



Drainage Work Order Request For Repair

Hardin County

Date: 5/1/2020

Work Order #: WO00000294

Drainage District: DDs\DD 11 (51024)

Sec-Twp-Rge: 13-88-22 **Qtr Sec:** _____

Location/GIS: 88-22-13-300-003

Requested By: Robert Smuck

Contact Phone: (641) 640-0132

Contact Email: _____

Landowner (if different): _____

Description: DD 11 - Robert Smuck reports 2' tile blowout along fenceline in SW corner of parcel # 882213300003, along fenceline shared with Shirley Madole's parcel to the south. Smuck had Gehrke out to look, and Gehrke states it is DD tile.

Repair labor, materials and equipment: _____

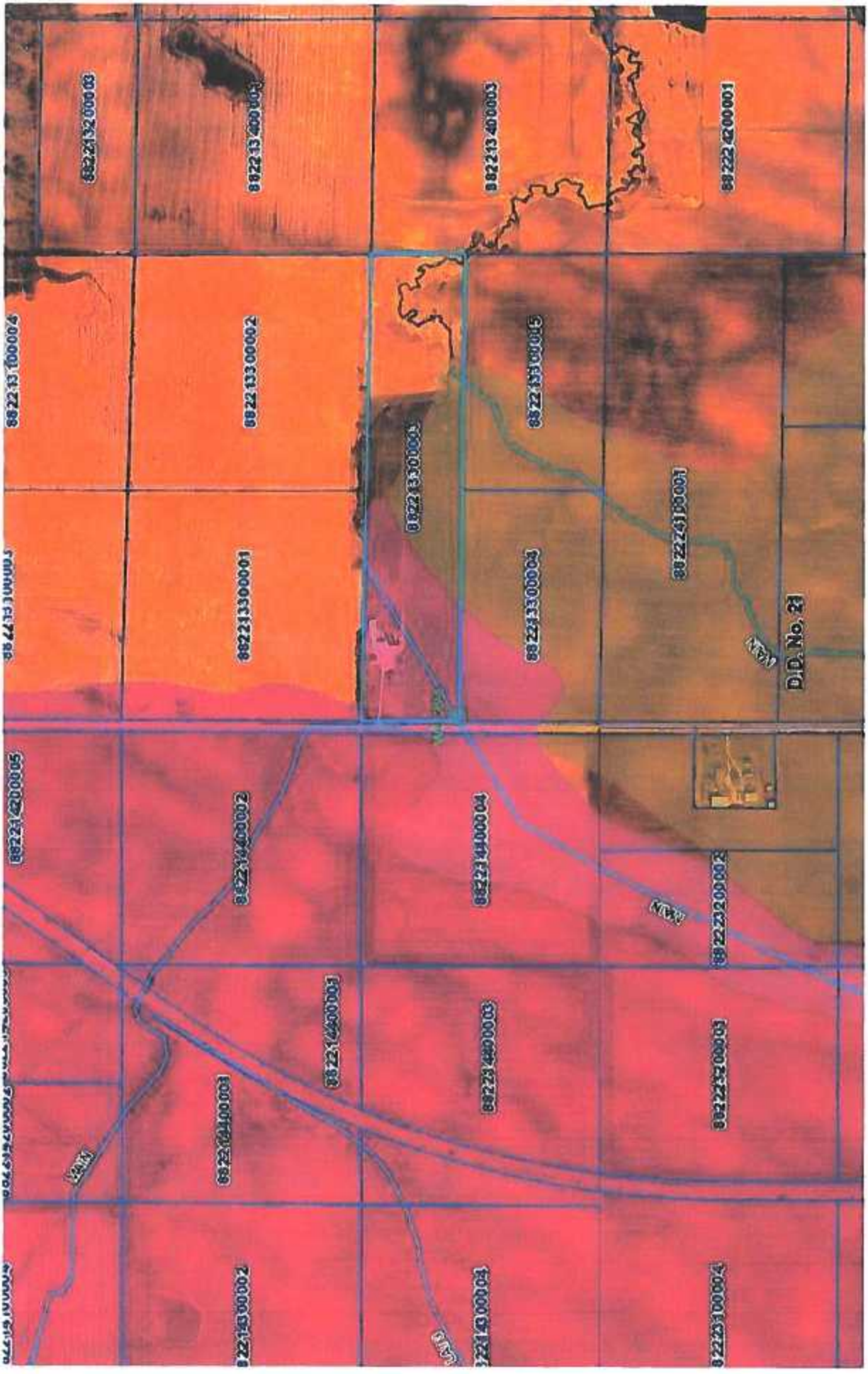
Repaired By: _____ **Date:** _____

Please reference work order # and send statement for services to:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ **Date:** _____





Drainage District:

#11

Investigation Summary:

- Per the earlier recommendation and authorization, CCTV inspected the 21-inch VCP Main Tile starting at the existing 5 feet diameter by 2 feet deep blowout located in the NE¼ of Section 23, Township 88 North, Range 22 West. CCTV'ed for approximately 1320 feet west of G Avenue and approximately 1500 feet north of 195th Street.
- Televised 976 feet upstream (to the northeast) from said existing blowout and found 13 partial/imminent collapses. (see attached Tabulated Defects sheet)
- Televised 607 feet downstream (to the southwest) from said existing tile blowout and found 13 partial/imminent collapses. (see attached Tabulated Defects sheet)
- Temporarily repaired said existing blowout with 24-inch Dual wall HDPE tile with fabric wrapped joints and backfilled the area with on-site soil.

Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials

Additional Actions Recommended:

It is obvious that the Main Tile is at the end of its useful lifecycle and needs to be repaired based on the CCTV results and the history of repairs in the area. If nothing is done, the tile's condition will only continue to deteriorate which will result in future blowouts and sinkholes that will impact the drainage capacity of the Main Tile and could result in siltation of the same. Therefore, we would recommend repairing the 26 collapse areas identified through 11 spot repairs which would consist of replacing approximately 475 feet of existing tile. It is our opinion that the total construction cost would be \$40,000-\$49,000. This cost is low enough that neither a hearing nor Engineer's Report would be required. Alternatively, the District Trustees could pursue replacement of the Main tile for its entire length of CCTV, the cost of which would exceed \$50,000 and require a hearing and Engineer's Report.

As noted on the Tabulated Contractor Time and Materials, crop damage was incurred. It is recommended that the District Trustees pay any damage claim brought forth.



Tabulated Contractor Time and Materials

Date	Totals	6/16/2020	6/17/2020	6/18/2020
Workman (hrs)	73 3/7	15 2/3	30 1/2	27 1/4
Mini Excavator (hrs)	21	6 1/2	7 1/2	7
Skidloader (hrs)	21	6 1/2	7 1/2	7
1" Clean Bedding Rock	Yes			
Concrete Collars	No			
24" Dual Wall HDPE Tile (ft.)	41 4/5			41 4/5
Crop Damage	1 1/4		1 1/4	

Tabulated Defects

	Total	GPS #392 UPSTREAM	GPS #394 DOWNSTREAM
Total Length Televised (ft)	1546.2	939.2	607
Date:		6/17/2020	6/17/2020
Top crack (ft)	1427	921.5	505.5
Side crack (ft)	489.6	196.1	293.5
Bottom crack (ft)	1427	921.5	505.5
Partial or imminent collapse (#)	26	13	13
Full collapse (#)	0	0	0
Debris (ft)	0	0	0
Offset Joint (#)	1	0	1
Soil/voids visible in offset joint (#)	1	0	1
Single Wall HDPE (non-deformed) (ft)	0	0	0
Dual Wall HDPE (ft)	0	0	0
CMP (rusty) (ft)	18.1	0	18.1
Holes (non-fixed) (#)	0	0	0
Holes (fixed) (#)	1	1	0
Alligator Cracks (ft)	0	0	0
Radial Cracks (# of tile)	0	0	0
Top of pipe missing(repaired with bats)#	0	0	0

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER: HARDIN DDWO # 294

DAYS OF WEEK:

S M 1 W T F S

COUNTY, ROUTE, ROAD: 6756.7/ DD# 11

SHEET NO.

1 OF 4

LOCATION: ALONG 1/4-1/4 LINE WEST OF GAVE 1971 TO 1972 NORTH OF E & 190TH ST
NW 1/4 NE 1/4 & W 1/2 NE 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD# 11 MAIN

LOW 60'S TO MID 80'S

SUNNY & BREEZY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

11:30 A.M. CREW AND OBSERVER ARRIVED ON SITE, ADAM, CARSON AND PERRY WITH KOLBELCO SK85LS MIN EXCAVATOR AND CAT 299D XHP TRACKED SKIDLOADER.

11:40 A.M. ADAM MET WITH BOB SMUCK EARLIER THIS MORNING AND LOOKED AT REPAIR. ADAM WAS STILL TRYING TO CONTACT LAND OWNER ON EAST SIDE OF REPAIR TO INFORM OF REPAIR.

11:45 A.M. OBSERVER WALKED OUT TO REPAIR TO LOOK AT REPAIR AND TAKE SOME BEFORE REPAIR PICTURES.

12:00 P.M. PICTURE # 3774 & 12:03 P.M. PICTURE # 3775 SEE PICTURE FOR DETAILS.

12:28 P.M. PICTURE # 3776, 12:30 P.M. PICTURE # 3777, & 12:32 P.M. PICTURE # 3778 SEE PICTURE FOR DETAILS.

12:50 P.M. OBSERVER LEFT SITE TO SET UP GPS BASE ON HARDIN COUNTY GPS MONUMENT # 8016 IN NW QUADRANT OF EAVE & 190TH ST

1:00 P.M. JEFF ARRIVED ON SITE.

