# Concrete Slab Assessment

## Floor Flatness/GPR Inspection/Visual Inspection

*Prepared by*:

**Blew & Associates, P.A.**

3825 N Shiloh Drive Fayetteville, AR 72703

January 18, 2023

**Project No.**

## EXECUTIVE SUMMARY

Blew & Associates, P.A. was retained by Inc., to perform a Concrete Slab Assessment on the property located at The purpose of the Concrete Slab Assessment was to determine the relative elevations of the slab using 3D Lidar Laser Scanning, visually identify slab defects such as cracking and spalling and identify in-slab reinforcements for portions of the ground floor slab of the building.

## Subject Property Description

The subject property is currently vacant. Property was found to be open, clean and clear at the time field work was performed. Large areas of the slab were covered by wood flooring which prevented visual inspection of the slab in these areas.

## Findings and Conclusions

Floor Flatness Survey *(See Exhibit A)*

Data was collected using a Faro Premium 70m Lidar scanner.

Areas 1, 2, 3, 4 and 5 were found to be within the client tolerance of 0.25' over 100'.

GPR Slab Inspection (See Exhibits B &C)

Data was collected using a Proceq 8100 Ground Penetrating Radar (GPR). GPR data was collected in 10x10 grids at 5 arbitrary locations throughout the slab to identify slab thickness and reinforcement locations. Single line passes were made throughout the slab and near indications on below slab utility infrastructure to determine the locations of in slab utilities shown in the plans provided by the client. Field data for this portion is shown in Exhibit A.

No horizontal in-slab utilities were believed to be discovered at the time field work was completed.

1 instance of horizontal conduits passing through the slab from level 1 was discovered and is shown in attached exhibits.

Slab is believed to be reinforced with rebar or mesh spaced at approximately 6" intervals in a grid pattern with 1.9"-4.0"± of cover to the top of slab. Even and consistent spacing within the horizontal grid pattern was found across all 5 test areas.

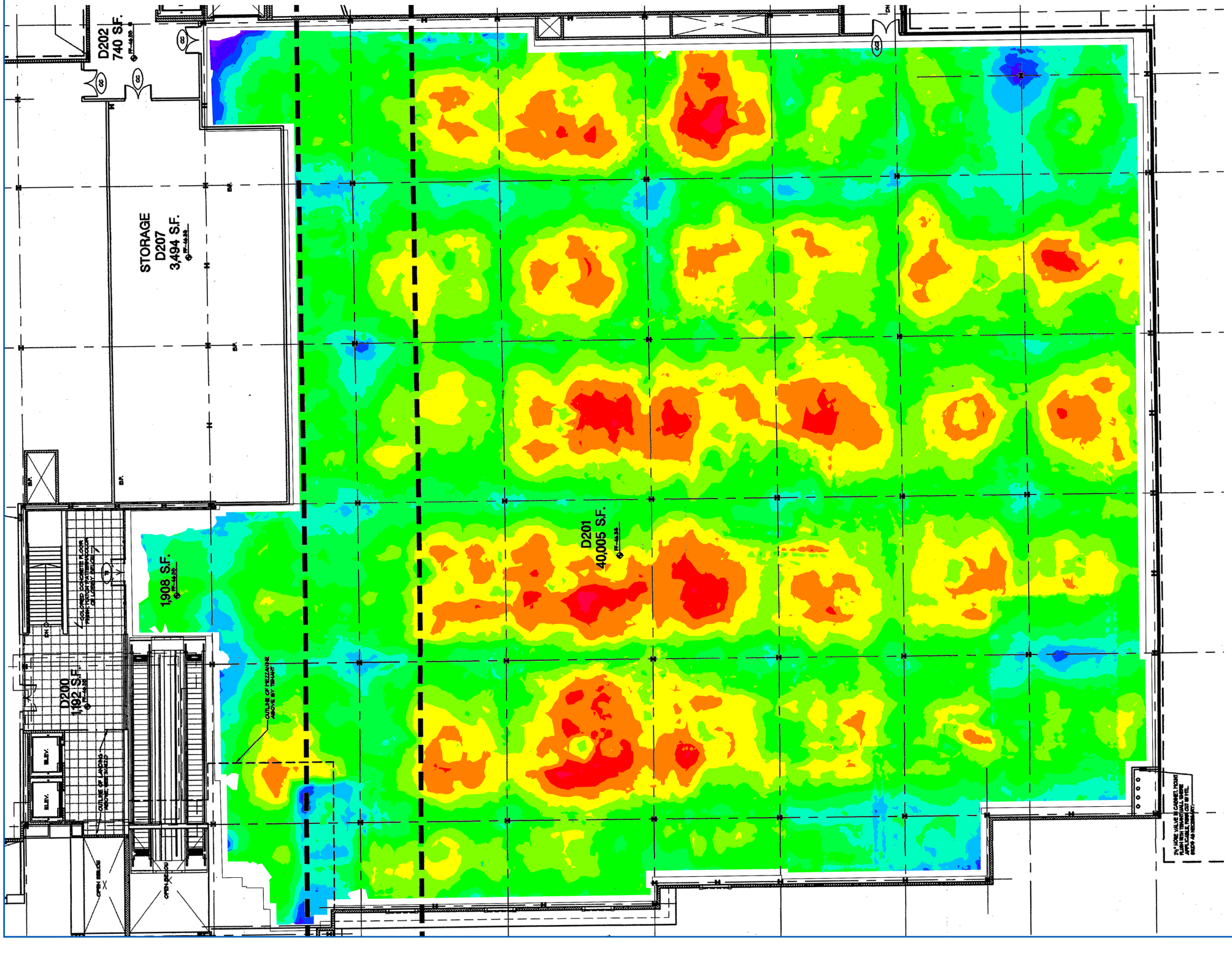
Visual Inspection *(See Exhibits B and D)*

Client requested a visual inspection of the slab surface to identify defects in the slab such as cracking and spalling. Due to the presence of wood flooring covering portions of the slab at the time of the inspection, some portions of the slab were not visibly accessible. Field data for this portion is shown in Exhibit B.

Minor cracking was found through and across all visible areas of the slab and is believed to continue in the same manor in areas which could not be observed due to flooring.

# FLOOR LEVELNESS SURVEY

Exhibit A

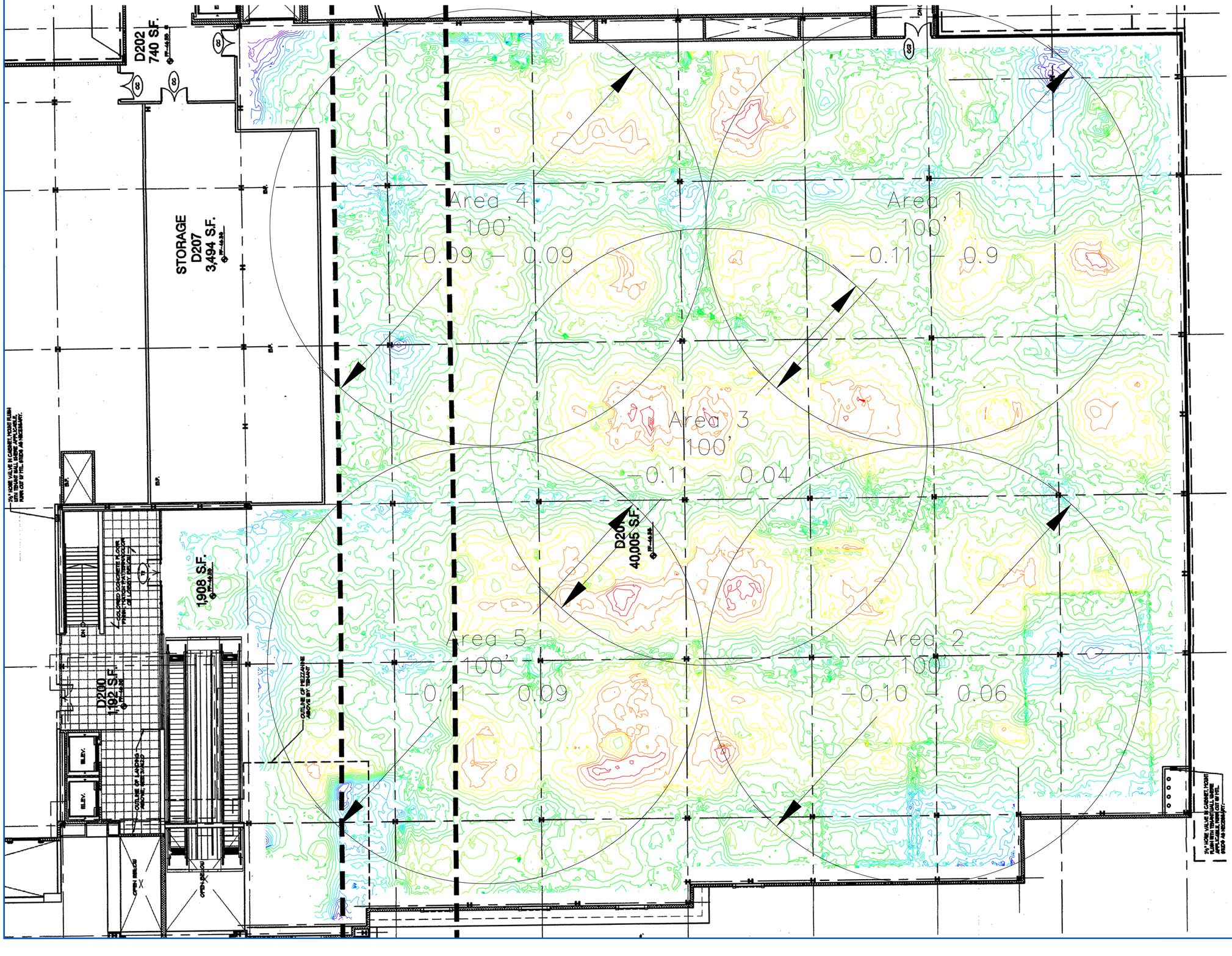



| Elevations Table | | | | |
|---|---|---|---|---|
| Number | Minimum Elevation | Maximum Elevation | Area | Color |
| 1 | −0.12 | −0.10 | 42.99 | |
| 2 | −0.10 | −0.08 | 727.95 | |
| 3 | −0.08 | −0.06 | 3283.82 | |
| 4 | −0.06 | −0.04 | 6710.06 | |
| 5 | −0.04 | −0.02 | 7353.67 | |
| 6 | −0.02 | 0.00 | 11350.27 | |
| 7 | 0.00 | 0.02 | 5241.38 | |
| 8 | 0.02 | 0.04 | 2646.26 | |
| 9 | 0.04 | 0.06 | 659.49 | |
| 10 | 0.06 | 0.08 | 125.76 | |
| 11 | 0.08 | 0.10 | 39.10 | |
| 12 | 0.10 | 0.12 | 7.55 | |


BLEW & ASSOCIATES, P.A.
Surveying
Engineering
Mapping
3825 N. SHILOH DRIVE - FAYETTEVILLE, AR 72703
EMAIL:SURVEY@BLEWINC.COM
OFFICE: 479.443.4506 -FAX: 479.582.1883
EMAIL: SURVEY@BLEWINC.COM-WWW.BLEWINC.COM


| SURVEYOR JOB NUMBER: | SURVEY DRAWN BY: |
|---|---|
| SURVEY REVIEWED BY: PS | SHEET: 1 OF 2 |

# FLOOR LEVELNESS SURVEY




| Elevations Table | | | | |
|---|---|---|---|---|
| Number | Minimum Elevation | Maximum Elevation | Area | Color |
| 1 | −0.12 | −0.10 | 42.99 | |
| 2 | −0.10 | −0.08 | 727.95 | |
| 3 | −0.08 | −0.06 | 3283.82 | |
| 4 | −0.06 | −0.04 | 6710.06 | |
| 5 | −0.04 | −0.02 | 7353.67 | |
| 6 | −0.02 | 0.00 | 11350.27 | |
| 7 | 0.00 | 0.02 | 5241.38 | |
| 8 | 0.02 | 0.04 | 2646.26 | |
| 9 | 0.04 | 0.06 | 659.49 | |
| 10 | 0.06 | 0.08 | 125.76 | |
| 11 | 0.08 | 0.10 | 39.10 | |
| 12 | 0.10 | 0.12 | 7.55 | |


BLEW & ASSOCIATES, P.A.
Surveying
Engineering
Mapping
3825 N. SHILOH DRIVE - FAYETTEVILLE, AR 72703
EMAIL:SURVEY@BLEWINC.COM
OFFICE: 479.443.4506 -FAX: 479.582.1883
EMAIL: SURVEY@BLEWINC.COM-WWW.BLEWINC.COM


| SURVEYOR JOB NUMBER: | SURVEY DRAWN BY: |
|---|---|
| SURVEY REVIEWED BY: PS | SHEET: 2 OF 2 |

# VISUAL SLAB INSPECTION

Exhibit B

D202
740 S.F.
FF=49.89

STORAGE
D207
3,494 S.F.
FF=49.89

D200
1,192 S.F.
FF=49.89

1,908 S.F.
FF=49.89

D201
40,005 S.F.
FF=49.89

Minor Cracking

Wood Flooring

GPR Grid 1
Mesh/Rebar Spacing: 6"
Cover to Top: 1.9" - 2.5"±
Slab Thickness: 3.7" - 6.2"±

GPR Grid 2
Mesh/Rebar Spacing: 6"
Cover to Top: 2.8" - 4.0"±
Slab Thickness: 4.6" - 6.5"±

GPR Grid 3
Mesh/Rebar Spacing: 6"
Cover to Top: 2.0" - 2.9"±
Slab Thickness: 4.4" - 6.3"±

GPR Grid 4
Mesh/Rebar Spacing: 6"
Cover to Top: 2.1" - 3.0"±
Slab Thickness: 4.0" - 6.2"±

GPR Grid 5
Mesh/Rebar Spacing:6"
Cover to Top: 2.1" - 3.0"±
Slab Thickness: 4.0"-6.2"±

Conduits Penetrating Through Slab to First Floor

OUTLINE OF MEZZANINE ABOVE BY TENANT

OUTLINE OF LANDING ABOVE, NOT SHOWN

OPEN BELOW

OPEN BELOW

ELEV.

ELEV.

2½" HOSE VALVE W/ CABINET, MOUNT FLUSH WITH TRANSWALL SYSTEM AT 5'-6" ABOVE FINISH FLOOR (AFF) AS NECESSARY.

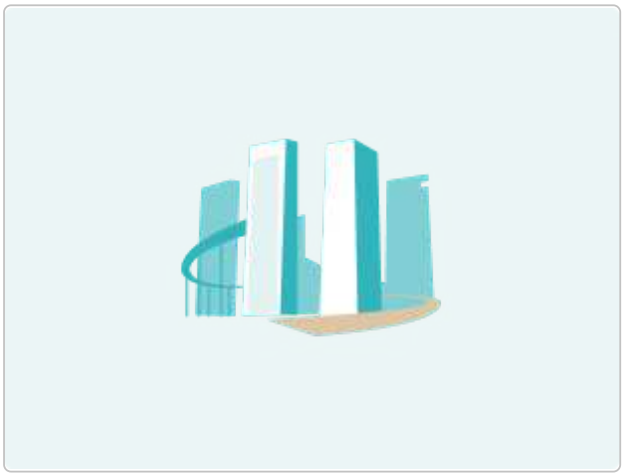

BLEW & ASSOCIATES, P.A.
Surveying
Engineering
Mapping
3825 N. SHILOH DRIVE - FAYETTEVILLE, AR 72703
EMAIL:SURVEY@BLEWINC.COM
OFFICE: 479.443.4506 -FAX: 479.582.1883
EMAIL: SURVEY@BLEWINC.COM·WWW.BLEWINC.COM


| SURVEYOR JOB NUMBER: | SURVEY DRAWN BY: |
|---|---|
| SURVEY REVIEWED BY: PS | SHEET: 1 OF 1 |

Blew & Associates P A
3825 N Shiloh Dr., Fayetteville, AR
72703
4794434506
blewinc.com

# GPR Slab Investigation

PREPARED BY
Will Deputy



CREATED DATE
16 Jan 2023

ASSET NAME

ASSET LOCATION

INSPECTION DATE
05 Jan 2023 - 05 Jan 2023

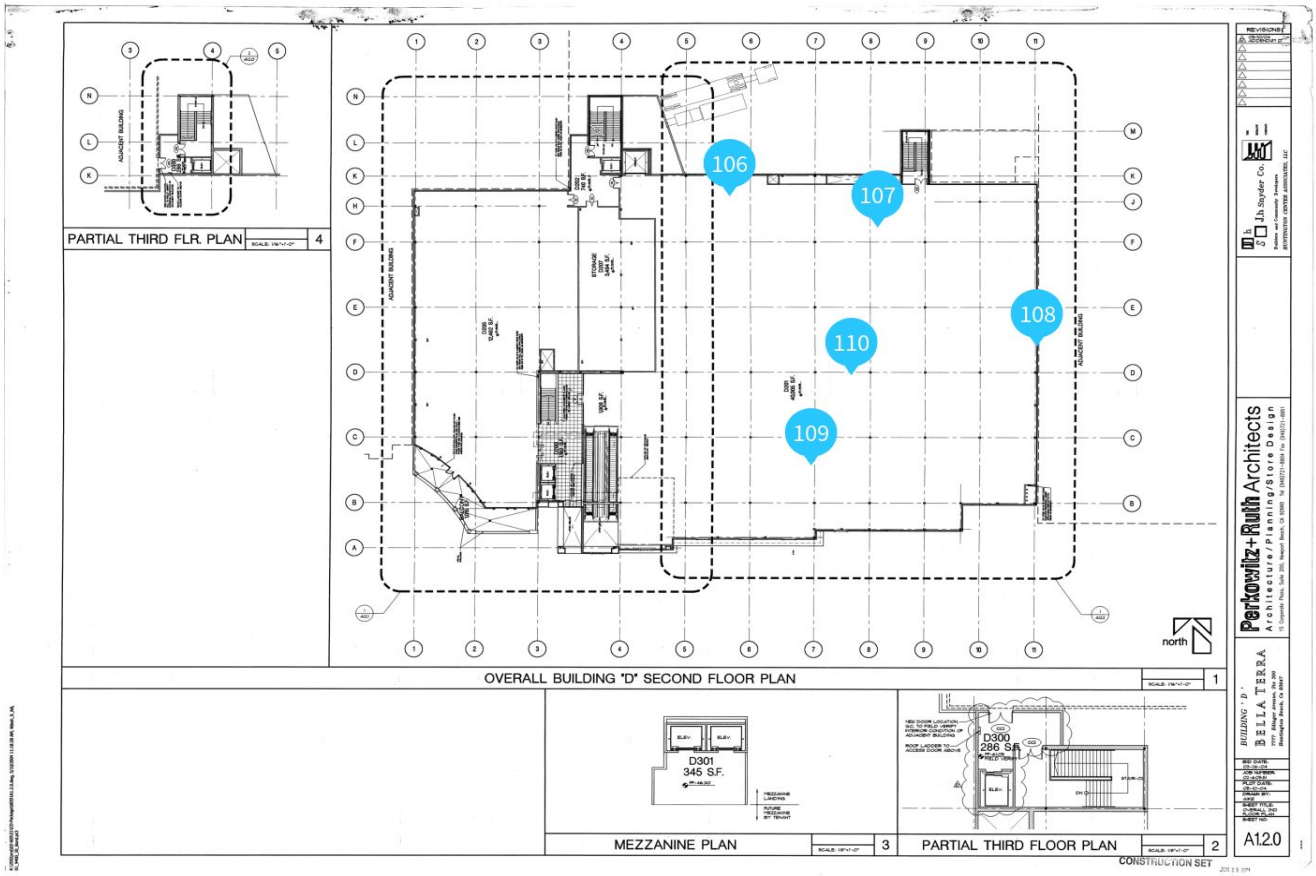


Created with inspect

# 2D View

FILE NAME
Floor Plan

TOTAL SPOTS IN VIEW
5 Spots






Created with inspect

# Spot 110

CREATED DATE
05 Jan 2023

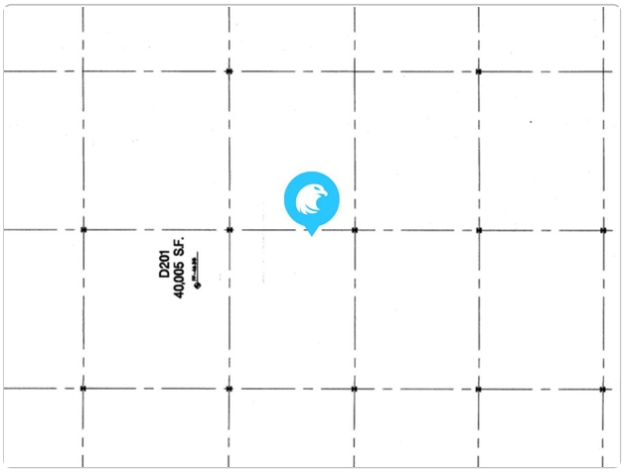
GRID
5

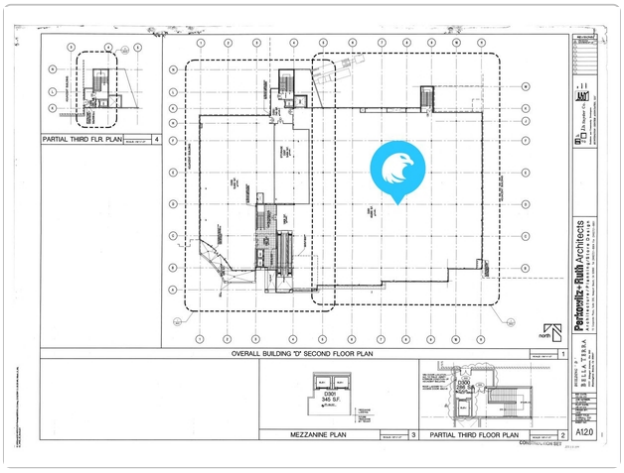
REINFORCEMENT TYPE
Rebar

COVER TO TOP OF SLAB
2.1"-3.0"

