16" COLD ROLLED STEEL	

GENERAL NOTES

1. ALL PLANTING AREAS TO HAVE TOP DRESSING OF DECOMPOSED GRANITE, SIZE & COLOR AS SPECIFIED, 2" DEPTH TYP. APPLIED OVER PRE-EMERGENT PER MFG. SPECS, 2 APPLICATIONS, MIN.
2. VERIFY ALL CONDITIONS IN FIELD PRIOR TO BIDDING/ INSTALLATION. DISCREPANCIES SHALL BE BROUGHT TO THE LANDSCAPE ARCHITECT'S ATTENTION IN WRITING.
3. NO PLANT SUBSTITUTION ALLOWED UNLESS APPROVED BY L/S ARCHITECT.
4. L/S ARCHITECT TO APPROVE ALL TREES PRIOR TO DELIVERY TO SITE.
5. LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE RESERVE THE RIGHT TO REFUSE ANY PLANT HE/SHE DEEMS UNACCEPTABLE.
6. FOR CLARIFICATION OF DISCREPANCIES BETWEEN THE DRAWINGS AND THE SITE, THEY SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING WORK.
7. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO TAKE PRECAUTIONS TO PROTECT ANY EXISTING IMPROVEMENTS.
8. PLANT LIST/QTY'S PROVIDED FOR CONTRACTOR'S CONVENIENCE ONLY. PLANS TAKE PRECEDENCE.
9. FINISHED GRADE BELOW ALL PLANTERS SHALL BE 1" BELOW ADJACENT HEADER, PAVING, CURBING, ETC.
10. GROUNDCOVER AND/OR DG SHALL EXTEND UNDER SHRUBS UNLESS NOTED.
11. ALL EARTHWORK IS TO BE DONE SO THAT ALL WATER DRAINS AWAY FROM ALL STRUCTURES.
12. ALL UNDERGROUND CONDUITS/PIPES/UTLITIES ARE TO BE LOCATED PRIOR TO DIGGING.
13. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SLEEVING WHETHER IT IS SHOWN ON THE PLANS OR NOT.
14. ADJUST NEW LANDSCAPE TO ACCOMMODATE EXISTING LANDSCAPE TO REMAIN.
15. LANDSCAPE CONTRACTOR RESPONSIBLE TO MAINTAIN EXISTING PLANT MATERIAL TO REMAIN IN GOOD, HEALTHY CONDITION DURING CONSTRUCTION.
16. ANY EXISTING PLANT MATERIAL NOT SHOWN TO REMAIN IS TO BE REMOVED BY CONTRACTOR.
17. ALL STEEL HEADER TO BE 3/16" THICK COLD ROLL STEEL 4" DEPTH STEEL HEADER TO SEPERATE ALL DECOMPOSE GRANITE AND FRACTURED GRANITE BANDS.

G.K. FLANAGAN ASSOCIATES
4626 N. 44th Street
PHOENIX, AZ 85018
602 . 912 . 9691
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DEUTSCH ARCHITECTURE GROUP
LICENSED LANDSCAPE ARCHITECT CERTIFICATE 20086 GREGORY CLARK FLANAGAN STATE OF ARIZONA U.S.A.
NOT FOR CONSTRUCTION
EXPIRES 12/31/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
DRAWN BY: DTC
CHK'D BY: DCAL

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PLANTING PLAN
01.17.20

L-1.6

NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 10 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR

WOOD PATEL

PRELIMINARY DRAINAGE REPORT
FOR
CAVCO WEST

January 10, 2020
WP# 184946

Exp 6/30/20

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Exp 6/30/20

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EXHIBIT 2 — FEMA FIRM

EXHIBIT 3 — Surrounding Drainage Conditions Map

EXHIBIT 4 — Proposed Drainage Map

Exp 6/30/20

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1.0 INTRODUCTION

1.1 General Background

Cavco West (Site) is a proposed commercial development located in the City of El Mirage (APN# 509-18-970B). The parcel consists of approximately 40 acres± of CenterPoint Logistics Park Lot 3, located within Section 27, Township 3 North, Range1 West of the Gila and Salt River Meridian. The Site parcel is located on the west side of Dysart Road, just south of Joe R. Ramirez Road. Refer to Exhibit 1 – *Vicinity Map* for the project location. The project includes one (1) building, approximately 480,000 SF in size. The Site will include employee parking, outdoor storage, truck docks, on-site wastewater treatment facilities (septic) and above ground stormwater storage.

This Preliminary Drainage Report has been prepared in accordance with Wood, Patel & Associates, Inc.'s (WOODPATEL'S) understanding of the City of El Mirage's technical drainage requirements and the Drainage Design Manuals for Maricopa County Hydrology and Hydraulics (2013), as applicable to the Cavco West.

1.2 Topography

The topography of the Site generally slopes from the north to the south from an approximate high elevation of 1,102 to an approximate low elevation of 1,096 at an approximate slope of 0.4%.

1.3 FEMA Regulated Flood Zones

The Federal Emergency Management Agency (FEMA) has published Flood Insurance Rate Maps for Maricopa County and Incorporated Areas. The Site is located within "Other Flood Areas" Zone "X" shaded per Flood Insurance Rate Map (FIRM) Panel 1680 of 4425, Map Number 04013C1680L, dated October 16, 2013. (Refer to Exhibit 2 – *FEMA FIRM*).

"Zone X" shaded is defined by FEMA as follows:

> *"Area of 0.2% annual chance flood; areas of 1" annual chance flood with average depths less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood".*

1.4 Scope of the Drainage Report

This Preliminary Drainage Report has been prepared in accordance with Wood, Patel & Associates, Inc.'s (WOODPATEL'S) understanding of the City of El Mirage's requirements for drainage storage and conveyance systems, as applicable for the Site. The purpose of this report is to address the following drainage design considerations for the Cavco West site:

- On-site retention calculations for the proposed retention system;
- Peak flow determination for conveyance system design;
- Inlet capacity calculations for the proposed conveyance structures

The hydrologic and hydraulic methods and design criteria utilized within this report are understood to be in accordance with the *City of El Mirage's Design & Development Standards Manual*, *Maricopa County Drainage Design Manual, Volume I – Hydrology*, and *Maricopa County Drainage Design Manual*, *Volume II – Hydraulics*.

2.0 HYDROLOGY ANALYSIS

2.1 Off-Site Hydrology

The Site is immediately south of and adjacent to Joe R. Ramirez Road. The Site and the surrounding area are currently active agricultural fields. Refer to Exhibit 3 – *Surrounding Drainage Conditions Map*. According to the as-built plans for Joe R. Ramirez Road, the off-site flow from the agricultural fields to the north is intercepted by roadway drainage swales and passed under the road through two (2) culverts (a 24-inch and 36-inch pipe culvert) where it will fill and overtop the local street storage basins and continue south across the Site. Currently, there is also one (1) 24-inch irrigation ditch culvert that is anticipated to have its flow diverted to the east and continue to provide irrigation to the adjacent agriculture fields.

As can be seen from the Site's existing topography, the Site currently drains to the south and southeast where any rainfall runoff will exit the property. Two City of El Mirage approved drainage reports north of the Site were utilized to determine the impact of the off-site flows on the Site. According to both the *Final Drainage Report for Joe Ramirez Road* (2018) and the *CenterPoint Logistic Park Primary Rail Spur Final Drainage Report* (2019), the Site receives 22 cfs from the 24-inch culvert and 50 cfs from the 36-inch pipe. The 22 cfs flow appears to be routed to the east within a drainage swale north of the Civez Steel Company (located to the west) and then under Joe R. Ramirez Road via the 24-inch pipe where it then passes through the Site. Further investigation of these off-site flows and their impact on the post-development drainage design shall be performed and detailed within the Site's Final Drainage Report.

2.2 On-Site Hydrology

All runoff for the Site will flow away from the buildings towards proposed conveyance structures that will ultimately outfall into proposed on-site retention basins. The drainage map for the Site is depicted in the attached Exhibit 4 – *Proposed Drainage Map*.

On-site peak flow estimates for the proposed development were generated using the Rational Method, as outlined in the *Drainage Design Manual for Maricopa County, Arizona: Volume I – Hydrology* (Ref. 2). NOAA Atlas 14 precipitation data was obtained and utilized to develop Intensity-Duration-Frequency (I-D-F) curves for the Site. Rational Method peak flows were computed at concentration points within the Site at key design locations. Runoff coefficients were estimated to reflect post-development land use conditions for the 10-year and 100-year events (Refer to Appendix A – *Hydrology*).

2.3 Retention

In accordance with the City of El Mirage's *Design & Development Standards Manual* (2019) Storm Water Storage Facilities (page 92) and the *Drainage Design Manual for Maricopa County*, *Volume II Hydraulics* (2018), the following required retention volume equation was used for this project:

$$Vol = (P/12) \times A \times C$$

P = Rainfall Depth = 2.4 inches (100 year, 1 hour)

A = Tributary Area (Acres)

C = Post-Development Condition Runoff Coefficient

To meet the 100-year, 1-hour retained volume requirement by the City of El Mirage for the Site's improvements, there are two (2) proposed stormwater storage basins. One (1) of the proposed basins is to intercept the off-site flow from the north, and one (1) is to be used to collect the on-site flow from the Site. Both are anticipated to be a minimum of 3-feet deep. The north basin may pass the flow through the Site and/or hold the off-site 100-year, 1-hour discharge and be drained via a bleed-off pipe. The south stormwater storage basin shall be drained by drywells. Based on using the required retention volume equation above, the preliminary calculation for the 100-year, 1-hour on-site required retention is 6.8 acre-feet.

The overall effect of retaining, at a minimum, the on-site 100-year, 1-hour storm runoff will be to reduce the rainfall runoff leaving the Site in the post-development condition and therefore, it is anticipated there will be no adverse impact to the surrounding areas.

2.4 Drywell

A preliminary estimate of the required number of drywells for the Site's one (1) 3-foot deep basin shall be calculated by utilizing a design drain rate of 0.80 cfs per drywell to properly drain the stormwater storage basin within 36 hours. When a new drywell is installed, percolation testing will be performed to determine the actual percolation rate of the drywells. Refer to Appendix A – *Hydrology* for drywell calculations for the Site.

Changes to any approved plan will be either revised plans or field directive with supporting documentation submitted to the City of El Mirage for review.

2.5 Outfall

The retention basins will drain from their southern boundaries and will ultimately outfall to the Site's southern property boundary where it will continue to flow south of the Site along its historic path.

It is anticipated that all finished floor elevations will be at a minimum 1-foot above the highest adjacent 100-year base flood elevation and fourteen inches (14") above the low outfall elevation of the Site. As the design of the Site's Civil Plans continues, a Final Drainage Report will be prepared which addresses the Site's drainage design system and shall provide the necessary documentation to show the Site's development is in conformance with the City of El Mirage's *Design & Development Standards Manual* (2019).

3.0 HYDRAULIC ANALYSIS

The Site has been designed to have on-site runoff flow across the parking lot towards one of the proposed retention basins or conveyance structures. Portions of the Site have been designed with grated catch basins located within sumps that will capture runoff and convey it towards the proposed retention basin. The sumps have been designed to be 6-inches deep before water will break out and cascades down to the next sump and ultimately to the proposed retention basin. The sumps have been designed to have a maximum ponding depth of 1-foot as water weirs out of the sump during the 100-year storm. Curb openings and wall openings will be designed to allow runoff to enter the retention basins. A detailed analysis of the Site's hydraulic structures will be documented in the Final Drainage Report for the Site. Refer to Appendix B – *Hydraulics* for a summary of the inlet capacities, as well as their respective calculations.

4.0 MAINTENANCE

Ongoing maintenance of the designed or recommended drainage systems is required to preserve the design integrity and purpose of the drainage system. Failure to provide maintenance can prevent the drainage system from performing to its intended design purpose, and can result in reduced performance. Maintenance within the public right-of-way is the responsibility of the governing municipality. However, it is the responsibility of land owners (such as private developers or property owners' associations) for facilities on private property within drainage easements, including private streets. Prior to ultimate condition build-out upstream of drainage structures, additional maintenance may be required due to an increase in sedimentation build-up. A regular maintenance program is required to have drainage systems perform to the level of protection or service, as presented in this report and the project's plans and specifications.

5.0 CONCLUSIONS

Based on our analysis of the Site, the following conclusions can be made:

1. The Drainage Report has been prepared in accordance with Wood, Patel & Associates, Inc.'s (WOODPATEL's) understanding of the City of El Mirage's technical drainage requirements and the *Drainage Design Manuals for Maricopa County Hydrology and Hydraulics* (2013), as applicable to the Cavco West Site.

2. The proposed improvements lie within a FEMA designated "Zone X" shaded.

3. Off-site stormwater will be routed through the Site to the southern property boundary.

4. On-site stormwater storage of the 100-year, 1-hour storm event occurs in two (2) 3-feet deep retention basins.

5. Drywells will be utilized to drain the retention basin along the northern property boundary of the Site within 36 hours.

6. All stormwater runoff not retained will ultimately outfall along the Site's southern property boundary.

7. Finished floor elevations have been designed to be free from inundation during a 100-year, 1-hour storm event.

8. The proposed catch basins have been designed to have a maximum ponding depth of 1-foot during the 100-year storm event.

9. Ongoing maintenance is required for all drainage systems in order to assure design performance. Maintenance is the responsibility of the private parties involved.

6.0 REFERENCES

1. *Drainage Design Manual for Maricopa County, Arizona; Volume I - Hydrology*, Flood Control District of Maricopa County, August 15, 2013.

2. *Drainage Design Manual for Maricopa County, Arizona; Volume II - Hydraulics*, Flood Control District of Maricopa County, August 15, 2013.

3. *Flood Insurance Rate Map, Maricopa County, Arizona, and Incorporated Areas Panel 1680*, Federal Emergency Management Agency, Effective October 16, 2013.

4. *Design & Development Standards Manual*, City of El Mirage, August 2019.

APPENDIX A

HYDROLOGY

IDF Data from FCDMC NOAA Atlas 14 Precipitation Data

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CIVIL ENGINEERS * HYDROLOGISTS * LAND SURVEYORS * CONSTRUCTION MANAGERS

SITE I-D-F CURVE

Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E., CFM

RAINFALL DEPTHS, INCHES

Duration	Average Reccurence Interval (years)					
	2	5	10	25	50	100
5-min	0.241	0.327	0.394	0.485	0.555	0.628
10-min	0.366	0.498	0.600	0.738	0.845	0.955
15-min	0.454	0.618	0.744	0.915	1.050	1.180
30-min	0.611	0.932	1.000	1.230	1.410	1.590
60-min	0.756	1.030	1.240	1.530	1.740	1.970
2-hr	0.858	1.150	1.380	1.690	1.920	2.170
3-hr	0.895	1.180	1.410	1.730	1.980	2.250
6-hr	1.030	1.320	1.560	1.890	2.140	2.410
12-hr	1.160	1.470	1.720	2.050	2.300	2.570
24-hr	1.480	1.920	2.260	2.740	3.120	3.510

RAINFALL INTENSITY, INCHES/HOUR

Duration minutes	Frequency, years					
	2	5	10	25	50	100
5	2.89	3.92	4.73	5.82	6.66	7.54
10	2.20	2.99	3.60	4.43	5.07	5.73
15	1.82	2.47	2.98	3.66	4.20	4.72
30	1.22	1.86	2.00	2.46	2.82	3.18
60	0.76	1.03	1.24	1.53	1.74	1.97
120	0.43	0.58	0.69	0.85	0.96	1.09
180	0.30	0.39	0.47	0.58	0.66	0.75
360	0.17	0.22	0.26	0.32	0.36	0.40
720	0.10	0.12	0.14	0.17	0.19	0.21
1440	0.06	0.08	0.09	0.11	0.13	0.15

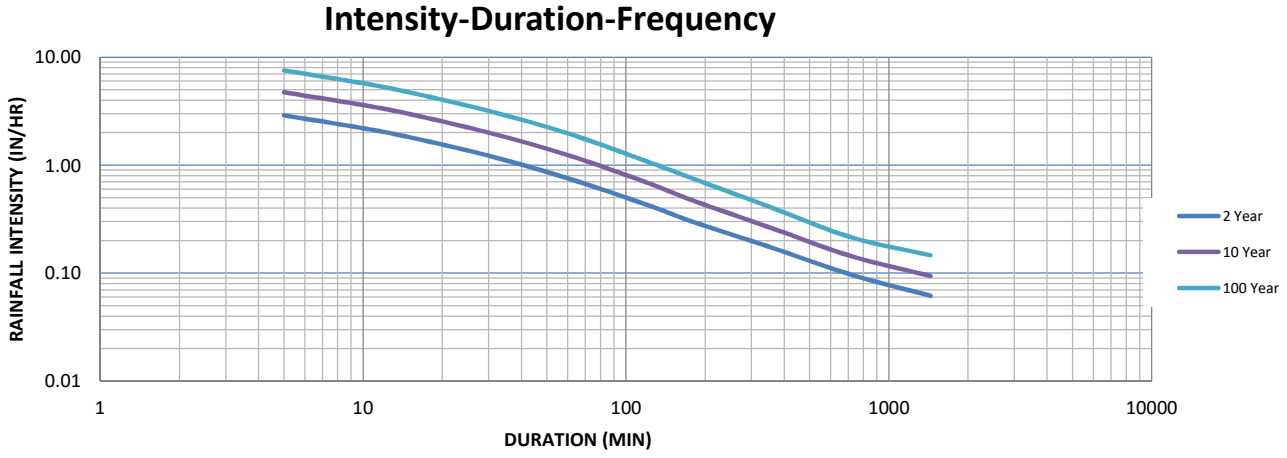

Table 1 - Rational Method Summary

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RATIONAL METHOD SUMMARY

100 Year, 10 Year, 2 Year

Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E., CFM

ON-SITE WATERSHEDS

										100 YEAR				10 YEAR				2 YEAR			
Drainage Subbasin ID	Longest Watercourse (ft)	Longest Watercourse "L" (mi)	Drainage Area (sf)	Drainage Area "A" (Acres)	"Kb" Type[1]	Watershed Resistance Coefficient "K_b"	Top Elevation	Bottom Elevation	Basin Slope "S" (ft/mi)	Calculated Q100 "Tc" (See Note 2) (min)	100 YR Intensity "i" (in/hr)	100 YR Runoff Coefficient "C"	Q100 Flow (cfs)	Calculated Q10 "Tc" (See Note 2) (min)	10 YR Intensity "i" (in/hr)	10 YR Runoff Coefficient "C"	Q10 Flow (cfs)	Calculated Q2 "Tc" (See Note 2) (min)	2 YR Intensity "i" (in/hr)	2 YR Runoff Coefficient "C"	Q2 Flow (cfs)
10	626	0.119	134,491	3.09	A	0.0369	1101.8	1099.8	17.3	8.8	6.16	0.93	**17.7**	10.9	3.49	0.81	**8.7**	13.7	1.91	0.75	**4.4**
20	1,600	0.303	683,962	15.70	A	0.0325	1101.8	1097.0	15.8	14.9	4.74	0.93	**69.4**	18.3	2.76	0.81	**35.1**	23.1	1.50	0.75	**17.6**
30	370	0.070	96,844	2.22	A	0.0378	1101.7	1100.5	17.1	6.5	6.99	0.95	**14.8**	8.1	4.03	0.83	**7.4**	10.2	2.18	0.76	**3.7**
40	740	0.140	143,445	3.29	A	0.0368	1101.1	1099.0	15.5	10.1	5.71	0.95	**17.9**	12.5	3.29	0.83	**8.9**	15.8	1.78	0.76	**4.5**
50	740	0.140	155,005	3.56	A	0.0366	1101.1	1099.0	15.5	10.1	5.71	0.95	**19.3**	12.5	3.29	0.83	**9.7**	15.7	1.79	0.76	**4.8**
60	740	0.140	155,021	3.56	A	0.0366	1101.1	1099.0	15.5	10.1	5.71	0.95	**19.3**	12.5	3.29	0.83	**9.7**	15.7	1.79	0.76	**4.8**
70	740	0.140	66,318	1.52	A	0.0389	1101.1	1099.0	15.5	10.5	5.63	0.95	**8.1**	12.9	3.24	0.83	**4.1**	16.3	1.76	0.76	**2.0**
80	1,526	0.289	254,016	5.83	A	0.0352	1101.7	1097.0	16.3	15.1	4.71	0.50	**13.7**	18.5	2.75	0.43	**7.0**	23.4	1.49	0.40	**3.5**

Notes:
1. Per Drainage Design Manual for Maricopa County, Vol. I, Hydrology (2013), Table 3.1: Equation for Estimating Kb in the Tc Equation
2. Minimum Tc is 5 minutes.

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COMPOSITE WEIGHTED "C" FACTOR CALCULATIONS — 100 Year

Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E

Drainage Subbasin ID	Area	Lots 24'x110' Residence		Lots 40'x110' & 50x110' Residences		Gravel Roadways & Shoulders		Park/Landscaped Open Space		Commercial		Collector Roadway		Desert Landscaping		100 YR Runoff Coefficient
(Description/ID)	(Acres)	%	"C"	%	"C"	%	"C"	%	"C"	%	"C"	%	"C"	%	"C"	"C"
10	3.09	0	0.70	0	0.70	25	0.88	0	0.25	75	0.95	0	0.73	0	0.50	**0.93**
20	15.70	0	0.70	0	0.70	25	0.88	0	0.25	75	0.95	0	0.73	0	0.50	**0.93**
30	2.22	0	0.70	0	0.70	0	0.88	0	0.25	100	0.95	0	0.73	0	0.50	**0.95**
40	3.29	0	0.70	0	0.70	0	0.88	0	0.25	100	0.95	0	0.73	0	0.50	**0.95**
50	3.56	0	0.70	0	0.70	0	0.88	0	0.25	100	0.95	0	0.73	0	0.50	**0.95**
60	3.56	0	0.70	0	0.70	0	0.88	0	0.25	100	0.95	0	0.73	0	0.50	**0.95**
70	1.52	0	0.70	0	0.70	0	0.88	0	0.25	100	0.95	0	0.73	0	0.50	**0.95**
80	5.83	0	0.70	0	0.70	0	0.88	0	0.25	0	0.95	0	0.73	100	0.50	**0.50**
Basin A	38.78	0	0.70	0	0.70	12	0.88	0	0.25	73	0.95	0	0.73	15	0.50	**0.87**

Table 2 - Retention Volumes Required

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RETENTION BASIN VOLUMES

100-Year, 1-Hour Volume

Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E., CFM

Rainfall Depth, "P" = 2.40 inches

Drainage Subbasin ID	Retention Basin ID	Drainage Area "A" (Acres)	100 YR Runoff Coefficient "C"	A*C	Required Retention (AF)
10-80	Basin A	38.78	0.87	33.88	6.78
TOTAL		38.78			6.78

Calculated Values:

Required Retention = Vrequired = (P/12)*C*A
Weighted "C" = ((A1*C1)+(A2*C2))/(A1+A2)

Table 3 – Retention Volumes Provided

RETENTION VOLUME PROVIDED — On-Site Retention

Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E., CFM

Volume Method Used: Conic Approximation

Drainage Subbasin ID	Retention Basin ID	Bottom Elevation	Top Elevation	Bottom Area (sf)	Top Area (sf)	Volume (cf)	Cumulative Volume (cf)	Cumulative Volume (AF)	Total Volume Provided (AF)	Volume Required 100-yr, 1-hr Retention (AF)
10-80	Basin A	1,093.0	1,094.0	102,286	127,716	114,766	114,766	2.63	8.99	6.78
		1,094.0	1,095.0	127,716	138,547	133,095	247,861	5.69		
		1,095.0	1,096.0	138,547	149,443	143,961	391,821	8.99		
OFF-SITE DETENTION BASIN	Basin B	1,095.0	1,096.0	3,752	7,924	5,710	5,710	0.13	2.19	#N/A
		1,096.0	1,097.0	7,924	12,974	10,346	16,055	0.37		
		1,097.0	1,098.0	12,974	18,360	15,589	31,645	0.73		
		1,098.0	1,099.0	18,360	24,062	21,147	52,791	1.21		
		1,099.0	1,100.0	24,062	30,073	27,012	79,803	1.83		
		1,100.0	1,100.5	30,073	33,193	15,810	95,613	2.19		