1:20 P.M. OBSERVER HAD GPS BASE SET UP AND CHECKED INTO GPS #320 1/2" Ø IRON ROD (01' DEEP) 2.8'± WEST OF PP GUY ANCHOR ON WEST SIDE OF MAPLE STREET IN LINE WITH SOUTH A/C EDGE FOR ELLSWORTH AVENUE TO EAST. BOTH HORIZONTAL AND VERTICAL POSITION CHECKED GOOD.

1:30 P.M. OBSERVER BACK ON SITE. CREW WAS STILL PREPPING FOR TILE REPLACEMENT WITH 4 TILE REMOVED FOR REPLACEMENT SO FAR

1:40 P.M. ADAM LEFT SITE TO GET ROCK AND DIFFERENT EXCAVATOR BUCKET.

1:55 P.M. PICTURE # 3779 & 1:56 P.M. PICTURE # 3781 SEE PICTURE FOR DETAILS.

2:15 P.M. CARSON AND PERRY LEFT SITE TO GET CONCRETE AND SOME OTHER SUPPLIES. JEFF CONTINUED TO REMOVE TILE TO GET TO GOOD TILE TO TIE INTO ON NE END.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared

06/16/2020

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE: 06/16/2020

PROJECT NUMBER: HARDIN DD WD # 294

DAYS OF WEEK: S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7/ DD # 11

SHEET NO. 2 OF 4

LOCATION: ALONG 1/4-1/4 LINE WEST OF GAVE 1871 TO 1912 NORTH OF E 195TH ST
NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD # 11 MAIN

LOW 60'S TO MID 80'S
SUNNY & BREEZY
JOB# 6756 BUCKEYE, SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

2:20 P.M. OBSERVER CALLED LEE ABOUT TILE BLOWOUT DUE TO TILE BEING CRACKED AND SIDES OF TILE HAVING VOIDS WITH NO SIDE SUPPORT CAUSING TILE TO COLLAPSE. TILE DOWNSTREAM IS IN BAD IN CONDITION. LEE SAID TO CONTINUE EXCAVATE DOWNSTREAM BUT STOP BEFORE REPAIR GETS TO BE 50'. IF IT GETS TO BE 50 FT THEN WILL HAVE TO TALK TO SUPERVISORS OR DISTRICT BEFORE ANY MORE WORK IS DONE.

2:24 P.M. PICTURE # 3781, 2:46 P.M. PICTURE # 3782, 2:48 P.M. PICTURE # 3783 & 2:51 P.M. PICTURE # 3784 SEE PICTURE FOR DETAILS.

3:30 P.M. ADAM BACK ON SITE WITH LOAD OF ROCK & ANOTHER EXCAVATOR BUCKET.

3:17 P.M. PICTURE # 3786 & 3:57 P.M. PICTURE # 3787. SEE PICTURE FOR DETAILS.

4:05 P.M. PICTURE # 3789, 4:07 P.M. PICTURE # 3790, & 4:08 P.M. PICTURE # 3791 SEE PICTURE FOR DETAILS.

4:15 P.M. PICTURE # 3792 & 4:22 P.M. PICTURE # 3793 SEE PICTURE FOR DETAILS.

4:21 P.M. OBSERVER CONTACTED LEE AND INFORMED HIM THAT CREW IS UP TO 26 FT DOWNSTREAM OF GPS 392 WITH TILE STILL HAVING ISSUES WITH CRACKS & CAVING DOWN. TILE STILL HAS WIDE JOINTS COVERED WITH TILE PIECES ON TOP BUT NOT ON SIDES CAUSING VOIDS ON OUTER BENDS OF TILE. LEE SAID TO KEEP EXCAVATING FOR GOOD TILE BUT STOP @ 50' TO DISCUSS WITH DISTRICT AFTER THAT.

4:51 P.M. PICTURE # 3794, 5:09 P.M. PICTURE # 3795 SEE PICTURE FOR DETAILS.

5:26 P.M. PICTURE # 3796, 5:27 P.M. PICTURE # 3796, PICTURE # 3797, & PICTURE # 3798 SEE PICTURE FOR DETAILS.

5:30 P.M. PERRY BACK ON SITE AFTER GETTING SUPPLIES

5:34 P.M. PICTURE # 3799, 5:45 P.M. PICTURE # 3800, 5:47 P.M. PICTURE # 3801
SEE PICTURE FOR DETAILS.

5:47 P.M. OBSERVER CONTACTED LEE THAT CREW EXPOSED TILE TO 41.8' DOWNSTREAM OF OF GPS # 392 WITH VOIDS STILL ON SIDE AND CLAY TILE ABOVE TOP OF JOINT

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.
Observer's Signature: Dean Penning Date Prepared: 06/16/2020
Reviewed by: _____ Engineer
Date Reviewed: _____

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER: HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7 / DD # 11

SHEET NO.

3 OF 4

LOCATION: NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22

LOW 60'S TO MID 80'S

INVESTIGATE TILE BLOWOUT ON DORRIMANN

SUNNY & BREEZY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

WITH TILE CRACKING & APPEARING TO BE CAVING DOWN.

5:50 P.M. CALLED LEE IF CREW COULD START ON REPAIR. LEE SAID TELEVISIONING COULD SHOW A LARGER REPAIR AND WOULD HAVE TO BID OUT PROJECT. ADAM WANTED TO START TELEVISIONING 1ST THING IN MORNING BUT LEE SAID IT WAS NOT A GOOD IDEA SINCE NOT APPROVED FOR YET AND IF NOT APPROVED WHO PAYS FOR TELEVISIONING

5:56 PICTURE # 3802, & 6:29 P.M. PICTURE # 3803 SEE PICTURE FOR DETAILS.

06/16/2020 PICTURE # 1 SEE PICTURE FOR DETAILS.

6:00 P.M. CREW WAS DONE FOR DAY & LEFT SITE. OBSERVER SHOT LANE CROP DAMAGES OUT TO REPAIR AND TORE DOWN GPS AND LEFT SITE.

QUANTITIES

ADAM 4 2/3 HOURS 1 3/4 HOUR GETTING LOAD OF 1 1/2" ROCK
CARSON 2 3/4 HOURS ? CARSON NEVER BACK TO SITE WITH PICKUP & DUMP TRAILER
PERRY 3 1/4 HOURS 3 1/4 HOURS GETTING SUPPLIES
JEFF 5 HOURS

KOLBELCO SK85CS-MINI EXCAVATOR 6 1/2 HOURS

CAT 299D XHP TRACKED SKIDLOADER 6 1/2 HOURS

CONCRETE INC. TICKET # 43614 HARDIN AGGREGATE 1 1/2 CRACK 8.2 TONS

PICKUP & TRIPLE AXLE DUMP TRAIL GETTING ROCK

NOTE: LEE IS TALKING TO DISTRICT/SUPERVISORS ABOUT TELEVISIONING LINE TOMORROW AT MEETING

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning

Date Prepared:

06/16/2020

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER:

HARDIN DD WO # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

6756.7/ DD # 11
ALONG 1/4-1/4 LINE WEST
OF GRADE 1971 TO 1972 NORTH
OF E & 195TH ST

SHEET NO.

4 OF 4

LOCATION:

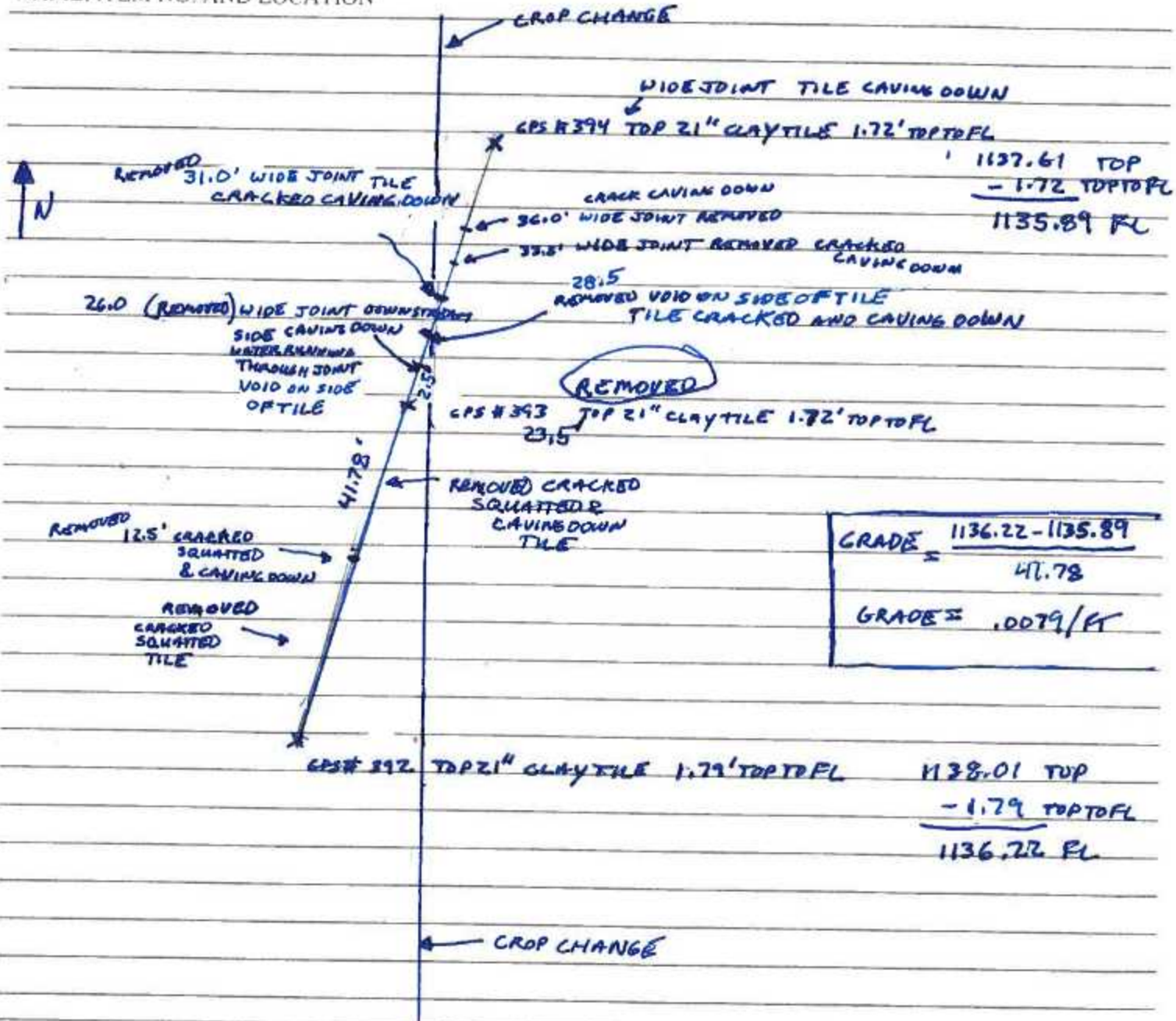
NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD # 11 MAIN