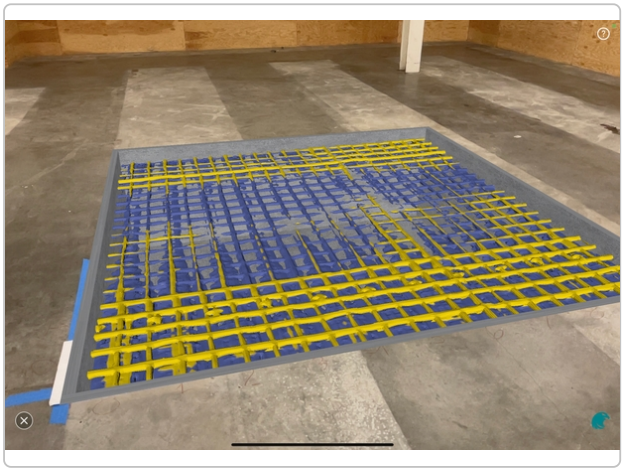
APPROXIMATE SLAB THICKNESS
4.0"-6.2"

## Location

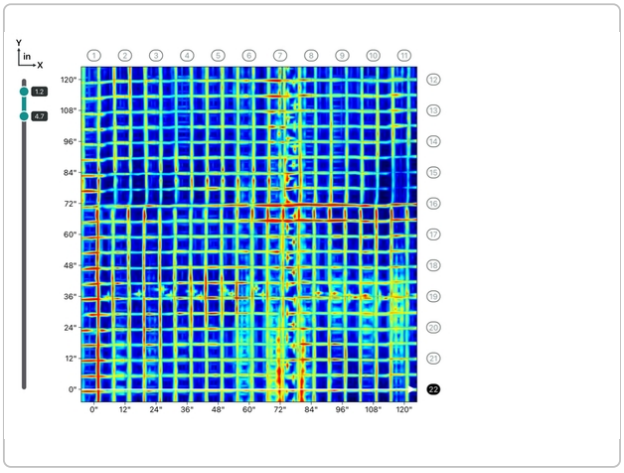



## Photos and Sketches



16 Jan 2023, 9:58 AM / Will Deputy

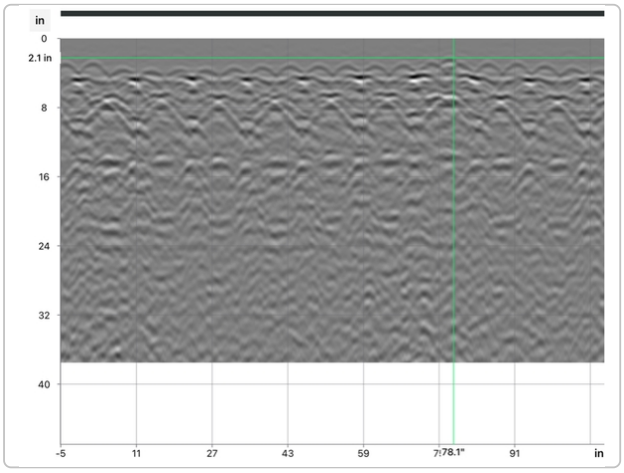


16 Jan 2023, 11:09 AM / Will Deputy

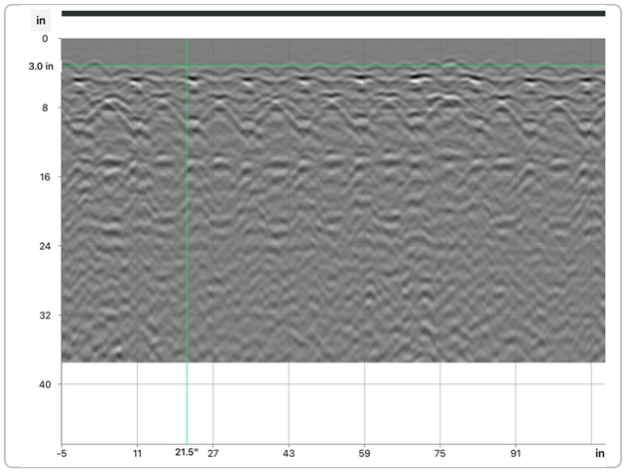


Created with inspect

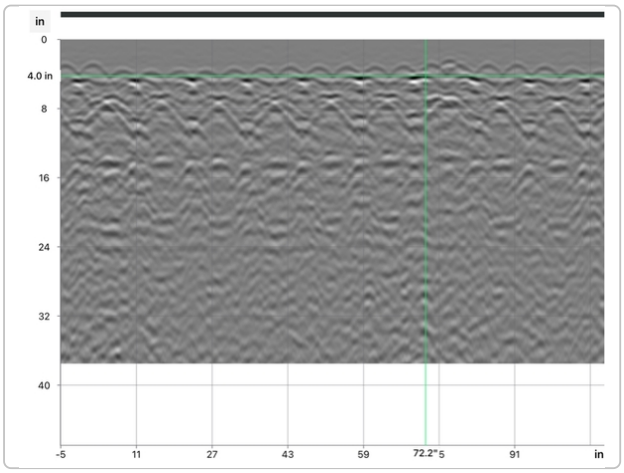
# Spot 110



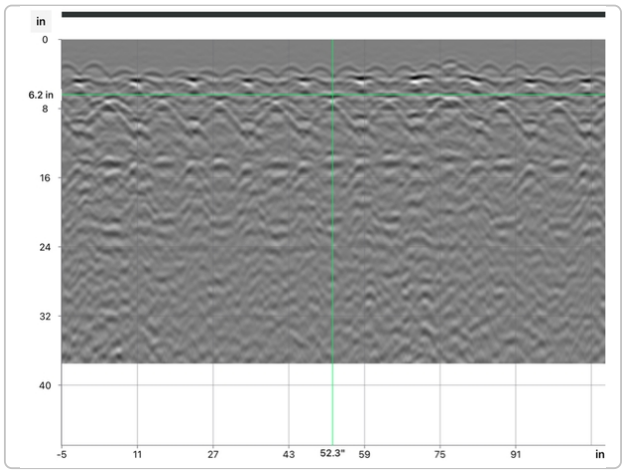

16 Jan 2023, 11:09 AM / Will Deputy




16 Jan 2023, 11:09 AM / Will Deputy




16 Jan 2023, 11:09 AM / Will Deputy




16 Jan 2023, 11:09 AM / Will Deputy



Created with inspect

# Spot 109

CREATED DATE
05 Jan 2023

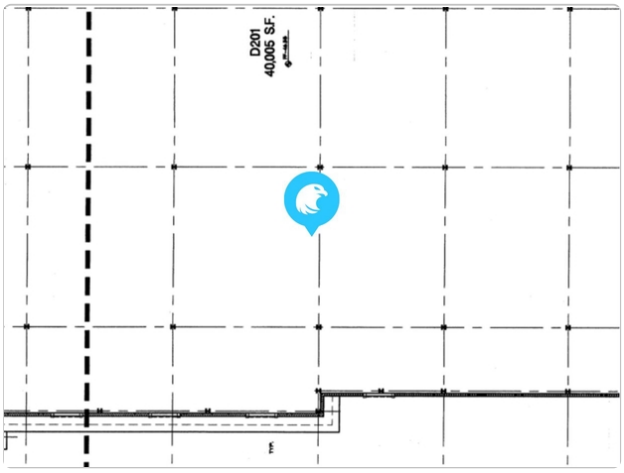
GRID
4

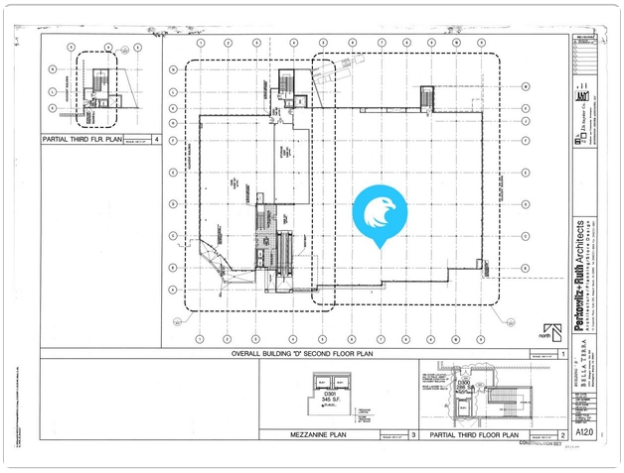
REINFORCEMENT TYPE
Rebar

COVER TO TOP OF SLAB
2.1"-3.0"

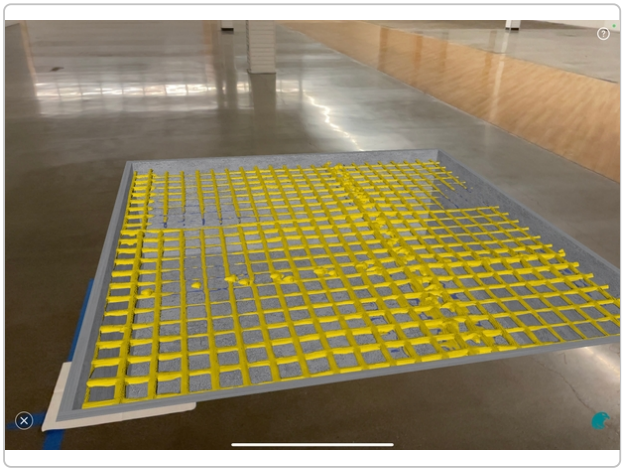
APPROXIMATE SLAB THICKNESS
4.0"-6.2"

## Location

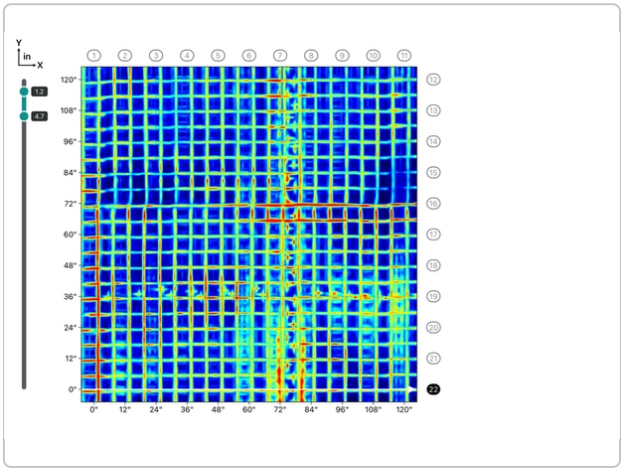



## Photos and Sketches



16 Jan 2023, 9:58 AM / Will Deputy

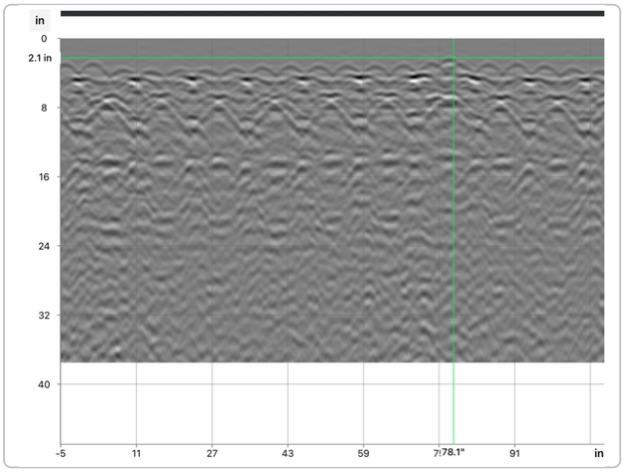


16 Jan 2023, 11:09 AM / Will Deputy

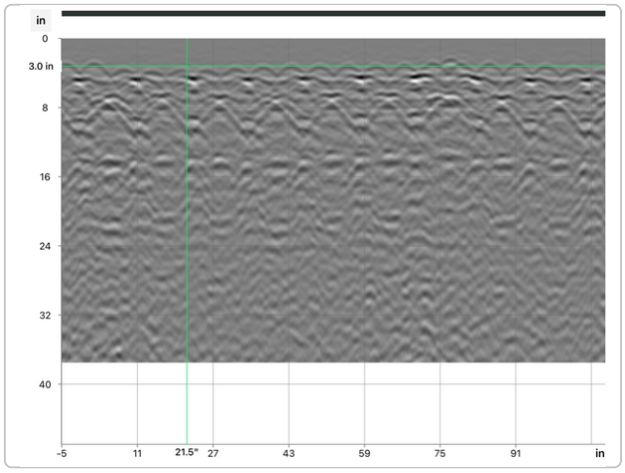


Created with inspect

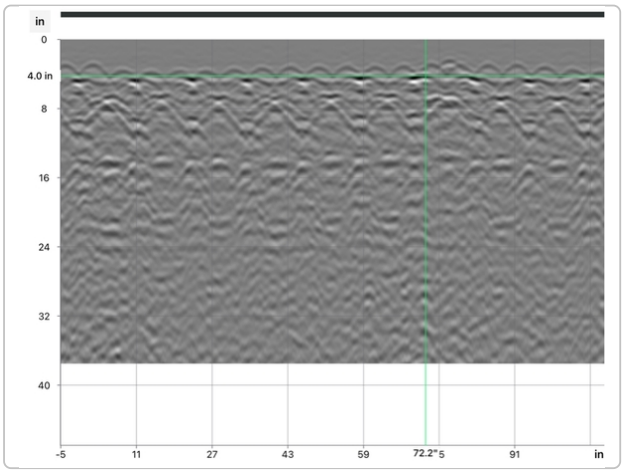
# Spot 109



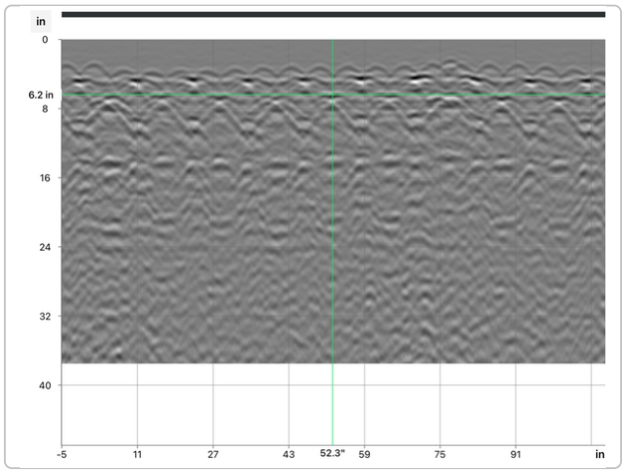

16 Jan 2023, 11:09 AM / Will Deputy




16 Jan 2023, 11:09 AM / Will Deputy




16 Jan 2023, 11:09 AM / Will Deputy




16 Jan 2023, 11:09 AM / Will Deputy



Created with inspect

# Spot 108

CREATED DATE
05 Jan 2023

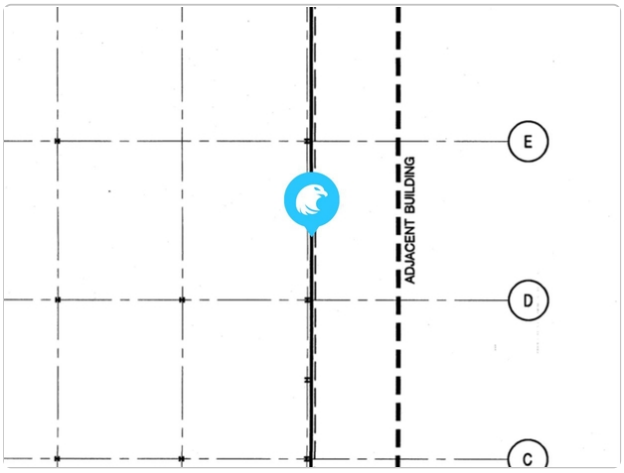
GRID
3

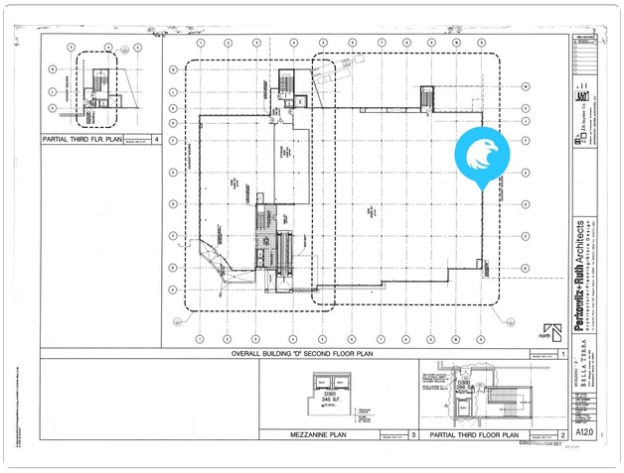
REINFORCEMENT TYPE
Rebar

COVER TO TOP OF SLAB
2.0" - 2.9"