Table 4 – Drywell Basin Drain Time

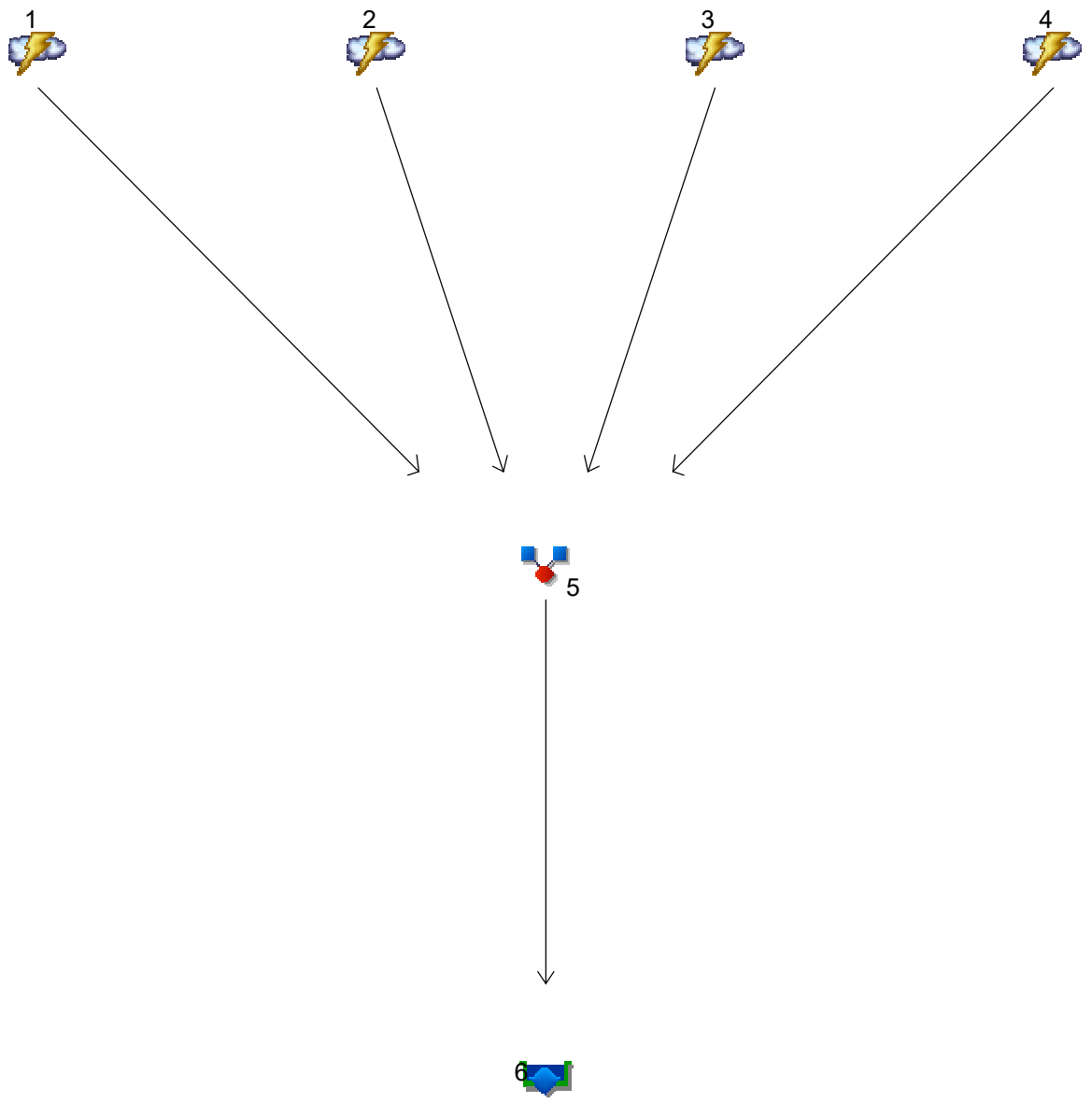
Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E., CFM

Retention Basin ID	Volume Required (AF)	Volume Required (cf)	Drywell Percolation Rate (cfs / drywell)	Number of Drywells	Drain Time (Minutes)	Drain Time (Hours)
Basin A	6.78	295,203	0.80	3	2,050	34.17

Off-Site Hydrology

Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3



Legend

Hyd.	Origin	Description
1	Rational	OFF-1
2	Rational	OFF-2
3	Rational	ON1
4	Rational	ON2
5	Combine	OFFSITEFLOW
6	Reservoir	ROUTE

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	Rational	------	-------	-------	-------	-------	-------	-------	-------	16.62	OFF-1
2	Rational	------	-------	-------	-------	-------	-------	-------	-------	51.21	OFF-2
3	Rational	------	-------	-------	-------	-------	-------	-------	-------	2.212	ON1
4	Rational	------	-------	-------	-------	-------	-------	-------	-------	2.765	ON2
5	Combine	1, 2, 3, 4	-------	-------	-------	-------	-------	-------	-------	63.89	OFFSITEFLOW
6	Reservoir	5	-------	-------	-------	-------	-------	-------	-------	20.48	ROUTE

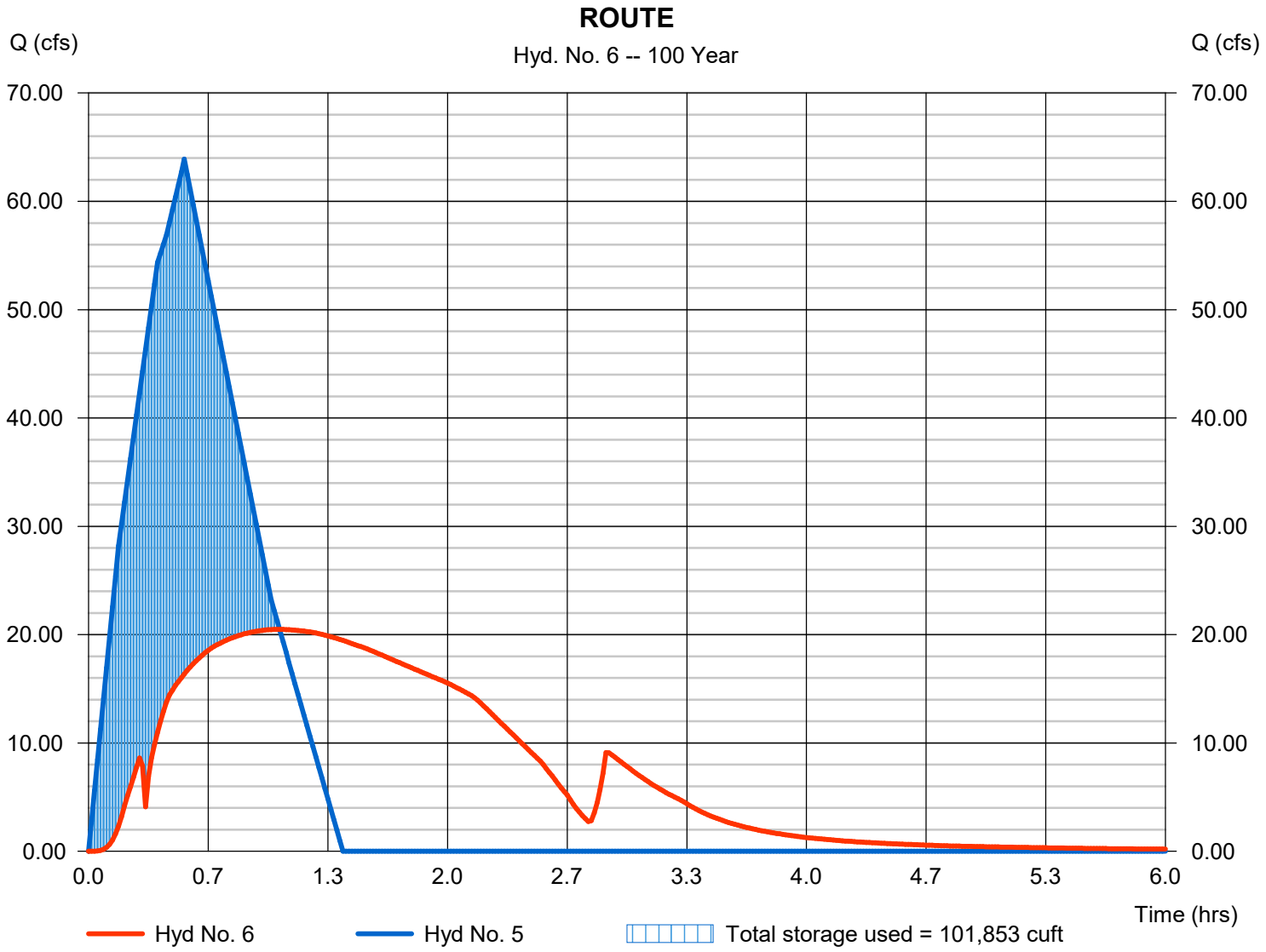
Hydrograph Report

Hyd. No. 6

ROUTE

Hydrograph type	=	Reservoir	Peak discharge	=	20.48 cfs
Storm frequency	=	100 yrs	Time to peak	=	1.07 hrs
Time interval	=	1 min	Hyd. volume	=	164,850 cuft
Inflow hyd. No.	=	5 - OFFSITEFLOW	Max. Elevation	=	1099.64 ft
Reservoir name	=	DETBASIN	Max. Storage	=	101,853 cuft

Storage Indication method used.



Pond No. 1 - DETBASIN

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 1095.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1095.00	9,641	0	0
1.00	1096.00	14,527	12,084	12,084
2.00	1097.00	19,807	17,167	29,251
3.00	1098.00	25,346	22,577	51,828
4.00	1099.00	31,191	28,269	80,096
5.00	1100.00	37,343	34,267	114,363

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 20.00	0.00	0.00	0.00
Span (in)	= 20.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 1095.00	0.00	0.00	0.00
Length (ft)	= 1.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.000	.000	n/a
Orifice Coeff.	= 0.60	0.00	0.00	0.00
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 0.00	0.00	0.00	0.00
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1095.00	0.00	---	---	---	---	---	---	---	---	---	0.000
0.10	1,208	1095.10	0.06	---	---	---	---	---	---	---	---	---	0.058
0.20	2,417	1095.20	0.23	---	---	---	---	---	---	---	---	---	0.227
0.30	3,625	1095.30	0.50	---	---	---	---	---	---	---	---	---	0.498
0.40	4,834	1095.40	0.87	---	---	---	---	---	---	---	---	---	0.867
0.50	6,042	1095.50	1.32	---	---	---	---	---	---	---	---	---	1.325
0.60	7,250	1095.60	1.87	---	---	---	---	---	---	---	---	---	1.868
0.70	8,459	1095.70	2.48	---	---	---	---	---	---	---	---	---	2.479
0.80	9,667	1095.80	3.16	---	---	---	---	---	---	---	---	---	3.155
0.90	10,876	1095.90	3.88	---	---	---	---	---	---	---	---	---	3.882
1.00	12,084	1096.00	4.66	---	---	---	---	---	---	---	---	---	4.659
1.10	13,801	1096.10	5.46	---	---	---	---	---	---	---	---	---	5.459
1.20	15,517	1096.20	6.28	---	---	---	---	---	---	---	---	---	6.278
1.30	17,234	1096.30	7.09	---	---	---	---	---	---	---	---	---	7.091
1.40	18,951	1096.40	7.88	---	---	---	---	---	---	---	---	---	7.881
1.50	20,668	1096.50	8.63	---	---	---	---	---	---	---	---	---	8.626
1.60	22,384	1096.60	9.27	---	---	---	---	---	---	---	---	---	9.270
1.70	24,101	1096.70	2.59	---	---	---	---	---	---	---	---	---	2.589
1.80	25,818	1096.80	5.19	---	---	---	---	---	---	---	---	---	5.188
1.90	27,534	1096.90	6.87	---	---	---	---	---	---	---	---	---	6.865
2.00	29,251	1097.00	8.21	---	---	---	---	---	---	---	---	---	8.209
2.10	31,509	1097.10	9.36	---	---	---	---	---	---	---	---	---	9.360
2.20	33,766	1097.20	10.38	---	---	---	---	---	---	---	---	---	10.38
2.30	36,024	1097.30	11.32	---	---	---	---	---	---	---	---	---	11.32
2.40	38,282	1097.40	12.18	---	---	---	---	---	---	---	---	---	12.18
2.50	40,539	1097.50	12.98	---	---	---	---	---	---	---	---	---	12.98
2.60	42,797	1097.60	13.74	---	---	---	---	---	---	---	---	---	13.74
2.70	45,055	1097.70	14.35	---	---	---	---	---	---	---	---	---	14.35
2.80	47,312	1097.80	14.73	---	---	---	---	---	---	---	---	---	14.73
2.90	49,570	1097.90	15.10	---	---	---	---	---	---	---	---	---	15.10
3.00	51,828	1098.00	15.46	---	---	---	---	---	---	---	---	---	15.46
3.10	54,654	1098.10	15.81	---	---	---	---	---	---	---	---	---	15.81
3.20	57,481	1098.20	16.16	---	---	---	---	---	---	---	---	---	16.16
3.30	60,308	1098.30	16.50	---	---	---	---	---	---	---	---	---	16.50
3.40	63,135	1098.40	16.83	---	---	---	---	---	---	---	---	---	16.83
3.50	65,962	1098.50	17.15	---	---	---	---	---	---	---	---	---	17.15
3.60	68,789	1098.60	17.47	---	---	---	---	---	---	---	---	---	17.47

Continues on next page...

DETBASIN

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
3.70	71,615	1098.70	17.78	---	---	---	---	---	---	---	---	---	17.78
3.80	74,442	1098.80	18.09	---	---	---	---	---	---	---	---	---	18.09
3.90	77,269	1098.90	18.39	---	---	---	---	---	---	---	---	---	18.39
4.00	80,096	1099.00	18.69	---	---	---	---	---	---	---	---	---	18.69
4.10	83,523	1099.10	18.98	---	---	---	---	---	---	---	---	---	18.98
4.20	86,949	1099.20	19.27	---	---	---	---	---	---	---	---	---	19.27
4.30	90,376	1099.30	19.56	---	---	---	---	---	---	---	---	---	19.56
4.40	93,803	1099.40	19.84	---	---	---	---	---	---	---	---	---	19.84
4.50	97,230	1099.50	20.11	---	---	---	---	---	---	---	---	---	20.11
4.60	100,656	1099.60	20.38	---	---	---	---	---	---	---	---	---	20.38
4.70	104,083	1099.70	20.65	---	---	---	---	---	---	---	---	---	20.65
4.80	107,510	1099.80	20.92	---	---	---	---	---	---	---	---	---	20.92
4.90	110,936	1099.90	21.18	---	---	---	---	---	---	---	---	---	21.18
5.00	114,363	1100.00	21.44	---	---	---	---	---	---	---	---	---	21.44

...End

APPENDIX B

HYDRAULICS

Inlets Capacity Summary

WOOD/PATEL
MISSION: CLIENT SERVICE®

CIVIL ENGINEERS * HYDROLOGISTS * LAND SURVEYORS * CONSTRUCTION MANAGERS

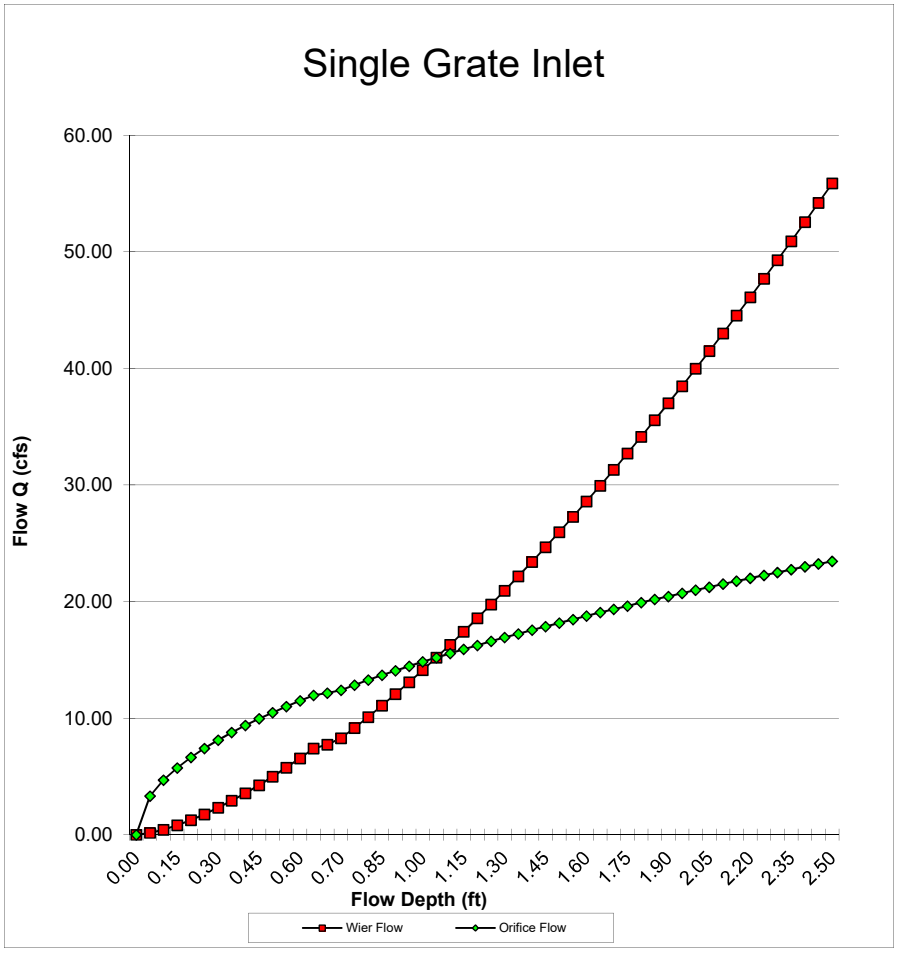
INLET CAPACITY AT SUMP LOCATIONS — MAG 535 Type 'F' Single Catch Basin

Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E., CFM

Weir Equation $Q_i = C_w P d^{1.5} (C_f)$
Orifice Equation $Q_i = C_o A (2gd)^{0.5} (C_f)$
Where: Cw = 3, Co = 0.67, and Cf = Clogging Factor = 0.5

P =	9.42	**ft**	P = Perimeter of catch basin minus area of longitudinal & lateral bars
A =	5.52	**sf**	A = Total area of grate minus area of longitudinal & lateral bars

Depth (ft)	Weir Qi (cfs)	Orifice Qi (cfs)
0.00	0.00	0.00
0.05	0.16	3.32
0.10	0.45	4.69
0.15	0.82	5.75
0.20	1.26	6.64
0.25	1.77	7.42
0.30	2.32	8.13
0.35	2.93	8.78
0.40	3.57	9.39
0.45	4.27	9.95
0.50	5.00	10.49
0.55	5.76	11.01
0.60	6.57	11.49
0.65	7.40	11.96
0.67	7.75	12.15
0.70	8.28	12.42
0.75	9.18	12.85
0.80	10.11	13.27
0.85	11.07	13.68
0.90	12.06	14.08
0.95	13.08	14.46
1.00	14.13	14.84
1.05	15.20	15.21
1.10	16.30	15.56
1.15	17.43	15.91
1.20	18.57	16.26
1.25	19.75	16.59
1.30	20.94	16.92
1.35	22.16	17.24
1.40	23.41	17.56
1.45	24.67	17.87
1.50	25.96	18.17



WOOD/PATEL
MISSION: CLIENT SERVICE®

CIVIL ENGINEERS * HYDROLOGISTS * LAND SURVEYORS * CONSTRUCTION MANAGERS

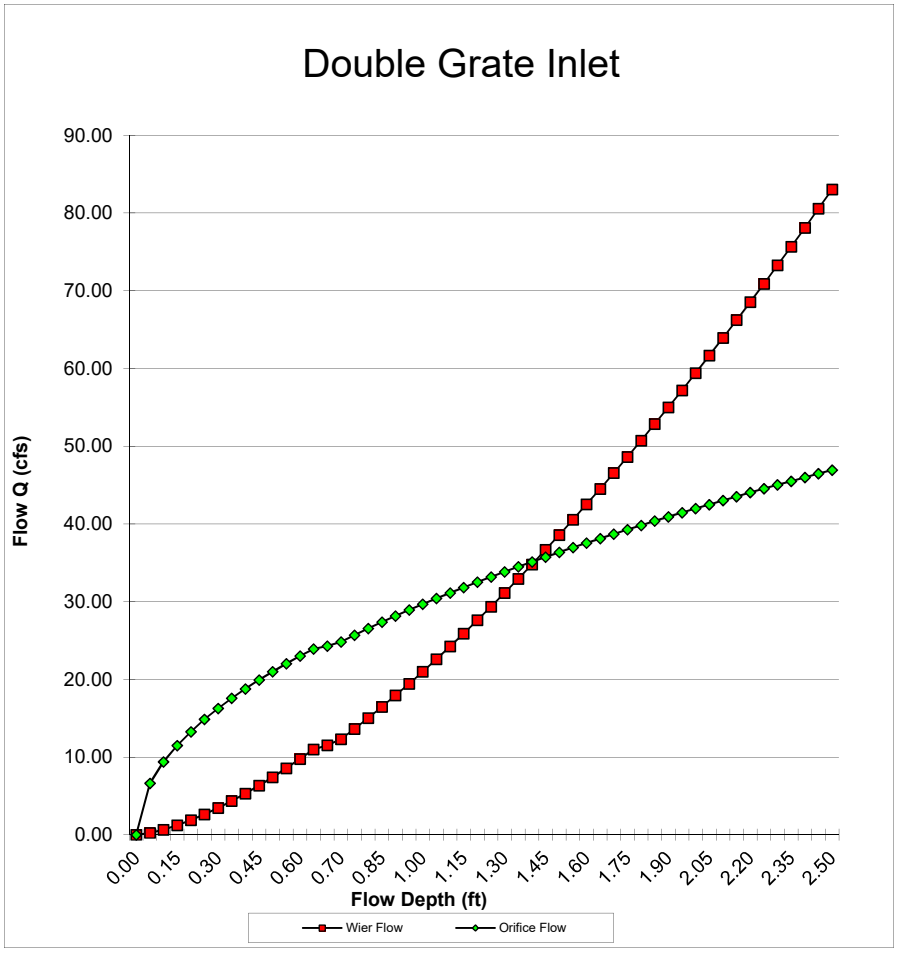
INLET CAPACITY AT SUMP LOCATIONS — MAG 535 Type 'F' Single Catch Basin

Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E., CFM

Weir Equation $Q_i = C_w P d^{1.5} (C_f)$
Orifice Equation $Q_i = C_o A (2gd)^{0.5} (C_f)$
Where: Cw = 3, Co = 0.67, and Cf = Clogging Factor = 0.5

P =	14.00	**ft**	P = Perimeter of catch basin minus area of longitudinal & lateral bars
A =	11.04	**sf**	A = Total area of grate minus area of longitudinal & lateral bars

Depth (ft)	Weir Qi (cfs)	Orifice Qi (cfs)
0.00	0.00	0.00
0.05	0.23	6.64
0.10	0.66	9.39
0.15	1.22	11.49
0.20	1.88	13.27
0.25	2.63	14.84
0.30	3.45	16.26
0.35	4.35	17.56
0.40	5.31	18.77
0.45	6.34	19.91
0.50	7.42	20.99
0.55	8.57	22.01
0.60	9.76	22.99
0.65	11.00	23.93
0.67	11.52	24.29
0.70	12.30	24.83
0.75	13.64	25.70
0.80	15.03	26.55
0.85	16.46	27.36
0.90	17.93	28.16
0.95	19.44	28.93
1.00	21.00	29.68
1.05	22.59	30.41
1.10	24.23	31.13
1.15	25.90	31.83
1.20	27.61	32.51
1.25	29.35	33.18
1.30	31.13	33.84
1.35	32.94	34.48
1.40	34.79	35.12
1.45	36.67	35.74
1.50	38.58	36.35



WOOD/PATEL
MISSION: CLIENT SERVICE®

CIVIL ENGINEERS * HYDROLOGISTS * LAND SURVEYORS * CONSTRUCTION MANAGERS

INLET CAPAITY FOR DEPRESSED CURBS IN A SUMP — Without a Local Depression

Project: Cavco West
Location: El Mirage, Arizona
Project No.: 184946
Project Eng.: Matthew Pruitt, P.E., CFM

Known Values and Equations:

$$Q_i\,(cfs)^{(2)} = C_W\,(L)d^{1.5}$$

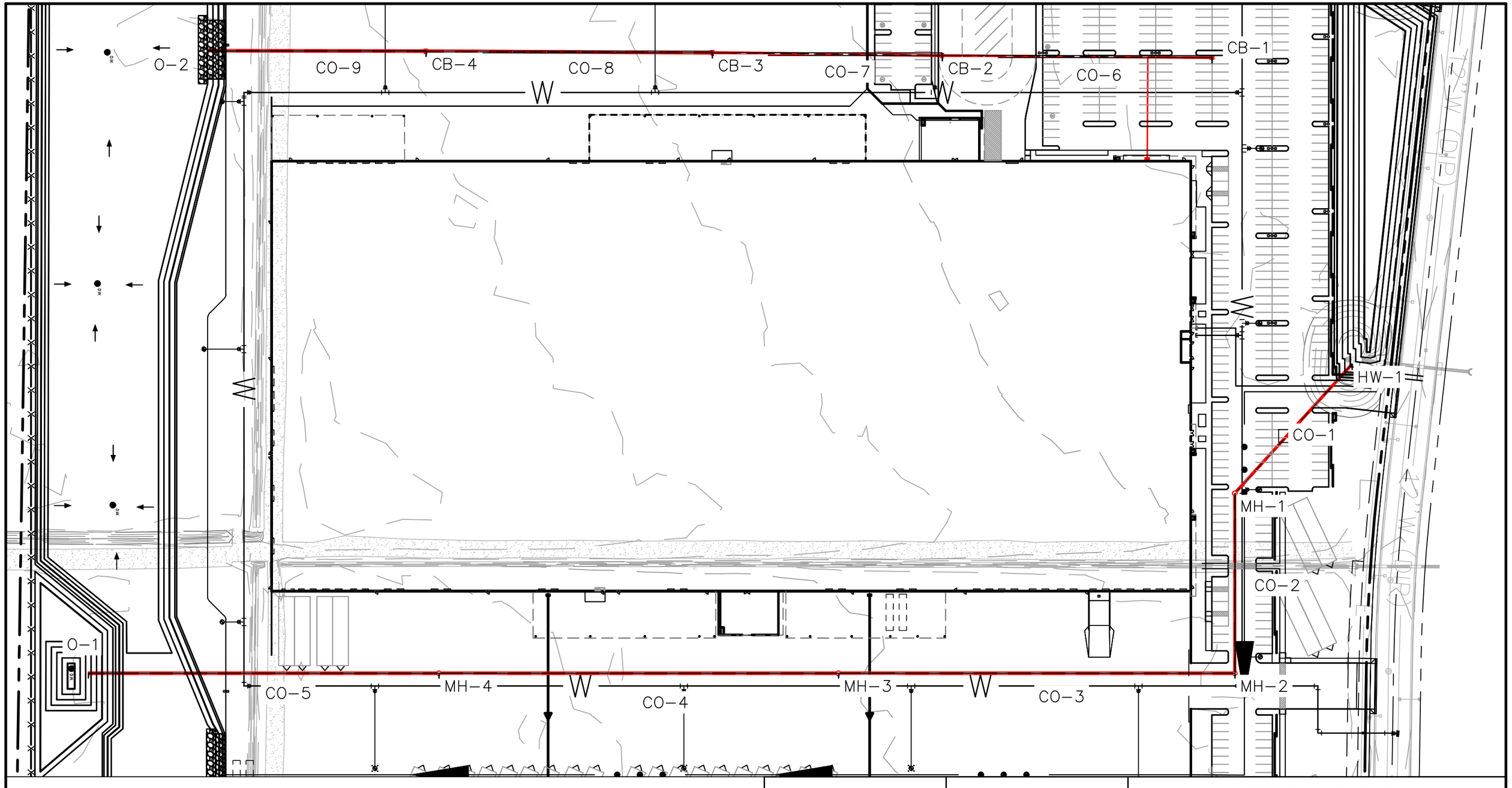
(1) Where:

C_W = Weir Coefficient =	3.0
d = Depth of flow at curb, ft =	0.50
L = Length of curb opening, ft	

Street Name/ Subbasin	Depressed Curb Opening by Roadway Plans	Curb Inlet Type	Number of Openings	Curb Opening Length, L (ft)	Depth of Flow, d (ft)	Capacity, Q (cfs)	Subbasin Flow Q2 (cfs)	Flow per CB Q2 (cfs)	Subbasin Flow Q_{100} (cfs)	Flow per Opening Q_{100} (cfs)
10	DC10	DC	1	18	0.50	19.1	18	17.7	17.7	17.7
20	DC20	DC	1	83	0.50	88.0	87	87.1	69.4	69.4
40	DC40	DC	1	65	0.50	68.9	13	12.6	14.8	14.8
70	DC50	DC	1	65	0.50	68.9	39	39.4	13.7	13.7

Notes
(1) Per FCDMC Drainage Design Manual, Volume II, Hydraulics, equation 3.13.
(2) DC = Depressed Curb

Pipe Analysis Summary



0 100 200

Horz. 1 in. = 100 ft.