LOW 60'S TO MID 80'S

SUNNY & BREEZY

JOB # 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION



GRADE	$\frac{1136.22 - 1135.89}{47.78}$
GRADE	$\frac{.0079}{ft}$

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 06/16/2020

Reviewed by: _____ Engineer Date Reviewed: _____

Beacon™ Hardin County, IA

Layers - Map Search Camp Search Results Report Pictometry Imagery

Layer List Legend
 Quick Links:
 Property Search
 View Map
 Drainage District Search

Layers:
 Address
 Corporate Limits
 Political Townships
 Geographic Townships
 Sections
 Subdivision Annotation
 Subdivisions
 Lot Annotation
 Lot Lines
 Road Dimensions
 Roads
 Road ROW
 Railroad Annotation
 Railroads
 Railroad ROW
 Water
 Parcel Dimensions
 Parcels
 Drainage Tiles
 Drainage Districts
 Cartography
 Landuse
 Soils
 Enterprise Zones
 Conservation Property
 Structures
 Garden Winds Turbines
 Airport Protected
 Airspace Surfaces
 Two Mile Boundary
 School Districts
 Voting Districts
 LOMR



Results:
 Parcel ID - 8822232000004
 Alt Id - 235000000
 Address - 19131 G AVE
 Owner - Smuck, Robert J
 (Deed)
 Acres - 4.24
[View Esri](#) | [Pictometry Imagery](#)

Parcel ID	8822232000004	Alternate ID	235000000
Sec/Twp/Rng	23-88-22	Class	R
Property Address	19131 G AVE HARDIN	Acres	4.24
District	63000	Owner Address	Smuck, Robert J 19131 G Ave Alden IA 50006
Brief Tax Description	COM NE COR S519' BEG NW442.5' S454.85' NE442.5' N445' BEG SEC23-T88N-R22W		

(Note: Not to be used on legal documents)

PICTURE#3774 IS LOOKING EAST TOWARDS ACREAGE @19131
G AVE - SHOWING 5.0' ϕ X 2.0' DEEP BLOWOUT IN BEAN
GROUND JUST WEST OF CROP CHANGE.



PICTURE#3775 IS LOOKING SOUTH TOWARDS 195TH STREET
AT 5.0' ϕ X 2.0' DEEP BLOWOUT IN BEAN GROUND
(WEST SIDE) OF CROP CHANGE

PICTURE #3776 IS LOOKING SW SHOWING EXISTING CLAY TILE EXPOSED NEAR TILE BLOWOUT WITH NO VISIBLE ISSUES YET (JOINT IS TIGHT)



TILE SECTION COLLAPSING & BROKEN

PICTURE #3777 IS LOOKING SLIGHTLY NW SHOWING EXISTING CLAY TILE TO SW IN GOOD SHAPE AND SECTION OF CLAY TILE COLLAPSED (GOOD CLAY AROUND TILE)

PICTURE # 3778 IS LOOKING NE SHOWING TILE EXPOSED WHERE SECTION OF TILE IS BROKEN & COLLAPSING NEAR BLOWOUT HOLE,



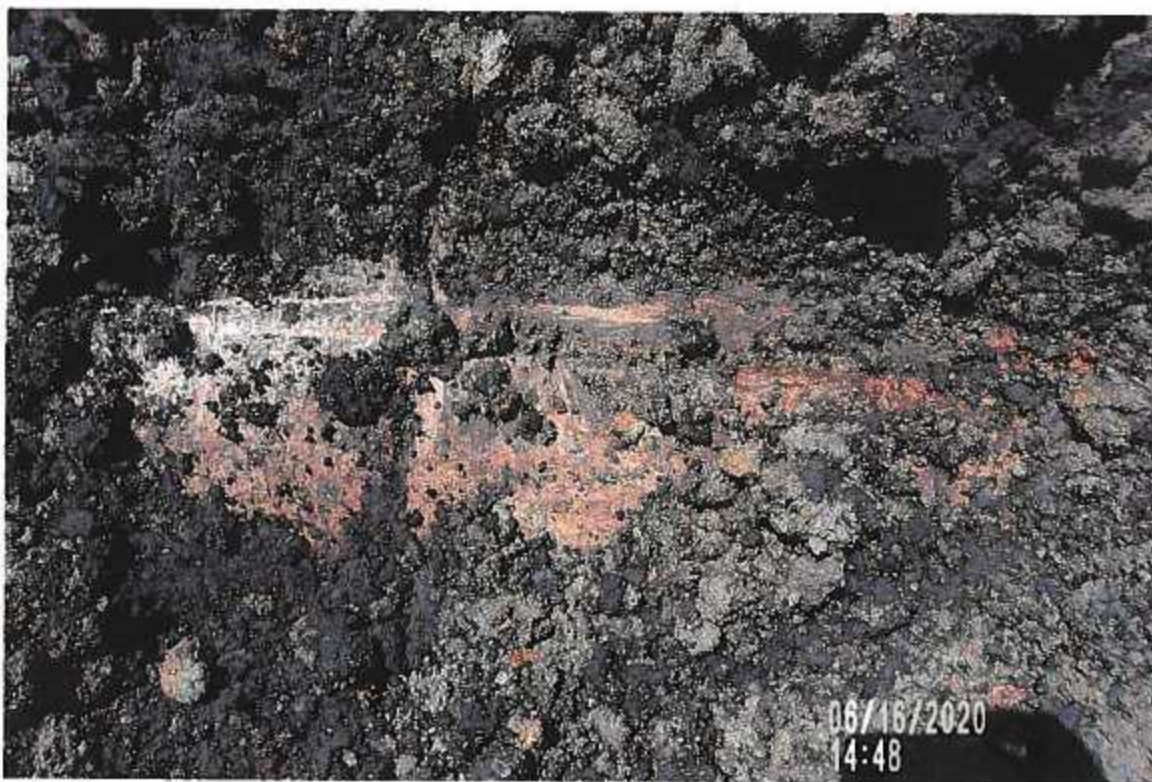
PICTURE # 3779 IS LOOKING SW UPSTREAM FROM GPS#392. INSIDE - 21" CLAY TILE WITH SMOOTH CRACKS @ 6 & 12 O'CLOCK, TILE IS CRACKED, SLIGHTLY SQUATTED, BUT DOES NOT APPEAR TO BE LEAVING DOWN.

PICTURE # 3780 IS LOOKING NE DOWNSTREAM APPROXIMATELY 12.5'
FROM GPS # 392 SHOWING TILE STILL CRACKED, SQUATTED,
AND CAVING DOWN. AFTER APPROXIMATELY 5 SECTIONS OF
TILE REMOVED



PICTURE # 3781 IS LOOKING NE DOWNSTREAM APPROXIMATELY
(23.5' FROM GPS # 392) (GPS # 393) SHOWING TILE STILL CRACKED,
SQUATTED, AND CAVING DOWN AFTER 4 SECTIONS OF TILE REMOVED.

PICTURE# 3782 IS LOOKING SLIGHTLY NW SHOWING 1/2" TO 2" WIDE JOINT ON CLAY TILE @ 28.5' ± DOWNSTREAM FROM GPS#392 WITH CLAY PIECES OVER JOINT AND UPSTREAM TILE CAVING DOWN.



PICTURE# 3783 IS LOOKING NW SHOWING TOP OF CLAY TILE CRACKED AND CAVING DOWN @ 26.0' DOWNSTREAM FROM GPS#392.