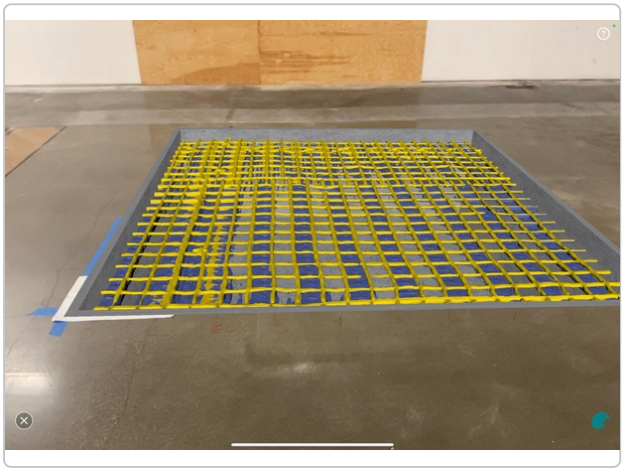
APPROXIMATE SLAB THICKNESS
4.4"-6.3

## Location

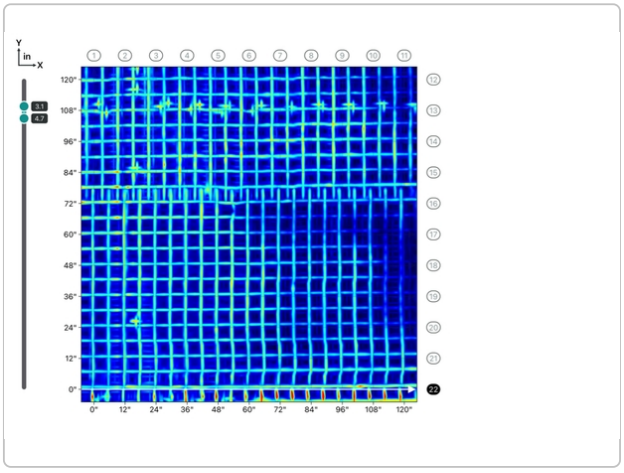



## Photos and Sketches



16 Jan 2023, 9:58 AM / Will Deputy

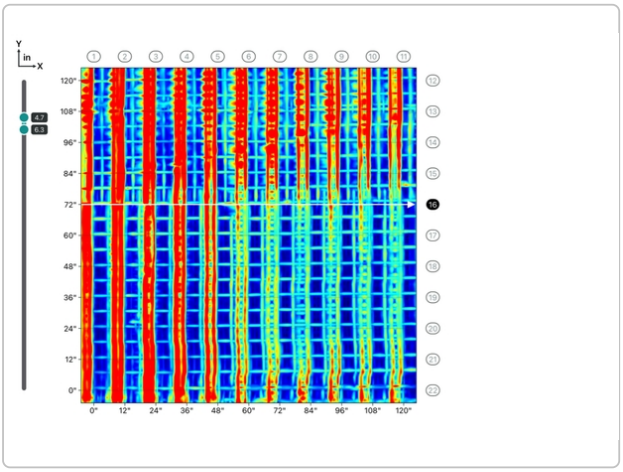


16 Jan 2023, 11:08 AM / Will Deputy

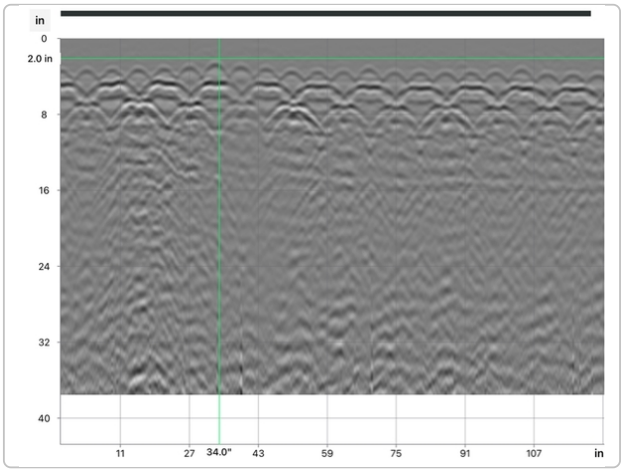


Created with inspect

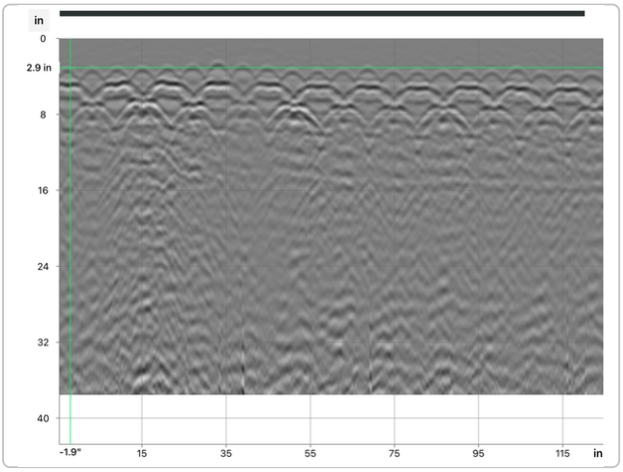
# Spot 108



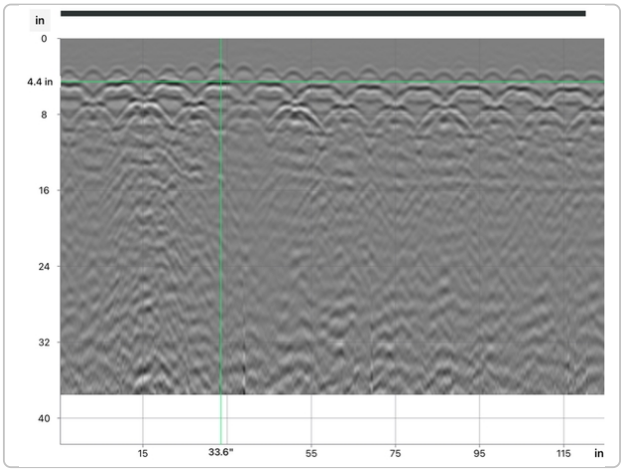
16 Jan 2023, 11:08 AM / Will Deputy



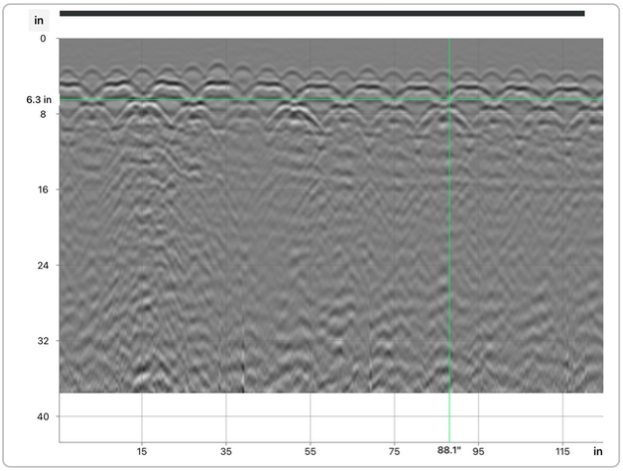

16 Jan 2023, 11:08 AM / Will Deputy




16 Jan 2023, 11:08 AM / Will Deputy




16 Jan 2023, 11:08 AM / Will Deputy




16 Jan 2023, 11:08 AM / Will Deputy



Created with inspect

# Spot 107

CREATED DATE
05 Jan 2023

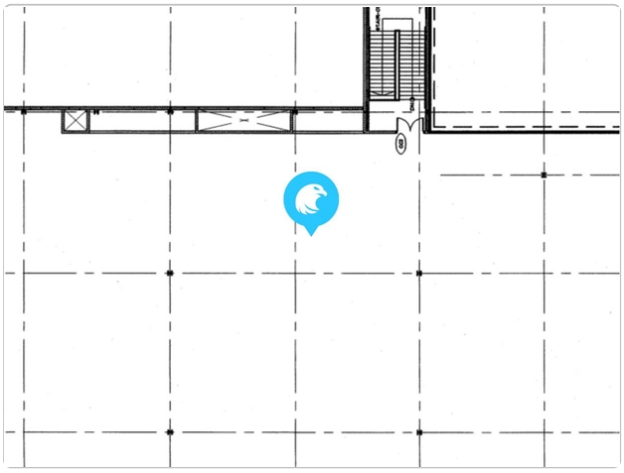
GRID
2

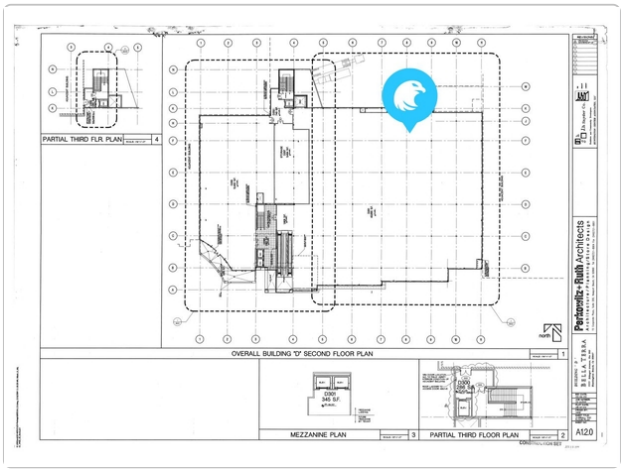
REINFORCEMENT TYPE
Rebar

COVER TO TOP OF SLAB
2.8" - 4.0"

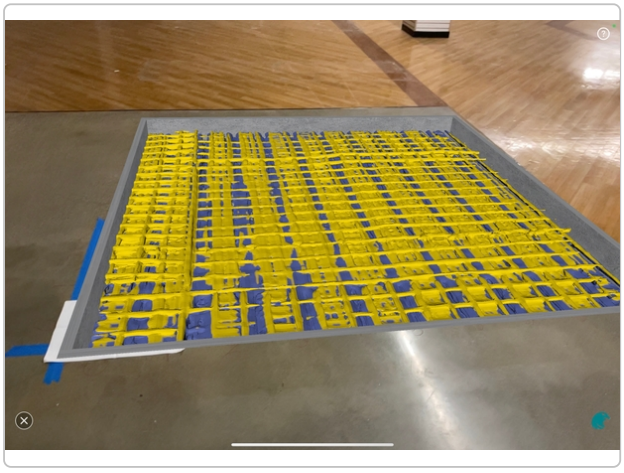
APPROXIMATE SLAB THICKNESS
4.6"-6.5"

## Location

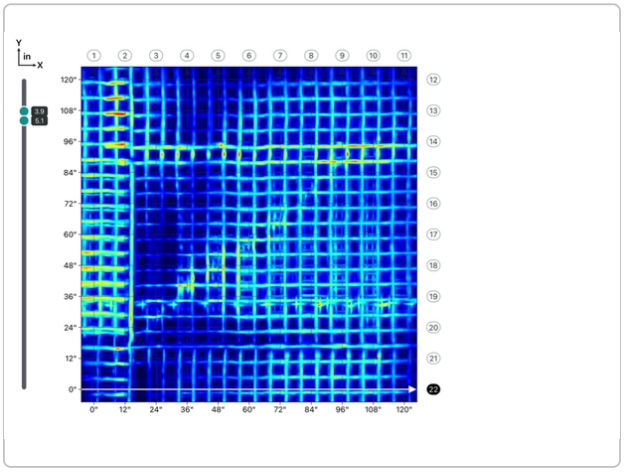





## Photos and Sketches



16 Jan 2023, 9:57 AM / Will Deputy

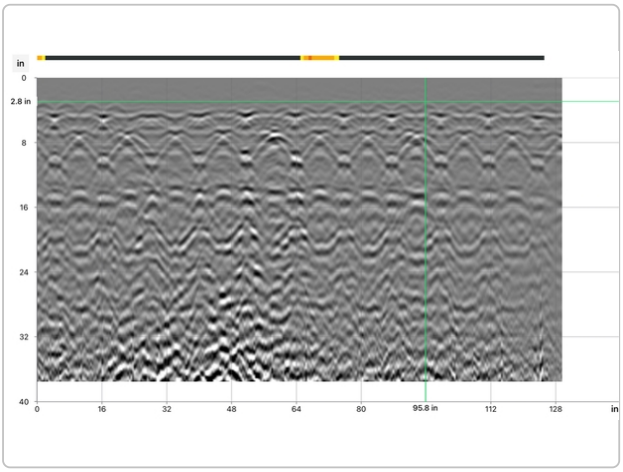


16 Jan 2023, 11:06 AM / Will Deputy

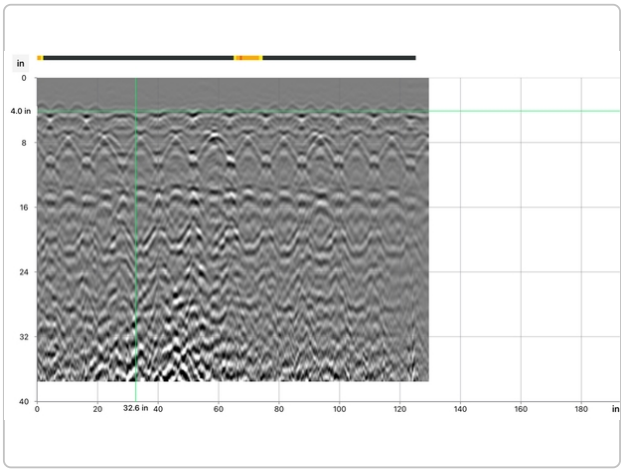


Created with inspect

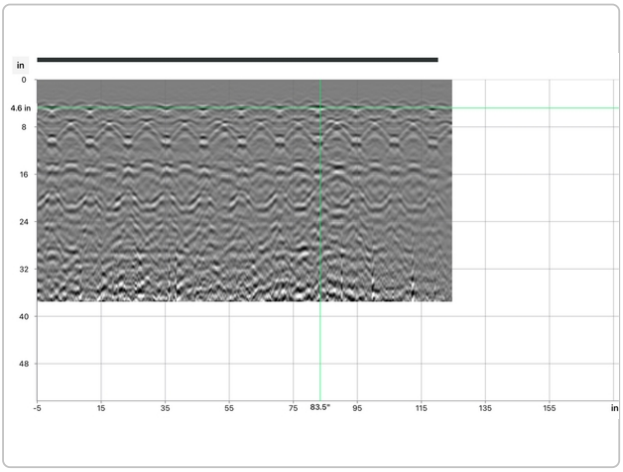
# Spot 107



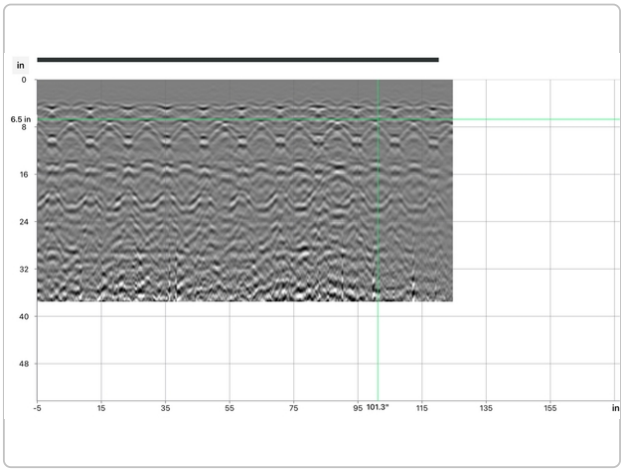

16 Jan 2023, 11:06 AM / Will Deputy



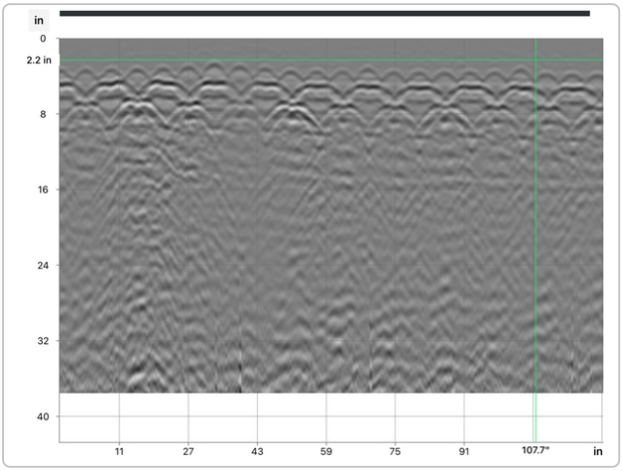

16 Jan 2023, 11:06 AM / Will Deputy




16 Jan 2023, 11:06 AM / Will Deputy




16 Jan 2023, 11:06 AM / Will Deputy




16 Jan 2023, 11:06 AM / Will Deputy



Created with inspect

# Spot 106

CREATED DATE
05 Jan 2023

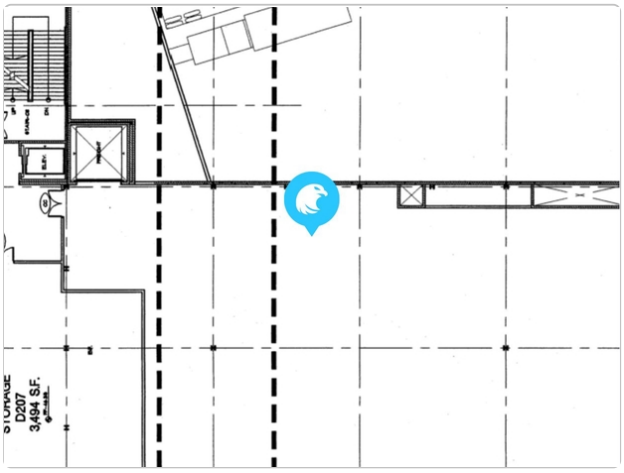
GRID
1

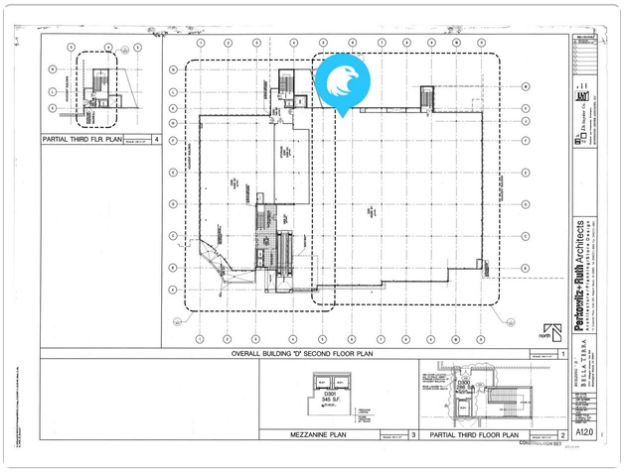
REINFORCEMENT TYPE
Rebar

COVER TO TOP OF SLAB
1.9-2.5

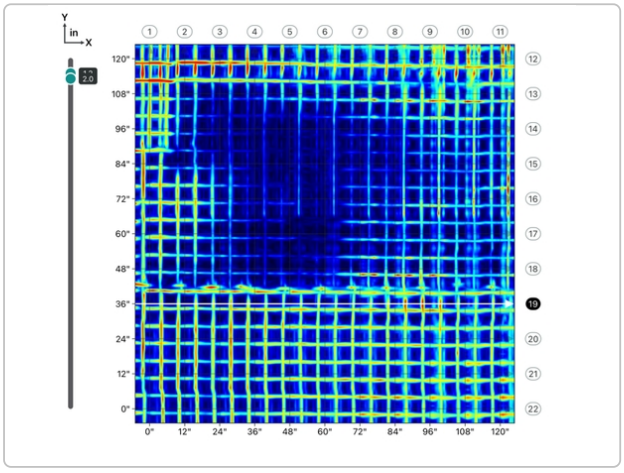
APPROXIMATE SLAB THICKNESS
3.7"-6.2"