N

NOT
FOR CONSTRUCTION OR RECORDING

WOOD PATEL

CAVCO WEST

STORMCAD EXHIBIT

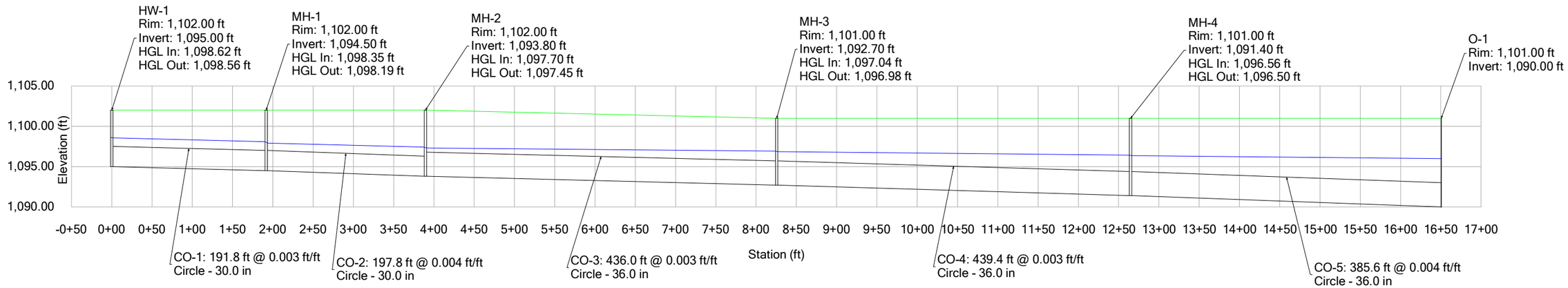
DATE	08/01/2020	SCALE	1" = 100'	SHEET	1 OF 1
JOB NO.	184946	DESIGN	MP	CHECK	JD
		DRAWN	MP	RFI #	-

Z:\2018\184946\Project Support\Reports\Drainage\StormCad\4946-STORMCAD.dwg

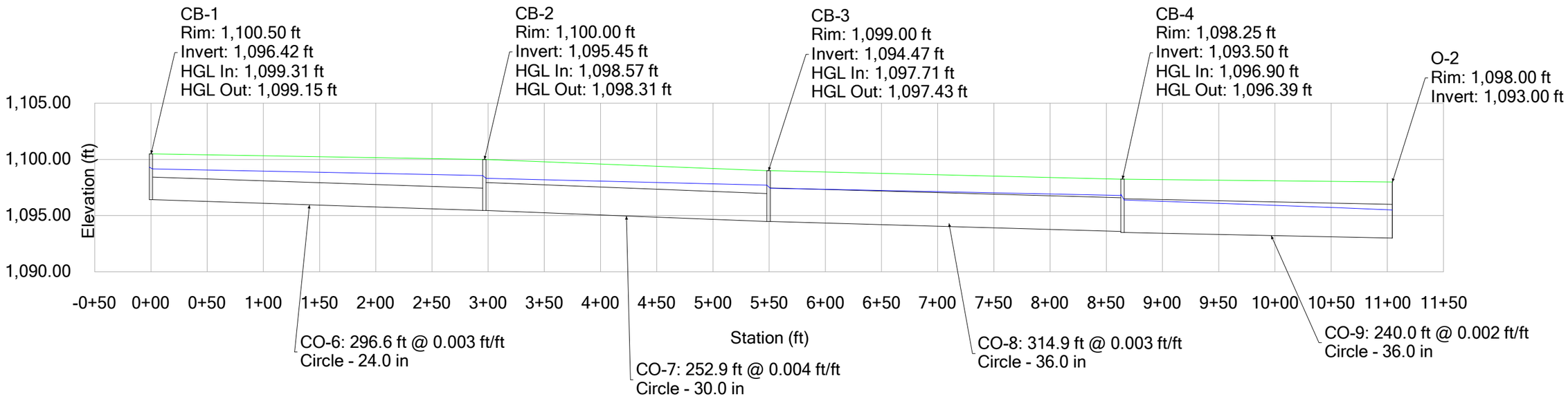
Conduit FlexTable: Combined Pipe/Node Report

Label	Start Node	Stop Node	Invert (Start) (ft)	Invert (Stop) (ft)	Diameter (in)	Length (Unified) (ft)	Slope (Calculated) (ft/ft)	Flow (cfs)	Velocity (ft/s)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)
CO-7	CB-2	CB-3	1,095.45	1,094.47	30.0	252.9	0.004	20.00	4.07	1,098.31	1,097.71	1,100.00	1,099.00
CO-8	CB-3	CB-4	1,094.47	1,093.60	36.0	314.9	0.003	30.00	5.57	1,097.43	1,096.80	1,099.00	1,098.25
CO-9	CB-4	O-2	1,093.50	1,093.00	36.0	240.0	0.002	40.00	5.66	1,096.39	1,095.50	1,098.25	1,098.00
CO-6	CB-1	CB-2	1,096.42	1,095.45	24.0	296.6	0.003	10.00	3.18	1,099.15	1,098.57	1,100.50	1,100.00
CO-1	HW-1	MH-1	1,095.00	1,094.50	30.0	191.8	0.003	20.50	4.18	1,098.56	1,098.08	1,102.00	1,102.00
CO-2	MH-1	MH-2	1,094.50	1,093.80	30.0	197.8	0.004	20.50	4.18	1,097.92	1,097.43	1,102.00	1,102.00
CO-3	MH-2	MH-3	1,093.80	1,092.70	36.0	436.0	0.003	20.50	2.90	1,097.32	1,096.91	1,102.00	1,101.00
CO-4	MH-3	MH-4	1,092.70	1,091.40	36.0	439.4	0.003	20.50	2.90	1,096.84	1,096.43	1,101.00	1,101.00
CO-5	MH-4	O-1	1,091.40	1,090.00	36.0	385.6	0.004	20.50	2.90	1,096.36	1,096.00	1,101.00	1,101.00

Profile Report
Engineering Profile - HW-1 TO O-1 (4946-STORMCAD.stsw)



Profile Report
Engineering Profile - CB-1 TO O-2 (4946-STORMCAD.stsw)



APPENDIX C

EXCERPTS FROM REFERENCED MATERIALS

Joe Ramirez Final Drainage Report

EXISTING CULVERT

PEORIA AVE

SWALE 1-A
TO BE MODIFIED WITH RAIL SPUR

EXISTING SWALE

PROPOSED INDUSTRY OWNED TRACK

EXISTING SWALE

OFF-2

OFF-4

Q100=49 cfs

SWALE 1-B
TO BE MODIFIED WITH RAIL SPUR

CU-1
3 X 36" CMP CULVERT
TO BE CONSTRUCTED WITH RAIL SPUR

EXISTING SWALE

BNSF RAILROAD

SWALE S-2A
TO BE CONSTRUCTED WITH RAIL SPUR

SWALE S-2B
TO BE CONSTRUCTED WITH RAIL SPUR

DYSART RD

EXISTING SWALE

Q100=50 cfs

Q100=16 cfs

OFF-1

OFF-3

Q100=15 cfs

RB-1*
BOT=1,094.00
HWE=1,097
$V_{REQ'D}$=7,810 CF
V_{PROP}=11,494 CF
DRYWELLS=0
*EQUALIZED WITH RB-2

CU-3
24" RGRCP CULVERT

CU-2
24" CMP CULVERT
TO BE CONSTRUCTED WITH RAIL SPUR

SWALE S-4A

SWALE S-4B

RB-1

RB-3*
BOT=1,096.00
HWE=1,099.00
$V_{REQ'D}$=4,863 CF
V_{PROP}=8,232 CF
DRYWELLS=1

SWALE S-3

ON-1

SWALE S-5A

SD-3
18" RGRCP

RB-3

SWALE S-5B

CU-6
2 X 36" RGRCP CULVERT

ON-2

ON-3

ON-4

JOE RAMIREZ RD ALIGNMENT

SPREADER BASIN
BOT=1,096.00
HWE=1,099.00
V_{PROP}=5,442 CF
DRYWELLS=1

CIVES PROPERTY

SD-1A, SD-1B, SD-1C
36" RGRCP

RB-2

CU-5
24" RGRCP CULVERT
(FOR IRRIGATION FLOWS)

SD-4
18" RGRCP

RB-4

RB-2*
BOT=1,094.00
HWE=1,097.00
$V_{REQ'D}$=7,810 CF
V_{PROP}=11,494 CF
DRYWELLS=1
*EQUALIZED WITH RB-1

RB-4
BOT=1,096.00
HWE=1,099.00
$V_{REQ'D}$=4,726 CF
V_{PROP}=8,072 CF
DRYWELLS=1

LEGEND

- PROJECT BOUNDARY
- DRAINAGE AREA (ONSITE)
- DRAINAGE AREA (OFFSITE)
- COLLECTOR CHANNEL
- DRAINAGE AREA ID — ON/OFF-XX
- 100-YEAR PEAK FLOW — Q100=XXX cfs
- RETENTION BASIN ID — RB-XX
- RETENTION BASIN
- FLOW ARROW
- ULTIMATE OUTFALL
- CULVERT CROSSING

N

150 75 0 150 300
SCALE FEET

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REV.:

HILGARTWILSON
ENGINEER | PLAN | SURVEY | MANAGE
2141 E. HIGHLAND AVE., STE. 250 | P: 602.490.0535 / F: 602.368.2436
PHOENIX, AZ 85016
www.hilgartwilson.com

JOE RAMIREZ ROAD

135TH AVE AND OLIVE AVE
EL MIRAGE, ARIZONA

FIG 3: FINAL DRAINAGE SUMMARY EXHIBIT

HILGARTWILSON
PROJ NO.: 1680
DATE: DEC 2018
SCALE: 1" = 150'
DRAWN: SL
DESIGNED: HW
APPROVED: AT
DWG. NO.
SHT. OF

U:\1600\1680\1680.0101 – John F. Long Properties LLLP\REPORTS\DRAINAGE\Joe Ramirez Road Alignment\Exhibits\1680 FIG 3 – Final Drainage Map.dwg 12/21/2018 11:01 AM

CenterPoint Logistics Final Drainage Report

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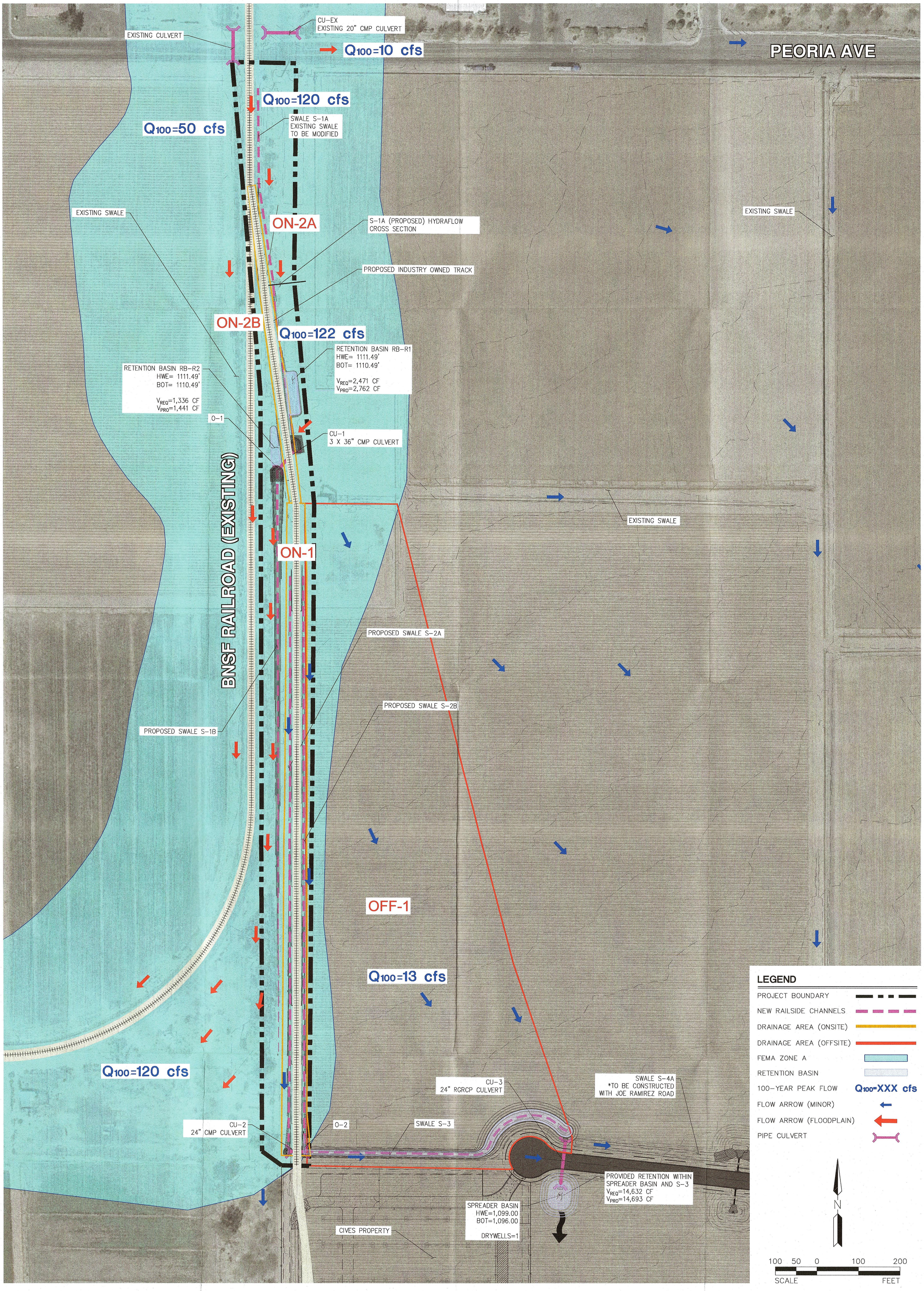

HILGARTWILSON

PROJ NO.:	1680
DATE:	MAR 2019
SCALE:	1" = 100'
DRAWN:	SL
DESIGNED:	HW
APPROVED:	AT

SHT. OF DWG. NO.

CENTERPOINT LOGISTICS

135TH AVE AND OLIVE AVE
EL MIRAGE, ARIZONA

FIG 3: RAILROAD SPUR DRAINAGE MAP

HILGARTWILSON
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PHOENIX, AZ 85016
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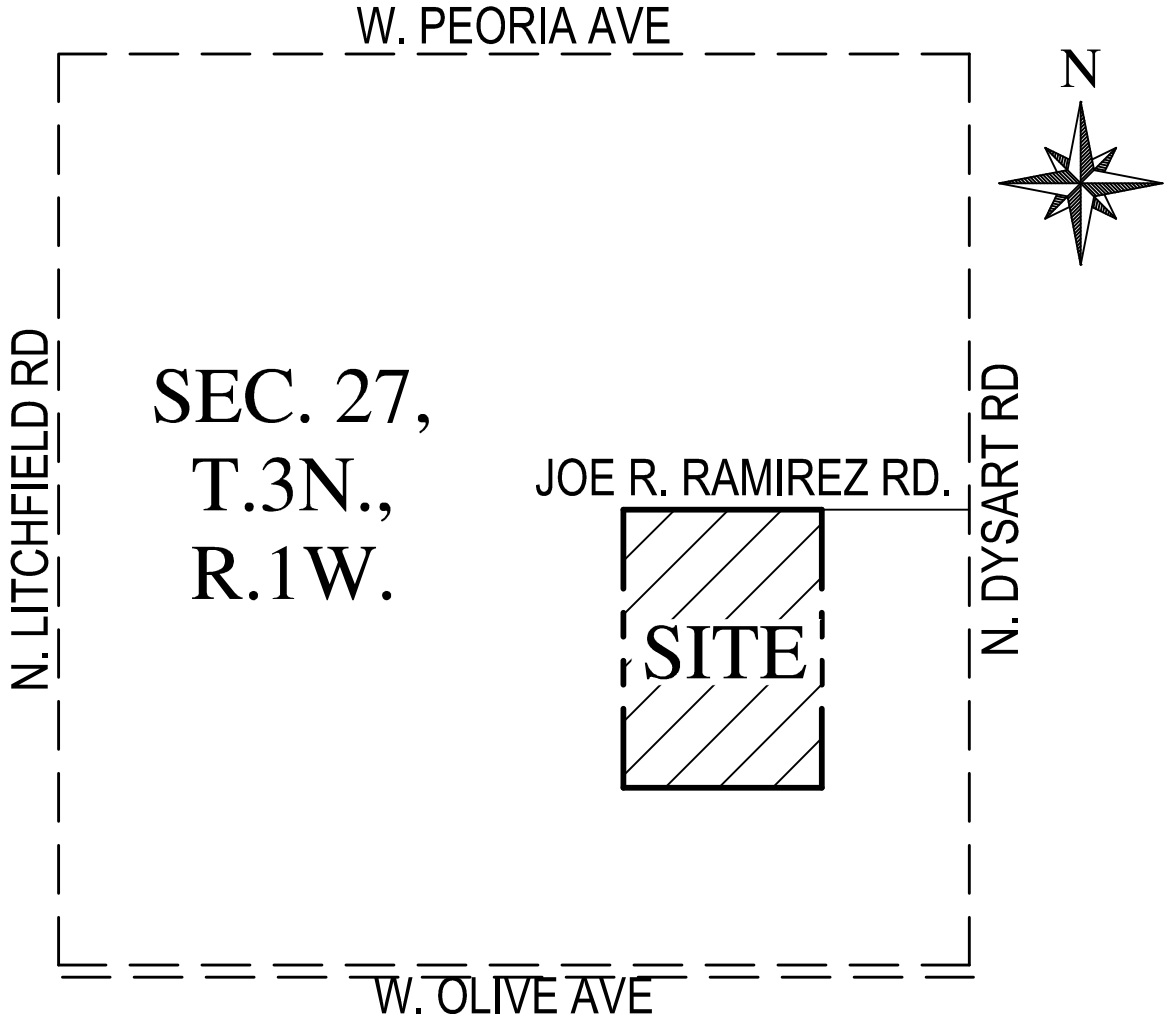
REV.:

U:\1600\1680\1680.0101 - John F. Long Properties LLLP\REPORTS\DRAINAGE\RR Spur\Exhibits\1680 FIG 3 - Drainage Map.dwg 3/19/2019 12:43 PM

EXHIBIT 1

VICINITY MAP



VICINITY MAP

N.T.S.

\\Phx-filesvr\res\2018\184946\Project Support\Reports\Drainage\Exhibits\4946-EXH1-VM.dwg

NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
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(602) 335-8500
WWW.WOODPATEL.COM

CAVCO WEST

FIGURE 1 - VICINITY MAP

DATE: 11-07-2019	SCALE: N.T.S.	SHEET 1 OF 1
JOB NO.: 184814.03	DESIGN: JCD	
	DRAWN: JCD	

EXHIBIT 2

FEMA FIRM

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

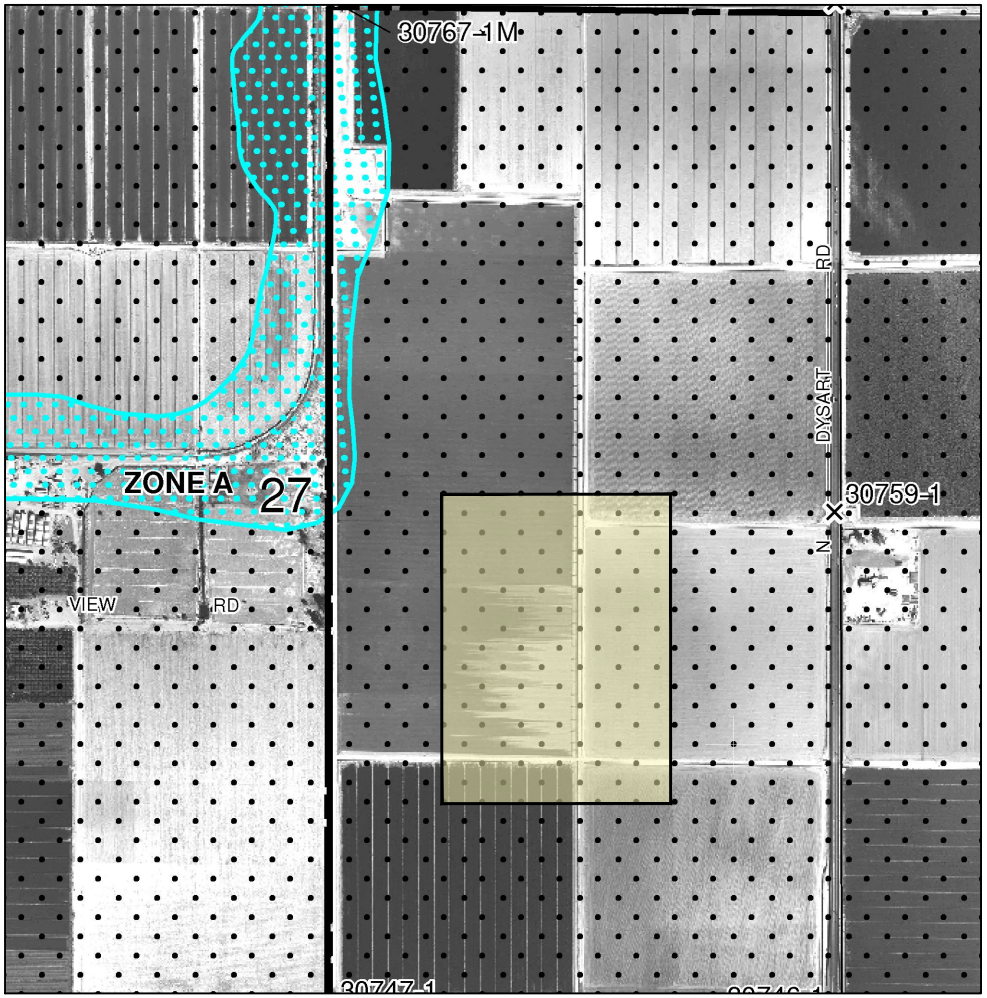
OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

A — A	Cross section line
23 — 23	Transect line
97°07'30", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4275000mN	1000-meter Universal Transverse Mercator grid ticks, zone 12
6000000 M	5000-foot grid ticks: Arizona State Plane coordinate system, central zone (FIPSZONE 0202), Transverse Mercator
DX5510	Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5	River Mile



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1680L

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 1680 OF 4425

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY	040037	1680	L
EL MIRAGE, CITY OF	040041	1680	L
GLENDALE, CITY OF	040045	1680	L
SURPRISE, CITY OF	040053	1680	L

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
04013C1680L

MAP REVISED
OCTOBER 16, 2013

Federal Emergency Management Agency

PROJECT AREA

NOT
FOR CONSTRUCTION OR RECORDING

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WWW.WOODPATEL.COM

CAVCO WEST

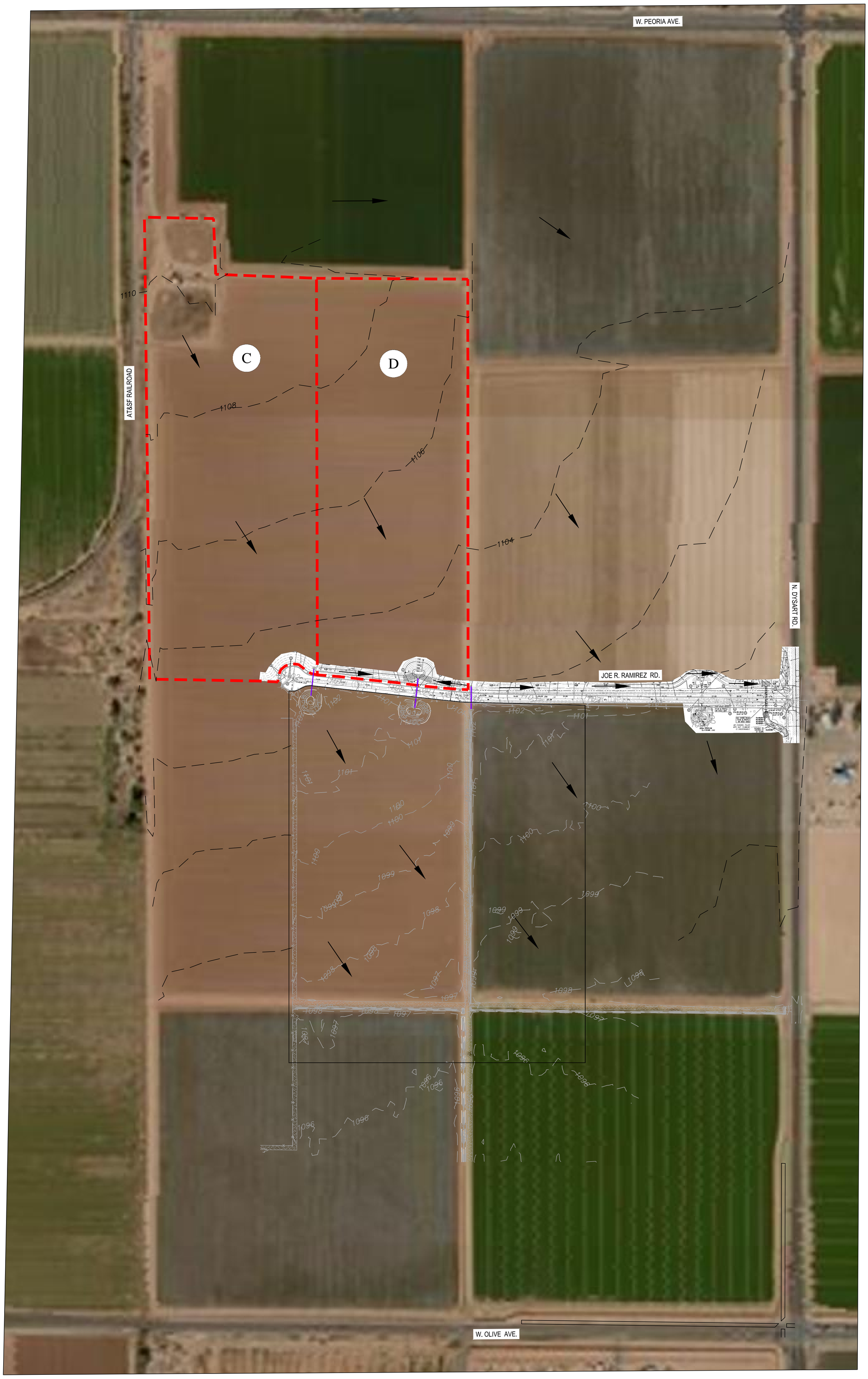
FIGURE 2 - FEMA FIRM

DATE: 11-07-2019	SCALE: 1" = 1000'	SHEET 1 OF 1
JOB NO.: 184814.03	DESIGN: JCD	
	DRAWN: JCD	

\\Phx-filesvr\res\2018\184946\Project Support\Reports\Drainage\Exhibits\4946-EXH2-FEMA.dwg

EXHIBIT 3

SURROUNDING DRAINAGE CONDITIONS MAP



N

0 30 60

Horz. 1 in. = 30 ft.