PICTURE # 3784 IS LOOKING SW SHOWING WIDE GAP & TOP OF TILE CRACKED AND CAVING DOWN

SW

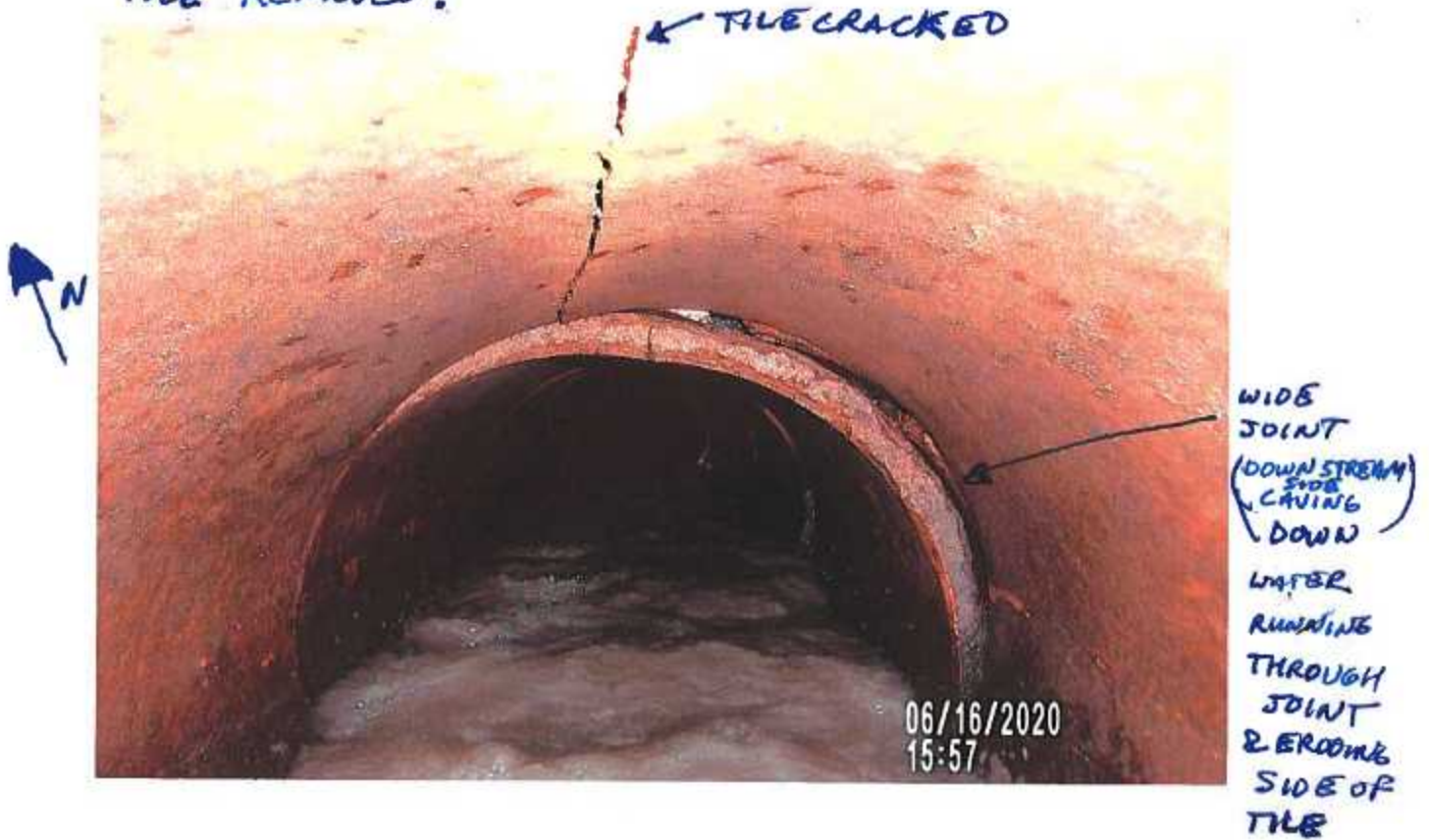


NE



PICTURE # 3786 IS LOOKING NE FROM GPS # 393 INSIDE 21" CLAY TILE SHOWING TOP TILE CRACKED AND CAVING DOWN WITH JOINT OIS & WIDE JOINT 2 JOINTS DOWNSTREAM.

PICTURE #3787 IS LOOKING NE (2.5' NE OF GPS#393) SHOWING INSIDE 21" CLAY TILE AFTER ANOTHER SECTION CLAY TILE REMOVED.



PICTURE #3789 IS LOOKING SOUTH SHOWING TILE CAVING DOWN 5.0' DOWN STREAM FROM GPS#393.

PICTURE # 3790 IS LOOKING DOWN STREAM FROM 28.5'± DOWNSTREAM FROM GPS # 392 SHOWING TILE STILL CRACKED AND CAVING DOWN



PICTURE # 3791 IS LOOKING ON WEST SIDE OF 21" TILE SHOWING VOID BESIDE TILE @ WIDE JOINT (28.5'± DOWNSTREAM FROM GPS # 392)

PICTURE # 3792 IS LOOKING SOUTH SHOWING BOOT HOLE AFTER CONTRACTOR STEPPED ABOVE-VOID ON EAST SIDE OF TILE 31' DOWNSTREAM OF GPS # 392!



PICTURE # 3793 IS LOOKING EAST SHOWING 2" WIDE JOINT WITH CLAY PIECES OVER ON EAST SIDE OF TILE (31' DOWNSTREAM OF GPS # 392). CLAY PIECES ARE JUST ON TOP OF JOINT BUT NOT ON SIDES, CAUSING Voids ON SIDES

PICTURE# 3794 IS LOOKING NORTH @ 21" CLAY TILE SHOWING
TILE STILL CRACKED AND CAVING DOWN

31.00' DOWN STREAM FROM GPS#
392

N ↑



N ↑



PICTURE# 3795 IS LOOKING NORTH SHOWING TRENCH WITH
DAMAGED TILE REMOVED.

GPS #392 TOP 21" CLAY TILE
SOUTHEND

PICTURE# 3796 IS LOOKING NW SHOWING JOINTS @ 33.5' & 36" DOWN STREAM FROM GPS #392 HAVING WIDE JOINTS



PICTURE# 379.7 IS LOOKING SW SHOWING TILE EXPOSED @ GPS 23 WITH TILE STILL CRACKED AND CAVING DOWN, (NO DIFFERENCE ON CONDITION) JOINTS ARE TIGHTER,

PICTURE# 3798 CLOSER UP PICTURE OF TILE CONDITION
TIGHTER JOINT BUT STILL CRACKED AND CAVING
DOWN.



PICTURE# 3799 IS LOOKING NE SHOWING TILE STILL
CRACKED, SQUATTED AND CAVING DOWN

PICTURE# 3800 IS LOOKING NORTH SHOWING ANOTHER WIDE JOINT
AT GPS# 394.



GPS# 394



PICTURE# 3801 IS LOOKING SE SHOWING ANOTHER VOID BESIDE
WEST SIDE OF TILE

PICTURE # 3802 IS LOOKING NE FROM GPS # 394 SHOWING INSIDE OF 21" CLAY TILE WITH TOP CRACKED AND CAVING DOWN. APPEARS NEXT 3 JOINTS ARE IN SAME CONDITION BUT ARE CLOSE TO OUR 50' MAX REPAIR LIMIT. LEE WILL TALK TO SUPERVISORS IN MORNING ABOUT TELEVISIONING LINE.



TO SUPERVISORS
IN MORNING
ABOUT
TELEVISIONING
LINE,



(41.8' DOWNSTREAM
FROM GPS # 392)



CPS # 394 TOP 21" CLAY TILE (5.4' DEEP)



PICTURE # 3803 IS LOOKING NE SHOWING 41.8 LF OF TILE REMOVED WITH NEXT THREE DOWNSTREAM TILE IN SAME CONDITION. CREW IS WAITING ON DECISION FROM DRAINAGE DISTRICT ON HOW FAR TO REPLACE TILE

CPS # 392 TOP 21" CLAY TILE (4.8' DEEP)

PICTURE #1 ROCK TO BE USED FOR
 BEDDING UNDER AND AROUND TILE
 FOR TILE REPAIR.

CONCRETE, INC. 43614

A42512
 HARDIN AGG

28295 4TH AVE
 GIFFORD, IA 50259
 PHONE 641-858-5637

TRUCK NO. _____

SOLD TO Adam Seward

ADDRESS _____

DATE ORDERED _____

ADDRESS _____

QUANTITY	DESCRIPTION	UNIT	PRICE	TOTAL
14110 FA	WASHED SAND	CU YD	10.00	141100
100	FILE SAND	CU YD	10.00	10000
100	SURFACING	CU YD	10.00	10000
100	PEA GRAVEL	CU YD	10.00	10000
100	1 1/2 GRAVEL	CU YD	10.00	10000
100	OVERSIZE	CU YD	10.00	10000
100	OTHER	CU YD	10.00	10000
	TOTAL			142200
	NET			16560

TERMS: DDV

DATE: 06/16/2020

DISCOUNT	AMOUNT
8.2	
SALES TAX	
HANDLE	
TOTAL	

06/16/2020

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/17/2020

PROJECT NUMBER: HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7 / DD # 11

SHEET NO.

1 OF 4

LOCATION: ALONG 1/4 - 1/4 LINE WEST OF GAVE 18.71 TO 192' NORTH OF E. 195TH ST. NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22 INVESTIGATE TILE BLOWOUT ON DD # 11

UPPER 50'S TO MID 80'S

SUNNY & WINDY
JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

10:43 A.M. OBSERVER RECEIVED A TEXT FROM LEE THAT BOARD OF SUPERVISORS APPROVED TELEVISIONING AND TO GO TO JOB SITE ASAP.

10:45 A.M. OBSERVER LEFT OFFICE FOR SITE.

11:25 A.M. OBSERVER ARRIVED ON SITE WITH JEFF, CARSON, PERRY & ADAM ON SITE AND CAT 299D XP TRACKED SKID LOADER & KOLBELCO SK 85CS MINI EXCAVATOR. JEFF WAS ON SITE @ 9 WITH CARSON, ADAM, & PERRY ON SITE @ 9:30 A.M. CREW WAS CLEANING UP TRENCH BANKS AND WAITING FOR APPROVAL TO TELEVISION LINE.