## Location

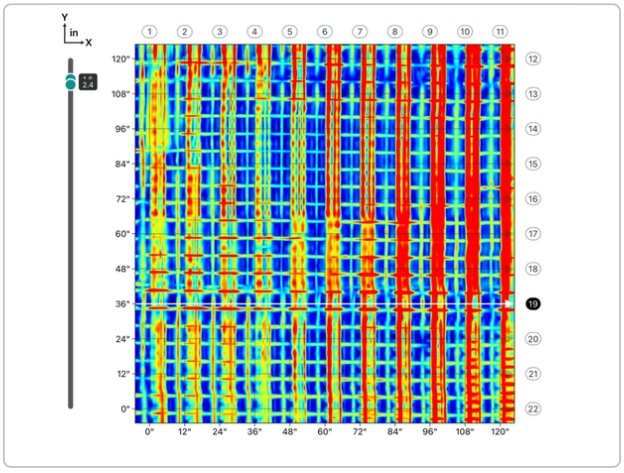





## Photos and Sketches



16 Jan 2023, 9:56 AM / Will Deputy

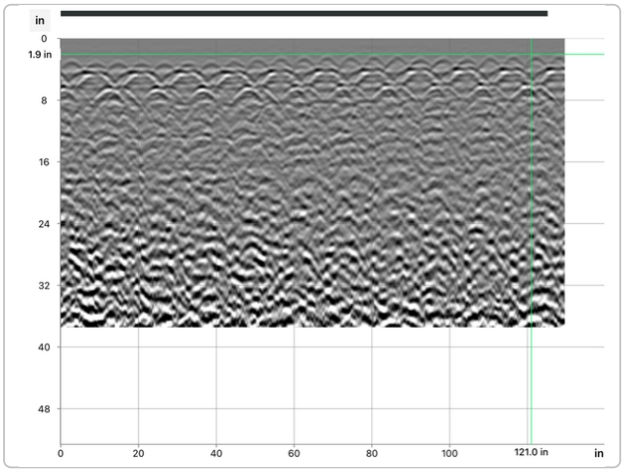


16 Jan 2023, 9:56 AM / Will Deputy

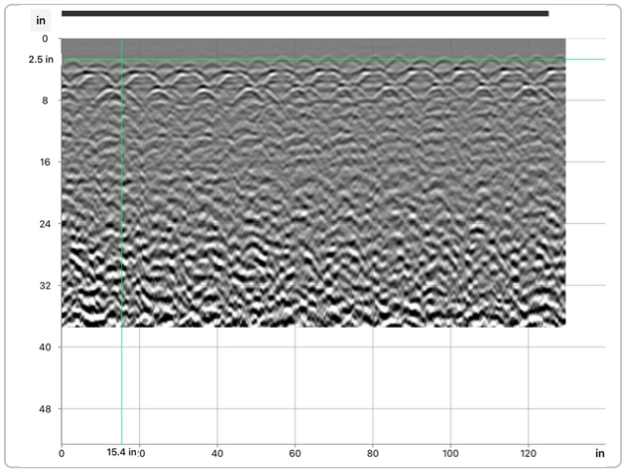


Created with inspect

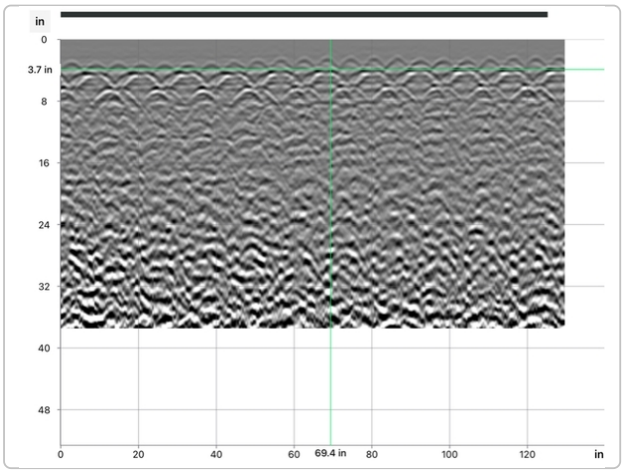
# Spot 106



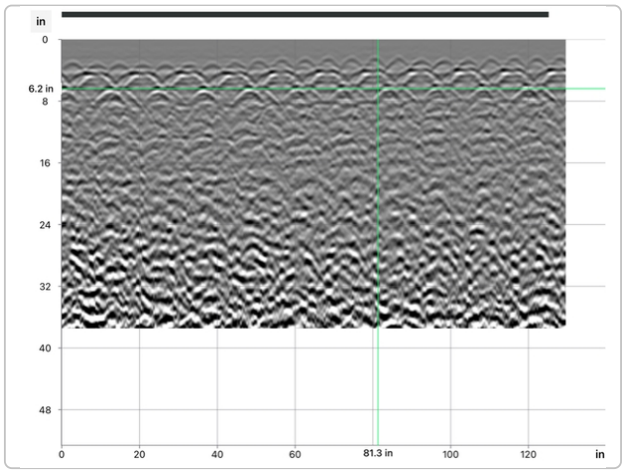

16 Jan 2023, 9:56 AM / Will Deputy



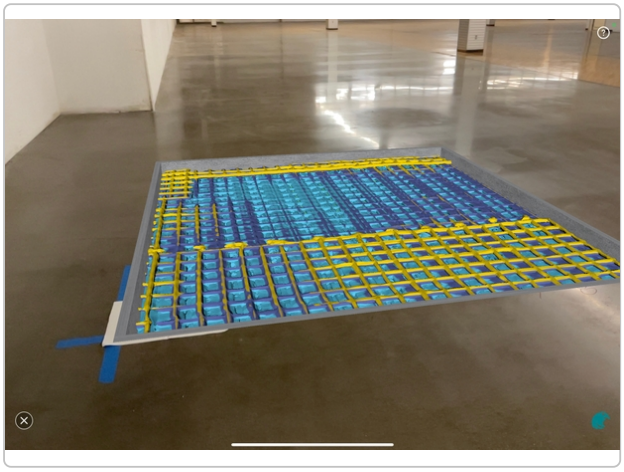

16 Jan 2023, 9:56 AM / Will Deputy




16 Jan 2023, 9:56 AM / Will Deputy




16 Jan 2023, 9:56 AM / Will Deputy



16 Jan 2023, 9:57 AM / Will Deputy



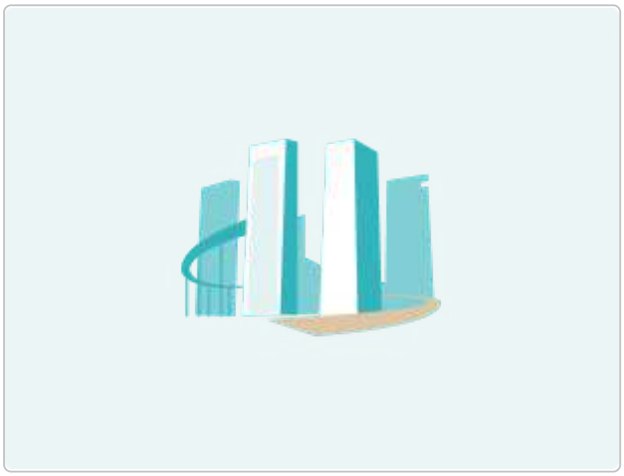
Created with inspect

Exhibit D

Blew & Associates P A
3825 N Shiloh Dr., Fayetteville, AR
72703
4794434506
blewinc.com

# Visual Slab Inspection

PREPARED BY
Will Deputy



CREATED DATE
16 Jan 2023

ASSET NAME

ASSET LOCATION

INSPECTION DATE
04 Jan 2023 - 05 Jan 2023

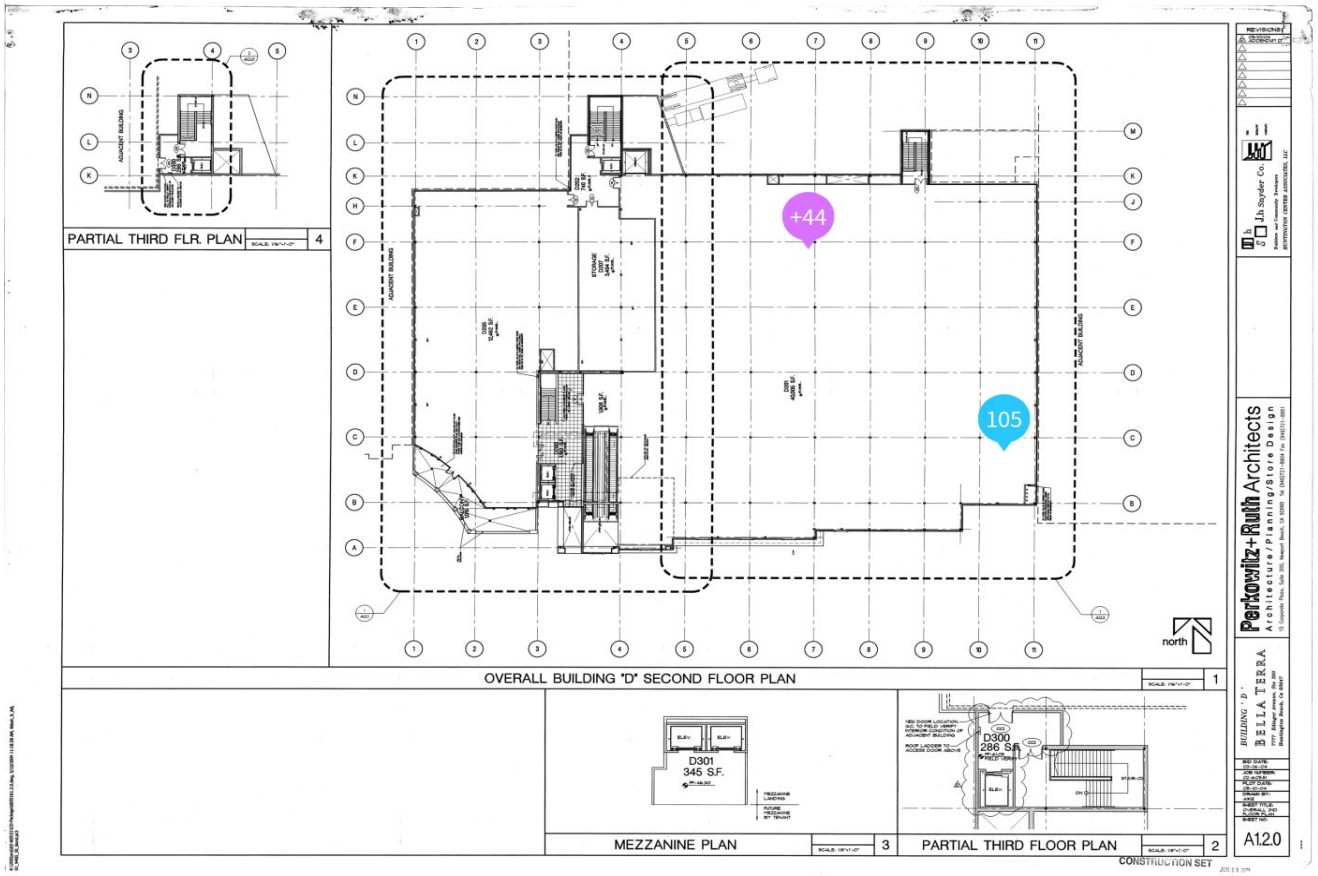


Created with inspect

# 2D View

FILE NAME
Floor Plan

TOTAL SPOTS IN VIEW
45 Spots






Created with inspect

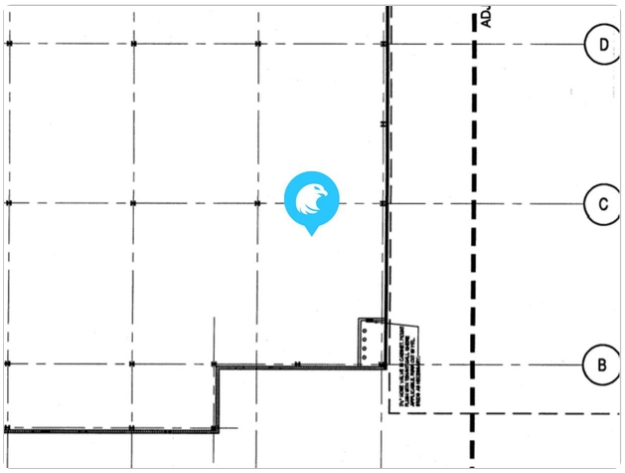
# Spot 105

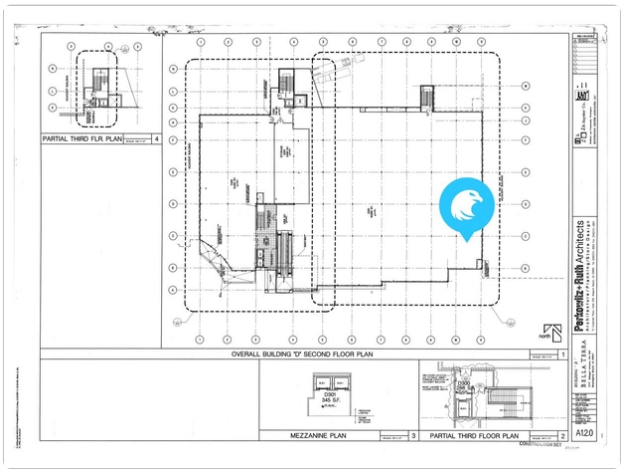
CREATED DATE
05 Jan 2023

SEVERITY
None

DEFECT TYPE
Conduits from first floor

## Location




## Photos and Sketches



05 Jan 2023, 11:20 AM / Will Deputy



Created with inspect

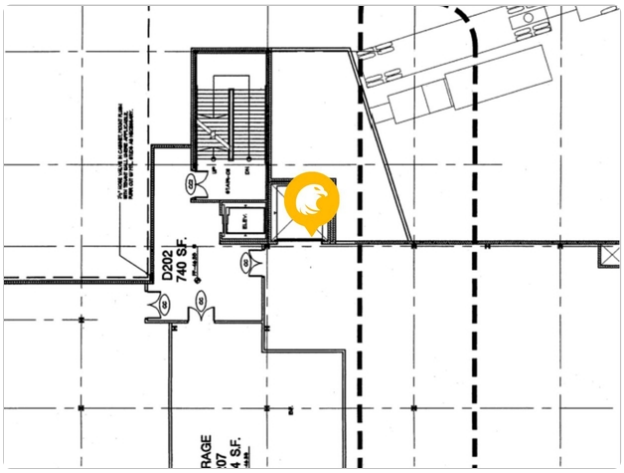
# Spot 104

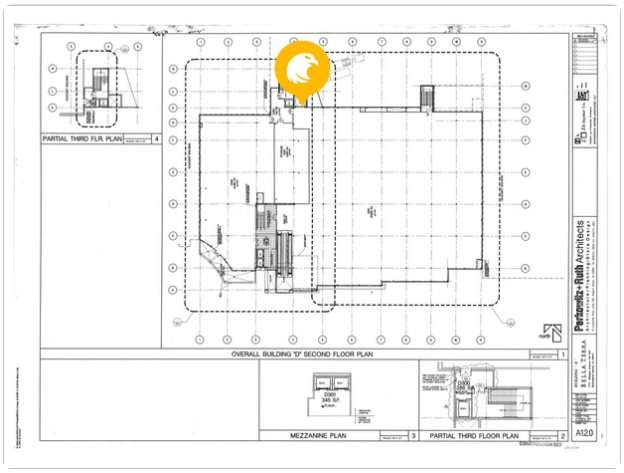
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:59 PM / Will Deputy



Created with inspect

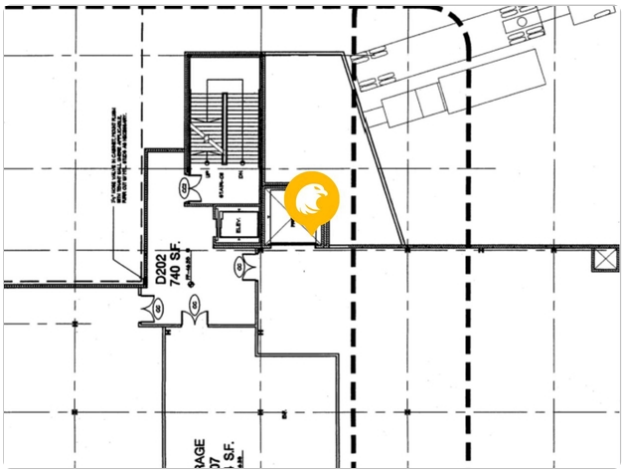
# Spot 103

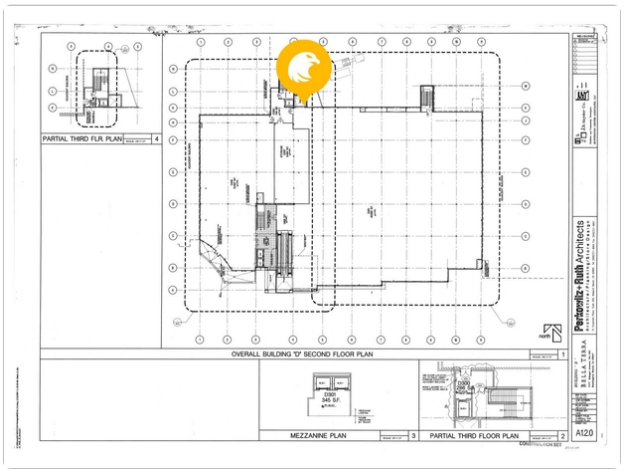
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:59 PM / Will Deputy



Created with inspect

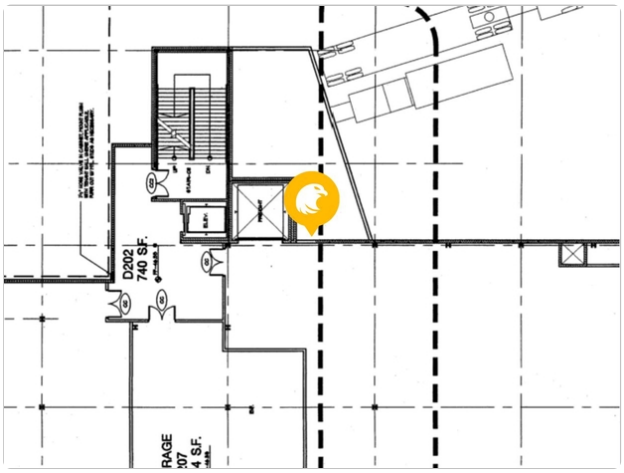
# Spot 102

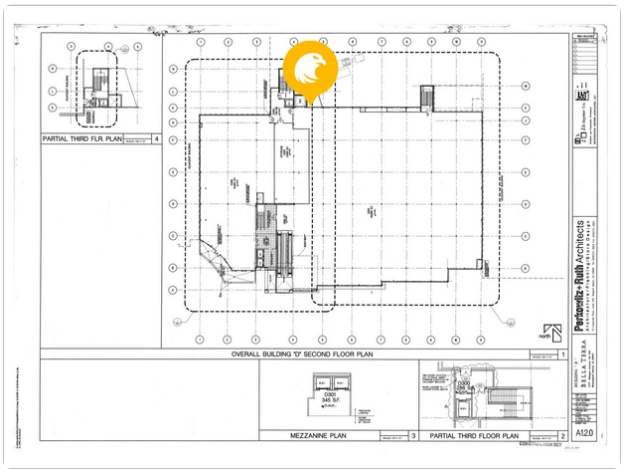
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:59 PM / Will Deputy



Created with inspect

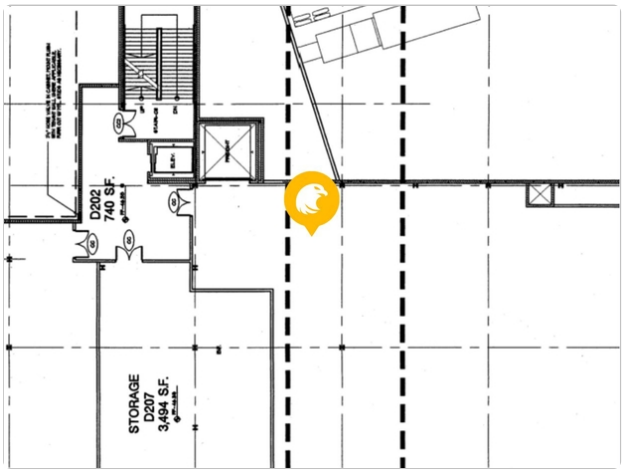
# Spot 101

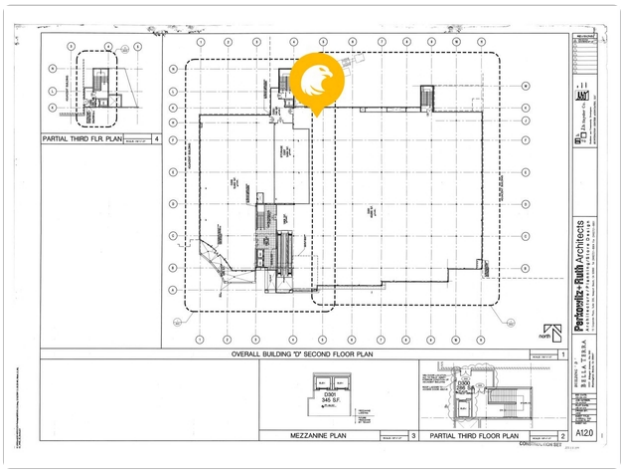
CREATED DATE
04 Jan 2023

SEVERITY
Minor

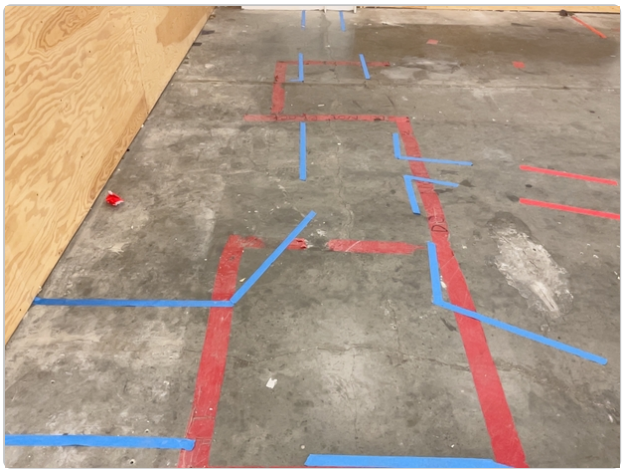
DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:59 PM / Will Deputy