LEGEND

- PROPERTY BOUNDARY
- DRAINAGE FLOW ARROW
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING LOOP 303 ADMPU CONTOURS
- EXISTING STORM DRAIN
- OFFSITE DRAINAGE AREA

NOT FOR CONSTRUCTION OR RECORDING

WOOD PATEL

CAVCO WEST

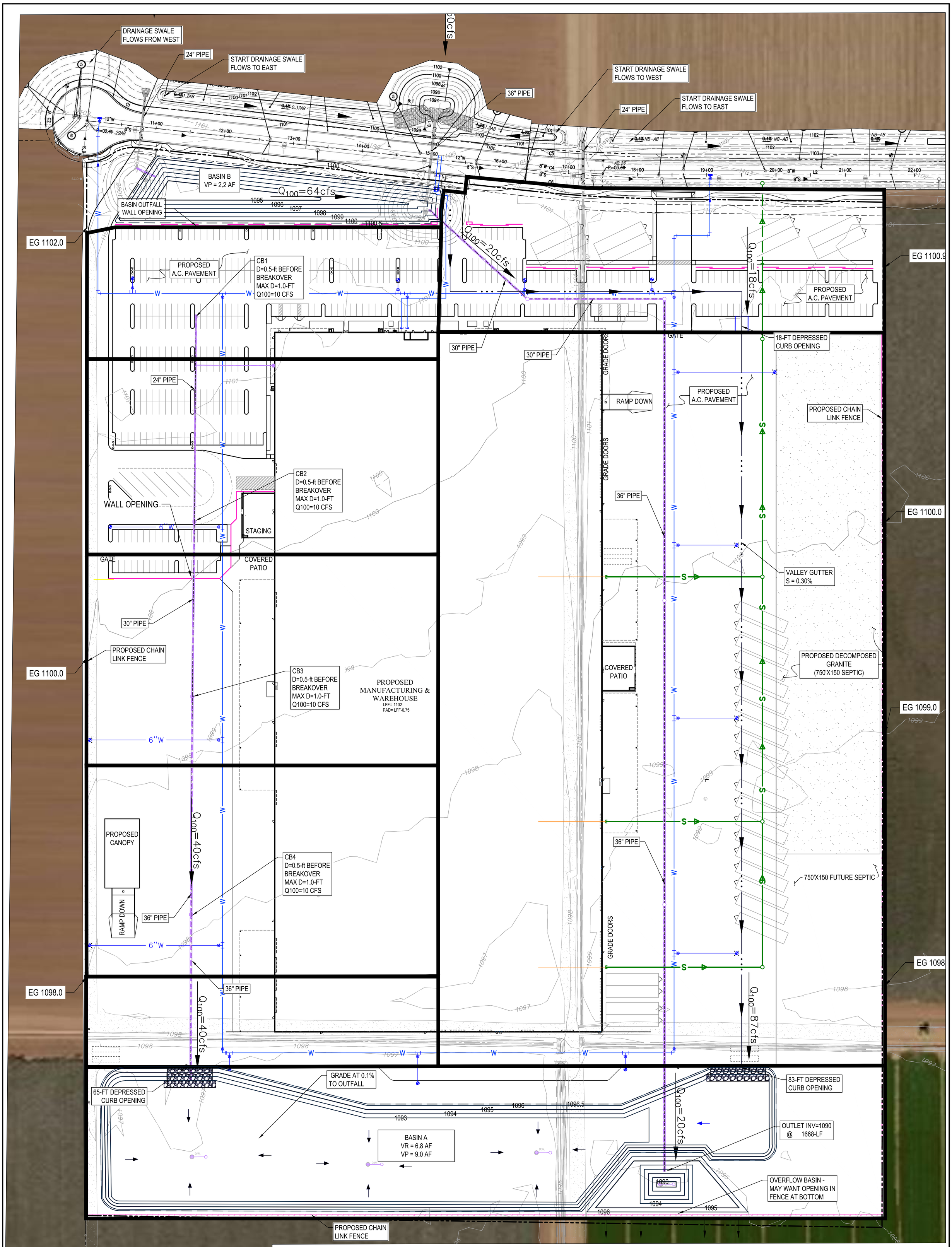
FIGURE 3 - SURROUNDING DRAINAGE CONDITIONS MAP

DATE	11-13-2019	SCALE	1" = 200'	SHEET	1 OF 1
JOB NO.	184946	DESIGN	JCD	DRAWN	JCD

\\Phx-filesvr\res\2018\184946\Project Support\Reports\Drainage\Exhibits\4946-EXH03-Existing Drainage Map.dwg

EXHIBIT 4

PROPOSED DRAINAGE MAP



NOT FOR CONSTRUCTION OR RECORDING

WOOD PATEL

CAVCO WEST

FIGURE 4 - PROPOSED DRAINAGE MAP

DATE	01/09/2020	SCALE	1" = 60'	SHEET	1 OF 1
JOB NO.	184946	DESIGN	JCD	DRAWN	JCD

Z:\2018\184946\Project Support\Reports\Drainage\Exhibits\4946-EXH04-Drainage Map Update 4.dwg

SOUTHWEST TRAFFIC ENGINEERING, LLC

13 November 2019

Bryce Christo
Assistant City Engineer
City of El Mirage
10000 N El Mirage Road
El Mirage, Arizona 85335

SUBJECT: RAMIREZ CAVCO
JOE R. RAMIREZ ROAD, WEST OF DYSART ROAD
TRAFFIC IMPACT STATEMENT

Dear Mr. Christo,

Please find enclosed a brief traffic impact statement (TIS) regarding the Ramirez Cavco project located on the south side of Joe R. Ramirez Road, west of Dysart Road, in El Mirage, Arizona. The vicinity of the project is shown in **Figure 1**. The project will consist of a proposed 700,000 square foot warehouse land use as shown in **Figure 2.**

The purpose of this TIS is to estimate the traffic generation associated with the proposed project and to identify the possible impacts of the site on the immediate project area.

Existing Conditions

The Ramirez Cavco project is located on an undeveloped parcel of land on the south side of Joe R. Ramirez Road, approximately 875 feet west of Dysart Road.

Dysart Road is a two-lane north/south aligned roadway with a posted speed limit of 50 miles per hour (mph). Dirt shoulders are present along Dysart Road, and overhead utilities and an irrigation canal are located along the east side of the roadway.

Joe R. Ramirez Road extends west from Dysart Road for approximately 2,000 feet before ending and forming a cul-de-sac. This roadway provides one through lane in each direction separated by a two-way center left turn lane. The posted speed limit of Joe R. Ramirez Road is 25 mph.

The intersection of Joe R. Ramirez Road/Dysart Road forms a three-leg, un-signalized intersection. The eastbound approach to the intersection is STOP controlled and provides an exclusive left turn and right turn lane. Northbound traffic is offered a shared left turn/through lane while southbound vehicles make use of a shared through/right turn lane. Traffic on Dysart Road is free flow.

A driveway that serves an existing industrial facility is located on the southwest side of the cul-de-sac at the end of Joe R. Ramirez Road.

Access

The Ramirez Cavco project will be served by three proposed access points located on the south side of Joe R. Ramirez Road. These access points will offer exclusive northbound right turn lanes for vehicles exiting the site.

East Access will be located approximately 1,175 feet west of Dysart Road. This driveway is expected to be fifty (50) feet wide and will offer full access to the parking area and will serve truck traffic. An internal gate is proposed at this access point for truck traffic.

Middle Access will be thirty (30) feet wide, located approximately 320 feet west of East Access. This access point will serve the employee parking area for the site.

West Access will be approximately 445 feet west of Middle Access, immediately east of the cul-de-sac at the end of Joe R. Ramirez Road. This access point will be thirty (30) feet wide and will provide full access to the west end of the site with internal gated access for truck traffic. The existing driveway in the cul-de-sac on Joe R. Ramirez Road will be located approximately 115 feet west of West Access.

Trip Generation

The Institute of Transportation Engineers (ITE) publication *Trip Generation, 10th Edition*, 2017 provides nationally agreed upon data based on land use type to estimate trip generation rates for future developments. Trip generation for the proposed 700,000 square-foot warehouse land use was performed base on ITE Land Use Code 150 (LUC 150), Warehousing. The results of the weekday trip generation calculations are shown in **Table 1**. Complete trip generation calculations can be found attached to this traffic impact statement.

Table 1 – Weekday Project Site Generated Trips

Time Period	700,000 sqft Warehousing (LUC 150)
Average Daily, Inbound (vtpd)	576
Average Daily, Outbound (vtpd)	576
Total Daily	**1,152**
AM Peak Hour, Inbound (vtph)	84
AM Peak Hour, Outbound (vtph)	25
Total AM Peak	**109**
PM Peak Hour, Inbound (vtph)	30
PM Peak Hour, Outbound (vtph)	82
Total PM Peak	**112**

vtpd - vehicle trips per day, vtph - vehicle trips per hour

Conclusion

The Ramirez Cavco project is predicted to generate an additional 109 weekday AM peak hour trips and 112 weekday PM peak hour trips to the surrounding roadway network. Minimal traffic is expected near the site due to the largely undeveloped surrounding area. Westbound left turning vehicles entering the proposed project access points from Joe R. Ramirez Road are able to remove themselves from the through traffic stream via an existing two-way center left turn lane. Regardless, as a low volume, dead end, minor collector street, Joe R. Ramirez Road is not expected to be significantly impacted by the project.

Due to the 50 mph posted speed limit on Dysart Road, a northbound left turn lane should be constructed at the Joe R. Ramirez Road/Dysart Road intersection if adjacent right of way allows for its placement. When Dysart Road is fully widened in the future, a southbound right turn should be added to the intersection as part of the improvements.

Thank you again for your time and review of this TIS. If you have any questions regarding the TIS, please feel free to contact me at 602.266.7983.

Respectfully Submitted,

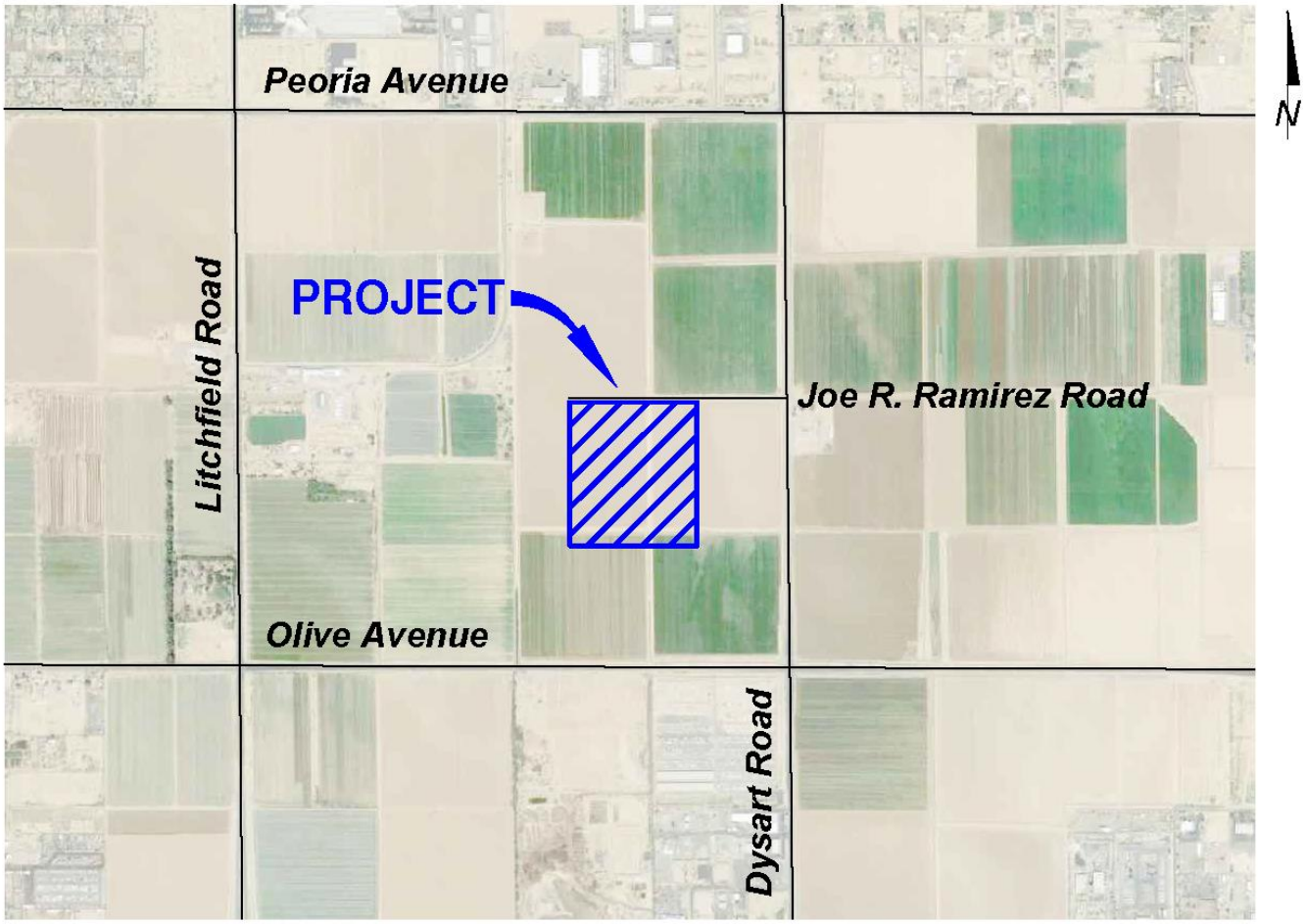
Andrew Smigielski, PE, PTOE, PTP
Southwest Traffic Engineering, LLC
Senior Traffic Engineer

cc: David Calcaterra, Deutsch Architecture Group (by email)

Attachments:

Figure 1 – Vicinity Map
Figure 2 – Site Plan
Trip Generation Calculation

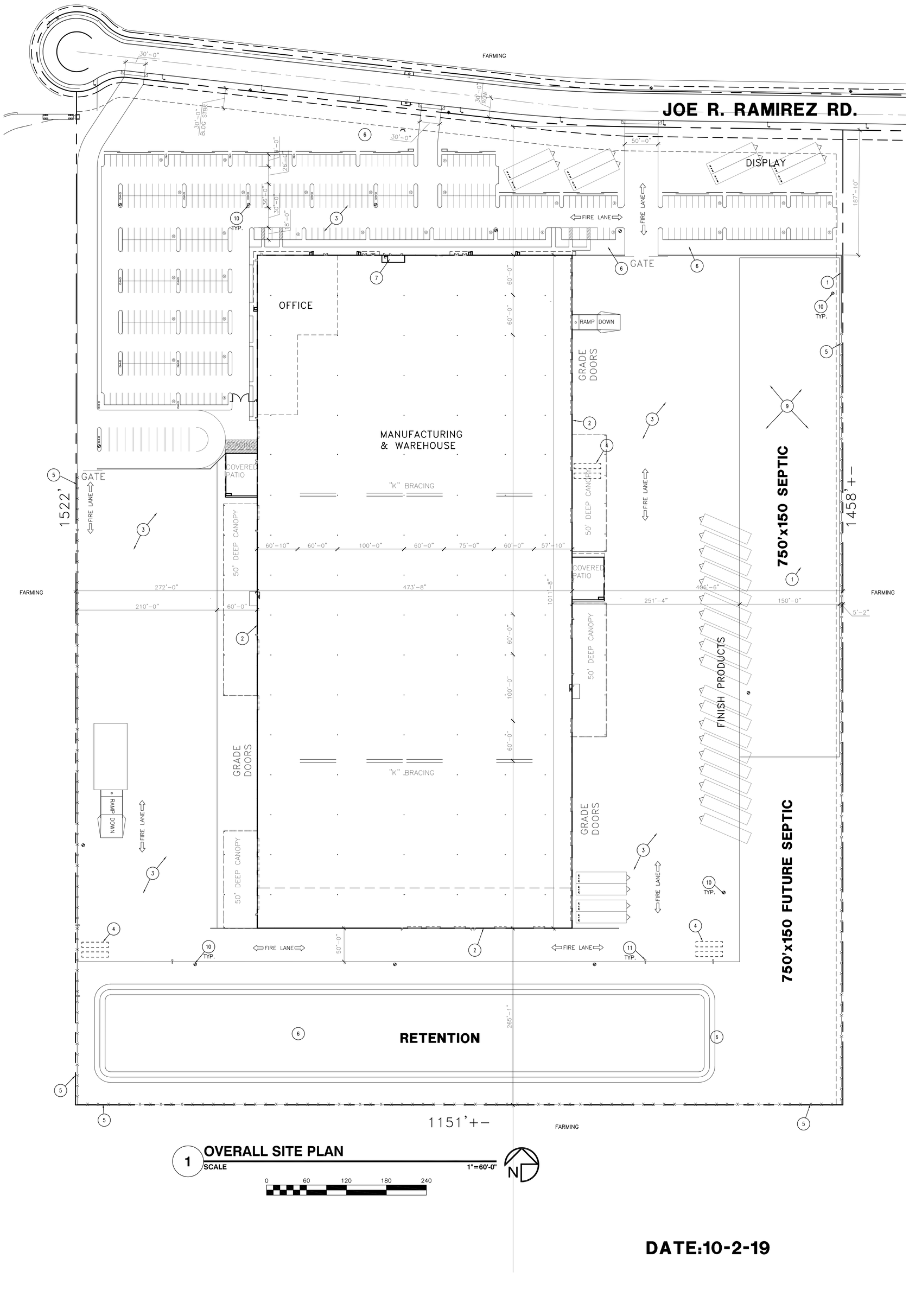
Figure 1 – Vicinity Map



LEGEND:

——— = Existing Road

= Project Site



1 **OVERALL SITE PLAN**

SCALE 1"=60'-0"

0 60 120 180 240

N

DATE:10-2-19

N:\2018\18129.00 Cavco El Mirage\3. Design\4. Drawings\AutoCAD\18129-00_B-SITE.dwg 11/5/2019 9:21:30 AM

Warehousing

LAND USE: 700,000 Square Feet Warehousing

TRIP GENERATION CALCULATIONS ARE BASED ON THE INSTITUTE OF TRANSPORTATION ENGINEERS' TRIP GENERATION, 10TH EDITION. THE ITE LAND USE CODE IS Warehousing (150), General Urban/Suburban

WEEKDAY

Fitted Curve T=1.58(X) + 45.54

Where X= 700000 Sq. Ft.

T = 1,152 VTPD

ENTER: (0.5)*(1151.54) = **576 VTPD**

EXIT: (0.5)*(1151.54) = **576 VTPD**

AM PEAK HOUR (ONE HOUR BETWEEN 7 AND 9 AM)

Fitted Curve T=0.12(X) + 25.32

Where X= 700000 Sq. Ft.

T = 109 VPH

ENTER: (0.77)*(109.32) = **84 VPH**

EXIT: (0.23)*(109.32) = **25 VPH**

PM PEAK HOUR (ONE HOUR BETWEEN 4 AND 6 PM)

Fitted Curve T=0.12(X) + 27.82

Where X= 700000 Sq. Ft.

T = 112 VPH

ENTER: (0.27)*(111.82) = **30 VPH**

EXIT: (0.73)*(111.82) = **82 VPH**

*where, T = trip ends

TRIP GENERATION SUMMARY

WEEKDAY	**1,152 VTPD**
AM PEAK HOUR (ONE HOUR BETWEEN 7 AND 9 AM)	**109 VPH**
PM PEAK HOUR (ONE HOUR BETWEEN 4 AND 6 PM)	**112 VPH**

PREMIER TITLE AGENCY

When Recorded Return to:
Cavco Exchange LLC
3636 N. Central Avenue, Suite 1200
Phoenix, Arizona 85012
Attention: Trent Hall

Escrow No. A-106182

SPECIAL WARRANTY DEED

FOR VALUABLE CONSIDERATION, receipt and sufficiency of which is forever acknowledged, Jacob F. Long, Trustee of the JOHN F. LONG FAMILY REVOCABLE LIVING TRUST under Agreement dated February 26, 2008 (Grantor), conveys to CAVCO EXCHANGE LLC, a Delaware limited liability company (Grantee), the following described real property situated in Maricopa County, Arizona, together with all rights and privileges appurtenant thereto:

See the legal description set forth in Exhibit "1" attached and incorporated by this reference (the Property).

SUBJECT TO all matters of record, as well as all matters that would be shown or discovered by an accurate ALTA/NSPS survey or inspection of the Property, and all laws, ordinances or governmental regulations restricting or regulating the use, occupancy or enjoyment of the Property.

Grantor warrants the title to the Property against all acts of the Grantor and no other.

PURSUANT TO A.R.S. §33-404, THE NAMES AND ADDRESS OF THE BENEFICIARIES OF THE JOHN F. LONG FAMILY REVOCABLE LIVING TRUST ARE MANYA J. LONG, SHIRLEY LONG AND JACOB F. LONG, 1118 E. MISSOURI AVENUE, SUITE A, PHOENIX, AZ 85014.

DATED this 13th day of August, 2019.

[signature page follows]

GRANTOR:

JOHN F. LONG FAMILY REVOCABLE LIVING TRUST under Agreement dated February 26, 2008

By _____
Jacob F. Long, Its Trustee

STATE OF ARIZONA)
) ss.
County of Maricopa)

The foregoing instrument was acknowledged before me this 13th day of August, 2019, by Jacob F. Long, solely in his capacity as Trustee of JOHN F. LONG FAMILY REVOCABLE LIVING TRUST under Agreement dated February 26, 2008, on behalf of the trust.

_____
Notary Public

My Commission expires:

10·13·2019

VALERIE J. RIEDLER
Notary Public - State of Arizona
MARICOPA COUNTY
My Commission Expires Oct. 13, 2019

EXHIBIT "1"
LEGAL DESCRIPTION OF PROPERTY

Lot 4, MINOR LAND DIVISION FOR CENTERPOINT LOGISTICS PARK-P/D WEST, according to the plat of record in the Office of the County Recorder of Maricopa County, Arizona recorded in Book ____ of Maps, Page ____.