11:00 A.M. PAUL WITH TELEVISIONING CAMERA ARRIVED ON SITE

11:50 A.M. PAUL STARTED TELEVISIONING DOWNSTREAM FROM GPS# 394 (TOP 21" CLAY TILE 1.72' TOP TO FL (BACK WHEELS A FEW OF TILE) (SOME OBSERVATIONS SEEN IN FIELD WHILE TELEVISIONING)

1.0' START TELEVISION DOWNSTREAM.

13.4 CIRCUMFERENTIAL CRACKS (12 TO 12)

147.0 BROKEN PIECE (CAVE IN)

21.0 CRACKED CAVE DOWN (9 TO 1)

160.0 STILL CRACKED (CAVE IN)

24.8 CLAY TO CMP

170.4 TILE SUNK DOWN

41.8 CMP TO CLAY (SAG @ CMP TO CLAY)

194.2 TILE BROKE LEFT SIDE

47.8

207.9 LOWER RIGHT CRACKED

49.9 TILE TOP TILE (CAVE DOWN)

227.2 CAVE DOWN

54.8 MULTIPLE CRACKS (CAVE DOWN)

228.2

59.1 WIDE GAP LEFT

230.1 GRADE CHANGE

61.2 CAVE DOWN

240.0 CRACKED CAVE DOWN

108.4 STILL CAVE DOWN

252.0 CRACKED CAVE DOWN

117.2 CRACKED CAVE DOWN

266.0 TILE LOOKED GOOD AS SAID

124.2

279.5

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature

Dean Penning

Date Prepared

06/17/2020

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/17/2020

PROJECT NUMBER:

HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

6756.7 / DD# 11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1931 TO 1912 NORTH
OF E 195TH ST

SHEET NO.

2 OF 4

LOCATION:

NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD# 11 MIN

UPPER 50'S TO MID 80'S

SUNNY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

300.D

412.8 CRACKED (CAVE DOWN)

315.5 CRACKS IN TILE

425.0 BETTER PIPE AGAIN

326.2 WIDE JOINT PUTTS OVER JOINT

475.0 CRACKED (CAVE DOWN)

332.0

550-562 CRACKED CAVING IN

335.3 CRACKED CAVING DOWN

562-569.5 TILE COLLAPSING DOWN /
(3, 9, 212)

331.6 CRACKED CAVING DOWN

586.5 TO 602 CRACKED CAVING DOWN

359.8 CRACKED CAVING DOWN

603.6 CHUNK CLAY TILE IN FLOW LINE
(TOP TILE CRACKED) END CAMERA
CAMERA CANNOT GO PAST
CHUNK TILE IN FLOW LINE

320.8 BETTER TILE (MORE ROUND) LESS SQUATTED

382.8

395.8

1:05 P.M. PAUL WAS DONE WITH TELEVISIONING DOWNSTREAM AND
STARTED TO LOCATE TILE.

1:05 P.M. OBSERVER HEADED TO SET UP GPS BASE ON GPS# 8016
AT NW QUADRANT OF E AVE & 190TH ST.

1:35 P.M. OBSERVER HAD GPS BASE SET UP AND CHECKED INTO GPS# 320
1/2" & FROM REROD (0.11' & DEEP) 2.8' & WEST OF GUY ANCHOR ON WEST
SIDE OF MAPLE STREET IN LINE WITH WITH SOUTH ACC EDGE FOR ELLSWORTH
AVE TO EAST WITH BOTH HORIZONTAL AND VERTICAL POSITION
CHECKING GOOD.

1:40 P.M. OBSERVER BACK ON SITE AND CREW WAS DONE
LOCATING TILE DOWNSTREAM, AND WAS PULLING CAMERA
BACK. OBSERVER SHOT TILE LOCATES (GPS# 394 TO GPS# 411)

2:04 P.M. PICTURE# 3810 SEE PICTURE FOR DETAILS.

2:20 P.M. PAUL HAD CAMERA TRAYTOR SET IN UPSTREAM TILE AND
READY TO START TELEVISIONING UPSTREAM FROM GPS# 392

2:25 P.M. PICTURE# 3811 SEE PICTURE FOR DETAILS.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penny

Date Prepared

06/17/2020

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/17/2020

PROJECT NUMBER:

HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

6756.7 / DD # 11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1071 TO 1912 NORTH
OF E 1912 ST

SHEET NO.

3 OF 4

LOCATION:

NW 1/4 NE 1/4 & W 1/2 NE 1/4 NE 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD# 11 MAIN

UPPER 50'S TO MID 80'S

SUNNY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

2:27 P.M. PAUL STARTED TELEVISIONING UPSTREAM

FROM GPS # 392 TOP 21" CLAY TILE (1.79' TO TOP FL) (BACK OF WHEELS
ON CAMERA AT END OF TILE) (SOME OBSERVATIONS SEEN IN FIELD WHILE TELEVISIONING)

1.5' START TELEVISION UPSTREAM. LONGITUDINAL CRACKS @ 12 START
(SLIGHT SQUAT)

4.7 LONGITUDINAL CRACK @ 12 SLIGHT SQUAT

8.8 LONGITUDINAL CRACK @ 6

15.2 LONGITUDINAL CRACK @ 12 (CAVING DOWN)

44.3 LONGITUDINAL CRACK @ 12 (CAVING DOWN)

55.9 LONGITUDINAL CRACK @ 12 (CAVING DOWN)

67.9 LONGITUDINAL CRACK @ 12 (CAVING DOWN)

129.6 LONGITUDINAL CRACK @ TOP SQUATTING START

163.0 LONGITUDINAL CRACK (CAVING DOWN)

175.9 LC (CAVING DOWN)

191.2 LC (CAVING DOWN)

199.7 TO 205.1 LC (CAVING DOWN)

261.9 LC (CAVING DOWN)

300.6 TO 337.1 LC (CAVING DOWN)

340.8 LC (CAVING DOWN)

378.8 LC (CAVING DOWN)

473.8 TO 479.7 LC (CAVING DOWN)

516.0 TO 518.8 LC (SQUATTING)

526.7 TO 543.3 LC (CAVING DOWN)

552.0 LC (CAVING DOWN)

580.0 TO 754.2 LC (CAVING DOWN)

667.2 LATERAL LEFT (9 FOLD)

914.2 TO 925.8 LC (CAVING DOWN)

936.6 TO 945.9 LC (CAVING DOWN)

3:52 P.M. 976.1 END CAMERA (OUT OF CABLE) CREW STARTED LOCATING
TILE UPSTREAM

I Certify that the work described in this report was incorporated into this contract unless otherwise noted

Observer's Signature

Dean Penny

Date Prepared

06/17/2020

Reviewed by

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/17/2020

PROJECT NUMBER: HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7/ DD#11

SHEET NO.

4 OF 4

LOCATION: NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22

UPPER 50'S TO MID 80'S

INVESTIGATE TILE BLOWOUT ON DDP/IMAIN

SUNNY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

4:22 P.M. PICTURE # 3812 & 4:23 P.M. PICTURE # 3814 SEE PICTURE FOR DETAILS.

4:28 P.M. CREW DONE LOCATING TILE & SHOOTING TILE LOCATES.

PAUL WAS PULLING CAMERA BACK TO BEGINNING AGAIN.

4:40 P.M. PAUL HAD CAMERA STUCK IN TILE AROUND 608 FT ON PULLBACK BUT AFTER PULLING ON CABLE PAUL DID GET CAMERA UNSTUCK.

5:00 P.M. ADAMS CREW QUIT FOR DAY. PAUL WAS GETTING EQUIPMENT PUT AWAY. OBSERVER SHOT CORN AND BEAN DAMAGES FOR TILE REPAIR AND ACCESS TO REPAIR

5:30 P.M. PAUL HAD EQUIPMENT PUT AWAY AND LEFT SITE.

5:56 P.M. PICTURE # 3815, 6:20 P.M. PICTURE # 3816, & 6:21 P.M. PICTURE # 3817 SEE PICTURES FOR DETAILS.

6:00 P.M. OBSERVER TORE DOWN GPS & LEFT SITE.

QUANTITIES

JEFF 8 HOURS

ADAM 7 1/2 HOURS

PERRY 7 1/2 HOURS

CARSON 7 1/2 HOURS

CAT 299D XHP TRACKED SKID LOADER

7 1/2 HOURS

KOLBELCO SK 85 CS MINI EXCAVATOR

7 1/2 HOURS

PAUL & CAMERA EQUIPMENT 6 1/2 HOURS

CORN DAMAGE 465, 469, 463, 462, 461, 460, 431-433, 435, 428, 441, 444-448, 440, 439, 436 0.324 AC

BEAN DAMAGE 431, 433, 435, 438, 441, 444, 443, 442, 437, 430, 454-457, 459, & 458 0.946 AC

NOTE: MOST OF DAY WAS TELEVISIONING TO FIGURE OUT HOW MUCH TO REPAIR.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature

Dean Penney

Date Prepared

06/17/2020

Reviewed by

Engineer

Date Reviewed



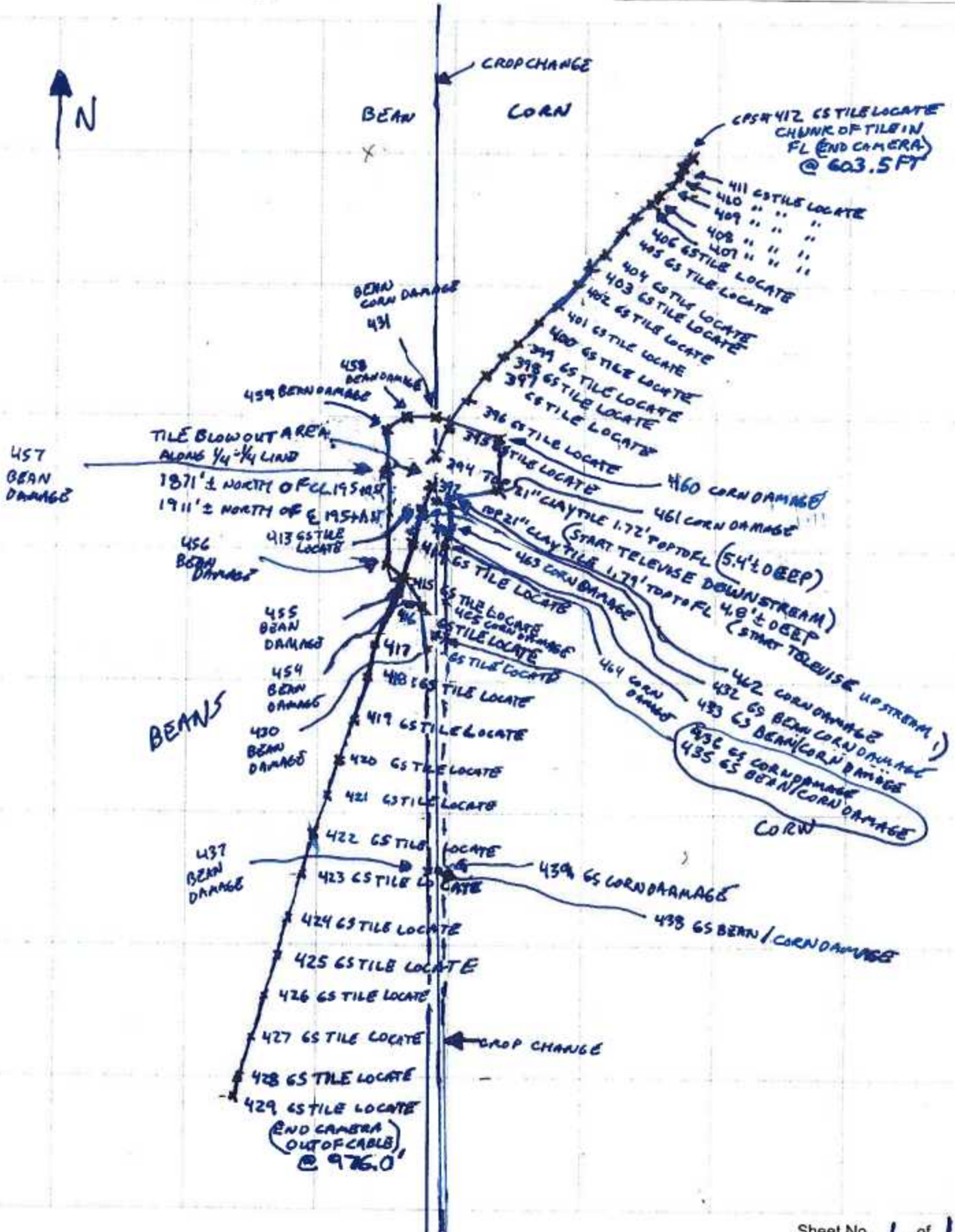
Clapsaddle-Garber Associates, Inc.

16 East Main Street, Marshalltown, Iowa 50158, ph 641-752-6701
 1523 South Bell Avenue, Suite 101, Ames, Iowa 50010, ph 515-232-1784
 5106 Nordic Drive, Cedar Falls, Iowa 50613, ph 319-266-0258
 739 Park Avenue, Ackley, Iowa 50601, ph 641-847-3273
 511 Bank Street, Webster City, Iowa 50595, ph 515-832-1876
 800-542-7981, www.cgaconsultants.com

MARDIN DD WO # 294 06/17/2020

6756.7 DD #11

PN _____
 Computed By _____ Date _____
 Checked By _____ Date _____
 Subject _____



Beacon™ Hardin County, IA



Log In

search

Map Search

Layer List Legend

- Quick Links:
- Property Search
 - View Map
 - Drainage District Search

Layers:

- Address
- Corporate Limits
- Political Townships
- Geographic Townships
- Sections
- Subdivision Annotation
- Subdivisions
- Lot Annotation
- Lot Lines
- Road Dimensions
- Roads
- Road ROW
- Railroad Annotation
- Railroads
- Railroad ROW
- Water
- Parcel Dimensions
- Parcels
- Drainage Tiles
- Drainage Districts
- Cartography
- Landuse
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- Enterprise Zones
- Conservation Property
- Structures
- Garden Woods Turbines
- Airport Protected Airspace Surfaces
- Two Mile Boundary
- School Districts
- Voting Districts
- LOMR



HARROW DD WO # 294
6756.7 DD # 11
06/17/2020
NW 1/4 NE 1/4
1/2 NE 1/4 NE 1/4
23-88-22

CORN DAMAGE
0.324 AC.

PICTURE# 3809 IS LOOKING NE SHOWING DOWN STREAM
 END OF EXPOSED TILE WHERE PAUL STARTED TELEVISIONING
 DOWN STREAM FROM WITH CAMERA IN TILE READY TO TELEVISION
 GPS # 394 TOP 21" CLAY TILE

1.72' TO FT
 FL



06/17/2020
 11:51



EXPOSED 21" CLAY TILE
 AREA. (GPS# 392 TO GPS# 394)



GPS# 412
 65 TILE LOCATE
 CHUNK TILE
 IN FL
 CAMERA
 UNABLE TO
 GET PASSED -
 LT

06/17/2020
 14:04

PICTURE# 3810 IS LOOKING SW SHOWING TILE LOCATES FROM
 GPS# 394 TILE BLOWOUT UP TO CHUNK TILE IN FLOWLINE
 WITH CAMERA UNABLE TO GET PASSED @ 603.5'

PICTURE #3811 IS LOOKING SW SHOWING CAMERA TRACTOR
IN UPSTREAM SIDE TILE OF BLOWOUT AND READY
TO START TELE VISING UPSTREAM,
GPS# 392 TOP 21" CLAY TILE (4.8' DEEP)



(1.79' TOP
TO FL)



PICTURE #3812 IS LOOKING NE FROM END OF CABLE
TILE LOCATE GPS# 429 TOWARD TILE BLOWOUT START
OF LOCATES (976.0')

PICTURE#3814 IS LOOKING WEST TOWARDS 402 PRAIRIE AVENUE
FROM LOCATION OF END TILE LOCATE (END OF CABLE)



✓ CPS# 429 END OF TILE LOCATE
(END OF CABLE)



PICTURE#3815 IS LOOKING SOUTH AT BEAN & CORN DAMAGE
ON ACCESS LANE OUT TO TILE REPAIR

PICTURE # 3816 IS LOOKING NORTH FROM 195TH ST / PRAIRIE ST
(GRAVEL ROAD) @ CORN/BEAN DAMAGE ON ACCESS LANE OUT TO TILE
REPAIR.



PICTURE 3817 IS LOOKING NW AT BEAN / CORN DAMAGE
FROM FIELD ENTRANCE ON NORTH SIDE 195TH ST / PRAIRIE ST
(GRAVEL ROAD) TO ACCESS LANE OUT TO TILE REPAIR.

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/18/2020

PROJECT NUMBER: HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7/ DD# 11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1921 NORTH
OF E 195TH ST

SHEET NO.

1 OF 4

LOCATION: NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE THE BLOWOUT ON ODD# 11 MAIN

MID 60'S TO MID 80'S

CLOUDY & WINDY
JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

6:50 A.M. OBSERVER LEFT OFFICE FOR JOBSITE.

7:20 A.M. OBSERVER ON SITE AND SET GPS BASE ON HARDIN COUNTY
GPS MONUMENT #8016 IN NW QUADRANT OF EAVE & 190TH ST.

7:40 A.M. GPS BASE SET UP AND CHECKED INTO GPS #320 1/2" Ø IRON
RE ROD (0.1' DEEP) 2.8' ± WEST OF GUY ANCHOR ON WEST SIDE OF MAPLE
STREET IN LINE WITH SOUTH ^{ALL} EDGE FOR ELLSWORTH AVENUE TO EAST
BOTH HORIZONTAL AND VERTICAL POSITION CHECKED GOOD.

7:45 A.M. OBSERVER AT REPAIR LOCATION TO TEMPORARY REPAIR
TILE UNTIL DISTRICT MAKES DECISION ON HOW MUCH
TO REPAIR. ADAM, JEFF, PERRY & CARSON ON SITE
WITH KOLBELCO SK85 CS MINI EXCAVATOR & CAT 299XHP
TRACKED SKIDLOADER ON SITE FOR EQUIPMENT. CREW
SAID THEY ARRIVED ON SITE ABOUT 7:00 A.M.

7:55 A.M. PICTURE #3818 SEE PICTURE FOR DETAILS.

8:09 A.M. PICTURE #3819 SEE PICTURE FOR DETAILS.

8:15 A.M. CREW WAS GRADING BOTTOM OF TRENCH
REMOVING SOME OF MUCK & PLACING ENOUGH ROCK
FOR A FIRM BOTTOM.

9:53 A.M. PICTURE #3820 SEE PICTURE FOR DETAILS.