Created with inspect

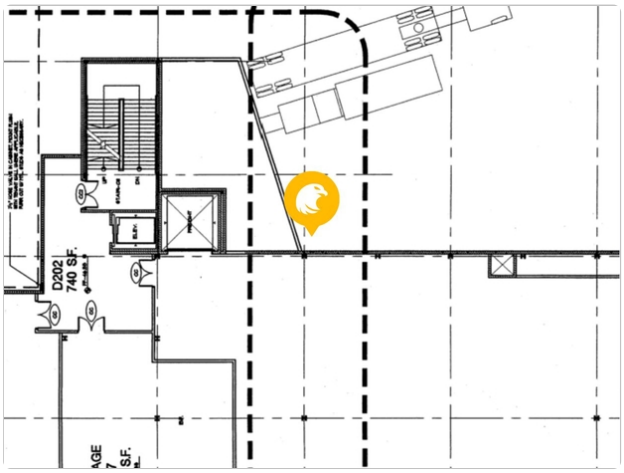
# Spot 100

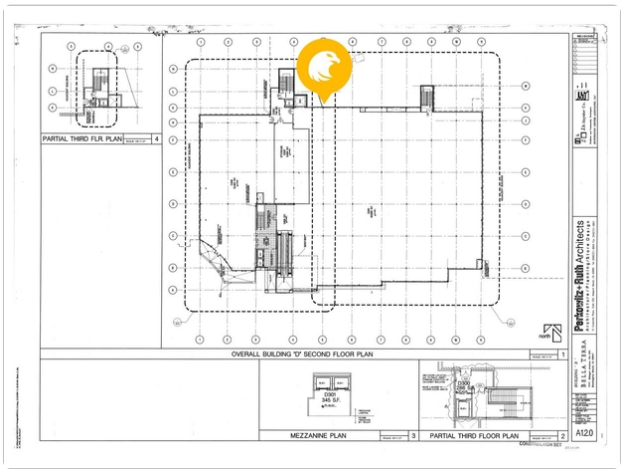
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:58 PM / Will Deputy



Created with inspect

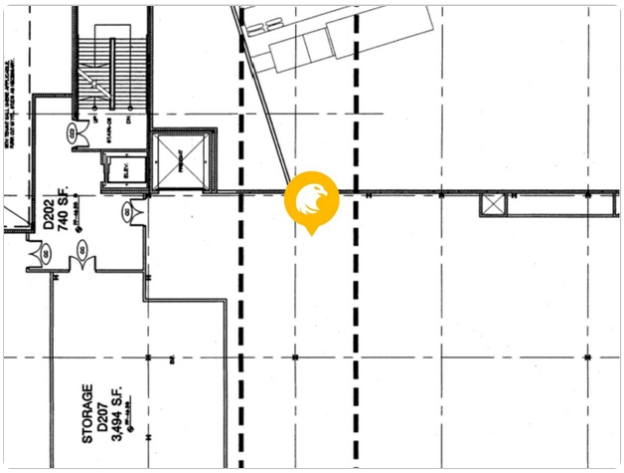
# Spot 99

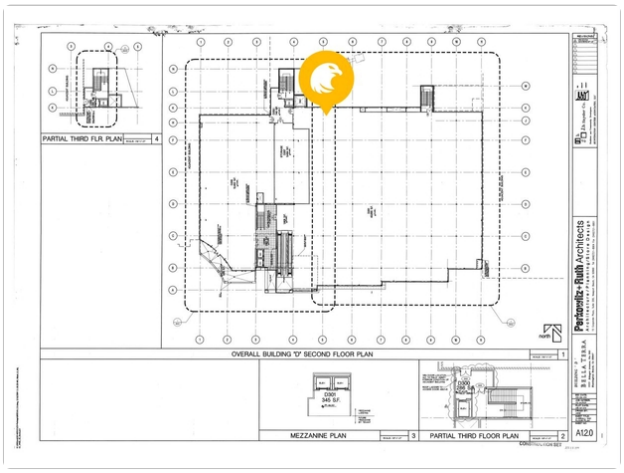
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:58 PM / Will Deputy



Created with inspect

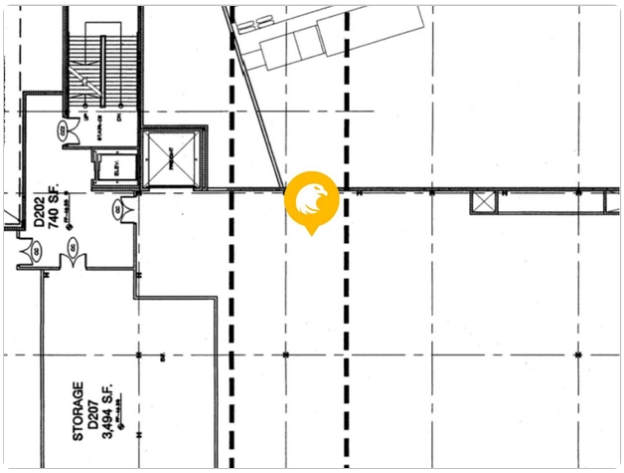
# Spot 98

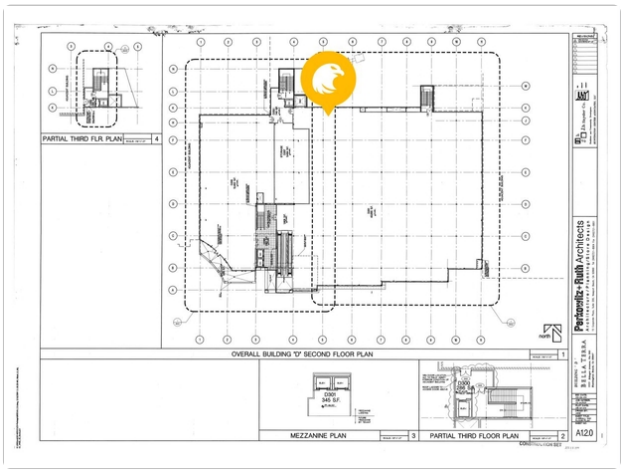
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:58 PM / Will Deputy



Created with inspect

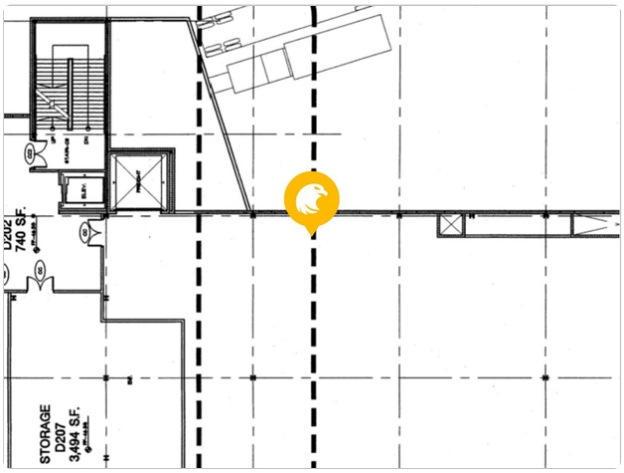
# Spot 97

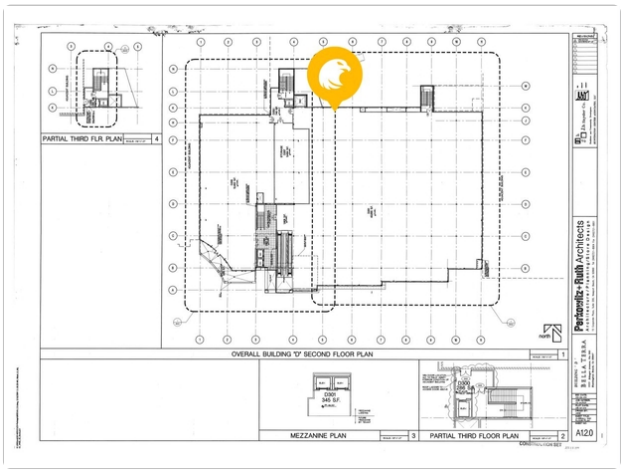
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:58 PM / Will Deputy



Created with inspect

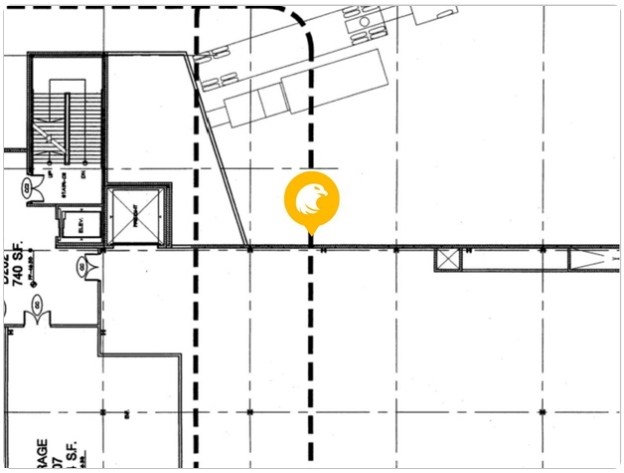
# Spot 96

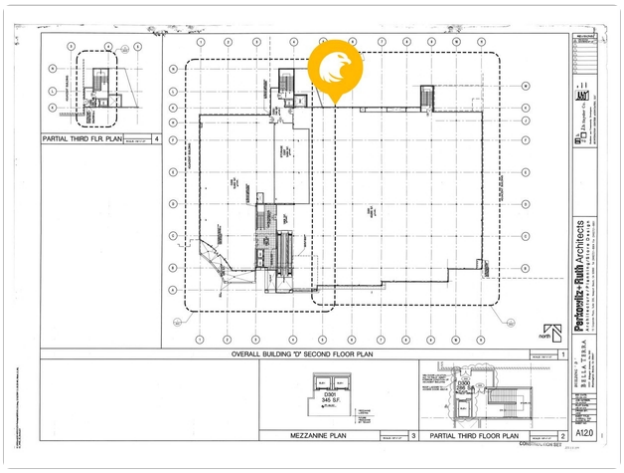
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:57 PM / Will Deputy



Created with inspect

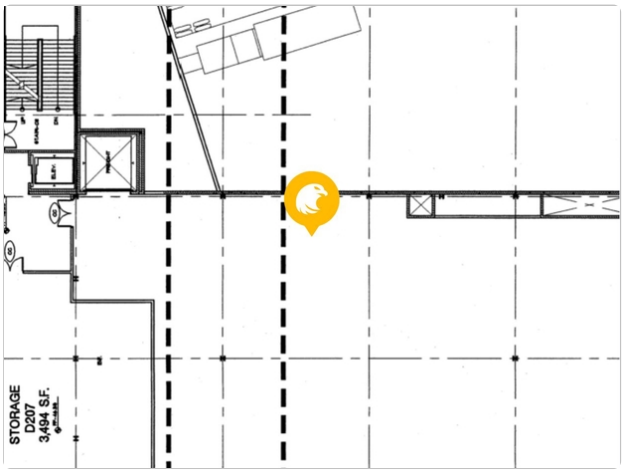
# Spot 95

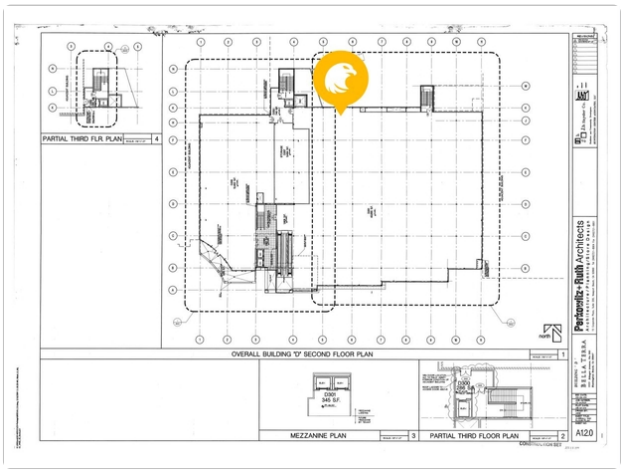
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:57 PM / Will Deputy



Created with inspect

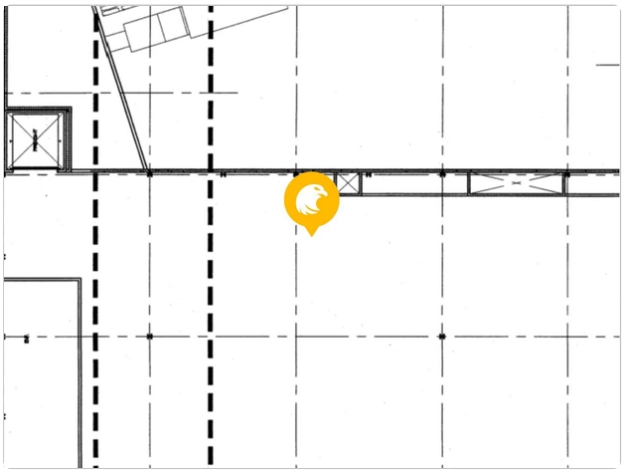
# Spot 94

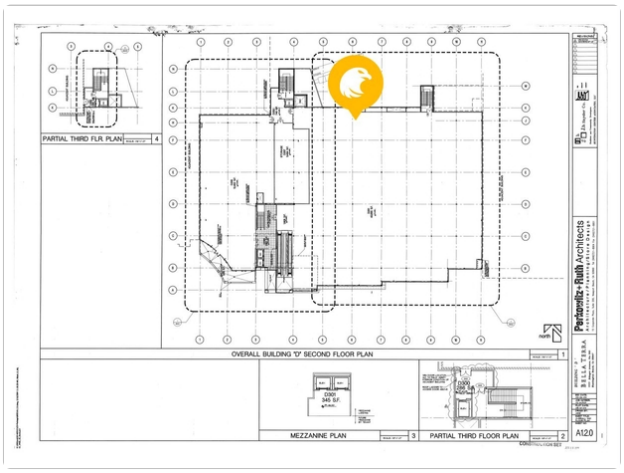
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:56 PM / Will Deputy



Created with inspect

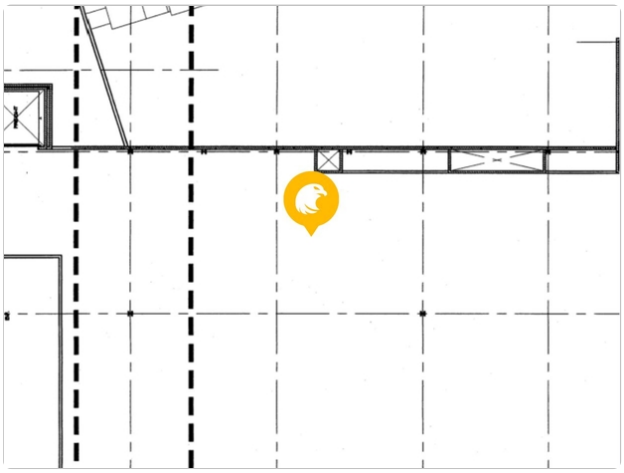
# Spot 93

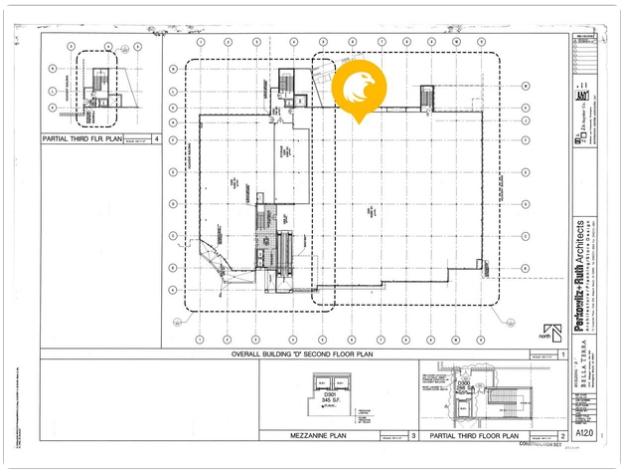
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:56 PM / Will Deputy



Created with inspect

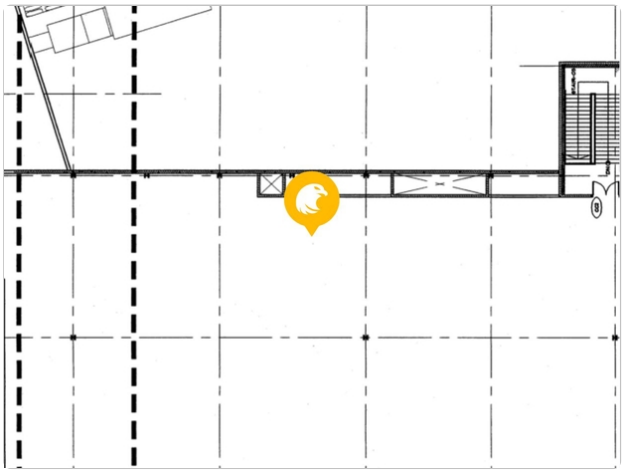
# Spot 92

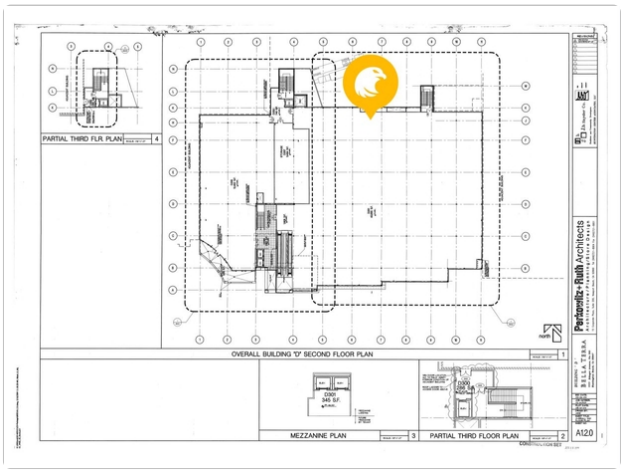
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:56 PM / Will Deputy



Created with inspect

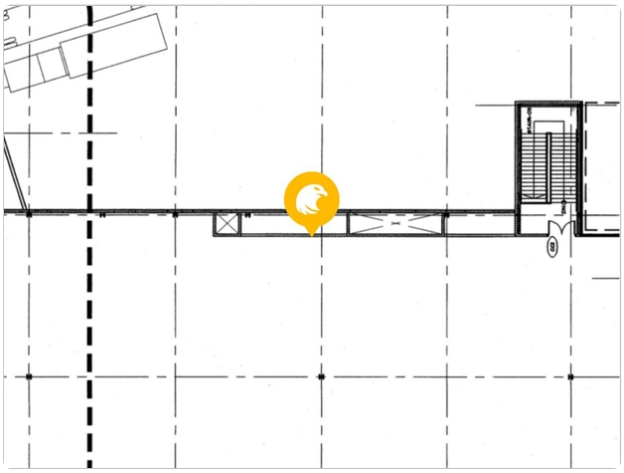
# Spot 91

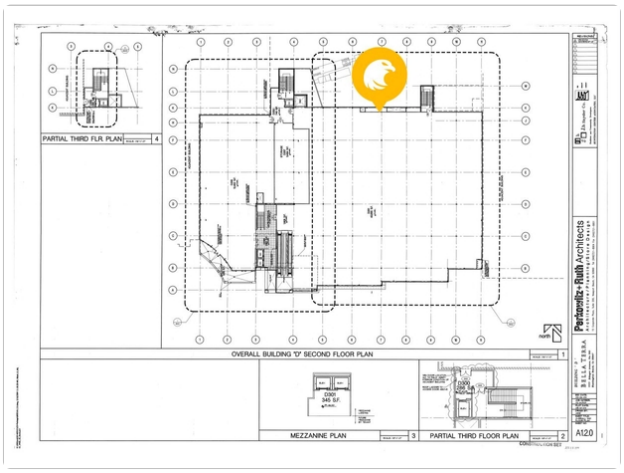
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:56 PM / Will Deputy