Also described as:

A portion of Lot 3 as shown on the Final Plat of CenterPoint Logistics Park-P/D West filed as Book 1399, Page 6 records of Maricopa County, Arizona being situated within a portion of the Southeast Quarter of Section 27, Township 3 North, Range 1 West of the Gila and Salt River Meridian, Maricopa County, Arizona, being more particularly described as follows:

COMMENCING at a found brass cap in hand hole accepted as the South Quarter corner of said Section 27 from which a found aluminum cap accepted as the North Quarter corner of said Section 27 thereof bears North 00°03'38" East, 5269.67 feet;

Thence North 00 degrees 03 minutes 38 seconds East, 747.24 feet along the west line of said Southeast Quarter of Section 27 to the Southwest corner of Lot 2 of said Final Plat;

Thence leaving said west line, South 89 degrees 01 minutes 07 seconds East, 600.08 feet along the south line of said Lot 2 to the Southeast corner of said Lot 2;

Thence leaving said south line, North 00 degrees 03 minutes 38 seconds East, 298.00 feet along the east line of said Lot 2 to the POINT OF BEGINNING;

Thence continuing along said east line, North 00 degrees 03 minutes 38 seconds East, 1522.00 feet to the south Right-of-Way line of Joe R. Ramirez Road as shown on said Final Plat to a non-tangent curve, concave northeasterly, having a radius of 60.00 feet;

THENCE THE FOLLOWING FIVE (5) COURSES ALONG SAID SOUTH LINE;

Thence northeasterly along said curve, through a central angle of 35 degrees 07 minutes 59 seconds, an arc length of 36.79 feet to a point of reverse curvature, concave northeasterly, having a radius of 60.00 feet;

Thence northeasterly along said curve, through a central angle of 41 degrees 24 minutes 35 seconds, an arc length of 43.36 feet to a tangent line;

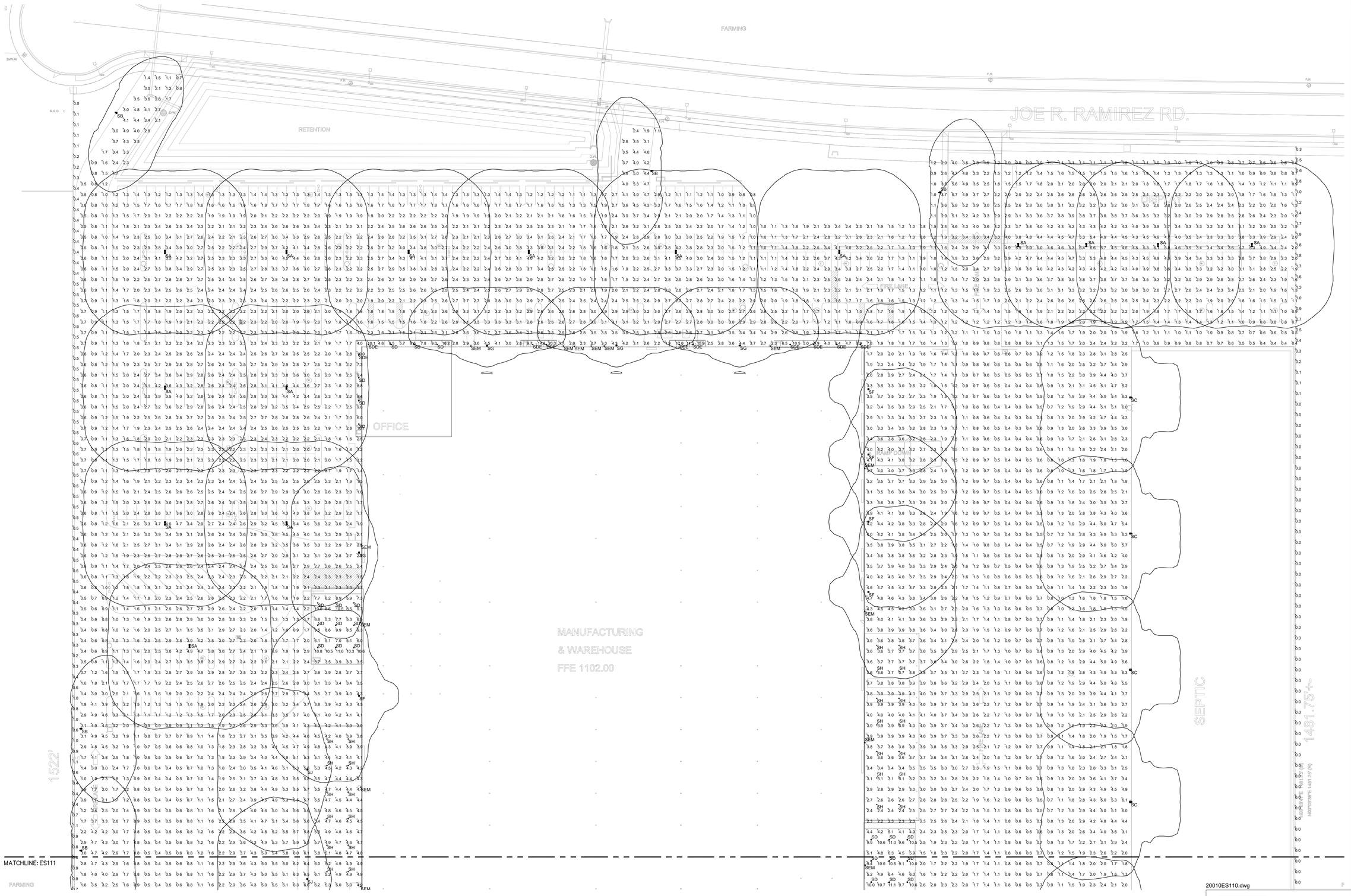
Thence South 83 degrees 39 minutes 46 seconds East, 560.24 feet to the beginning of a tangent curve, concave northeasterly, having a radius of 2030.00 feet;

Thence southeasterly along said curve, through a central angle of 05 degrees 28 minutes 52 seconds, an arc length of 194.19 feet to a tangent line;

Thence South 89 degrees 08 minutes 38 seconds East, 324.68 feet;

Thence leaving said south line, South 00 degrees 03 minutes 38 seconds West, 1481.75 feet;

Thence North 89 degrees 08 minutes 38 seconds West, 1151.00 feet to a point on the aforesaid east line of said Lot 2 being the POINT OF BEGINNING.



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PL FC AFG	×	0.2 fc	1.8 fc	0.0 fc	N/A	N/A
SITE FC AFG	+	2.3 fc	20.3 fc	0.1 fc	203.0:1	23.0:1

20010ES110.dwg

Zee Engineering Group, LLC
1830 S. Alma School Road, Suite 120
Mesa, Arizona 85210
V. 480.222.8835
F. 480.222.8836

2929.COM
DEUTSCH ARCHITECTURE GROUP

Registered Professional Engineer
Certificate No.
30546
SHYAMJK
SEHWA
1/9/20
Date Signed
ARIZONA, U.S.A.
Expires 09/30/2020

4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

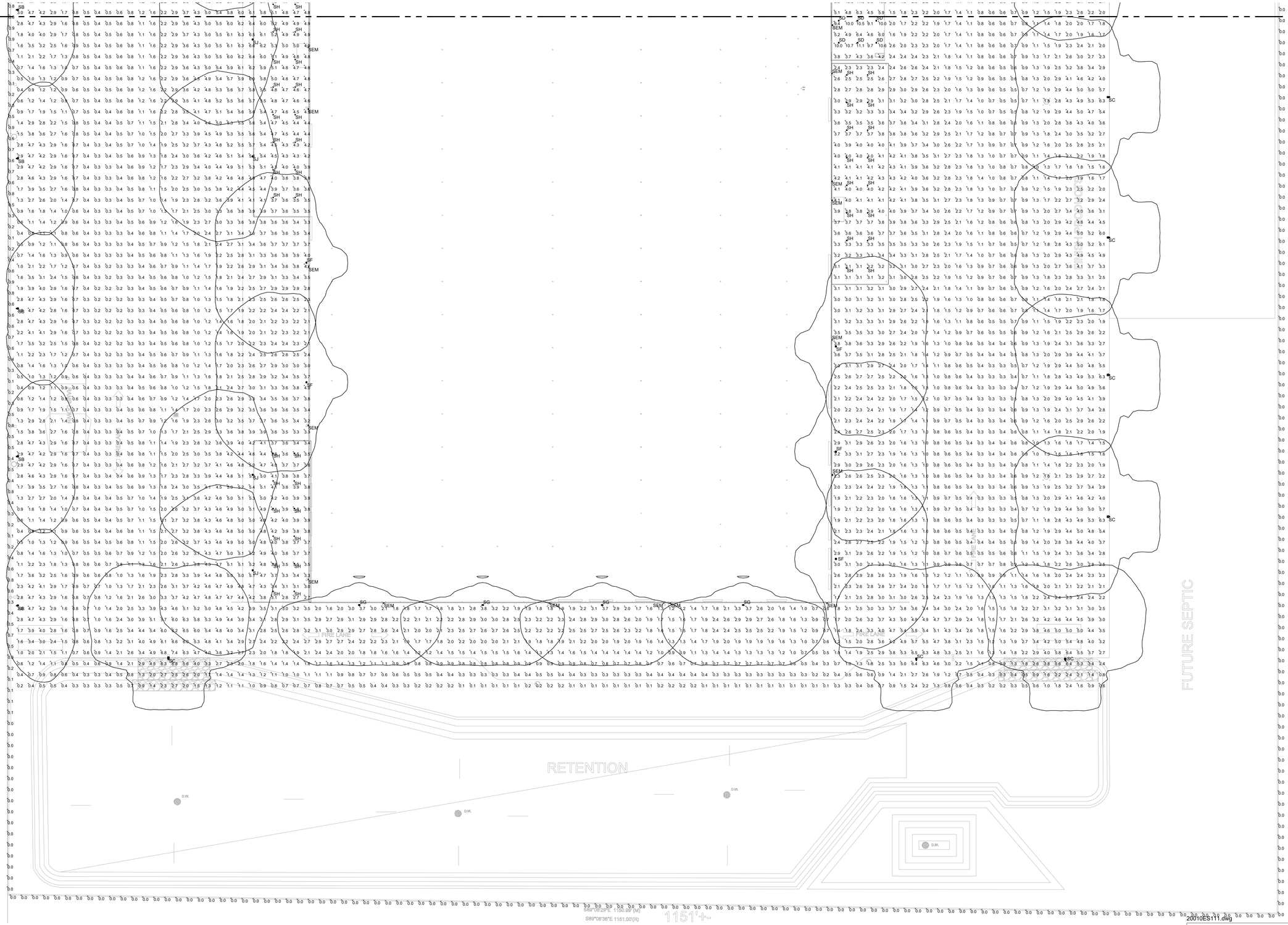
Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
DRAWN BY: YC
CHK'D BY: SS
COPYRIGHT 2019: DEUTSCH ARCHITECTURE GROUP

SITE PHOTOMETRIC PLAN

ES110

NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 30 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PL FC AFG	×	0.2 fc	1.8 fc	0.0 fc	N/A	N/A
SITE FC AFG	+	2.3 fc	20.3 fc	0.1 fc	203.0:1	23.0:1

Zee Engineering Group, LLC
1830 S. Alma School Road, Suite 120
Mesa, Arizona 85210
V. 480.222.8835
F. 480.222.8836

2929.COM
DEUTSCH ARCHITECTURE GROUP
Registered Professional Engineer
Expires 09/30/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F

CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ

CavcoWest

Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
DRAWN BY: YC
CHK'D BY: SS
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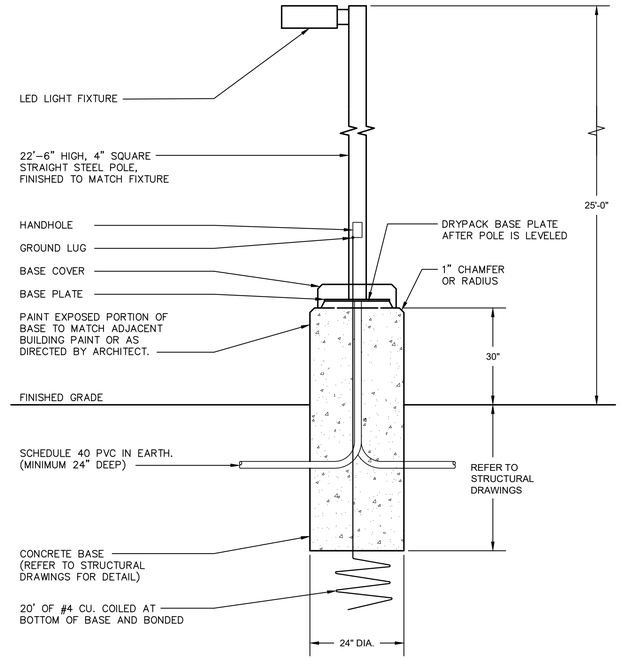
SITE PHOTOMETRIC PLAN

ES111

NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 30 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR

Luminaire Schedule

Label	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
SA	Lithonia Lighting	(2)DSX1 LED P7 40K T5W MVOLT/ 22.5' POLE ON 2.5' BASE	DSX1 LED P7 40K T5W MVOLT	LED	1	21384	0.91	366
SB	Lithonia Lighting	DSX1 LED P7 40K BLC MVOLT/ 22.5' POLE ON 2.5' BASE	DSX1 LED P7 40K BLC MVOLT	LED	1	16998	0.91	183
SC	Lithonia Lighting	DSX2 LED P5 40K TFTM MVOLT/ 22.5' POLE ON 2.5' BASE	DSX2 LED P5 40K TFTM MVOLT	LED	1	37949	0.91	321
SD	Gotham Architectural Lighting	EVO 40/25 6AR MD LSS EZ1	4000K, 2500LM, CRI80, 6IN CLEAR, MED DIST, SEMI-SPEC	LED	1	2694	0.91	29.5
SDE	Gotham Architectural Lighting	EVO 40/25 6AR MD LSS EZ1 W/90 MIN. EM BATTERY PACK	4000K, 2500LM, CRI80, 6IN CLEAR, MED DIST, SEMI-SPEC	LED	1	2694	0.91	29.5
SEM	Lithonia Lighting	AFF FCT W/90 MIN. EM BATTERY PACK	AFF premium FCT (Forward Throw)	LED, Forward throw	1	451	0	5.48
SF	Lithonia Lighting	DSX1 LED P9 40K T4M MVOLT WBA35'	DSX1 LED P9 40K T4M MVOLT	LED	1	26996	0.91	241
SG	Lithonia Lighting	DSX0 LED P7 40K T3M MVOLT WBA25'	DSX0 LED P7 40K T3M MVOLT	LED	1	17831	0.91	166
SH	Lithonia Lighting	DSXSC LED 30C 1000 40K T5M MVOLT	DSX SURFACE CANOPY FIXTURE WITH 3 LIGHT ENGINES, 1000mA DRIVER, 4000K LEDs, T5M OPTIC.	LED	1	11565	0.91	107
SJ	Lithonia Lighting	DSX1 LED P9 40K T4M MVOLT WBA(TO SIDE OF CANOPY)	DSX1 LED P9 40K T4M MVOLT	LED	1	26996	0.91	241



FIXTURE POLE MOUNTING DETAIL

N.T.S.

2929.COM
DEUTSCH ARCHITECTURE GROUP
Registered Professional Engineer
Shyamuk Sidhwa
3054G
SHYAMUK SIDHWA
1/9/20
Date Signed
ARIZONA, U.S.A.
Expires 09/30/2020
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LUMINAIRE SCHEDULE AND DETAIL

ES112

20010ES112.dwg

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NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 10 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR

D-Series Size 1
LED Area Luminaire

d-series

Catalog Number

Notes

Type: **SA/SB/SF/SJ**

Note: Actual performance may differ as a result of end-user environment and application.

Specifications

EPA: 1.01 ft² (0.09m²)

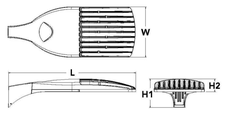
Length: 33" (83.8 cm)

Width: 13" (33.0 cm)

Height H1: 7-1/2" (19.0 cm)

Height H2: 3-1/2"

Weight (max): 27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4 P7 P2 P5 P8 P3 P6 P9 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide BLC Backlight control[2] LCCO Left corner cutoff[2] RCCO Right corner cutoff[2]	MVOLT[3] 120[4] 208[4] 240[4] 277[4] 347[4] 480[4]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[5] RPUMBA Round pole universal mounting adaptor[5] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[6]

Control options		Other options	Finish (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[7] PIRHN Network, high/low motion/ambient sensor[8] PER NEMA twist-lock receptacle only (controls ordered separate)[9] PERS Five-pin receptacle only (controls ordered separate)[9,10] PER7 Seven-pin receptacle only (controls ordered separate)[9,10] DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)[11] DS Dual switching[12,13,14]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[15,16] PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[15,16] PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[15,16] PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[15,16] FAO Field adjustable output[14]	**Shipped installed** HS House-side shield[17] SF Single fuse (120, 277, 347V)[4] DF Double fuse (208, 240, 480V)[4] L90 Left rotated optics[1] R90 Right rotated optics[1] **Shipped separately** BS Bird spikes[18] EGS External glare shield[18]	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

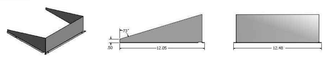
DLL127F1.5 10 PE	Photocell - SSL twist-lock (120-277V) [19]
DLL347F1.5 CUL 10 PE	Photocell - SSL twist-lock (347V) [19]
DLL480F1.5 CUL 10 PE	Photocell - SSL twist-lock (480V) [19]
DSHORT SBK 10	Shorting cap [20]
DSX1HS 30CC 6	House-side shield for P1, P2, P3, P4 and P5 [21]
DSX1HS 40CC 6	House-side shield for P6 and P7 [21]
DSX1HS 60CC 6	House-side shield for P8, P9, P10, P11 and P12 [21]
PUMBA DDBXD U	Square and round pole universal mounting bracket (specify finish)[22]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [6]

For more control options, visit DTL and DLL127F online.

NOTES
1. P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
2. Not available with HS.
3. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
4. Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
5. Universal mounting brackets intended for retrofit on existing, pre-drilled pole(s) only. 1.5 G vibration load rating per ANSI C136.31.
6. Must be ordered with KMA8 DDBXD U. Universal mounting bracket adaptor (specify finish). See Accessories Information. For use with 2-3/8" mast arm (not included).
7. Must be ordered with PIRHN. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
8. Must be ordered with NLTAIR2. For more information on nLight AIR 2 visit this link.
9. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with DS option. Shorting cap included.
10. FIFSMA™ mode required. It must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
11. DMG not available with PIRHN, PERS, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V.
12. Provides 50/50 fixture operation via (2) independent drivers. Not available with PER, PERS, PER7, PIR or PIRH. Not available P1, P2, P3, P4 or P5.
13. Requires (2) separately switched circuits with isolated neutral. See Outdoor Control Technical Guide for details.
14. Reference Motion Sensor table on page 4.
15. Reference controls options table on page 4 to see functionality.
16. Not available with other dimming controls options.
17. Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories Information.
18. Must be ordered with fixture for factory pre-drilling.
19. Requires luminaire to be specified with PER, PERS or PER7 option. See PER Table on page 3.
20. For retrofit use only.

Options

EGS - External Glare Shield



Drilling

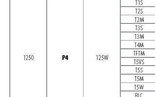
HANDHOLE ORIENTATION

Tenon Mounting Slipfitter **

Tenon O.D.	Mounting	Single (Side)	2 @ 180	2 @ 90	3 @120	3 @ 90	4 @ 90
2-3/8"	SPA/RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 320	AS3-5 390	AS3-5 490
	SPUMBA	AS3-5 190	AS3-5 280	AS4-5 290	AS3-5 320	AS4-5 390	AS4-5 490
	RPUMBA	AS3-5 190	AS3-5 280		AS3-5 320		
2-7/8"	SPA/RPA	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
	SPUMBA	AST25-190	AST25-280		AST25-320		
	RPUMBA	AST25-190	AST25-280		AST25-320		
4"	SPA/RPA	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490
	SPUMBA	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490
	RPUMBA	AST35-190	AST35-280		AST35-320		

Template #8

Top of Pole



Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Shield Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
EXAMPLE: Fixture	#8	DM19AS	DM28AS	DM29AS	DM28ASS	DM32AS	DM49AS

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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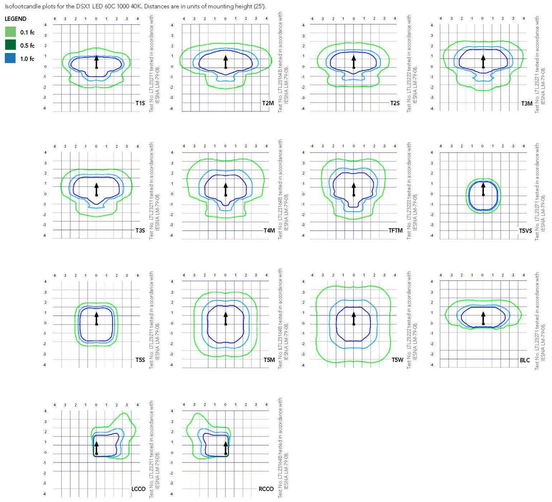
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').

LEGEND
- 0.1 fc
- 0.5 fc
- 1.0 fc



Test no. LTL27211 tested in accordance with IESNA LM-79-08.

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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings					
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ SFC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*For use when motion sensor is used as dusk to dawn control.						

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.15	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.95	1.12	0.97	0.86	0.67	0.49

Controls Options				
Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost-effective alternative.
PERS or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as RSNA.	Pins 4&5 to dimming leads on drivers. Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell, PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIR1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight AIR nSGNR	nLight AIR sensors can be programmed and commissioned from the ground using the CLAIRITY Pro app.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI) Lumens	B	U	G	LPW	40K (4000 K, 70 CRI) Lumens	B	U	G	LPW	50K (5000 K, 70 CRI) Lumens	B	U	G	LPW
30	530	P1	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130
				BLC	6,450	2	0	1	119	6,949	2	0	2	129	7,037	2	0	2	130
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131
				T2S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131
				T4M	6,227	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136
				T5M	6,711	2	0	1	124	7,229	3	0	1	134	7,321	3	0	1	136
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135
				BLC	5,299	1	0	1	98	5,709	1	0	1	106	5,781	1	0	1	107
				LCCO	3,941	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
				RCCO	3,941	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
30	700	P2	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129
				T4M	8,080	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129
				T5VS	8,588	3	0	0	122	9,252	3	0	0	132	9,369	3	0	0	134
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,351	3	0	2	134
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
30	1050	P3	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	122	12,721	3	0	3	125
				T2S	11,648	2	0	2	114	12,548	3	0	3	122	12,707	3	0	3	125
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125
				T4M	11,426	2	0	2	112	12,309	2	0	3	121	12,465	2	0	3	122
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125
				T5VS	12,140	3	0	1	119	13,078	3	0	3	128	13,244	3	0	1	130
				T5S	12,150	3	0	1	119	13,089	3	0	3	128	13,254	4	0	1	130
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
30	1250	P4	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117
				T2M	13,487	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,239	4	0	1	122
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
30	1400	P5	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116
				T2M	14,729	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,141	1	0	2	95
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71
				RCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI) Lumens	B	U	G	LPW	40K (4000 K, 70 CRI) Lumens	B	U	G	LPW	50K (5000 K, 70 CRI) Lumens	B	U	G	LPW
40	1250	P6	143W	T1S	17,454	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118
				T2S	17,455	3	0	3	108	18,998	3	0	3	117	19,238	2	0	3	118
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119
				T3S	17,147	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	3	118
				T5VS	18,279	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123
				T5S	18,294	4	0	1	113	19,816	4	0	2	122	20,066	4	0	2	123
				T5M	18,248	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123
				T5W	18,128	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122
				BLC	14,403	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97
				LCCO	10,781	1	0	3	66	11,674	1	0	3	71	11,761	2	0	3	72
				RCCO	10,781	1	0	3	66	11,674	1	0	3	71	11,761	2	0	3	72
40	1400	P7	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115
				T5VS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119
				T5M	19,985	4	0	2	109	21,527	5	0	2	118	21,799	5	0	2	119
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94
				LCCO	11,742	2	0

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	10K (5000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	**P10**	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	132	14,278	3	0	3	134
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,196	4	0	4	133
				T2M	13,203	3	0	3	125	14,217	3	0	3	134	14,401	3	0	3	136
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,391	4	0	4	136
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136
				T5M	13,254	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112
				LCCO	2,789	1	0	3	73	8,291	1	0	3	79	8,497	1	0	3	80
				RCCO	2,779	4	0	4	73	8,280	4	0	4	79	8,486	4	0	4	80
60	700	**P11**	137W	T1S	16,554	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135
				T5S	16,822	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134
				T5M	16,826	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110
				LCCO	3,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79
				RCCO	3,873	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79
60	1050	**P12**	207W	T1S	22,096	4	0	4	111	24,773	4	0	4	120	25,082	4	0	4	121
				T2S	22,864	4	0	4	110	24,611	5	0	5	119	24,910	5	0	5	120
				T2M	23,277	4	0	4	112	25,035	4	0	4	121	25,331	4	0	4	123
				T3S	22,539	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123
				T4M	22,824	5	0	5	110	24,586	5	0	5	119	24,899	5	0	5	120
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,541	5	0	5	123
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123
				T5M	23,374	5	0	2	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122
				BLC	19,233	3	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101
				LCCO	13,774	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,746	4	0	4	66	14,736	4	0	4	71	14,963	4	0	4	72
60	1250	**P13**	237W	T1S	25,400	4	0	4	110	27,260	4	0	4	118	27,709	4	0	4	120
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	5	0	5	121
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121
				T4M	25,219	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119
				TFTM	25,863	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122
				T5VS	26,040	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100
				LCCO	15,130	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72
				RCCO	15,100	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72

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Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background2

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft²) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS

Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The DSX1 LED area luminaire has a number of control options. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS

The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION

Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern (template #8). NEMA photocontrol receptacle are also available.

LISTINGS

UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40ºC minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product.
Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL, to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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D-Series Size 2
LED Area Luminaire

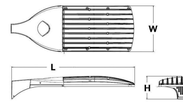
d-series

Catalog Number
Notes
Type **SC**

Hit the Tab key or mouse over the page to see all interactive content.

Specifications

EPA: 1.1 ft² (0.10 m²)
Length: 40" (101.6 cm)
Width: 15" (38.1 cm)
Height 1: 7-1/4" (18.4 cm)
Height 2 (max): 3.5"
Weight: 36lbs



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. The Size 2 is ideal for replacing 400-1000W metal halide in area lighting applications with energy savings of up to 80% and expected service life of over 100,000 hours.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX2 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX2 LED						
Series	**LEDs**	**Color temperature**	**Distribution**		**Voltage**	**Mounting**
DSX2 LED	**Forward optics** P1 P5 P2 P6 P3 P7 P4 P8 **Rotated optics**[1] P10 P13 P11 P14 P12	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I Short T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium T5VS Type V Very Short T5S Type V Short T5M Type V Medium T5W Type V Wide BLC Backlight control [2] LCCO Left corner cutoff [2] RCCO Right corner cutoff [2]		MVOLT [3] 120 [4] 208 [4] 240 [4] 277 [4] 347 [4] 480 [4]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor [5] RPUMBA Round pole universal mounting adaptor [5] **Shipped separately** KMAB DDBXD U Mast arm mounting bracket adaptor (specify finish) [6]

Control options		Other options		Finish (required)	
Shipped installed		**Shipped installed**		DDBXD	Dark bronze
NLTAIR2 nLight AIR generation 2 enabled [7]		HS House-side shield [8]		DBLXD	Black
PIRHN Network, Bi-Level motion/ambient sensor [9]	PIRH Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enable at 5fc	SF Single fuse (120, 277, 347V) [4]		DNAXD	Natural aluminum
PER NEMA twist-lock receptacle only (no controls) [3]	FAO Field Adjustable Output [9]	DF Double fuse (208, 240, 480V) [4]		DWHXD	White
PERS Five-wire receptacle only (no controls) [3,10]		L90 Left rotated optics [1]		DDBTXD	Textured dark bronze
PER7 Seven-wire receptacle only (no controls) [3,10]		R90 Right rotated optics [1]		DBLBXD	Textured black
DMG 0-10V dimming extend out back of housing for external control (no controls) [11]		**Shipped separately**		DNATXD	Textured natural aluminum
DS Dual switching [12,13]		BS Bird spikes [14]		DWHGXD	Textured white
		EGS External glare shield			

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Ordering Information

Accessories

Ordered and shipped separately.