9:30 A.M. BOB SMUCK WAS AT REPAIR LOCATION CHECKING ON
REPAIR. OBSERVER TOLD BOB THAT THERE IS A LOT OF
CRACKED AND CAVING DOWN SECTIONS OF TILE IN VIDEO
BOTH 976' UPSTREAM AND 605' ± DOWNSTREAM. AS OF NOW
WE ARE MAKING TEMPORARY REPAIRS UNTIL DISTRICT
DECIDES HOW MUCH TO REPAIR. OTHER ISSUE IS THE
CLAY TILE HAS VOIDS WHERE SOIL HAS ERODED AWAY ON OUTSIDE

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature

Dean Penning

Date Prepared

06/18/2020

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/18/2020

PROJECT NUMBER: HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7 / DD # 11

SHEET NO.

2 OF 4

LOCATION: ALONG 1/4-1/4 LINE WEST OF GAVE 1871 TO 1912 NORTH OF E 195TH ST NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22 INVESTIGATE TILE BLOWOUT ON DD#11 MINN

MID 60'S TO MID 80'S

CLOUDY & WINDY
JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

BENDS OF TILE DUE TO WIDE JOINTS. THIS CAUSES TILE TO GIVE DOWN IN NUMEROUS SPOTS. TO WEAKEN TILE DUE TO LACK OF SIDE SUPPORT, PROBABLY EVERY BEND ON OUTSIDE EDGE COULD BE DOING THIS.

9:45 A.M. CREW IS PREPPING REST OF TRENCH BY REMOVING MUCK AND PLACING ENOUGH ROCK TO GET A FIRM BOTTOM FOR TILE TO SIT IN

10:50 A.M. OBSERVER CHECKED GRADE ON DOWNSTREAM END OF 1ST FULL SECTION DOWNSTREAM INSTALLED

GPS # 452 TOP 24" HDPE DW NONPERF TILE 1138.18

PLAN FL = $1136.22 - (19.02 \times .0079) = 1136.07 - 2.14$

1136.04' FL 24" TILE

.03' LOW PER GPS WITHIN REASON

10:58 A.M. PICTURE # 3822 & PICTURE # 3823 SEE PICTURE FOR DETAILS

11:32 A.M. PICTURE # 3824 & 11:33 A.M. PICTURE # 3825 SEE PICTURE FOR DETAILS.

11:25 A.M. OBSERVER CHECKED GRADE ON UPSTREAM END OF FULL SECTION INSTALLED.

GPS # 453 TOP 24" HDPE DW NONPERF TILE 1138.15

PLAN FL = $1136.22 - (24.12 \times .0079) = 1136.03 - 2.14$

.02' LOW PER GPS WITHIN REASON

1138.01

11:30 A.M. CHECKED TOP OF SMALL SECTION BY PLANING TOP OF FULL SECTION. CREW TAMPED A LOT OF BEDDING ROCK UNDER BUTT CONNECTION TO MAKE SURE IT STAYED IN PLACE & WRAPPED A 2.0' X 5.0' PIECE OF FABRIC OVER BUTT CONNECTION JOINT FOR TEMPORARY REPAIR.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.
Observer's Signature: Dean Penny Date Prepared: 06/18/2020
Reviewed by: _____ Engineer
Date Reviewed: _____

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/18/2020

PROJECT NUMBER: HARDIN DDWO # 294
6756.7/ DD# 11
COUNTY, ROUTE, ROAD: ALONG 1/4-1/4 LINE WEST OF GAVE 1831 TO 1912 NORTH OF E 195TH ST
LOCATION: NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE THE BLOWOUT ON DD# 11 MAIN

DAYS OF WEEK: S M T W T F S
SHEET NO. 3 OF 4
MID 60'S TO MID 80'S
CLOUDY & WINDY
JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION 11:44 A.M. PICTURE # 3826 & 11:51 A.M. PICTURE # 3827 SEE PICTURE FOR DETAILS.

- 11:50 A.M. RESHOT A COUPLE SHOTS OUT FURTHER FOR CROP DAMAGES.
- 12:30 P.M. ADAM AND OBSERVER HEADED TO 6845 0031 TO CHECK ON COUPLE SINKHOLES JACK RUNGE STOPPED BY AND TALKED TO ADAM ABOUT FROM PREVIOUS REPAIR. CREW CONTINUED BACKFILLING TRENCH AND DRESSING UP REPAIR AREA.
- 1:15 P.M. ADAM HEADED BACK TO REPAIR. OBSERVER CHECKED ON 0026 SURFACE DRAIN REPAIR.
- 1:30 P.M. OBSERVER BACK ON SITE WITH CREW JUST FINISHING UP DRESSING UP REPAIR AREA.
- 1:51 P.M. PICTURE # 3842, 1:52 P.M. PICTURE # 3843, 1:53 P.M. PICTURE # 3844 & PICTURE # 3845, 1:58 P.M. PICTURE # 3846.
- 2:00 P.M. CREW HAD EQUIPMENT LOADED UP WITH OBSERVER AND CREW LEAVING SITE.

NOTE IF NO PERMANENT REPAIRS DONE WILL NEED TO REMOVE CHUNK OF CLAY IN FLOW LINE @ GPS # 412 WHEN CROPS ARE OUT.

QUANTITIES

ADAM	7-12:30	6 1/4 HOURS
JEFF	7-2	7 HOURS
PERRY	7-2	7 HOURS
CARSON	7-2	7 HOURS
KOLBELCO SK85CS MINI EXCAVATOR		
CAT 2990 XHP TRACKED SKIDLOADER		

TEMPORARY REPAIR DUE TO CONDITION OF TILE 24" DW HOPE NONPERF TILE 41.8 LF
(NEED TO FIGURE OUT HOW MUCH TO REPLACE) 3-2.0' X 5.0' ENGINEER FABRIC
FABRIC TO FILL BELL JOINT
20' X 20' ENGINEERING FABRIC

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: Dean Penning Date Prepared: 06/18/2020

Reviewed by: _____ Engineer: Date Reviewed: _____

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER:

HARDW DOW#294

DAYS OF WEEK:

S M W T F S

COUNTY, ROUTE, ROAD:

6756.1/00#11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1871'S TO 1916'S
NORTH OF E 195TH ST

SHEET NO.

4 OF 4

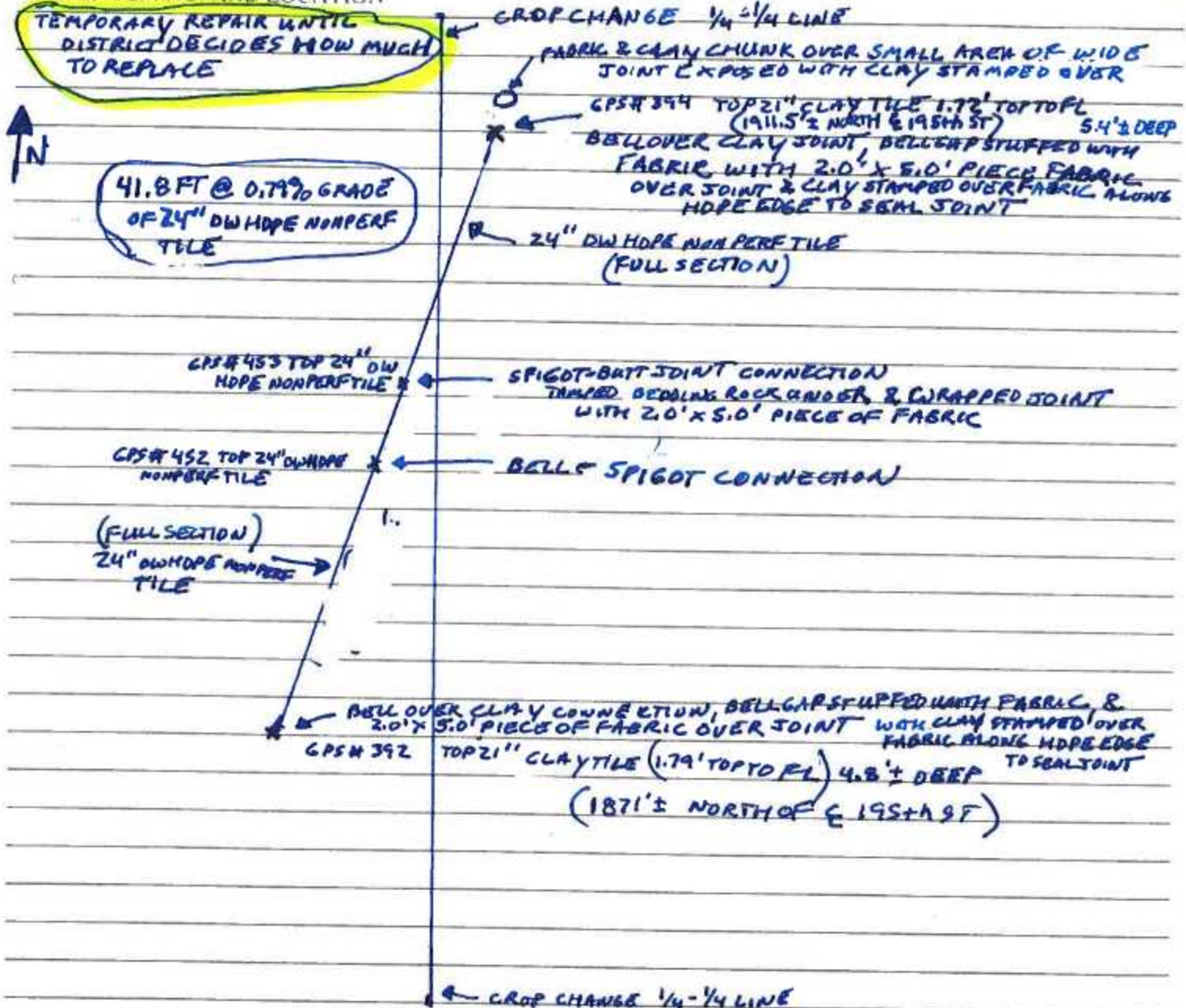
LOCATION:

NW 1/4 NE 1/4 & W 1/4 NE 1/4 NE 1/4 23-8822
INVESTIGATE TILE BLOWOUT ON DOW#11 MAIN

MID 60'S TO MID 80'S
CLOUDY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Deann Pamy

Date Prepared:

06/16/2020

Reviewed by:

Engineer

Date Reviewed

PICTURE# 3818 SHOWING CREW DRILL HOLES IN BOTTOM OF 24" DW HOPE NONPERF TILE BEFORE INSTALLED TO PREVENT TILE FROM FLOATING UP.