Created with inspect

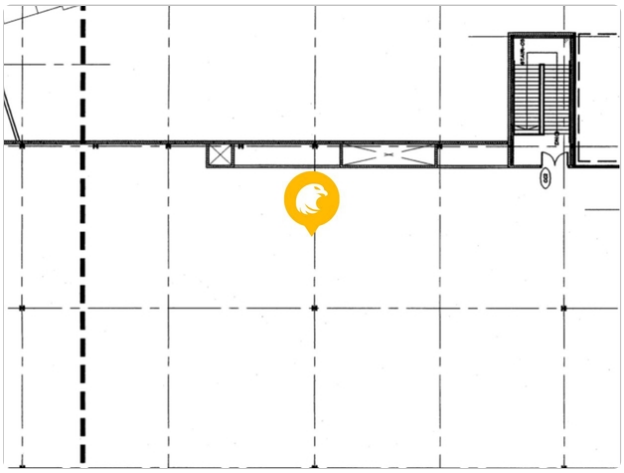
# Spot 90

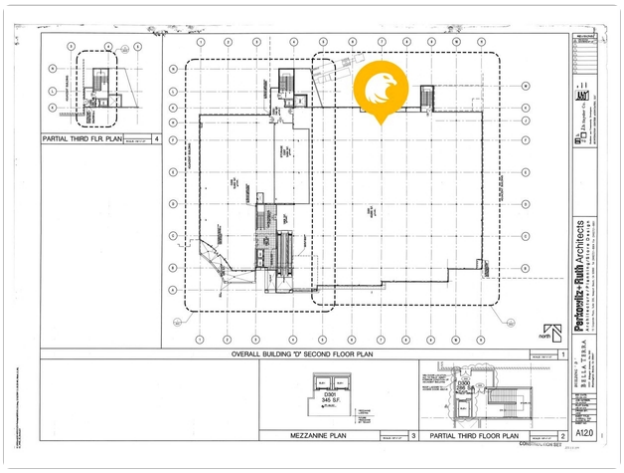
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:56 PM / Will Deputy



Created with inspect

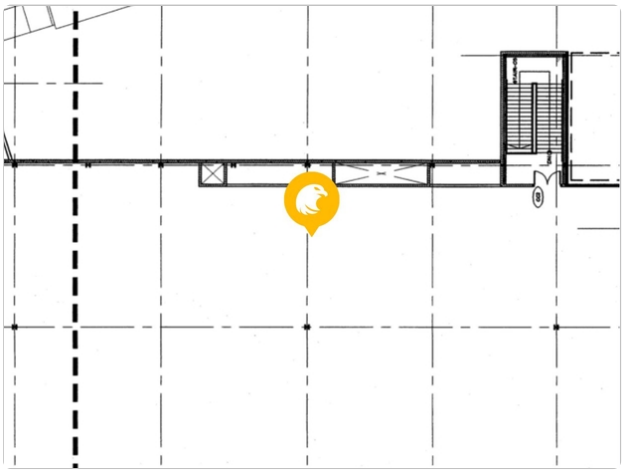
# Spot 89

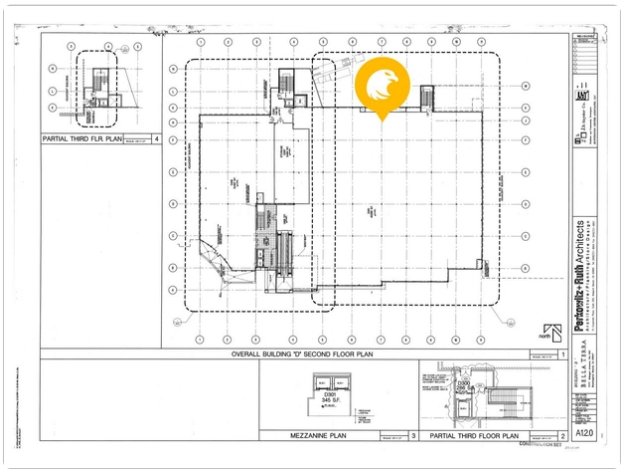
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:55 PM / Will Deputy



Created with inspect

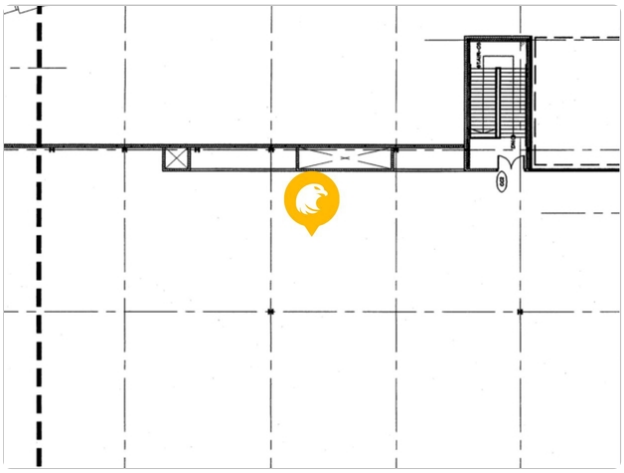
# Spot 88

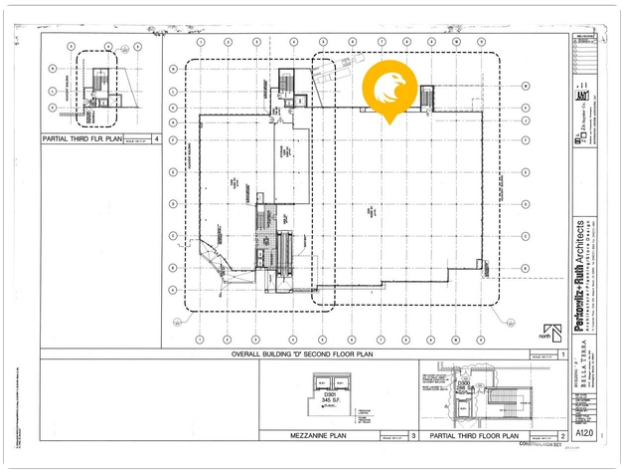
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:55 PM / Will Deputy



Created with inspect

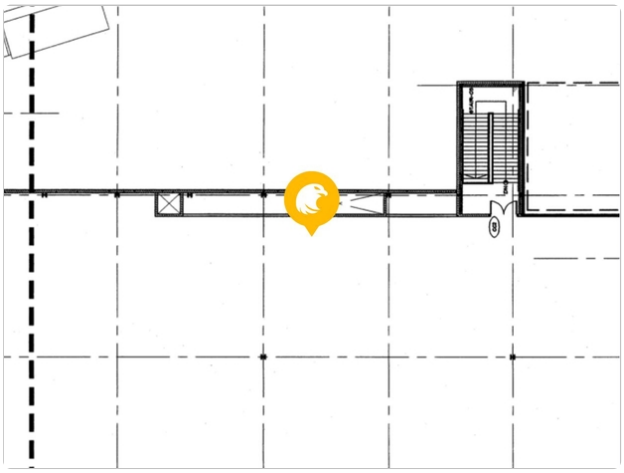
# Spot 87

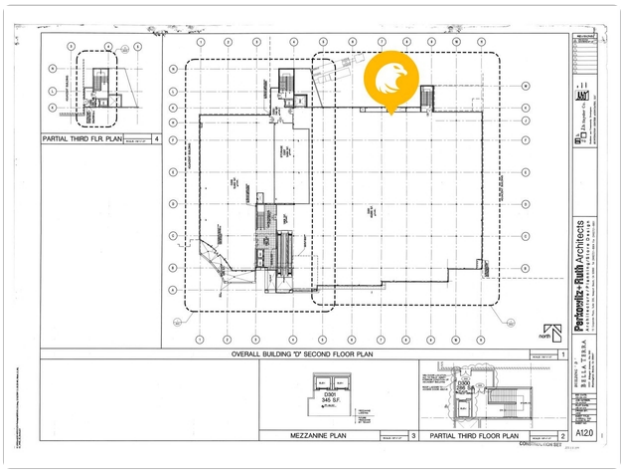
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:55 PM / Will Deputy



Created with inspect

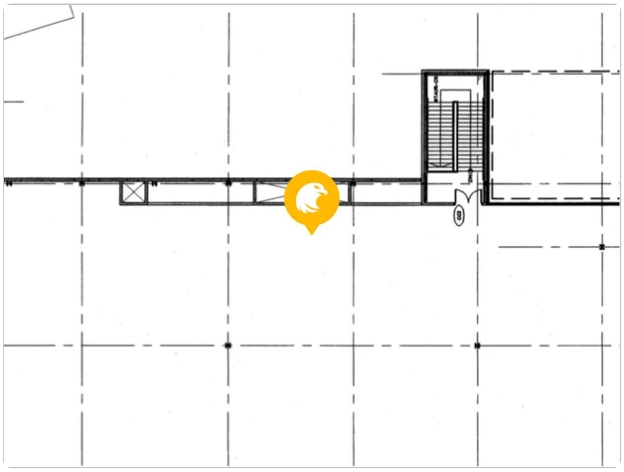
# Spot 86

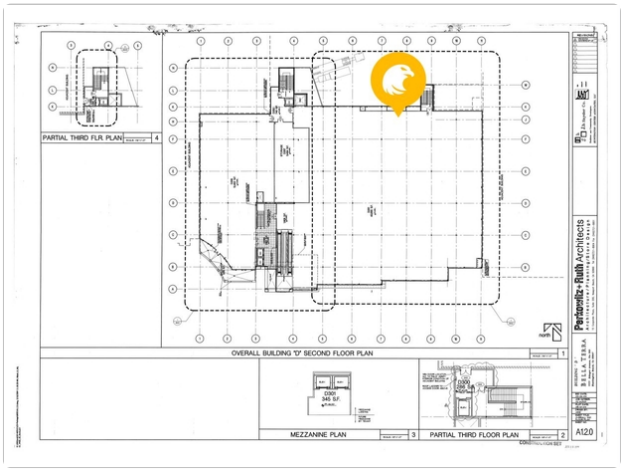
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:55 PM / Will Deputy



Created with inspect

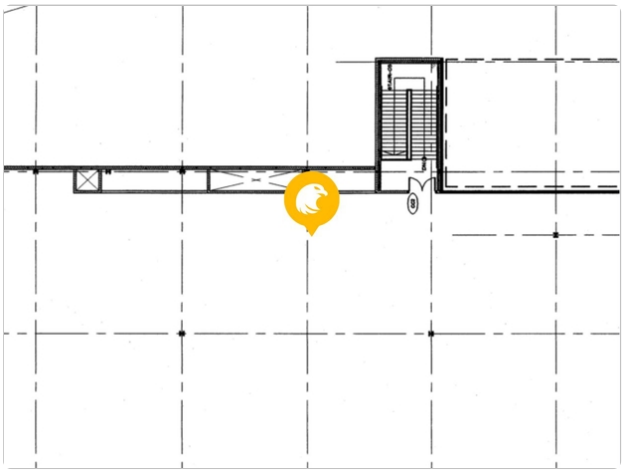
# Spot 85

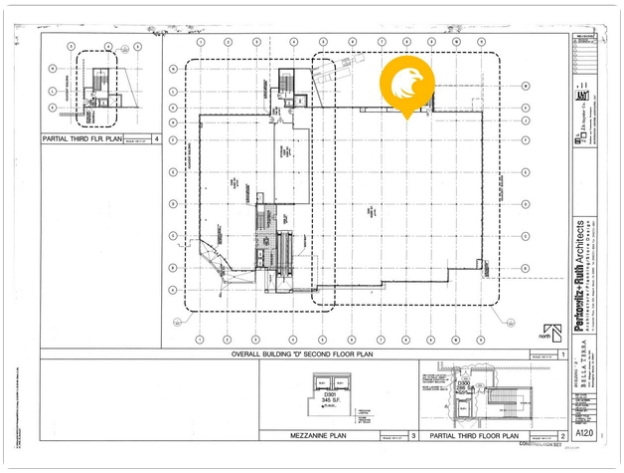
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:55 PM / Will Deputy



Created with inspect

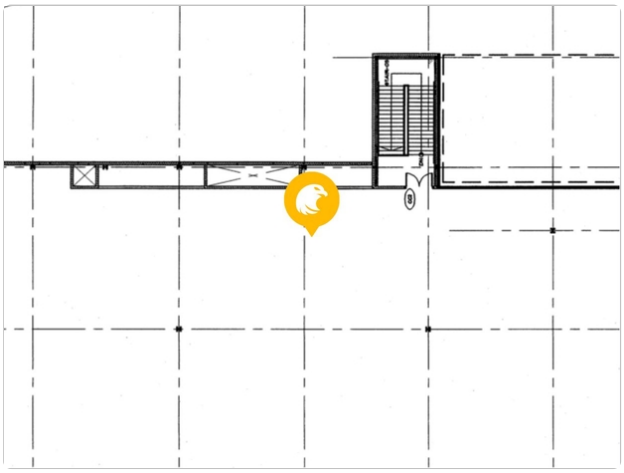
# Spot 84

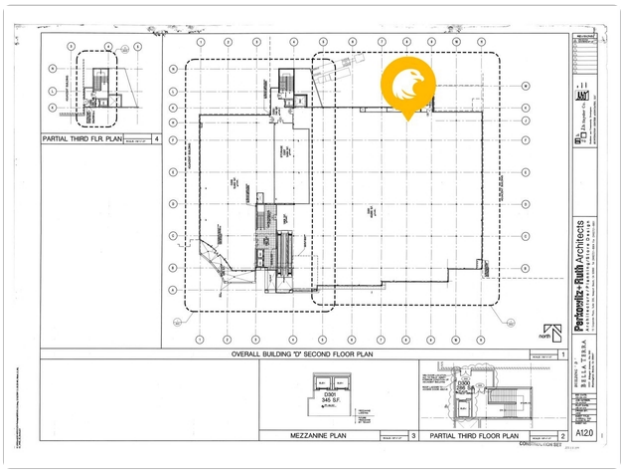
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:54 PM / Will Deputy



Created with inspect

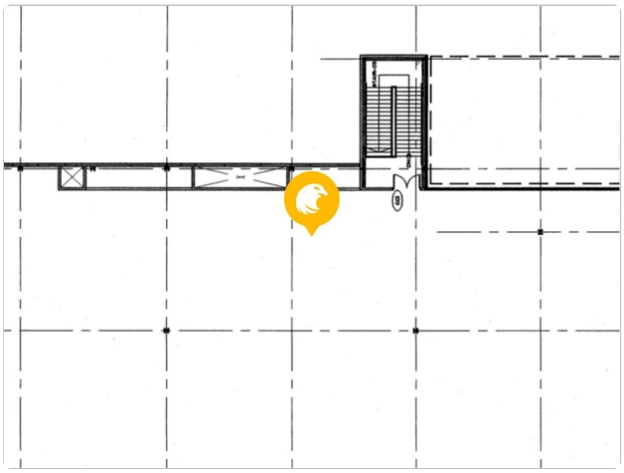
# Spot 83

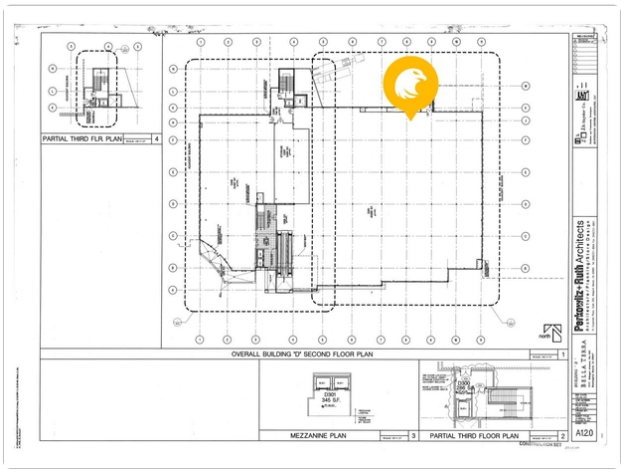
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:54 PM / Will Deputy



Created with inspect

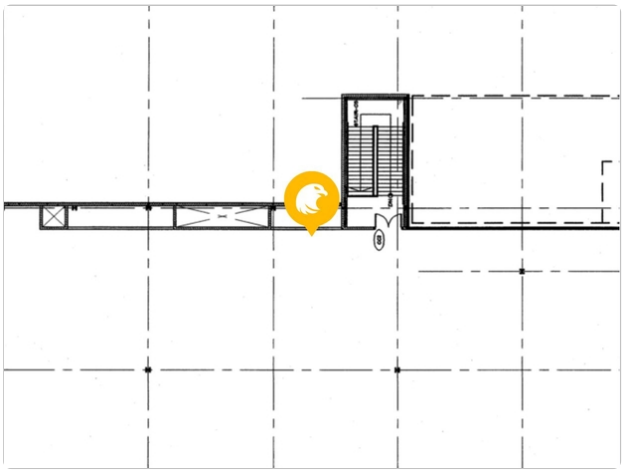
# Spot 82

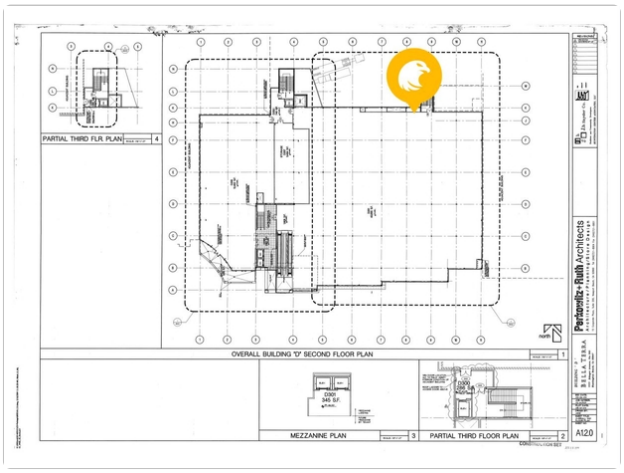
CREATED DATE
04 Jan 2023

SEVERITY
Minor

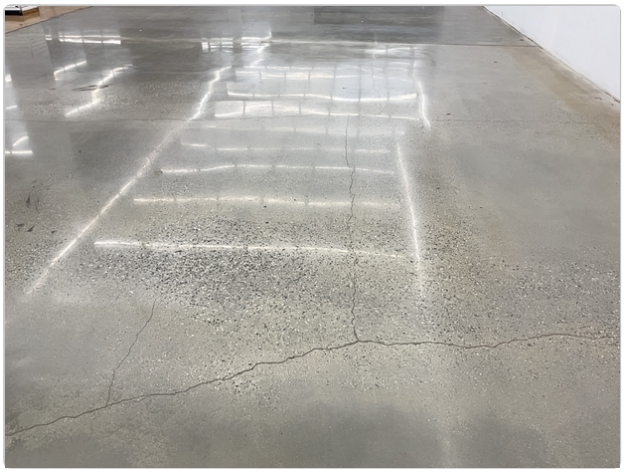
DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:54 PM / Will Deputy



Created with inspect

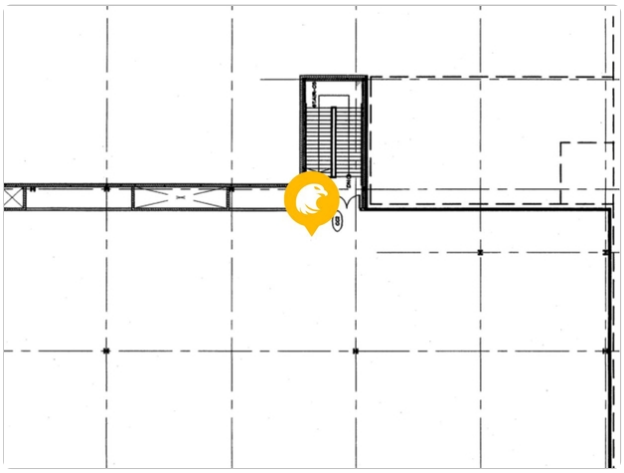
# Spot 81

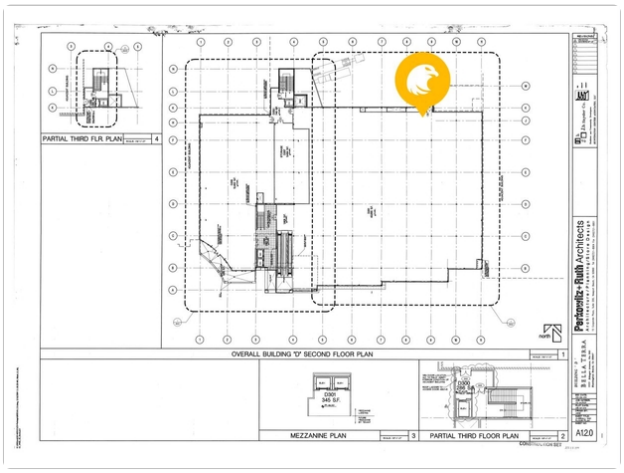
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:54 PM / Will Deputy