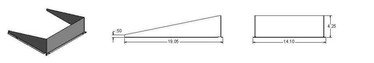
DLL127 1.5 JU	Photocell - SSL twist-lock (120-277V) [9]
DLL347 1.5 CUL JU	Photocell - SSL twist-lock (347V) [9]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [9]
DSHSM SSR U	Shorting cap [9]
DSX2HS WCU	House-side shield for WLLD unit [8]
DSX2HS WCU	House-side shield for WLLD unit [8]
DSX2HS 1WCU	House-side shield for 1WLLD unit [8]
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) [6]
KMAB DDBXD U	Mast arm mounting bracket adaptor (specify finish) [6]
DSX2EGS PINT50 U	External glare shield

For more control options, visit NLTAIR2 and ROAM online.

NOTES
1 P10, P11, P12, P13 or P14 and rotated optics (L90, R90) only available together.
2 Not available with HS.
3 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
4 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
5 Universal mounting bracket intended for retrofit on existing pre-drilled poles only. 1.5 G vibration load rating per ANSI C136.31.
6 Must order fixture with SPA or RPA. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
7 Must be ordered with PIRHN. Sensor cover only available in dark bronze, black, white or natural aluminum color.
8 Must be ordered with NLTAIR2. For more information on nLight Air 2 click here.
9 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with DS option. Shorting Cap included.
10 If ROAM® mode required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
11 DMG not available with PIRHN, PERS, PER7, PIR, PIRH, PIR1FC3V or PIRHTC2V.
12 Requires (2) separately switched circuits with isolated neutrals. See Outdoor Control Technical Guide for details.
13 Provides 50/50 fixture operation via (2) independent drivers. Not available with PER, PERS, PER7, PIR or PIRH. Not available with P1, P2, P10.
14 Reference controls options table on page 4.
15 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessories; see Accessories information.
16 Must be ordered with fixture for factory pre-drilling.
17 Requires luminaire to be specified with PER, PERS and PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.
18 Not available with other dimming controls options.
19 For retrofit use only.

Options

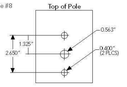
E6S - External Glare Shield



Drilling

HANDHOLE ORIENTATION

Template #8



Tenon Mounting Slipfitter**

Tenon O.D.	Mounting	Single/Unit	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
2-3/8"	SPA/RPA	AST3-5190	AST3-5280	AST3-5290	AST3-5320	AST3-5390	AST3-5490
	SPUMBA	AST3-5190	AST3-5280	AST4-5290	AST3-5320	AST4-5390	AST4-5490
	RUPUMBA	AST3-5190	AST3-5280		AST3-5320		
2-7/8"	SPA/RPA	AST25-5190	AST25-5280	AST25-5290	AST25-5320	AST25-5390	AST25-5490
	SPUMBA	AST25-5190	AST25-5280		AST25-5320		
	RUPUMBA	AST25-5190	AST25-5280		AST25-5320		
4"	SPA/RPA	AST35-5190	AST35-5280	AST35-5290	AST35-5320	AST35-5390	AST35-5490
	SPUMBA	AST35-5190	AST35-5280	AST35-5290	AST35-5320	AST35-5390	AST35-5490
	RUPUMBA	AST35-5190	AST35-5280		AST35-5320		

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DBL019A5	DBL028A5	DBL029A5	DBL039A5	DBL120C	DBL040A5

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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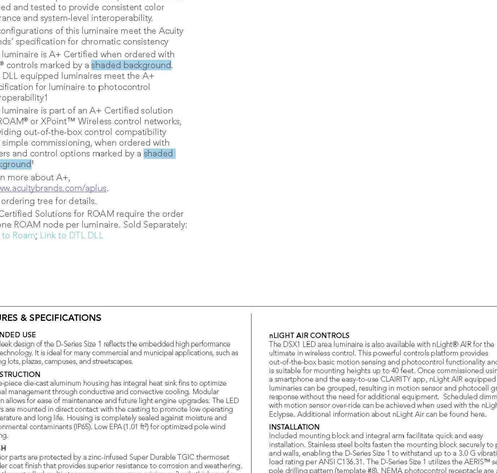
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 2 homepage.

Isofootcandle plots for the DSX2 LED 80C 1000 40K. Distances are in units of mounting height (30').

LEGEND
0.1 fc
0.5 fc
1.0 fc



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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40ºC (32-104ºF).

Ambient	Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).
To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25000	50000	100000
Lumen Maintenance Factor	1.00	0.96	0.92	0.85

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	80	530	140	1.18	0.68	0.59	0.51	0.40	0.32
	P2	80	700	185	1.56	0.90	0.78	0.66	0.52	0.39
	P3	80	850	217	1.82	1.05	0.90	0.80	0.63	0.48
	P4	80	1050	270	2.27	1.31	1.12	0.99	0.79	0.59
	P5	80	1250	321	2.68	1.54	1.34	1.17	0.93	0.68
	P6	100	1050	343	2.89	1.66	1.59	1.37	1.00	0.71
	P7	100	1250	398	3.31	1.91	1.66	1.45	1.16	0.83
	P8	100	1550	491	3.61	2.07	1.81	1.57	1.25	0.91
Rotated Optics (Requires L90 or R90)	P10	90	530	156	1.30	0.76	0.65	0.62	0.45	0.32
	P11	90	700	207	1.75	1.01	0.87	0.74	0.60	0.46
	P12	90	850	234	2.12	1.22	1.06	0.94	0.73	0.55
	P13	90	1200	344	2.88	1.65	1.44	1.25	1.00	0.73
	P14	90	1400	405	3.39	1.90	1.71	1.46	1.18	0.86

Motion Sensor Default Settings						
Option	**Dimmed State**	**High Level (when triggered)**	**Photocell Operation**	**Dwell Time**	**Ramp-up Time**	**Ramp-down Time**
PIR or PIRH	3V (73%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (73%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min

*For use when motion sensor is used as dusk to dawn control.

Controls Options				
Nomenclature	**Description**	**Functionality**	**Primary control device**	**Notes**
FAO	Field adjustable output device installed inside the luminaire wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads.
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two seperately switched circuits. Consider nLight AIR as a more cost effective alternative.
PERS or PER7	Twist-lock photocell receptical	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DCL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 in dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting, PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air ISBGR	nLight AIR sensors can be programmed and commissioned from the ground using the CLAIRITY Pro app.

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CavcoWest
NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 10 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR

Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
DRAWN BY: YC
CHK'D BY: SS
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LIGHT FIXTURE CUTSHEETS

ES114

20010ES114.dwg

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	50K (5000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
80	530	P1	140W	T1S	17,535	3	0	3	126	18,003	3	0	3	135	19,173	3	0	3	137
				T2S	17,556	3	0	3	125	18,012	3	0	3	135	19,152	3	0	3	137
				T2M	17,647	3	0	3	126	19,070	3	0	3	136	19,251	3	0	3	138
				T3S	17,090	3	0	3	122	18,411	3	0	3	132	18,644	3	0	3	133
				T3M	17,604	3	0	3	126	18,964	3	0	3	135	19,204	3	0	3	137
				T4M	17,211	3	0	3	123	18,552	3	0	4	133	18,787	3	0	4	134
				TFTM	17,593	3	0	3	126	18,952	3	0	4	135	19,192	3	0	4	137
				T5VS	18,297	4	0	3	131	19,711	4	0	3	141	19,961	4	0	3	142
				T5S	18,312	4	0	2	131	19,727	4	0	2	141	19,977	4	0	2	143
				T5M	18,360	4	0	3	130	19,677	4	0	3	141	19,926	4	0	3	142
				T5W	18,146	5	0	3	130	19,545	5	0	3	140	19,796	5	0	3	141
				BLC	14,434	2	0	2	103	15,539	2	0	3	111	15,736	2	0	3	112
				LCCO	10,733	1	0	3	77	11,562	1	0	3	83	11,709	2	0	3	84
				RCCO	10,733	1	0	3	77	11,562	1	0	3	83	11,709	2	0	3	84
80	700	P2	185W	T1S	22,205	3	0	4	121	24,029	3	0	4	130	24,333	3	0	4	132
				T2S	22,281	3	0	4	120	24,083	3	0	4	130	24,107	3	0	4	131
				T2M	22,396	3	0	3	121	24,127	3	0	4	130	24,432	3	0	3	132
				T3S	21,690	3	0	3	117	23,365	3	0	4	126	23,662	3	0	4	128
				T3M	22,342	3	0	4	121	24,068	3	0	4	130	24,373	3	0	4	132
				T4M	21,857	3	0	4	118	23,545	3	0	4	127	23,844	3	0	4	129
				TFTM	22,328	3	0	4	121	24,054	3	0	4	130	24,358	3	0	4	132
				T5VS	23,222	5	0	3	126	25,016	5	0	3	135	25,333	5	0	3	137
				T5S	23,241	4	0	2	126	25,037	4	0	2	135	25,354	4	0	2	137
				T5M	23,182	5	0	3	125	24,974	5	0	3	135	25,290	5	0	3	137
				T5W	23,003	5	0	4	124	24,810	5	0	4	134	25,124	5	0	4	136
				BLC	18,307	2	0	3	99	19,721	2	0	3	107	19,971	2	0	3	108
				LCCO	13,622	2	0	3	74	14,674	2	0	4	79	14,860	2	0	4	80
				RCCO	13,622	2	0	3	74	14,674	2	0	4	79	14,860	2	0	4	80
80	850	P3	217W	T1S	26,202	3	0	3	121	28,226	3	0	3	130	28,584	3	0	3	132
				T2S	26,174	3	0	4	121	28,196	3	0	4	130	28,553	3	0	4	132
				T2M	26,309	3	0	3	121	28,342	3	0	3	131	28,700	3	0	3	132
				T3S	25,479	3	0	4	117	27,448	3	0	4	126	27,795	3	0	4	128
				T3M	26,245	3	0	4	121	28,272	3	0	4	130	28,631	3	0	4	132
				T4M	25,675	3	0	4	118	27,659	3	0	4	127	28,009	3	0	4	129
				TFTM	26,229	3	0	4	121	28,255	3	0	4	130	28,615	3	0	4	132
				T5VS	27,279	5	0	1	126	29,387	5	0	1	135	29,734	5	0	1	137
				T5S	27,301	4	0	2	126	29,410	5	0	2	136	29,782	5	0	2	137
				T5M	27,232	5	0	3	125	29,336	5	0	3	135	29,707	5	0	3	137
				T5W	27,051	5	0	4	125	29,144	5	0	4	134	29,513	5	0	4	136
				BLC	21,514	2	0	3	99	23,166	3	0	3	106	23,459	3	0	3	108
				LCCO	16,001	2	0	4	74	17,238	2	0	4	79	17,456	2	0	4	80
				RCCO	16,001	2	0	4	74	17,238	2	0	4	79	17,456	2	0	4	80
80	1050	P4	270W	T1S	30,963	4	0	4	115	33,355	4	0	4	123	33,777	4	0	4	125
				T2S	30,930	4	0	4	115	33,320	4	0	4	123	33,742	4	0	4	125
				T2M	31,083	4	0	4	115	33,485	4	0	4	124	33,915	4	0	4	126
				T3S	30,108	4	0	4	112	32,435	4	0	5	120	32,845	4	0	5	122
				T3M	31,014	3	0	4	115	33,410	3	0	4	124	33,833	3	0	4	125
				T4M	30,340	3	0	5	112	32,684	3	0	5	121	33,098	3	0	5	123
				TFTM	30,995	3	0	5	115	33,390	3	0	5	124	33,812	3	0	5	125
				T5VS	32,235	5	0	1	119	34,730	5	0	1	129	35,166	5	0	1	130
				T5S	32,261	5	0	2	119	34,754	5	0	2	129	35,194	5	0	2	130
				T5M	32,180	5	0	4	119	34,667	5	0	4	128	35,105	5	0	4	130
				T5W	31,969	5	0	4	118	34,439	5	0	5	128	34,875	5	0	5	129
				BLC	25,412	2	0	4	94	27,376	2	0	4	101	27,722	2	0	4	103
				LCCO	18,909	2	0	4	70	20,370	2	0	4	75	20,628	2	0	4	76
				RCCO	18,909	2	0	4	70	20,370	2	0	4	75	20,628	2	0	4	76

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	50K (5000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
80	1250	P5	321W	T1S	35,193	4	0	4	110	37,912	4	0	4	118	38,392	4	0	4	120
				T2S	35,155	4	0	5	110	37,872	4	0	5	118	38,351	4	0	5	119
				T2M	35,316	4	0	4	110	38,047	4	0	4	119	38,549	4	0	4	120
				T3S	34,222	4	0	5	107	36,866	4	0	5	115	37,333	4	0	5	116
				T3M	35,251	3	0	4	110	37,974	3	0	5	119	38,455	4	0	5	120
				T4M	34,485	3	0	5	107	37,149	4	0	5	116	37,620	4	0	5	117
				TFTM	35,229	3	0	5	110	37,951	3	0	5	118	38,431	3	0	5	120
				T5VS	36,029	5	0	1	114	38,470	5	0	1	123	38,970	5	0	1	125
				T5S	36,069	5	0	2	114	39,502	5	0	2	123	40,002	5	0	2	125
				T5M	36,256	5	0	4	114	39,403	5	0	4	122	39,907	5	0	4	124
				T5W	36,136	5	0	5	113	39,144	5	0	5	122	39,640	5	0	5	123
				BLC	28,884	3	0	4	90	31,115	3	0	4	97	31,509	3	0	4	98
				LCCO	21,492	2	0	4	67	23,153	2	0	5	72	23,446	3	0	5	73
				RCCO	21,492	2	0	4	67	23,153	2	0	5	72	23,446	3	0	5	73
100	1050	P6	342W	T1S	37,824	4	0	4	110	40,747	4	0	4	119	41,263	4	0	4	120
				T2S	37,784	4	0	5	110	40,704	4	0	5	119	41,219	4	0	5	120
				T2M	37,979	4	0	4	111	40,913	4	0	4	119	41,431	4	0	4	121
				T3S	36,796	4	0	5	107	39,623	4	0	5	116	40,124	4	0	5	117
				T3M	37,886	3	0	5	110	40,814	4	0	5	119	41,331	4	0	5	120
				T4M	37,060	4	0	5	108	39,927	4	0	5	116	40,453	4	0	5	118
				TFTM	37,863	3	0	5	110	40,789	4	0	5	119	41,305	4	0	5	120
				T5VS	39,079	5	0	1	115	42,102	5	0	1	124	42,959	5	0	1	125
				T5S	39,117	5	0	2	115	42,456	5	0	2	124	42,993	5	0	2	125
				T5M	39,111	5	0	4	115	42,149	5	0	4	123	42,985	5	0	4	125
				T5W	39,053	5	0	5	114	42,071	5	0	5	123	42,904	5	0	5	124
				BLC	31,063	3	0	4	91	33,442	3	0	4	97	33,865	3	0	4	99
				LCCO	23,099	2	0	5	67	24,884	3	0	5	72	25,199	3	0	5	73
				RCCO	23,099	2	0	5	67	24,884	3	0	5	72	25,199	3	0	5	73
100	1250	P7	398W	T1S	42,599	4	0	4	107	45,890	4	0	4	115	46,471	4	0	4	117
				T2S	42,553	4	0	5	107	45,842	4	0	5	115	46,422	4	0	5	117
				T2M	42,773	4	0	4	107	46,078	4	0	4	116	46,661	4	0	5	117
				T3S	41,423	4	0	5	104	44,624	4	0	5	112	45,189	4	0	5	114
				T3M	42,681	3	0	5	107	45,966	3	0	5	116	46,548	4	0	5	117
				T4M	41,742	4	0	5	105	44,967	4	0	5	113	45,537	4	0	5	114
				TFTM	42,648	4	0	5	107	45,938	4	0	5	116	46,516	4	0	5	117
				T5VS	44,030	5	0	1	111	47,777	5	0	1	120	48,383	5	0	1	122
				T5S	44,085	5	0	2	112	47,835	5	0	3	120	48,420	5	0	3	122
				T5M	44,019	5	0	4	111	47,695	5	0	4	120	48,298	5	0	4	121
				T5W	43,983	5	0	5	111	47,382	5	0	5	119	47,982	5	0	5	121
				BLC	34,962	3	0	4	88	37,664	3	0	4	95	38,140	3	0	4	96
				LCCO	26,035	3	0	5	65	28,025	3	0	5	70	28,380	3	0	5	71
				RCCO	26,035	3	0	5	65	28,025	3	0	5	70	28,380	3	0	5	71
100	1350	P8	448W	T1S	48,610	4	0	4	109	45,105	4	0	4	101	49,257	4	0	4	110
				T2S	45,562	4	0	5	106	49,083	4	0	5	114	49,704	4	0	5	115
				T2M	45,797	4	0	4	106	49,336	4	0	4	114	49,960	4	0	4	116
				T3S	44,352	4	0	5	103	47,779	4	0	5	111	48,384	4	0	5	112
				T3M	45,686	4	0	5	106	49,216	4	0	5	114	49,829	4	0	5	116
				T4M	44,690	4	0	5	104	48,147	4	0	5	112	48,756	4	0	5	113
				TFTM	45,657	4	0	5	106	49,186	4	0	5	114	49,808	4	0	5	116
				T5VS	47,485	5	0	1	110	51,155	5	0	1	119	51,802	5	0	1	120
				T5S	47,524	5	0	3	110	51,196	5	0	3	119	51,844	5	0	3	120
				T5M	47,414	5	0	4	110	51,067	5	0	5	118	51,713	5	0	5	120
				T5W	47,093	5	0	5	109	50,732	5	0	5	118	51,374	5	0	5	119
				BLC	37,434	3	0	5	87	40,326	3	0	5	94	40,837	3	0	5	95
				LCCO	27,854	3	0	5	65	30,006	3	0	5	70	30,386	3	0	5	71
				RCCO	27,854	3	0	5	65	30,006	3	0	5	70	30,386	3	0	5	71

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	50K (5000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
90	530	P10	156W	T1S	20,148	4	0	4	129	21,202	4	0	4	139	21,977	4	0	4	141
				T2S	20,026	4	0	4	128	21,577	4	0	4	138	21,850	4	0	4	140
				T2M	20,391	4	0	4	131	21,402	4	0	4	141	21,245	4	0	4	140
				T3S	19,719	4	0	4	126	21,242	4	0	4	136	21,511	4	0	4	138
				T3M	20,179	4	0	4	130	21,954	4	0	4	141	22,212	4	0	4	142
				T4M	19,995	4	0	4	128	21,540	4	0	4	138	21,812	5	0	5	140
				TFTM	20,511	4	0	4	131	22,096	5	0	5	142	22,376	5	0	5	143
				T5VS	20,805	5	0	1	132	22,411	5	0	1	143	22,693	5	0	1	144
				T5S	20,482	4	0	2	131	22,064	4	0	2	141	22,343	4	0	2	143
				T5M	20,417	5	0	3	131	22,093	5	0	4	141	22,338	5	0	4	142
				T5W	20,291	5	0	3	130	21,861	5	0	3	140	22,138	5	0	4	142
				BLC	16,846	2	0	4	108	18,148	3	0	4	116	18,378	3	0	4	118
				LCCO	12,032	2	0	4	77	12,961	2	0	4	83	13,125	2	0	3	84
				RCCO	12,016	4	0	4	77	12,944	4	0	4	83	13,108	4	0	4	84
90	700	P11	207W	T1S	25,518	4	0	4	123	27,490	4	0	4	133	27,837	4	0	4	134
				T2S	25,371	5	0	5	123	27,331	5	0	5	132	27,677	5	0	5	134
				T2M	25,829	4	0	4	125	27,825	4	0	4	134	28,177	4	0	4	136
				T3S	24,977	4	0	5	121	26,907	5	0	5	130	27,248	5	0	5	132
				T3M	25,814	5	0	5	125	27,809	5	0	5	134	28,161	5	0	5	136
				T4M	25,337	5	0	5	122	27,294	5	0	5	132	27,629	5	0	5	133
				TFTM	25,981	5	0	5	126	27,989	5	0	5	135	28,343	5	0	5	137
				T5VS	26,164	5	0	1	126	28,185	5	0	1	136	28,542	5	0	1	138
				T5S	25,943	5	0	2	125	27,948	5	0	3	135	28,302	5	0	3	137
				T5M	25,937	5	0	3	125	27,941	5	0	3	135	28,295	5	0	3	137
				T5W	25,784	5	0	4	124	27,691	5	0	4	134	28,041	5	0	4	135
				BLC	21,339	4	0	4	103	22,988	4	0	4	111	23,279	4	0	4	112
				LCCO	15,240	2	0	4	74	16,418	2	0	4	79	16,626	2	0	4	80
				RCCO	15,228	4	0	4	74	16,406	4	0	4	79	16,614	4	0	4	80
90	850	P12	254W	T1S	29,912	4	0	4	118	32,220	4	0	4	127	32,651	5	0	4	128
				T2S	29,965	5	0	5	118	32,278	5	0	5	126	32,481	5	0	5	128
				T2M	30,277	4	0	4	119	32,616	5	0	5	128	33,029	5	0	5	130
				T3S	29,276	5	0	5	115	31,540	5	0	5	124	31,940	5	0	5	126
				T3M	30,251	5	0	5	119	32,597	5	0	5	128	33,010	5	0	5	130
				T4M	29,688	5	0	5	117	31,982	5	0	5	126	32,387	5	0	5	128
				TFTM	30,404	5	0	5	119	32,808	5	0	5	129	33,224	5	0	5	131
				T5VS	30,669	5	0	1	121	33,039	5	0	1	130	33,457	5	0	1	132
				T5S	30,411	5	0	2	120	32,761	5	0	2	129	33,176	5	0	2	131
				T5M	30,404	5	0	4	120	32,753	5	0	4	129	33,168	5	0	4	131
				T5W	30,131	5	0	4	119	32,459	5	0	4	128	32,870	5	0	4	129
				BLC	25,013	4	0	4	98	26,946	5	0	4	106	27,287	5	0	4	107
				LCCO	17,865	2	0	4	70	19,245	2	0	4	76	19,489	2	0	4	77
				RCCO	17,841	5	0	5	70	19,220	5	0	5	76	19,463	5	0	5	77
90	1200	P13	344W	T1S	38,768	5	0	5	113	41,764	5	0	5	121	42,292	5	0	5	123
				T2S	38,545	5	0	5	112	41,521	5	0	5	121	42,049	5	0	5	122
				T2M	39,247	5	0	5	114	42,273	5	0	5	123	42,808	5	0	5	124
				T3S	37,947	5	0	5	110	40,879	5	0	5	119	41,396	5	0	5	120
				T3M	39,218	5	0	5	114	42,249	5	0	5	123	42,783	5	0	5	124
				T4M	38,470	5	0	5	112	41,451	5	0	5	120	41,976	5	0	5	122
				TFTM	39,472	5	0	5	115	42,522	5	0	5	124	43,060	5	0	5	125
				T5VS	39,767	5	0	1	116	42,823	5	0	1	124	43,363	5	0	1	126
				T5S	39,435	5	0	2	115	42,461	5	0	2	123	42,998	5	0	2	125
				T5M	39,405	5	0	4	115	42,430	5	0	4	123	42,968	5	0	4	125
				T5W	39,053	5	0	4	114	42,069	5	0	4	122	42,602	5	0	4	124
				BLC	32,419	5	0	5	94	34,925	5	0	5	102	35,367	5	0	5	103
				LCCO	23,161	3	0	5	67	24,941	3	0	5	73	25,259	3	0	5	73
				RCCO	23,124	5	0	5	67	24,901	5	0	5	72	25,224	5	0	5	73
90	1400	P14	405W	T1S	42,867	5	0	5	106	46,180	5	0	5	114	46,764	5	0	5	115
				T2S	42,621	5	0	5	105	45,914	5	0	5	113	46,495	5	0	5	115
				T2M	43,390	5	0	5	107	46,743	5	0	5	115	47,335	5	0	5	117
				T3S	41,959	5	0	5	104	45,203	5	0	5	112	45,773	5	0	5	113
				T3M	43,345	5	0	5	107	46,716	5	0	5	115	47,307	5	0	5	117
				T4M	42,547	5	0	5	105	45,824	5	0	5	113	46,414	5	0	5	115
				TFTM	43,640	5	0	5	108	47,018	5	0	5	116	47,614	5	0	5	118
				T5VS	43,952	5	0	1	109	47,349	5	0	1	117	47,948	5	0	1	118
				T5S	43,582	5	0	2	108	46,950	5	0	2	116	47,545	5	0	2	117
				T5M	43,572	5	0	4	108	46,939	5	0	4	116	47,533	5	0	4	117
				T5W	43,187	5	0	5	107	46,538	5	0	5	115	47,107	5	0	5	116
				BLC	35,847	5	0	5	89	38,617	5	0	5	95	39,106	5	0	5	97
				LCCO	25,602	3	0	5	63	27,580	3	0	5	68	27,930	3	0	5	69
				RCCO	25,569	5	0	5	63	27,544	5	0	5	68	27,893	5	0	5	69

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Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background2

To learn more about A+, visit www.acuitybrands.com/aplus.
1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Area Size 2 reflects the embedded high performance LED technology. It is ideal for applications

SPECIFICATIONS

Optical Assembly
Fully serviceable and upgradeable lensed LED light engine suitable for field maintenance or service from below the ceiling.
Optical design is a Bounding Ray™ design with 45° cutoff to source and source image. Top-down flash characteristic for superior glare control.
Unitized optics shall have mechanical attachment of the light engine to the lower reflector for complete optical alignment.

Electrical
The luminaire shall operate from a 50 or 60 Hz ±3 Hz AC line over a voltage ranging from 120 VAC to 277 VAC. The fluctuations of line voltage shall have no visible effect on the luminous output.
The luminaire shall have a power factor of 90% or greater at all standard operating voltages and full luminaire output.
Sound Rated A+. Driver shall be >80% efficient at full load across all input voltages.
Input wires shall be 18AWG, 300V minimum, solid copper.

Controls
Luminaire shall be equipped with interface for nLight wired or wireless network with integral power supply as per specification.

Dimming
The luminaire shall be capable of continuous dimming without perceivable stroboscopic flicker as measured by flicker index (ANSI/IES RP-16-10) over a range of 100 – 10%, 100 – 1.0% or 100 – 0.1% of rated lumen output with a smooth shut off function to step to 0%.
eldoLED LED drivers shall conform to IEEE P1789 standards. Alternatively, manufacturers must demonstrate conformance with product literature and testing which demonstrates this performance. Systems that do not meet IEEE P1789 will not be considered.
Driver is inadible in 24dB environment, and stable when input voltage conditions fluctuate over what is typically experienced in a commercial environment.

Construction
Luminaire housing shall be constructed of 16-gauge galvanized steel and have preinstalled telescopic mounting bars with maximum 32" and minimum 15" extension and 4" vertical adjustment.
Luminaires shall be suitable for installation in ceilings up to 1½" thick. (specify ceiling thickness adapter to extend frame to accommodate ceiling thickness up to 5").
Tool-less adjustments shall be possible after installation.
The assembly and manufacturing process for the luminaire shall be designed to assure all internal components are adequately supported to withstand mechanical shock and vibration.
25°C ambient temperature standard (1/2" clearance on all sides from non-combustible materials in non-IC applications, unless marked spacing noted otherwise). For use in insulated ceilings, a 3" clearance on all sides from insulation is required (unless marked spacing noted otherwise). 40°C high ambient optional.

Listings
Fixtures are CSA certified to meet US and Canadian Standards. All fixtures manufactured in strict accordance with the appropriate and current requirements of the "Standards for Safety" to UL, wet location covered ceiling. Luminaire configurations are Energy Star certified through testing in EPA-recognized laboratories, with the results reviewed by an independent, accredited certification organization. Visit www.energystar.gov for specific configurations listed.

Photometrics
LEDs tested to LM-80 standards. Measured by IESNA Standard LM-79-08 in an accredited lab. Lumen output shall not decrease by more than 30% over the minimum operational life of 60,000 hours.
Color appearance from luminaire to luminaire of the same type and in all configurations, shall be consistent both initially and at 6,000 hours and operate within a tolerance of <2.5 MacAdam ellipse as defined by a point at the intersection of the CCT line and the black body locus line in CIE chromaticity space.

Warranty
5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

Note:
Actual performance may differ as a result of end user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.

A+ Capable Luminaire
This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.
- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight® control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.
*See ordering tree for details

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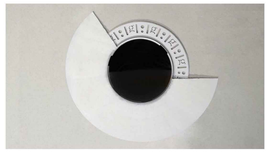
Flangeless

Partially finished mud ring, showing cross-section detail.


An EVO downlight requires only approximately 3" of plaster to finish.

EVO with flangeless trim

Flangeless Installation
Gotham's flangeless option utilizes a micro-thin polymer mud ring that minimizes the amount of drywall compound required to finish the ceiling. The end result is a virtually undetectable flangeless downlight installation.
The polymer mud ring is installed independent of the of the recessed frame, therefore floating with the ceiling. This innovation minimizes any surface cracks during reflector installation, ceiling movement and any future service to the recessed frame, wiring, electronics, etc.

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Tables of Use

Marked Spacing in Inches 25°C Ambient			
Lumen Package	Fixed Center to Center MIN	Fixture Center to Building Member MIN	Space Above Fixture
500-5000	None	None	None
6000	24	12	5
8000	36	18	11
10000			9
12000			
15000			
17500	72	36	

Marked Spacing in Inches 40°C Ambient			
Lumen Package	Fixed Center to Center MIN	Fixture Center to Building Member MIN	Space Above Fixture
5000	24	12	5
6000			
8000	48	24	9
10000			
12000			
15000	72	36	9

Marked Spacing Chicago Plenum Open Frame in Inches 25°C Ambient			
Lumen Package	Fixed Center to Center MIN	Fixture Center to Building Member MIN	Space Above Fixture
250-5000	None	None	None
6000	24	12	5
8000	36	18	11
10000			
12000			9
15000			
17500	72	36	

Marked Spacing Chicago Plenum Enclosure in Inches 25°C Ambient			
Lumen Package	Fixed Center to Center MIN	Fixture Center to Building Member MIN	Space Above Fixture
250-6000	None	None	None
8000	36	18	6
10000	48	24	3
12000			

EVO - eldoLED Driver Default Dimming Curve			
Nomenclature	Min Dimming	Driver Dim Curve	Control Dim Curve
EZ10	10%	Linear	Linear/Logarithmic
EZ1	1%	Linear	Linear/Logarithmic
EXA1	1%	Linear	Linear/Logarithmic
EZ8	<1%	Logarithmic	Linear
EDA8	<1%	Logarithmic	Linear
EXA8	<1%	Logarithmic	Linear
EDX8	<1%	Square	Linear

Lumen Output Multiplier		
CRI	CCT	Multiplier
80	2700K	0.96
	3000K	1.00
	3500K	1.00
	4000K	1.01
	5000K	1.07
90	2700K	0.80
	3000K	0.83
	3500K	0.85
	4000K	0.87
	5000K	0.91

Reflector Finish Multiplier	
Reflector Finish	Multiplier
LS - Specular	1
LSS - Semi-Specular	0.956
WR - White	0.87
LD - Matte Diffuse	0.85
BK - Black	0.78

Distributions		
Nomenclature	Beam Angle	Field Angle
VND	30	64
ND	44	69
MD	54	82
MWD	67	89
WD	71	92

Driver		Control Provided (note: 347V/UVOLT versions provided with 347 option selected)			
Nomenclature	Description	NLT	NLTER	NLTAIR2	NLTAIRER2
GZ10	0-10V driver dims to 10%	nPP16 D EFP	nPP16 D ER EFP	RPP20 D 24V GZ	RPP20 D 24V ER GZ
GZ1	0-10V driver dims to 1%	nPP16 D EFP	nPP16 D ER EFP	RPP20 D 24V GZ	RPP20 D 24V ER GZ
EZ10	eldoLED 0-10V ECOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V GZ	RPP20 D 24V ER GZ
EZ1	eldoLED 0-10V ECOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V GZ	RPP20 D 24V ER GZ
EZ8	eldoLED 0-10V SOLOdrive	nPS 80 EZ	nPS 80 EZ ER	RPP20 D 24V GZ	RPP20 D 24V ER GZ

How to Estimate Delivered Lumens in Emergency Mode
Delivered Lumens = 1.25 x P x LPW
P = Output power of emergency driver. P = 10W for PS1055CP
LPW = Lumen per watt rating of the luminaire. This information is available on the AEL luminaire spec sheet.

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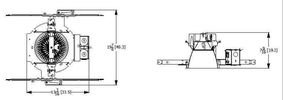
DIMENSIONAL DATA

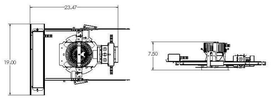
*Dimensions in inches [centimeters]

Aperture: 6 1/4" [15.9]	Ceiling Opening: 7 1/8" [18.1] self-flanged
Overlap Trim 7 1/2" [19.1]	7 1/4" [18.4] flangeless

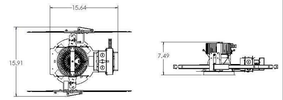
1000LM-4500LM Standard



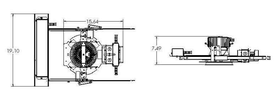
1000LM-4500LM Battery Pack



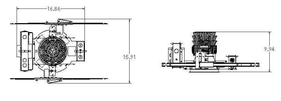
5000LM-8000LM Standard



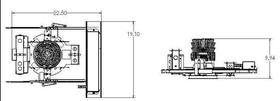
5000LM-8000LM Battery Pack



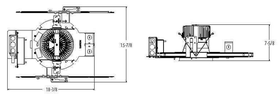
10,000LM-17,500LM Standard



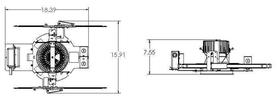
10,000LM-17,500LM Battery Pack



1000LM-4500LM CP



5000 Lumen ECO/SOLO Drive Open Frame CP



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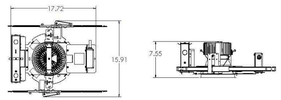
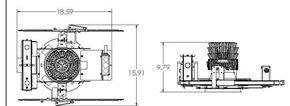
DIMENSIONAL DATA

*Dimensions in inches [centimeters]

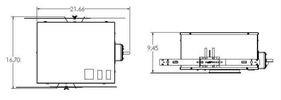
5000 (Lutron & POWER Drive Only), 6000 & 8000 Lumen Open Frame CP



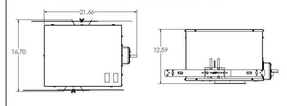
10000 - 17,500 Lumen Open Frame CP



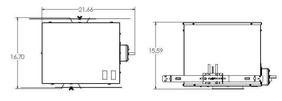
250 - 6000 Lumen CP for nLight® or Battery Pack



8,000LM Enclosed CP for nLight or Battery Pack



10,000LM-12,000LM Enclosed CP for nLight or Battery Pack



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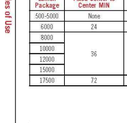
Photometry

EVO6 35/15 AR MWD LS INPUT WATTS: 14.7, DELIVERED LUMENS: 1471LM, LPW= 100, 1.03 S/MH, TEST NO. LTL27783P1505



	Ave	Lumens	Zone	Lumens	% Lamp
0	1431		0° - 30°	1061.4	72.2
5	1410	154	0° - 40°	1393.5	94.7
15	1442	405	0° - 60°	1469.5	99.9
25	1161	523	0° - 90°	1470.9	100.0
35	540	332	90° - 180°	0.0	0.0
45	78	72	0° - 180°	1470.9	*100.0
55	3	4		*Efficiency	
65	1	1			
75	0	1			
85	0	0			
90	0				

	pf	20%				
	pc	80%		70%		50%
	pw	50%	30%	10%	50%	30% 10%	50%	30%	10%
0		119	119	119	116	116	116	111	111	111
1		111	108	106	109	106	104	106	103	101
2		103	99	96	101	98	95	98	95	93
3		96	91	87	95	90	87	92	88	85
4		90	84	80	89	84	80	87	82	79
5		84	78	74	83	78	74	81	77	73
6		79	73	69	78	73	69	77	72	68
7		74	68	64	74	68	64	72	67	63
8		70	64	60	69	64	60	68	63	59
9		66	60	56	65	60	56	64	59	56
10		62	56	52	62	56	52	61	56	52

50% beam - 64.4°
10% beam - 77.9°

Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
9.0	47.3	5.2	23.7	8.9	4.7
10.0	35.4	7.7	12.7	12.1	2.6
12.0	15.9	9.8	7.9	15.3	1.6
14.0	10.8	11.8	5.4	18.6	1.1
16.0	7.9	13.9	3.9	21.8	0.8

EVO6 35/45 AR MWD LS INPUT WATTS: 47.3, DELIVERED LUMENS: 4532.7LM, LPW= 95.8, 1.03 S/MH, TEST NO. LTL27783P1649

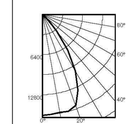
	Ave	Lumens	Zone	Lumens	% Lamp
0	4411		0° - 30°	3270.7	72.2
5	4346	413	0° - 40°	4294.2	94.7
15	4443	1247	0° - 60°	4528.3	99.9
25	3578	1610	0° - 90°	4532.7	100.0
35	1665	1024	90° - 180°	0.0	0.0
45	242	222	0° - 180°	4532.7	*100.0
55	8	12		*Efficiency	
65	2	3			
75	1	2			
85	0	0			
90	0				

	pf	20%				
	pc	80%		70%		50%
	pw	50%	30%	10%	50%	30% 10%	50%	30%	10%
0		119	119	119	116	116	116	111	111	111
1		111	108	106	109	106	104	105	103	101
2		103	99	96	101	98	95	98	95	93
3		96	91	87	95	90	87	92	88	85
4		90	84	80	89	84	80	87	82	79
5		84	78	74	83	78	74	81	77	73
6		79	73	69	78	73	69	77	72	68
7		74	68	64	74	68	64	72	67	63
8		70	64	60	69	64	60	68	63	59
9		66	60	56	65	60	56	64	59	56
10		62	56	52	62	56	52	61	56	52

50% beam - 64.4°
10% beam - 77.9°

Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
9.0	145.8	5.7	72.9	8.9	14.6
10.0	79.4	7.7	39.2	12.1	7.8
12.0	46.9	9.8	24.4	15.3	4.9
14.0	33.4	11.8	16.7	18.6	3.3
16.0	24.2	13.9	12.1	21.8	2.4

EVO6 35/175 AR MWD LS INPUT WATTS: 175.3, DELIVERED LUMENS: 17801LM, LPW=101.5, 1.06 S/MH, TEST NO. ISF 34035P268



	Ave	Lumens	Zone	Lumens	% Lamp
0	16146		0° - 30°	12002.3	67.4
5	15999	1521	0° - 40°	16291.0	91.5
15	16006	4479	0° - 60°	17746.3	99.7
25	13962	6001	0° - 90°	17801.0	100.0
35	7018	4289	90° - 120°	0.0	0.0
45	1470	1299	90° - 130°	0.0	0.0
55	100	156	90° - 150°	0.0	0.0
65	37	36	90° - 180°	0.0	0.0
75	13	14	0° - 180°	17801.0	*100.0
85	0	2		*Efficiency	
90	0				

	pf	20%				
	pc	80%		70%		50%
	pw	50%	30%	10%	50%	30% 10%	50%	30%	10%
0		119	119	119	116	116	116	111	111	111
1		111	108	106	109	106	104	104	103	101
2		103	98	95	101	97	94	98	95	92
3		95	90	86	94	89	86	91	87	84
4		89	83	79	88	82	78	85	81	77
5		83	77	72	82	76	72	80	75	71
6		77	71	67	77	71	67	75	70	66
7		73	66	62	72	66	62	71	65	61
8		68	62	58	67	62	57	66	61	57
9		64	58	54	63	58	54	62	57	53
10		60	54	50	60	54	50	59	54	50

50% beam - 66.7°
10% beam - 79.8°

Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	539.7	6.6	266.9	9.2	53.4
10.0	287.0	7.9	143.5	12.5	28.7
12.0	179.3	10.0	89.4	15.9	17.9
14.0	122.1	12.1	61.0	19.2	12.2
16.0	88.6	14.3	44.3	22.6	8.9

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DEUTSCH ARCHITECTURE GROUP
Registered Professional Engineer
Certificate Holder
30546
SHYAMJK SEHWA
1/9/20
Date Signed
ARIZONA, U.S.A.
Expires 09/30/2020
4600
EAST INDIAN SCHOOL RD
PHOENIX, ARIZONA 85018
602-840-2929 P
602-840-6646 F
CAVCO INDUSTRIES
JOE R. RAMIREZ RD AND DYSART RD.
EL MIRAGE, AZ
CavcoWest
NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISION: THIS CONTRACT ALLOWS THE OWNER TO CERTIFY AND APPROVE BILLINGS AND ESTIMATES WITHIN 30 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR

Revisions

PROJECT NO: 18129
1ST ISSUE DATE:
DRAWN BY: YC
CHK'D BY: SS
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LIGHT FIXTURE CUTSHEETS

ES116

20010ES116.dwg

Zee Engineering Group, LLC
1830 S. Alma School Road, Suite 120
Mesa, Arizona 85210
V. 480.222.8835
F. 480.222.8836

gotham | E V O

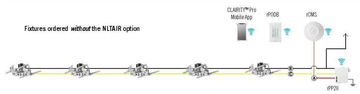
6" General Illumination Round Downlight

NLIGHT AIR

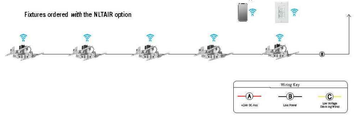
Possibilities for nLight® AIR

nLight® AIR is the ideal solution for retrofit or new construction spaces where adding communication wiring is cost prohibitive. The integrated nLight AIR rP20 Power Pack is part of each EVO Luminaire ordered with the NLTAIR option. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

Fixtures ordered without the NLTAIR option



Fixtures ordered with the NLTAIR option



nLight® AIR Control Accessories
Order as separate catalog number. Visit nLight AIR.

Wall Switches	Model Number
On/Off single pole	rPODB (color) G2
On/Off two pole	rPODB 2P (color) G2
On/Off & raise/lower single pole	rPODB DX (color) G2
On/Off & raise/lower two pole	rPODB 2P DX (color) G2

nLight® AIR Control Accessories *(cont.)*

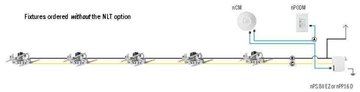
Occupancy Sensors (PIR/dual tech)	Model Number
Small motion 360°, ceiling	rCMS 9 / rCMS PDT 9
Large motion 360°, ceiling	rCMS 10 / rCMS PDT 10

NLIGHT

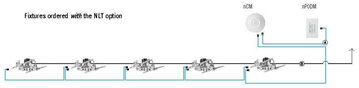
Possibilities for nLight® wired

nLight® The nLight® solution is a digital networked lighting control system that provides both energy savings and increased user configurability by most effectively integrating time-based, daylight-based, sensor-based and manual lighting control schemes.

Fixtures ordered without the NLT option



Fixtures ordered with the NLT option



nLight® Wired Control Accessories
Order as separate catalog number. Visit nLight.

Wall Switches	Model Number
On/Off single pole	nPODM (color)
On/Off two pole	nPODM 2P (color)
On/Off & raise/lower single pole	nPOD 10A (color)
On/Off & raise/lower two pole	nPODM 2P DX (color)
Graphic touchscreen	nPOD GFX (color)
Photocell Controls	
Dimming	nCM ADCX

nLight® Wired Control Accessories *(cont.)*

Occupancy Sensors (PIR/dual tech)	Model Number
Small motion 360°, ceiling	nCM 9 / nCM PDT 9
Large motion 360°, ceiling	nCM 10 / nCM PDT 10
Wide View	nWV 16 / nWV PDT 16
Wall switch with raise/lower	nWSX LV DX / nWSX PDT LV DX
Cat-5 Cables (plenum rated)	
10', CAT5	CAT5 10FT J1
15', CAT5	CAT5 15FT J1

GOTHAM ARCHITECTURAL DOWNLIGHTING | 1400 Lester Road Conyers, GA 30012 | P 800-705-SERV (7378) | gothamlighting.com
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gotham

D-Series Size 0
LED Area Luminaire

Catalog Number

Notes

Type **SG**

Specific lighting arrangement and image layout are shown on page 2.

Specifications

EPA: 0.95 ft² (.09 m²)

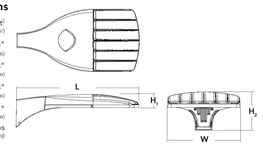
Length: 26" (66.0 cm)

Width: 13" (33.0 cm)

Height$_1$: 3" (7.62 cm)

Height$_2$: 7" (17.8 cm)

Weight (max): 16 lbs (7.26kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED											
Series	**LEDs**		**Color temperature**		**Distribution**			**Voltage**	**Mounting**	
DSX0 LED	**Forward optics**		30K 3000 K		T1S Type I short		T5S Type V short	MVOLT [1,2]	**Shipped included**	
	P1	P4 P7	40K 4000 K		T2S Type II short		T5W Type V medium	120 [3]	SPA Square pole mounting	
	P2	P5	50K 5000 K		T2M Type II medium		T5VW Type V wide	208 [3]	RPA Round pole mounting	
	P3	P6			T3S Type III short		BLC Backlight control[4]	240 [3]	WBA Wall bracket	
	Rotated optics				T3M Type III medium		LCCO Left corner cutoff[4]	277 [3]	SPUMBA Square pole universal mounting adaptor [6]	
	P10	P12			T4M Type IV medium		RCCO Right corner cutoff[4]	347 [2,3]	RPUMBA Round pole universal mounting adaptor [6]	
	P11	P13			TFTM Forward throw medium			480 [2,3]	**Shipped separately**	
					T5VS Type V very short				KMAB DDBXD U Mast arm mounting bracket adaptor (specify finish)[7]	

Control options		Other options		Finish (required)	
Shipped installed		**Shipped installed**		DDBXD	Dark bronze
NLTAIR2 nLight AIR generation 2 enabled[8,9]	PIR High/low, motion/ambient sensor, 8–15' mounting height, ambient sensor enabled at 5fc[10,11]	HS House-side shield [9]		DBLXD	Black
PIRHN Network, high/low motion/ambient sensor [8]	PIRH High/low, motion/ambient sensor, 15–30' mounting height, ambient sensor enabled at 5fc[10,11]	SF Single fuse (120, 277, 347V) [3]		DNAXD	Natural aluminum
PER NEMA twist-lock receptacle only (control ordered separate) [12]	PIR1FC3V High/low, motion/ambient sensor, 8–15' mounting height, ambient sensor enabled at 1fc[10,11]	DF Double fuse (208, 240, 480V) [3]		DWHXD	White
PERS Five-pin receptacle only (control ordered separate) [11,12]	PIRH1FC3V High/low, motion/ambient sensor, 15–30' mounting height, ambient sensor enabled at 1fc[10,11]	L90 Left rotated optics [1]		DDBTXD	Textured dark bronze
PER7 Seven-pin receptacle only (leads exit fixture) (control ordered separate) [11,12]		R90 Right rotated optics [1]		DBLBXD	Textured black
DMG 0–10V dimming extend out back of housing for external control (control ordered separate) [13]		DDL Diffused drop lens [9]		DNAXD	Textured natural aluminum
		Shipped separately		DWHGXD	Textured white
		BS Bird spikes [9]			
		EGS External glare shield [9]			

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Ordering Information

Accessories
Ordered and shipped separately

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [14]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [14]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [14]
DSHORT SBK U	Shorting cap [15]
DSXHS 240 U	House-side shield for P1, P2, P3 and P4 [16]
DSXHS 360 U	House-side shield for P5, P6, P10, P12 and P13 [16]
DSXHS 480 U	House-side shield for P5, P6 and P7 [16]
DLDXDDL U	Diffused drop lens (poly-carbonate) [16]
PUMBA DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish)[17]
RMAA DDBXD U	Mast arm mounting bracket adaptor (specify finish)[17]

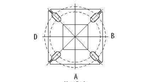
For more control options, visit DTC and DTCMAX online. Link to nLight Air 2.

NOTES
1 P10, P11, P12 and P13 and rotated options (L90 or R90) only available together.
2 Not available with HS or DDL.
3 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
4 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
5 Not available with BLSN, BLSO or PIRMT options.
6 Universal mounting brackets intended for retrofit on existing pre-drilled poles only. 1.5 G vibration load rating per ANSI C136.31.
7 Must order fixture with SPA mounting. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
8 Not available with DMG.
9 Sensor cover available only in dark bronze, black, white and natural aluminum colors.
10 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this page.
11 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
12 If ECAM™ mode required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Shorting Cap included.
13 DMG not available with PIRHN, PIR, PIR1FC3V, PIRH, PIRH1FC3V or PIRHTFC3V.
14 Reference Motion Sensor table on page 3.
15 Shorting cap included when PER, PERS or PER7 ordered.
16 Not available with other dimming controls options.
17 Not available with BLC, LCCO and RCCO distribution.
18 Must be ordered with fixture for factory pre-drilling.
19 Requires luminaire to be specified with PER, PERS or PER7 option. See PER Table on page 3.
20 For retrofit use only.

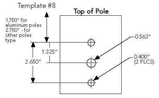
EGS – External Glare Shield

Drilling

HANDHOLE ORIENTATION
(from top of pole)



Template #8



Tenon Mounting Slipfitter

Tenon O.D.	Single/Wall	2 at 180°	2 at 90°	3 at 120	3 at 90°	4 at 90°
2-3/8"	AS120-190	AS120-280	AS120-290	AS120-320	AS120-390	AS120-490
2-7/8"	AS125-190	AS125-280	AS125-290	AS125-320	AS125-390	AS125-490
4"	AS135-190	AS135-280	AS135-290	AS135-320	AS135-390	AS135-490

Mounting Option	Drilling Template	Single	2 @ 180°	2 @ 90°	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DWH4G	DWD4G	DWC4G	DWA4G	DWS4G	DWA4G
		Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"		3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"		4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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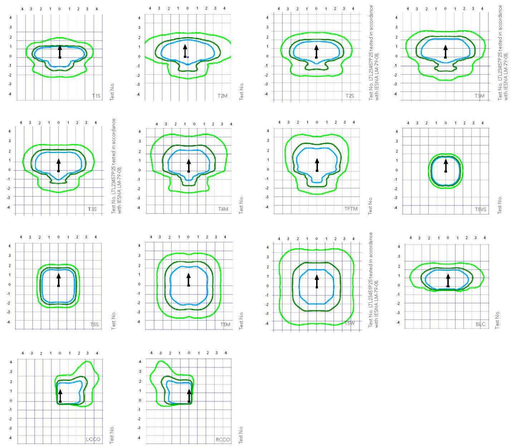
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 0 homepage.

Isofootcandle plots for the DSX0 LED 40C 1000 40K. Distances are in units of mounting height (20').