Created with inspect

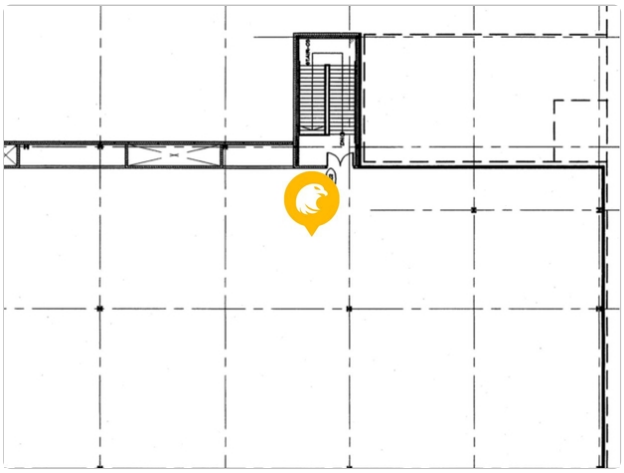
# Spot 80

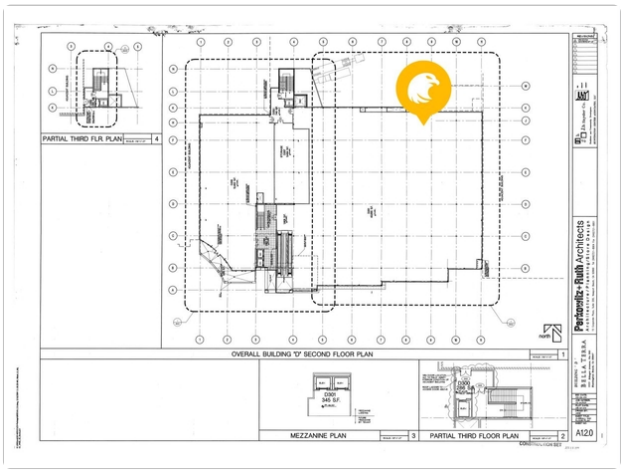
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:54 PM / Will Deputy



Created with inspect

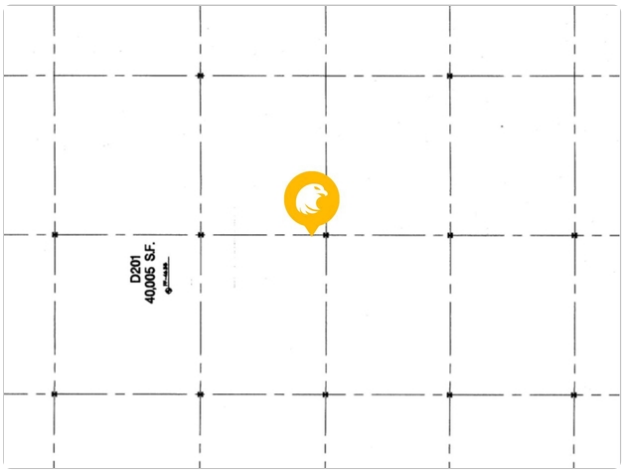
# Spot 79

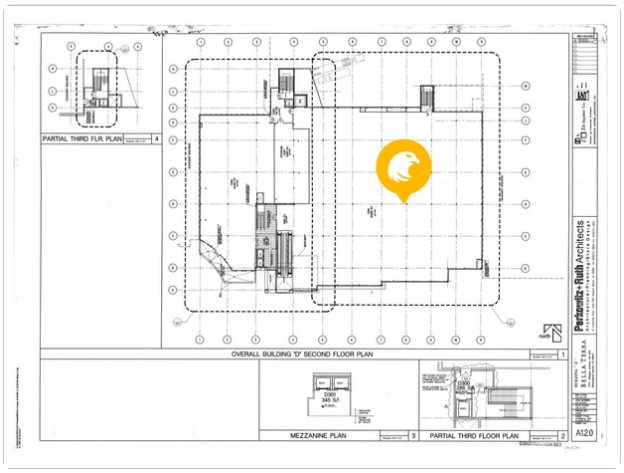
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:53 PM / Will Deputy



Created with inspect

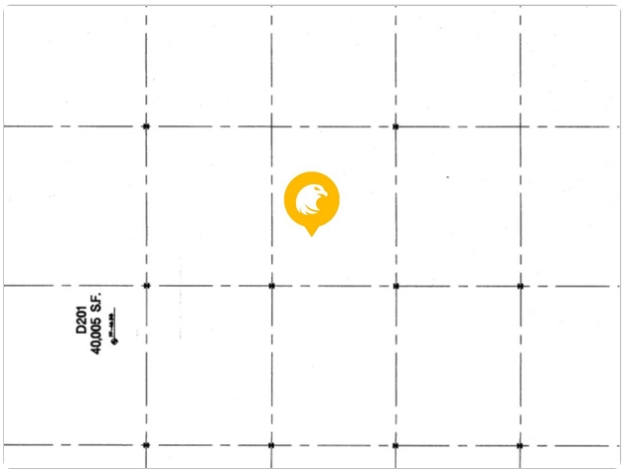
# Spot 78

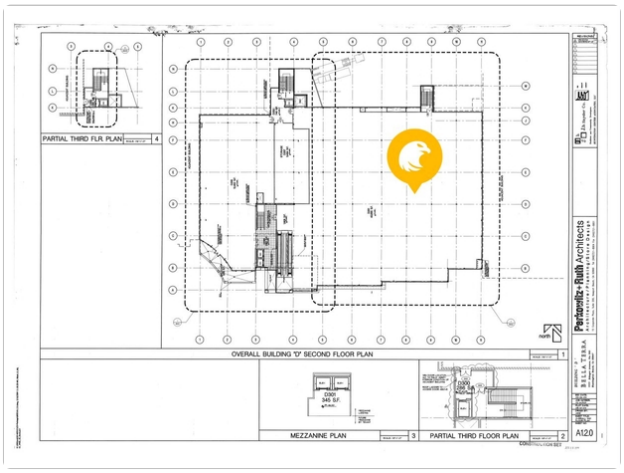
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:53 PM / Will Deputy



Created with inspect

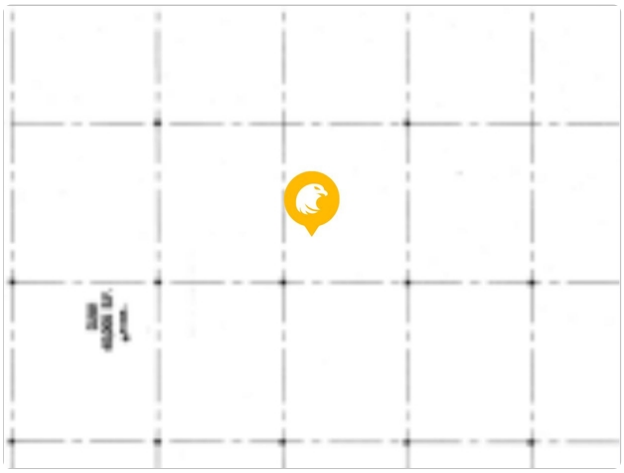
# Spot 77

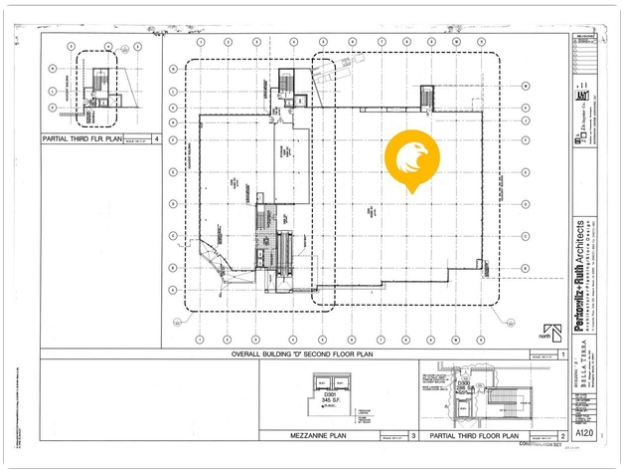
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:52 PM / Will Deputy



Created with inspect

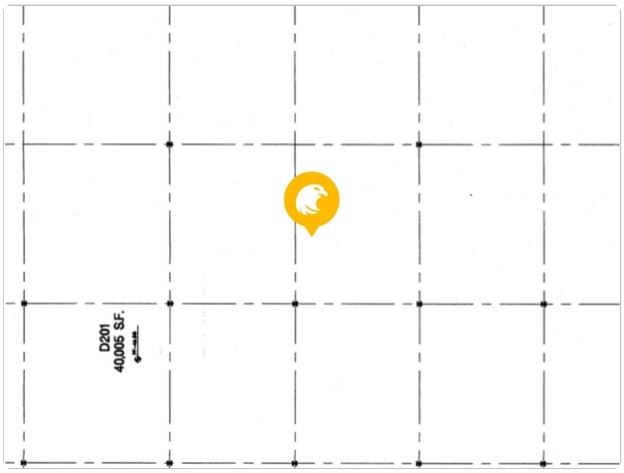
# Spot 76

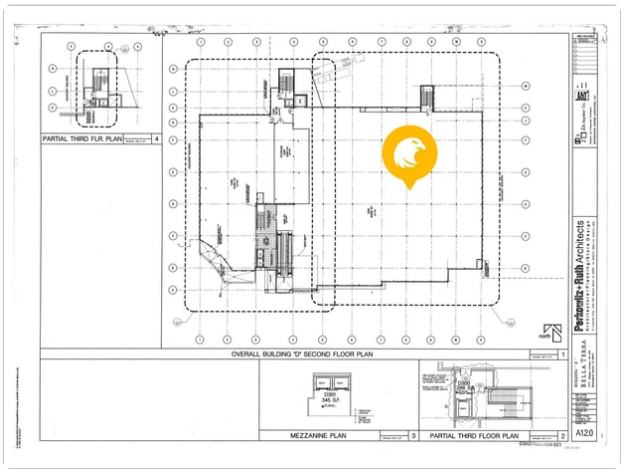
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:52 PM / Will Deputy



Created with inspect

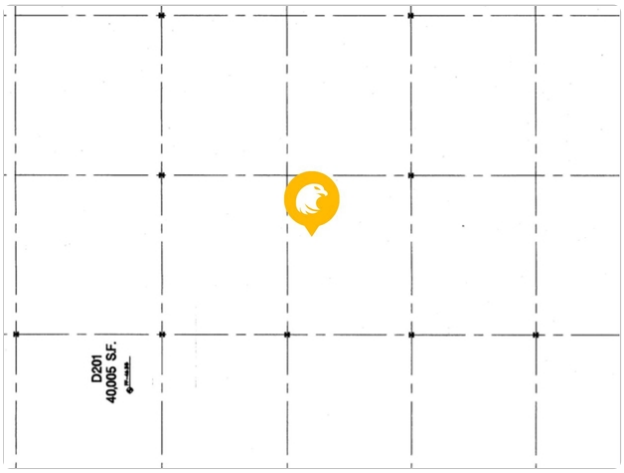
# Spot 75

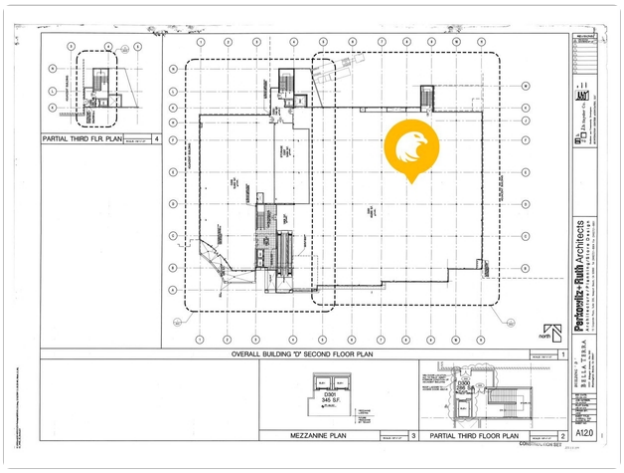
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:52 PM / Will Deputy



Created with inspect

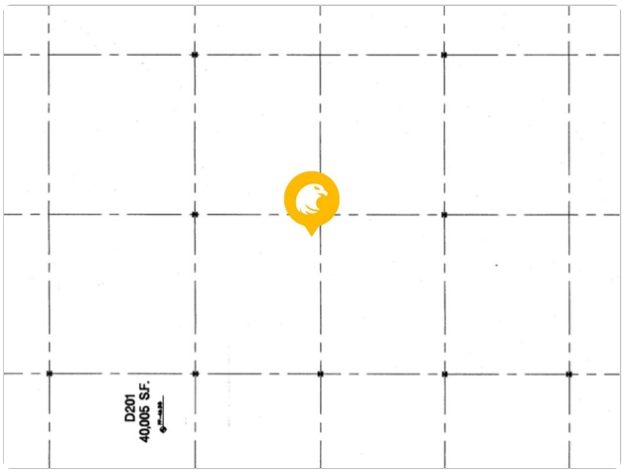
# Spot 74

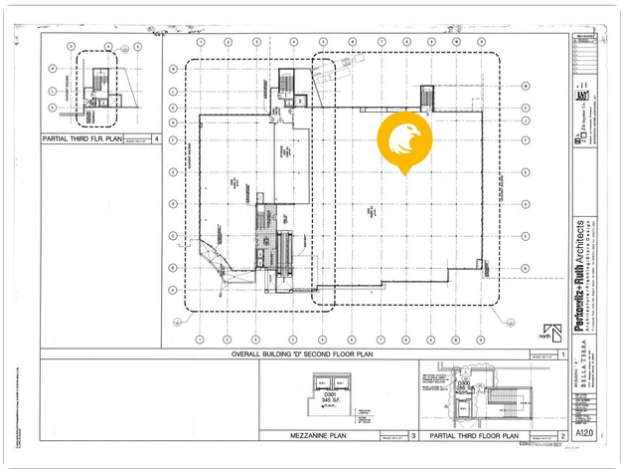
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:52 PM / Will Deputy



Created with inspect

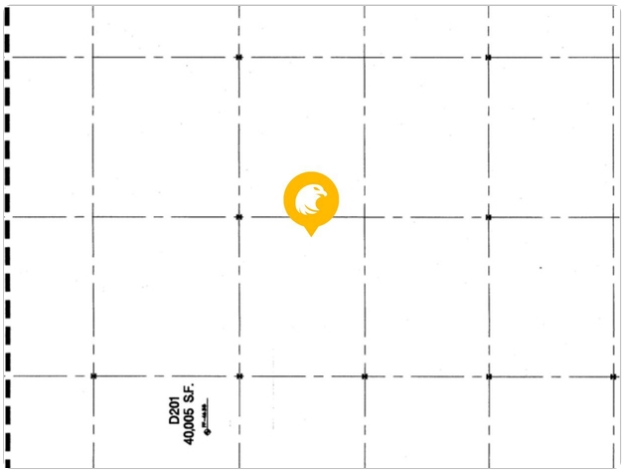
# Spot 73

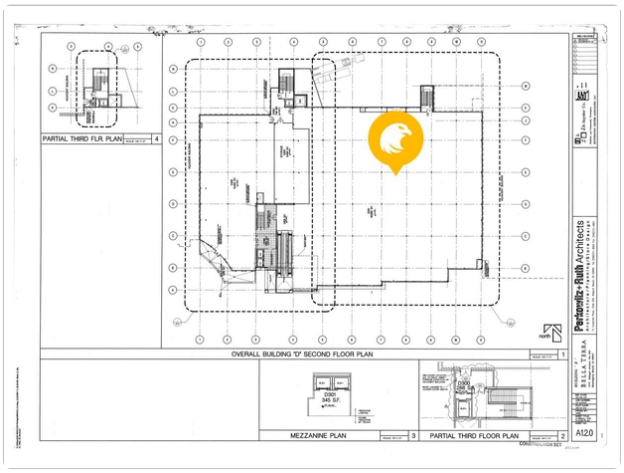
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:52 PM / Will Deputy



Created with inspect

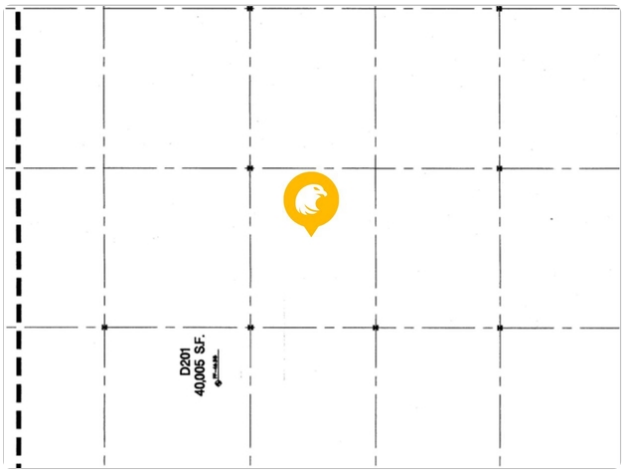
# Spot 72

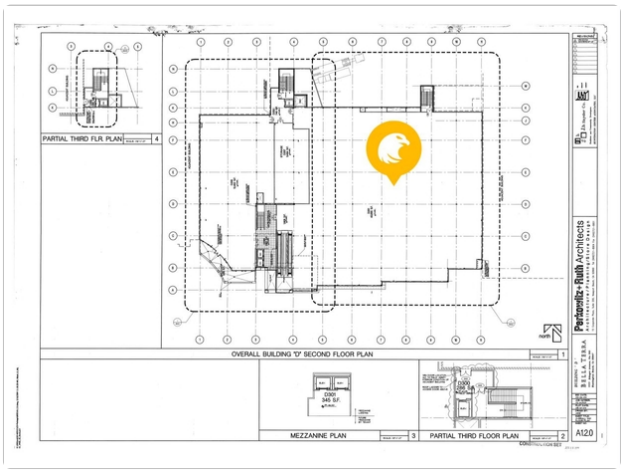
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:51 PM / Will Deputy



Created with inspect

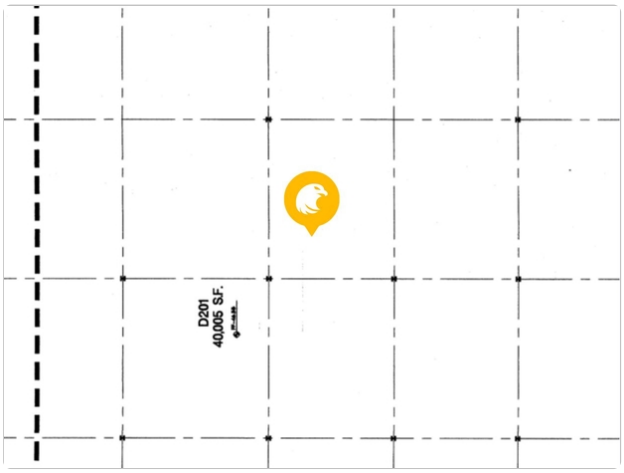
# Spot 71

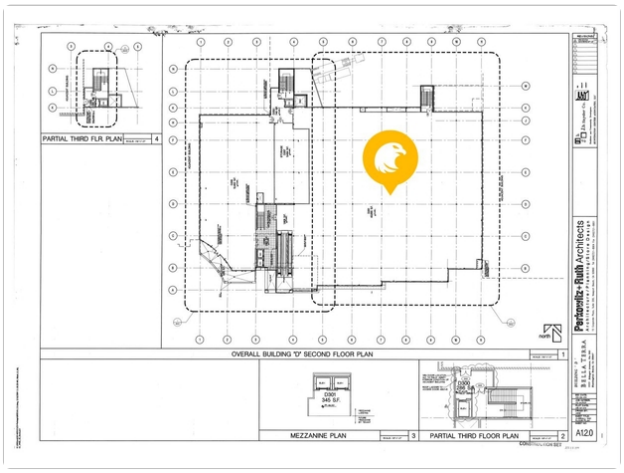
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:51 PM / Will Deputy



Created with inspect

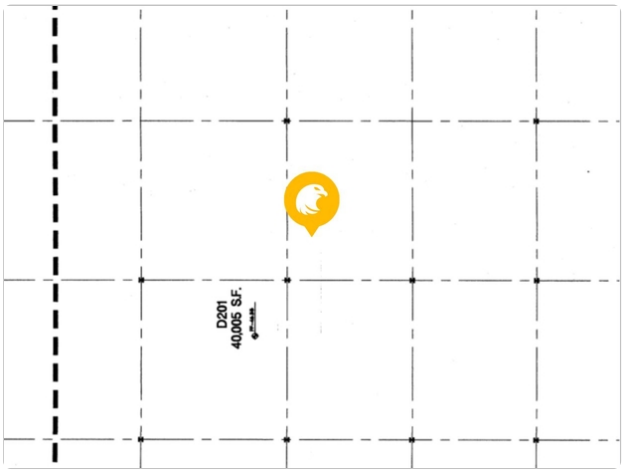
# Spot 70

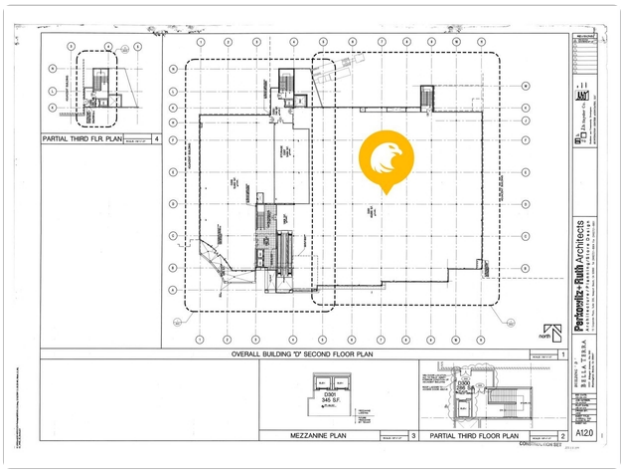
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:51 PM / Will Deputy



Created with inspect

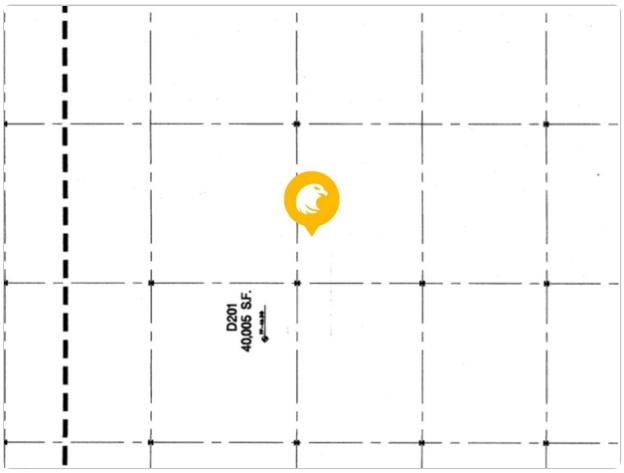
# Spot 69

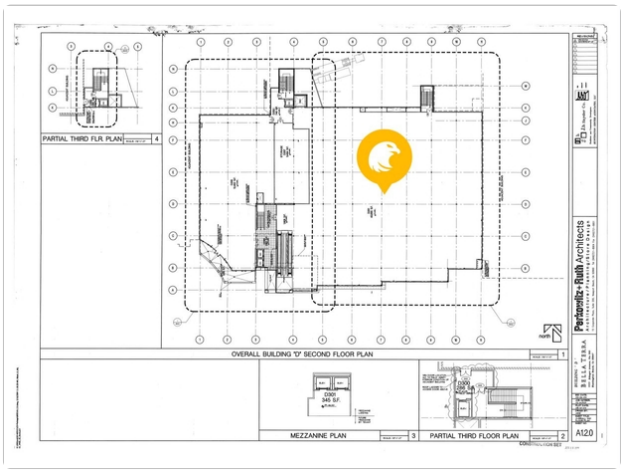
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:51 PM / Will Deputy



Created with inspect

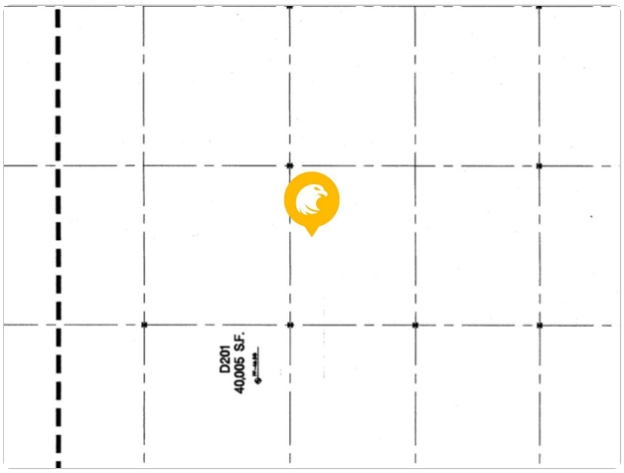
# Spot 68

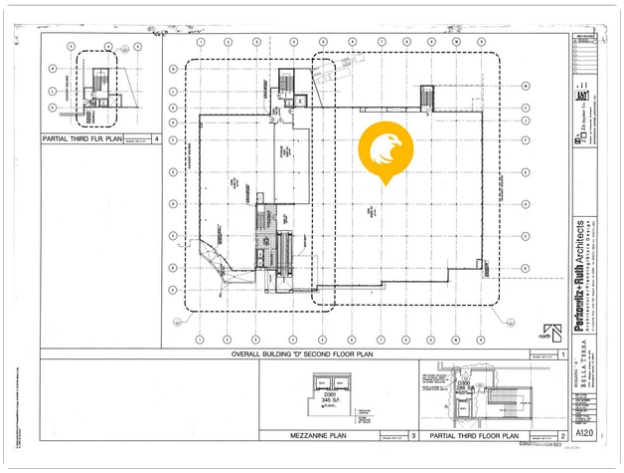
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:50 PM / Will Deputy



Created with inspect

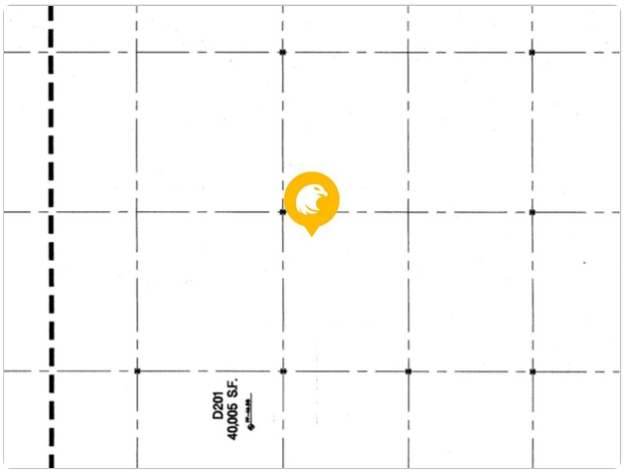
# Spot 67

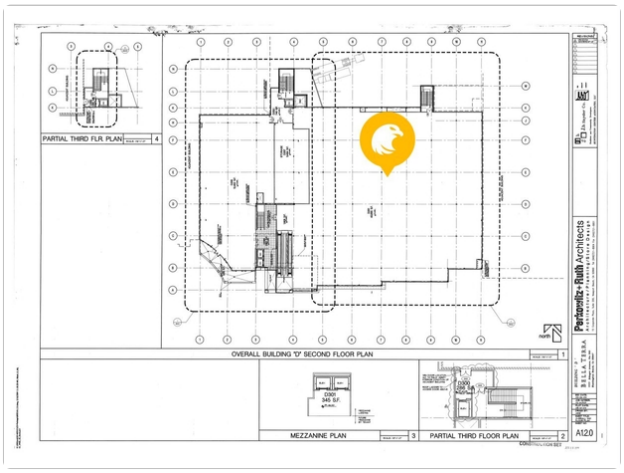
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:50 PM / Will Deputy



Created with inspect

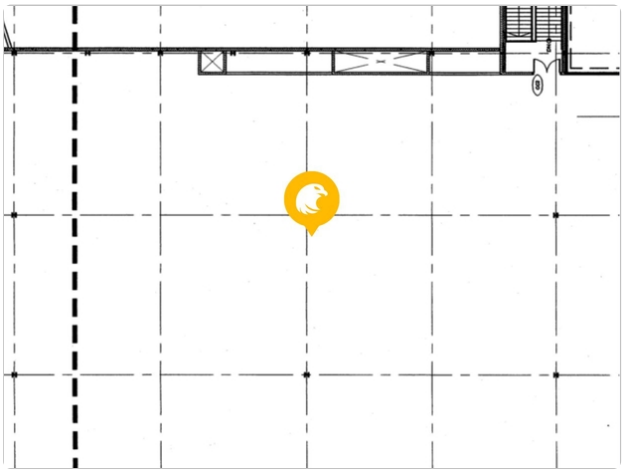
# Spot 66

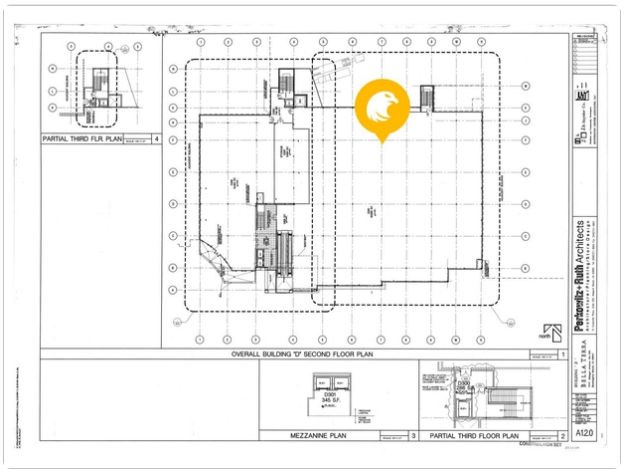
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:49 PM / Will Deputy



Created with inspect

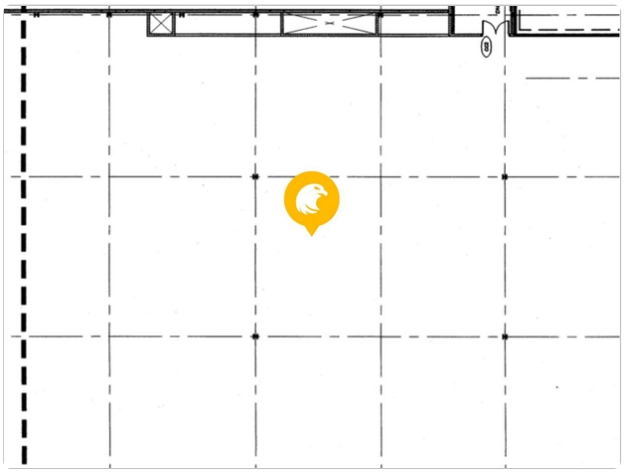
# Spot 65

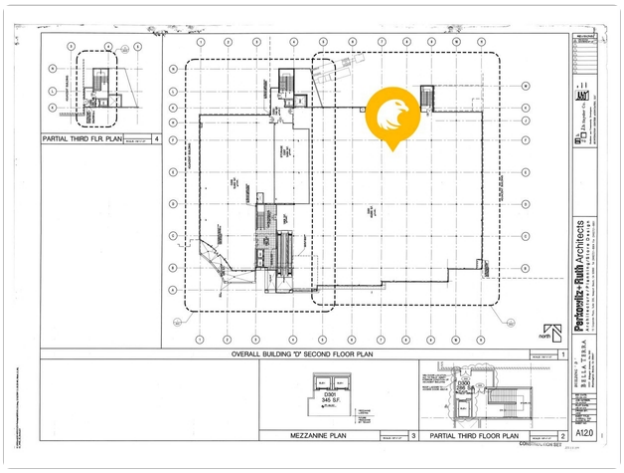
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:49 PM / Will Deputy



Created with inspect

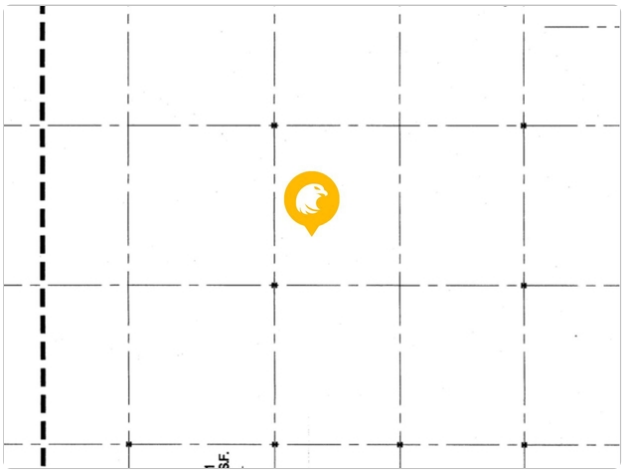
# Spot 64

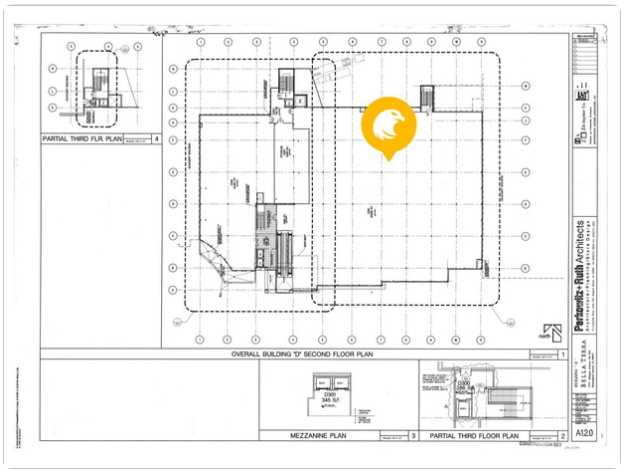
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:49 PM / Will Deputy



Created with inspect

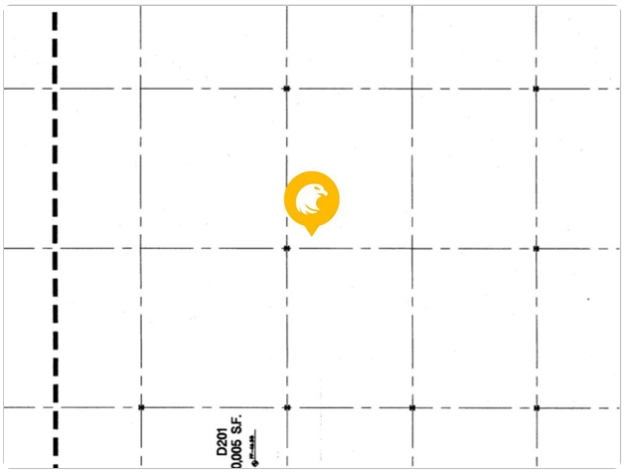
# Spot 63

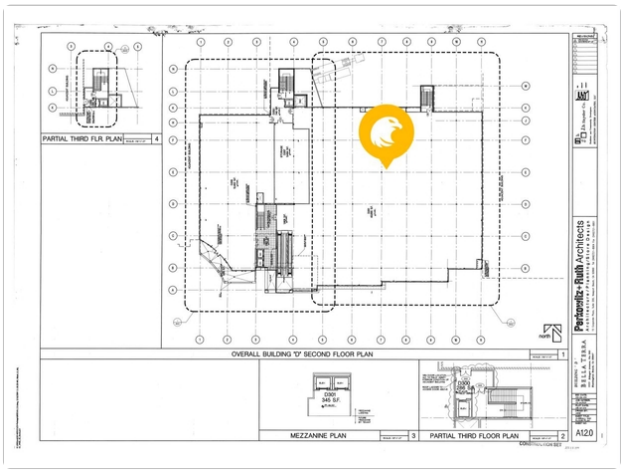
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location




## Photos and Sketches



04 Jan 2023, 5:49 PM / Will Deputy



Created with inspect

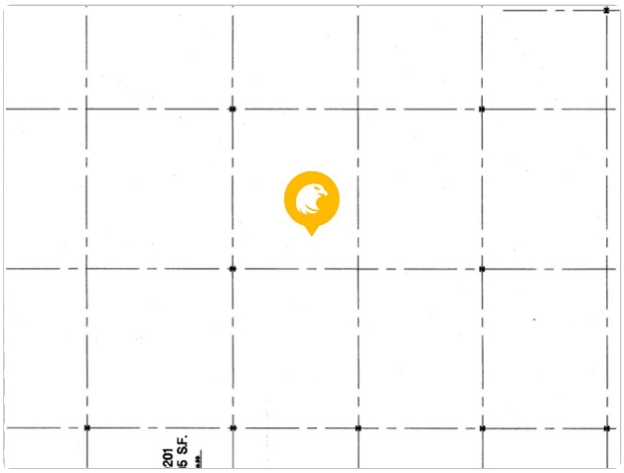
# Spot 62

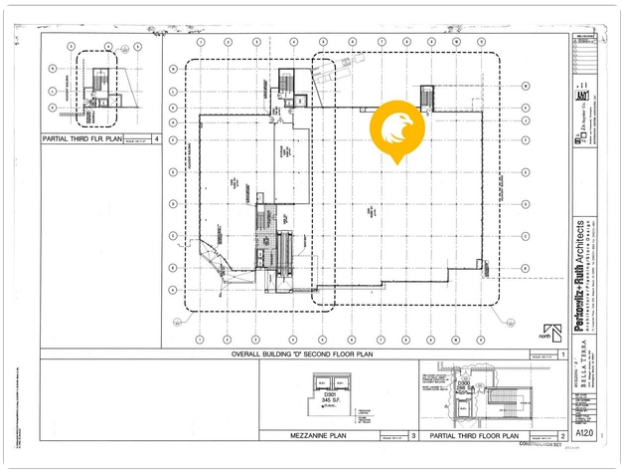
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:49 PM / Will Deputy



Created with inspect

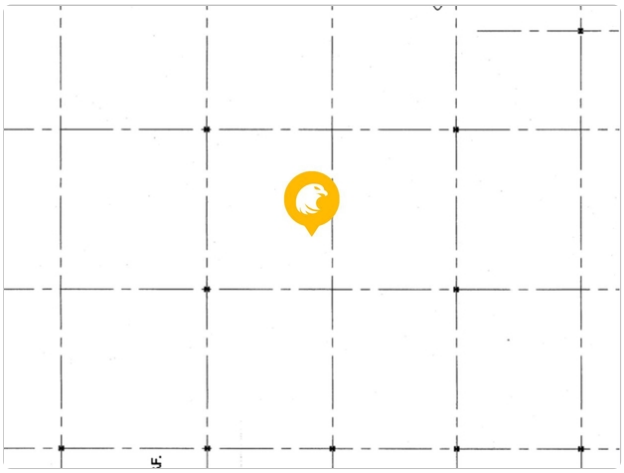
# Spot 61

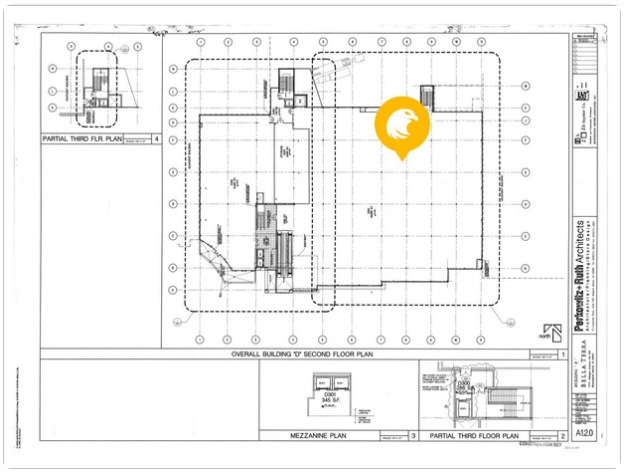
CREATED DATE
04 Jan 2023

SEVERITY
Minor

DEFECT TYPE
Crack

## Location






## Photos and Sketches



04 Jan 2023, 5:48 PM / Will Deputy



Created with inspect