LEGEND
0.1 fc
0.5 fc
1.0 fc



Test No. LTL12MOTP2 tested in accordance with IESNA LM-79-08.

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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.02
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings					
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3fc (33%) Output	10fc (100%) Output	Enabled @ 5fc	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3fc (33%) Output	10fc (100%) Output	Enabled @ 1fc	5 min	3 sec	5 min

*For use with separate Dusk to Dawn or timer.

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	20	530	38	0.32	0.18	0.15	0.15	0.10	0.08
	P2	20	700	49	0.41	0.23	0.20	0.19	0.14	0.11
	P3	20	1050	71	0.60	0.37	0.32	0.27	0.21	0.15
	P4	20	1400	92	0.77	0.45	0.39	0.35	0.28	0.20
	P5	40	700	89	0.74	0.43	0.38	0.34	0.26	0.20
	P6	40	1050	134	1.12	0.65	0.55	0.48	0.39	0.29
	P7	40	1330	166	1.38	0.80	0.69	0.60	0.50	0.37
Rotated Optics (Requires L90 or R90)	P10	30	530	53	0.45	0.26	0.23	0.21	0.16	0.12
	P11	30	700	72	0.60	0.35	0.30	0.27	0.20	0.16
	P12	30	1050	104	0.88	0.50	0.44	0.39	0.31	0.23
	P13	30	1330	126	1.08	0.62	0.54	0.48	0.37	0.27

Controls Options

Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads.
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two seperately switched circuits. Consider nLight AIR as a more cost-effective alternative.
PERS or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 by dimming lead on drivers. Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell, PIR for 8-15' mounting, PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIR1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR-enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Ecosystem.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissioned from the ground using the CLARITY Pro app.

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Performance Data

Lumen Output

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Forward Optics

Power Package	LED Count	Drive Current	System Watts	Dist. Type	30K (3000 K, 70 CRI) Lumens	B	U	G	LPW	40K (4000 K, 70 CRI) Lumens	B	U	G	LPW	50K (5000 K, 70 CRI) Lumens	B	U	G	LPW
P1	20	530	38W	T1S	4,169	1	0	1	115	4,706	1	0	1	124	4,766	1	0	1	125
				T2S	4,164	1	0	1	115	4,701	1	0	1	124	4,761	1	0	1	125
				T2M	4,187	1	0	1	115	4,726	1	0	1	124	4,785	1	0	1	126
				T3S	4,248	1	0	1	112	4,577	1	0	1	120	4,634	1	0	1	122
				T3M	4,376	1	0	1	115	4,714	1	0	1	124	4,774	1	0	1	126
				T4M	4,281	1	0	1	113	4,612	1	0	2	121	4,670	1	0	2	123
				TFTM	4,373	1	0	1	115	4,711	1	0	2	124	4,771	1	0	2	126
				T5VS	4,548	2	0	0	120	4,900	2	0	0	129	4,962	2	0	0	131
				T5S	4,532	2	0	0	120	4,904	2	0	0	129	4,966	2	0	0	131
				T5M	4,641	3	0	1	120	4,891	3	0	1	129	4,953	3	0	1	130
				T5W	4,576	3	0	2	120	4,929	3	0	2	130	4,992	3	0	2	131
				BLC	3,586	1	0	1	94	3,863	1	0	1	102	3,912	1	0	1	103
				LCCO	2,668	1	0	1	70	2,874	1	0	2	76	2,911	1	0	2	77
				RCCO	2,668	1	0	1	70	2,874	1	0	2	76	2,911	1	0	2	77
P2	20	700	49W	T1S	5,370	1	0	1	114	6,001	1	0	1	122	6,077	2	0	2	124
				T2S	5,364	1	0	2	114	5,994	1	0	2	122	6,070	2	0	2	124
				T2M	5,398	1	0	1	114	6,035	1	0	1	123	6,112	1	0	1	125
				T3S	5,417	1	0	2	111	5,835	1	0	2	119	5,909	2	0	2	121
				T3M	5,580	1	0	2	114	6,011	1	0	2	123	6,087	2	0	2	124
				T4M	5,458	1	0	2	111	5,880	1	0	2	120	5,955	1	0	2	122
				TFTM	5,576	1	0	2	114	6,007	1	0	2	123	6,083	1	0	2	124
				T5VS	5,799	2	0	0	118	6,247	2	0	0	127	6,327	2	0	0	129
				T5S	5,804	2	0	0	118	6,253	2	0	0	128	6,332	2	0	0	129
				T5M	5,789	3	0	1	118	6,237	3	0	1	127	6,316	3	0	1	129
				T5W	5,834	3	0	2	119	6,285	3	0	2	128	6,364	3	0	2	130
				BLC	4,572	1	0	1	93	4,925	1	0	1	101	4,987	1	0	1	102
				LCCO	3,402	1	0	2	69	3,665	1	0	2	75	3,711	1	0	2	76
				RCCO	3,402	1	0	2	69	3,665	1	0	2	75	3,711	1	0	2	76
P3	20	1050	71W	T1S	7,853	2	0	2	110	8,458	2	0	2	119	8,545	2	0	2	120
				T2S	7,825	2	0	2	110	8,429	2	0	2	119	8,516	2	0	2	120
				T2M	7,865	2	0	2	111	8,473	2	0	2	119	8,580	2	0	2	121
				T3S	7,617	2	0	2	107	8,205	2	0	2	116	8,309	2	0	2	117
				T3M	7,846	2	0	2	111	8,452	2	0	2	119	8,559	2	0	2	121
				T4M	7,675	2	0	2	108	8,269	2	0	2	116	8,373	2	0	2	118
				TFTM	7,841	2	0	2	110	8,447	2	0	2	119	8,554	2	0	2	120
				T5VS	8,155	3	0	0	115	8,785	3	0	0	124	8,896	3	0	0	125
				T5S	8,162	3	0	1	115	8,792	3	0	1	124	8,904	3	0	1	125
				T5M	8,141	3	0	2	115	8,770	3	0	2	124	8,881	3	0	2	125
				T5W	8,204	3	0	2	116	8,838	4	0	2	124	8,950	4	0	2	126
				BLC	6,429	1	0	2	91	6,926	1	0	2	98	7,013	1	0	2	99
				LCCO	4,784	1	0	2	67	5,153	1	0	2	73	5,218	1	0	2	73
				RCCO	4,784	1	0	2	67	5,153	1	0	2	73	5,218	1	0	2	73
P4	20	1400	92W	T1S	9,791	2	0	2	106	10,547	2	0	2	115	10,681	2	0	2	116
				T2S	9,780	2	0	2	106	10,536	2	0	2	115	10,669	2	0	2	116
				T2M	9,831	2	0	2	107	10,590	2	0	2	115	10,724	2	0	2	117
				T3S	9,521	2	0	2	103	10,256	2	0	2	111	10,386	2	0	2	113
				T3M	9,807	2	0	2	107	10,565	2	0	2	115	10,698	2	0	2	116
				T4M	9,594	2	0	2	104	10,335	2	0	3	112	10,466	2	0	3	114
				TFTM	9,801	2	0	2	107	10,558	2	0	2	115	10,692	2	0	2	116
				T5VS	10,193	3	0	1	111	10,981	3	0	1	119	11,126	3	0	1	121
				T5S	10,201	3	0	1	111	10,990	3	0	1	119	11,129	3	0	1	121
				T5M	10,176	4	0	2	111	10,962	4	0	2	119	11,101	4	0	2	121
				T5W	10,254	4	0	3	111	11,047	4	0	3	120	11,186	4	0	3	122
				BLC	8,036	1	0	2	87	8,656	1	0	2	94	8,766	1	0	2	95
				LCCO	5,979	1	0	2	65	6,441	1	0	2	70	6,523	1	0	3	71
					5,979	1	0	2	65	6,441	1	0	2	70	6,523	1	0	3	71

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

Power Package	LED Count	Drive Current	System Watts	Dist. Type	50K (5000 K, 70 CRI)					60K (6000 K, 70 CRI)					50K (5000 K, 80 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P5	40	700	89W	T1S	10,831	2	0	2	122	11,668	2	0	2	131	11,816	2	0	2	133
				T2S	10,820	2	0	2	122	11,656	2	0	2	131	11,803	2	0	2	133
				T2M	10,876	2	0	2	122	11,716	2	0	2	132	11,864	2	0	2	133
				T3S	10,532	2	0	2	118	11,346	2	0	2	127	11,490	2	0	2	129
				T3M	10,949	2	0	2	122	11,687	2	0	2	131	11,835	2	0	2	133
				T4M	10,613	2	0	3	119	11,434	2	0	3	128	11,578	2	0	3	130
				TFTM	10,842	2	0	2	122	11,680	2	0	2	131	11,826	2	0	2	133
				T5VS	11,276	3	0	1	127	12,148	3	0	1	136	12,312	3	0	1	138
				T5S	11,286	3	0	1	127	12,158	3	0	1	137	12,322	3	0	1	138
				T5M	11,257	4	0	1	126	12,127	4	0	1	136	12,290	4	0	1	138
				T5W	11,344	4	0	3	127	12,221	4	0	3	137	12,375	4	0	3	139
				BLC	8,890	1	0	2	100	9,576	1	0	2	108	9,698	1	0	2	109
				LCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81
				RCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81
P6	40	1050	134W	T1S	14,805	3	0	3	110	15,949	3	0	3	119	16,151	3	0	3	121
				T2S	14,789	3	0	3	110	15,932	3	0	3	119	16,134	3	0	3	120
				T2M	14,865	3	0	3	111	16,014	3	0	3	120	16,217	3	0	3	121
				T3S	14,396	3	0	3	107	15,509	3	0	3	116	15,705	3	0	3	117
				T3M	14,829	2	0	3	111	15,975	3	0	3	119	16,177	3	0	3	121
				T4M	14,507	2	0	3	108	15,628	3	0	3	117	15,826	3	0	3	118
				TFTM	14,820	2	0	3	111	15,965	3	0	3	119	16,167	3	0	3	121
				T5VS	15,413	4	0	1	115	16,604	4	0	1	124	16,815	4	0	1	125
				T5S	15,406	3	0	1	115	16,618	4	0	1	124	16,828	4	0	1	126
				T5M	15,387	4	0	2	115	16,576	4	0	2	124	16,786	4	0	2	125
				T5W	15,506	4	0	3	116	16,704	4	0	3	125	16,915	4	0	3	126
				BLC	12,151	1	0	2	91	13,090	1	0	2	98	13,255	1	0	2	99
				LCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74
				RCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74
P7	40	1300	166W	T1S	17,023	3	0	3	103	18,338	3	0	3	110	18,570	3	0	3	112
				T2S	17,005	3	0	3	102	18,319	3	0	3	110	18,551	3	0	3	112
				T2M	17,092	3	0	3	103	18,413	3	0	3	111	18,646	3	0	3	112
				T3S	16,553	3	0	3	100	17,822	3	0	3	107	18,058	3	0	3	109
				T3M	17,053	3	0	3	103	18,369	3	0	3	111	18,601	3	0	3	112
				T4M	16,681	3	0	3	100	17,969	3	0	3	108	18,197	3	0	3	110
				TFTM	17,045	3	0	3	103	18,357	3	0	3	110	18,590	3	0	3	112
				T5VS	17,723	4	0	1	107	19,092	4	0	1	115	19,334	4	0	1	116
				T5S	17,717	4	0	2	107	19,108	4	0	2	115	19,349	4	0	2	117
				T5M	17,692	4	0	2	107	19,059	4	0	2	115	19,301	4	0	2	116
				T5W	17,829	5	0	3	107	19,207	5	0	3	116	19,450	5	0	3	117
				BLC	13,971	2	0	2	84	15,051	2	0	2	91	15,241	2	0	2	92
				LCCO	10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68
					10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68

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Performance Data

Lumen Output

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Rotated Optics

Power Package	LED Count	Drive Current	System Watts	Dist. Type	50K (5000 K, 70 CRI)					60K (6000 K, 70 CRI)					50K (5000 K, 80 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P10	30	530	53W	T1S	6,727	2	0	2	127	7,247	3	0	3	137	7,339	3	0	3	138
				T2S	6,689	2	0	3	126	7,205	3	0	3	136	7,297	3	0	3	138
				T2M	6,809	3	0	3	128	7,336	3	0	3	138	7,428	3	0	3	140
				T3S	6,585	3	0	3	124	7,094	3	0	3	134	7,183	3	0	3	136
				T3M	6,869	3	0	3	129	7,231	3	0	3	138	7,324	3	0	3	140
				T4M	6,677	3	0	3	126	7,191	3	0	3	136	7,284	3	0	3	137
				TFTM	6,855	3	0	3	129	7,379	3	0	3	139	7,472	3	0	3	141
				T5VS	6,808	3	0	0	129	7,431	3	0	0	140	7,525	3	0	0	142
				T5S	6,840	2	0	1	129	7,368	2	0	1	139	7,461	2	0	1	141
				T5M	6,838	3	0	1	129	7,366	3	0	1	139	7,460	3	0	2	141
				T5W	6,777	3	0	2	128	7,300	3	0	2	138	7,393	3	0	2	139
				BLC	5,626	2	0	2	106	6,060	2	0	2	114	6,137	2	0	2	116
				LCCO	4,018	1	0	2	76	4,328	1	0	2	82	4,383	1	0	2	83
				RCCO	4,013	3	0	3	76	4,323	3	0	3	82	4,377	3	0	3	83
P11	30	700	72W	T1S	8,594	3	0	3	119	9,256	3	0	3	129	9,376	3	0	3	130
				T2S	8,545	3	0	3	119	9,205	3	0	3	128	9,322	3	0	3	129
				T2M	8,699	3	0	3	121	9,371	3	0	3	130	9,490	3	0	3	132
				T3S	8,412	3	0	3	117	9,062	3	0	3	126	9,177	3	0	3	127
				T3M	8,694	3	0	3	121	9,366	3	0	3	130	9,484	3	0	3	132
				T4M	8,530	3	0	3	118	9,189	3	0	3	128	9,305	3	0	3	129
				TFTM	8,710	3	0	3	122	9,427	3	0	3	131	9,546	3	0	3	133
				T5VS	8,812	3	0	0	122	9,493	3	0	0	132	9,613	3	0	0	134
				T5S	8,738	3	0	1	121	9,413	3	0	1	131	9,532	3	0	1	132
				T5M	8,736	3	0	2	121	9,411	3	0	2	131	9,530	3	0	2	132
				T5W	8,657	4	0	2	120	9,326	4	0	2	130	9,444	4	0	2	131
				BLC	7,187	3	0	3	100	7,742	3	0	3	108	7,840	3	0	3	109
				LCCO	5,133	1	0	2	71	5,529	1	0	2	77	5,599	1	0	2	78
				RCCO	5,126	3	0	3	71	5,522	3	0	3	77	5,592	3	0	3	78
P12	30	1050	104W	T1S	12,149	3	0	3	117	13,088	3	0	3	126	13,253	3	0	3	127
				T2S	12,079	4	0	4	116	13,012	4	0	4	125	13,177	4	0	4	127
				T2M	12,297	3	0	3	118	13,247	3	0	3	127	13,415	3	0	3	129
				T3S	11,891	4	0	4	114	12,810	4	0	4	123	12,972	4	0	4	125
				T3M	12,290	3	0	4	118	13,239	3	0	4	127	13,407	3	0	4	129
				T4M	12,058	4	0	4	116	12,990	4	0	4	125	13,154	4	0	4	126
				TFTM	12,309	4	0	4	119	13,255	4	0	4	128	13,424	4	0	4	130
				T5VS	12,456	3	0	1	120	13,419	3	0	1	129	13,589	4	0	1	131
				T5S	12,251	3	0	1	119	13,206	3	0	1	128	13,374	3	0	1	130
				T5M	12,249	4	0	2	119	13,203	4	0	2	128	13,371	4	0	2	130
				T5W	12,238	4	0	3	118	13,183	4	0	3	127	13,350	4	0	3	128
				BLC	10,159	3	0	3	98	10,944	3	0	3	105	11,083	3	0	3	107
				LCCO	7,256	1	0	3	70	7,816	1	0	3	75	7,915	1	0	3	76
				RCCO	7,246	3	0	3	70	7,806	4	0	4	75	7,905	4	0	4	76
P13	30	1300	128W	T1S	14,418	3	0	3	113	15,504	3	0	3	122	15,701	3	0	3	123
				T2S	14,355	4	0	4	112	15,465	4	0	4	121	15,660	4	0	4	122
				T2M	14,614	3	0	3	114	15,744	4	0	4	123	15,943	4	0	4	125
				T3S	14,132	4	0	4	110	15,224	4	0	4	119	15,417	4	0	4	120
				T3M	14,606	4	0	4	114	15,735	4	0	4	123	15,934	4	0	4	124
				T4M	14,330	4	0	4	112	15,438	4	0	4	121	15,633	4	0	4	122
				TFTM	14,701	4	0	4	115	15,836	4	0	4	124	16,037	4	0	4	125
				T5VS	14,804	4	0	1	116	15,948	4	0	1	125	16,150	4	0	1	126
				T5S	14,679	3	0	1	115	15,814	3	0	1	124	16,014	3	0	1	125
				T5M	14,676	4	0	2	115	15,810	4	0	2	124	16,010	4	0	2	125
				T5W	14,544	4	0	3	114	15,668	4	0	3	122	15,866	4	0	3	124
				BLC	7919	3	0	3	62	8531	3	0	3	67	8639	3	0	3	67
				LCCO	5146	1	0	2	40	5545	1	0	2	43	5613	1	0	2	44
					5139	3	0	3	40	5536	3	0	3	43	5606	3	0	3	44

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SG

Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability!
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1].

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and pedestrian areas.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.95 ft²) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in 3000 K, 4000 K or 5000 K (70 CRI) configurations. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSXD LED area luminaire has a number of control options. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS
The DSXD LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor override can be achieved when used with the nLight Eclipse. Additional information about nLight Air can be found here.

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 0 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 0 utilizes the AERIS™ series pole drilling pattern (template #8). Optional terminal block and NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium®(DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/resources/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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D-Series
LED Surface Canopy

d*series

Catalog Number

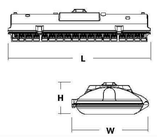
Notes

Type

SH

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications



Length: 17-3/4" (45.1 cm)
Width: 8-1/2" (21.6 cm)
Height: 3-7/16" (8.7 cm)
Weight (max): 16 lbs (7.3 kg)

Introduction

The D-Series LED Surface Canopy luminaire is ideal for covered walkways or drive-thrus, semi-covered outdoor aisles, and walk-in coolers and freezers. Its five optical choices provide the design flexibility to potentially reduce luminaire counts while still meeting IES criteria, lowering overall energy consumption.

Its expected service life of over 100,000 hours (20 years of nighttime operation) combined with the available motion/ambient sensor offers an extremely low maintenance solution that yields quick payback.

Ordering Information

EXAMPLE: DSXSC LED 20C 700 40K T5M MVOLT SRM DWHXD

DSXSC LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting
DSXSC LED	10C 10 LEDs (one engine)[1,2]	350 350 mA	30K 3000 K	T1S Type V, entryway [4]	MVOLT [5]	277 [6]	Shipped included
	20C 20 LEDs (two engines)	530 530 mA	40K 4000 K	T2M Type V, medium	120 [5]	347 [6]	SRM Surface mount (12-inch length supply leads)
	30C 30 LEDs (three engines)	700 700 mA	50K 5000 K	T3W Type V, wide	208 [5]	480 [6]	
		1000 1000 mA (1 A)	AMBPC Amber phosphor converted [3]	T5R Type V, rectangular	240 [5]		
				ASY Asymmetric			

Options		Finish (required)	
Shipped installed		Shipped separately	DWHXD White
HS House-side shield (housing visor) [7]	PIR1FC3V Motion/ambient sensor for 15-30' mounting heights and typical applications requiring daylight harvesting and 1fc at compliance [11]	BDS Bird shroud [7]	DNAXD Natural aluminum
SF Single fuse (120, 277, 347V) [6,9]	PIR1FC3V924 Motion/ambient sensor for emergency circuits for 8-15' mounting heights [12,13,14]		DBXD Dark bronze
DF Double fuse (208, 240, 480V) [6,9]	PIR1FC3V924 Motion/ambient sensor for emergency circuits for 15-30' mounting heights [12,13,14]		
SPD Separate surge protection [10]	XAD XPoint™ Wireless enabled [11]		
DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately) [8,9]	XAD924 XPoint™ Wireless enabled for emergency circuit [12,14,15]		
PIR Motion/ambient sensor for 8-15' mounting heights [11]	XAD PIR XPoint™ Wireless enabled motion/ambient sensor for 8-15' mounting heights [12,15]		
PIRH Motion/ambient sensor for 15-30' mounting heights [11]	XAD PIRH XPoint™ Wireless enabled motion/ambient sensor for 15-30' mounting heights [12,15]		
PIR1FC3V Motion/ambient sensor for 8-15' mounting heights and for typical applications requiring daylight harvesting and 1fc at 24' compliance [11]	XAD924 PIR XPoint™ Wireless enabled motion/ambient sensor for emergency circuits for 8-15' mounting heights [12,14,15]		
	XAD924 PIRH XPoint™ Wireless enabled motion/ambient sensor for emergency circuits for 15-30' mounting heights [12,14,15]		

Accessories

Ordered and shipped separately.

DSXCHS U House-side shield (1 per light engine)
DSXCBDS2/DWHBD U Bird shroud for SRM on surface J-box only, white (specify finish)

NOTES
1 Available with 700mA or 1000mA option only.
2 Not available with 347 or 480V.
3 AMBPC only available with 530mA or 700mA.
4 DesignLights Consortium qualified.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
6 N/A with one light engine (10C). Only available with 700mA or 1000mA.
7 Also available as a separate accessory; see Accessories information at left.
8 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
9 Not available with XAD or XAD924 options.
10 See the electrical section on page 3 for more details.
11 DMG not available with all PIR or XAD options
12 Dimming driver standard. Available in layouts up to 30'. Not available with 347V or 480V. Not available with fusing.
13 PIR & PIR1FC3V specifies the Acuity Controls SBOR 10 ODP motion/ambient sensor, the PIRH & PIR1FC3V specifies the Acuity Controls SBOR 6 ODP motion/ambient sensor.
14 XAD924 specifies the Acuity Controls XPA 8B.1 DSI EM XPoint wireless light controller as a UL924 listed device for emergency lighting.
15 XAD PIR specifies the Acuity Controls XPA SBOR10 wireless controller, the XAD924 PIR specifies the Acuity Controls XPA SBOR10_EM wireless controller, the XAD PIRH specifies the Acuity Controls XPA SBOR6 wireless controller, and the XAD924 PIRH specifies the XPA SBOR10_EM wireless controller.

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SH

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Light Engines	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 80 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (1x1Ea)	700 mA	26W	AST	2,681	0	0	1	108	2,793	1	0	1	107	2,838	1	0	1	108	3,293	1	0	1	127
			T1S	2,733	0	0	1	105	2,845	1	0	1	110	2,892	1	0	1	111	2,566	1	0	1	98
			T2M	2,742	1	0	1	105	2,845	2	0	1	110	2,892	2	0	1	111	2,576	2	0	1	99
			T3S	2,700	1	0	1	104	2,806	2	0	1	108	2,850	2	0	1	109	2,538	2	0	1	97
			T3M	2,779	2	0	1	99	2,760	2	0	1	106	2,777	2	0	1	107	2,726	2	0	1	96
	1000 mA	37W	AST	3,447	1	0	1	93	3,591	1	0	1	97	3,647	1	0	1	98					
			T1S	3,513	1	0	1	95	4,116	2	0	1	111	4,156	2	0	1	112					
			T2M	3,544	1	0	1	96	4,152	2	0	1	112	4,194	2	0	1	113					
			T3S	3,736	2	0	1	101	4,066	2	0	2	110	4,091	3	0	1	111					
			T3M	3,604	2	0	1	97	3,875	2	0	2	105	3,894	3	0	1	105					
20C (2x1Ea)	350 mA	25W	AST	3,798	1	0	1	112	3,894	1	0	1	115	3,931	1	0	1	117					
			T1S	3,818	1	0	1	113	3,915	1	0	1	116	3,952	1	0	1	118					
			T2M	3,850	2	0	1	115	3,948	2	0	1	117	3,988	2	0	1	118					
			T3S	3,695	2	0	1	111	3,789	2	0	2	113	3,826	2	0	1	114					
			T3M	3,765	2	0	1	113	3,860	2	0	2	115	3,897	2	0	1	116					
	530 mA	37W	AST	4,843	1	0	1	109	4,558	1	0	1	103	4,566	1	0	1	103					
			T1S	4,265	2	0	1	115	4,513	2	0	1	121	4,554	2	0	1	123	3,732	2	0	1	100
			T2M	4,300	2	0	1	115	4,553	2	0	1	122	4,594	2	0	1	124	3,771	2	0	1	101
			T3S	4,170	2	0	1	112	4,369	2	0	2	117	4,407	2	0	1	119	3,649	2	0	1	98
			T3M	3,992	2	0	1	108	4,207	3	0	2	113	4,244	3	0	1	114	3,484	3	0	1	94
			AST	5,129	1	0	1	102	5,426	1	0	1	108	5,542	1	0	1	110	4,433	1	0	1	88
			T1S	5,186	2	0	1	107	5,734	2	0	1	114	5,820	2	0	1	115	4,554	2	0	1	90
			T2M	5,409	2	0	1	108	5,880	3	0	1	116	5,864	3	0	1	117	4,671	3	0	1	93
			T3S	5,125	3	0	1	106	5,718	3	0	1	114	5,754	3	0	1	115	4,582	3	0	1	91
			T3M	5,040	2	0	1	104	5,582	3	0	2	111	5,477	3	0	1	114	4,363	3	0	1	87
	1000 mA	74W	AST	7,183	1	0	1	96	7,606	1	0	1	103	7,653	1	0	1	103					
			T1S	7,437	2	0	1	100	7,881	2	0	1	107	7,936	2	0	1	107					
			T2M	7,468	3	0	1	101	8,029	3	0	1	108