4.8'± DEEP
GPS# 392 TOP 21" CLAY TILE (1.72' TOP TO FL)



(TEMPORARY REPAIR)
PICTURE# 3819 GPS# 394 TILE TOP 21" CLAY (1.72' TOP TO FL) IS LOOKING SOUTH UPSTREAM 5.4'± DEEP WITH MUCK CLEANED OUT OF BOTTOM OF TRENCH & READY TO INSTALL 24" HOPE DW NONPERF TILE. BOTTOM IS SOFT IN AREAS AND WILL USE SOME ROCK TO FIRM UP ON INSTALLATION

(TEMPORARY REPAIR)
 PICTURE # 3820 IS LOOKING NE SHOWING FIRST
 FULL SECTION OF 24" DW HDPE NONPERF TILE IN PLACE
 WITH BELL END ON UPSTREAM END WITH JUST ENOUGH ROCK
 TO GET FIRM BOTTOM OF TRENCH. HDPE TILE WAS SET SO

INSIDE
 BOTTOM
 OF BELL
 IS RESTING
 ON BOTTOM
 OF CLAY
 TILE
 AT TIE IN



GPS # 392 TOP 21" CLAY TILE (1.79' TO TOP FL)
 4.8' ± DEEP

GPS # 392



GPS # 452
 TOP 24" DW
 HDPE
 NONPERF
 TILE
 2.14' TO TOP FL

GPS # 453 TOP 24" DW HDPE NONPERF
 TILE 2.14' TO TOP FL

PICTURE # 3821 IS LOOKING SW AT FULL SECTION INSTALLED FROM
 DOWNSTREAM END (BELL END AT CLAY TILE TIE IN) WITH BELL END OF SMALL
 SECTION OF 24" DW HDPE NONPERF TILE INSTALLED ON SPIGOT END OF UPSTREAM SECTION
 & BUTT CONNECTION ON SPIGOT END FROM DOWNSTREAM FULL SECTION

PICTURE #. 3822 IS LOOKING SE SHOWING BELL END OF 24" DW
HDPE NONPERF TILE AT UPSTREAM TIE IN CONNECTION
WITH FABRIC STUFF BETWEEN INSIDE BELL & OUTSIDE OF CLAY
GPS # 392 WITH BEDDING ROCK



TAMPED
IN UNDER
HDPE TILE
AND 2.0'
X 5.0' PLEGE
ENGINEERING
FABRIC OVER
JOINT
N
↓



GPS # 392
N
←

PICTURE # 3823 IS LOOKING EAST AT ENGINEER FABRIC STUFFED
IN JOINT & OVER JOINT. CREW STOMPED IN CLAY AROUND
HDPE EDGE BEFORE BACK FILLING SOIL IN TRENCH. BEDDING ROCK
TAMPED IN UNDER TILE TO KEEP IT IN PLACE;

PICTURE# 3824 IS LOOKING SW SHOWING CREW BACKFILLING SOIL AROUND NEW TILE WITH CREW TAMPING IN SOIL AROUND HAUNCH OF TILE. SOIL IS GETTING LITTLE MULKY DUE TO WATER AROUND TILE BUT WITH FIRM BOTTOM UNDER TILE.



N
↓



BUTT JOINT CONNECTION WRAPPED WITH FABRIC

GPS#453

GPS#452

06/18/2020
11:33

PICTURE#3825 IS LOOKING NE SHOWING SMALL SECTION 24" DW HDPE NONPERF TILE WITH BELL-SPIGOT CONNECTION & SPIGOT BUTT CONNECTION ON DOWNSTREAM END WITH JOINT WRAPPED WITH FABRIC & BEDDING ROCK TAMPED UNDER CONNECTION

PICTURE # 3826 SHOWING A PIECE OF FABRIC WITH CLAY TILE PIECES OVER A EXPOSED TILE JOINT THAT IS WIDER THAN NORMAL JOINT FOR NEXT JOINT NORTH OF TIE IN



CONNECTIONS
CREW STAMPED
CLAY OVER
TOO.



BEDDING ROCK
TAPPED UNDER
HDPSTILE
TO KEEP BOTTOM
OF INSIDE OF
BELL TIGHT
UP TO BOTTOM
OF CLAY TILE

PICTURE # 3827 AS LOOKING SW SHOWING LOOSE SOIL BEING BACKFILLED AROUND TILE. CREW STUFFED FABRIC IN GAP BETWEEN INSIDE BELL AND TOP OF CLAY. CREW PLACED 2.0' x 5.0' PIECE OF ENGINEERING FABRIC OVER JOINT AND STOMPED CLAY AROUND EDGE HDPSTILE BEFORE BACKFILLING

GPS # 394 DOWNSTREAM END TIE IN

PICTURE # 3842 IS LOOKING SOUTH SHOWING BEAN DAMAGE
IN REPAIR WITH AREA CLEANED UP.



↓ N



PICTURE # 3843 IS LOOKING SOUTH SHOWING CORN DAMAGE
IN REPAIR AREA WITH AREA CLEANED UP

PICTURE# 3844 IS LOOKING SOUTH AT BEAN/CORN
DAMAGE TO ACCESS LANE WITH AREA CLEANED
UP



PICTURE# 3845 IS LOOKING SE SHOWING BEAN DAMAGE
TO ACCESS LANE WITH AREA CLEANED UP

PICTURE # 3846 IS LOOKING SOUTH AT BEAN
DAMAGE TO ACCESS LANE WITH AREA
CLEANED UP.



Inspection Report

Produced on behalf of – HARDIN CO

Site location – ,

Survey reference – 6756.7

Date – 170620

WILLIAMS UNDERGROUND SVCS.

102 INDUSTRIAL DRIVE, ACKLEY, IOWA

50601,










641-485-3925

1 Drain / Sewer Survey

1.1 Survey Header

1.1.1	Surveyed by (Operator)	PAUL
1.1.2	Contract no.	
1.1.3	Job no.	6756.7
1.1.4	Catchment (Drainage area)	DD 11
1.1.5	Division	MAIN
1.1.6	District	
1.1.7	Pipeline length ref	1000
1.1.8	Date	170620
1.1.9	Time	11:43
1.1.10	Location	HOLE 394
1.1.11	Start manhole no.	
1.1.12	Start depth	m
1.1.13	Start cover level	
1.1.14	Start invert level	
1.1.15	Finish manhole no.	
1.1.16	Finish depth	m
1.1.17	Finish cover level	
1.1.18	Finish invert level	
1.1.19	Use of Drain	
1.1.20	Direction	D
1.1.21	Size 1 (diameter/height)	21mm
1.1.22	Size 2 (width)	mm
1.1.23	Shape	O
1.1.24	Material	VC
1.1.25	Lining	
1.1.26	Pipe length	1000m
1.1.27	Total length	
1.1.28	Year laid	
1.1.29	Video cassette number	
1.1.30	Comments: General	
1.1.31	Purpose	
1.1.32	Sewer category	
1.1.33	Pre-cleaning	
1.1.34	Weather	
1.1.35	Location code	
1.1.36	Further location details	

1.3 Observations

Video Ref	Dist (ft)	Cont Defect	Code	Photo Ref	Diameter/ Dimension	Clock		Intrusion		Remarks
						At	To	%	mm	
0:03:54	13.4	YES	CM	2020_06_17-11_56_45_767.jpg 		12	11			
0:04:50	21.0		CL	2020_06_17-11_58_15_486.jpg 		12				TOPCRACKED BADLY
0:05:30	24.8		MC	2020_06_17-12_00_19_434.jpg 						VCP TO CMP PIPE CHANGE
0:06:46	42.4		MC	2020_06_17-12_02_13_273.jpg 						CMP TO VCP PIPE CHANGE
0:11:03	49.9	YES	B	2020_06_17-12_06_51_666.jpg 		12	11			MULTIPLE CRACKS ALL AROUND AS FAR AS CAMERA CAN SEE
0:14:24	108.4	YES	B	2020_06_17-12_12_01_891.jpg 		12	11			LOTS OF BROKEN PIPE AS FAR AS VISIBLE
0:15:06	118.4		B	2020_06_17-12_13_30_307.jpg 		12	11			BROKEN AN BUCKLING DOWN
0:19:23	194.2		B	2020_06_17-12_18_17_103.jpg 		06	09			TILE HAS BROKEN OFF AND INTRUDING INTO PIPE.
0:24:18	252.0		B	2020_06_17-12_23_57_456.jpg 		12	12			BROKEN AT ALL CLOCK POSITIONS AND SQUATTING DOWN
0:31:32	335.3		B	2020_06_17-12_32_05_562.jpg		11	12			MULTIPLE BREAKS ALL

1.4 Photographs

CM 2020_06_17-11_56_45_767.jpg



MC 2020_06_17-12_02_13_273.jpg



CL 2020_06_17-11_58_15_486.jpg



B 2020_06_17-12_06_51_666.jpg

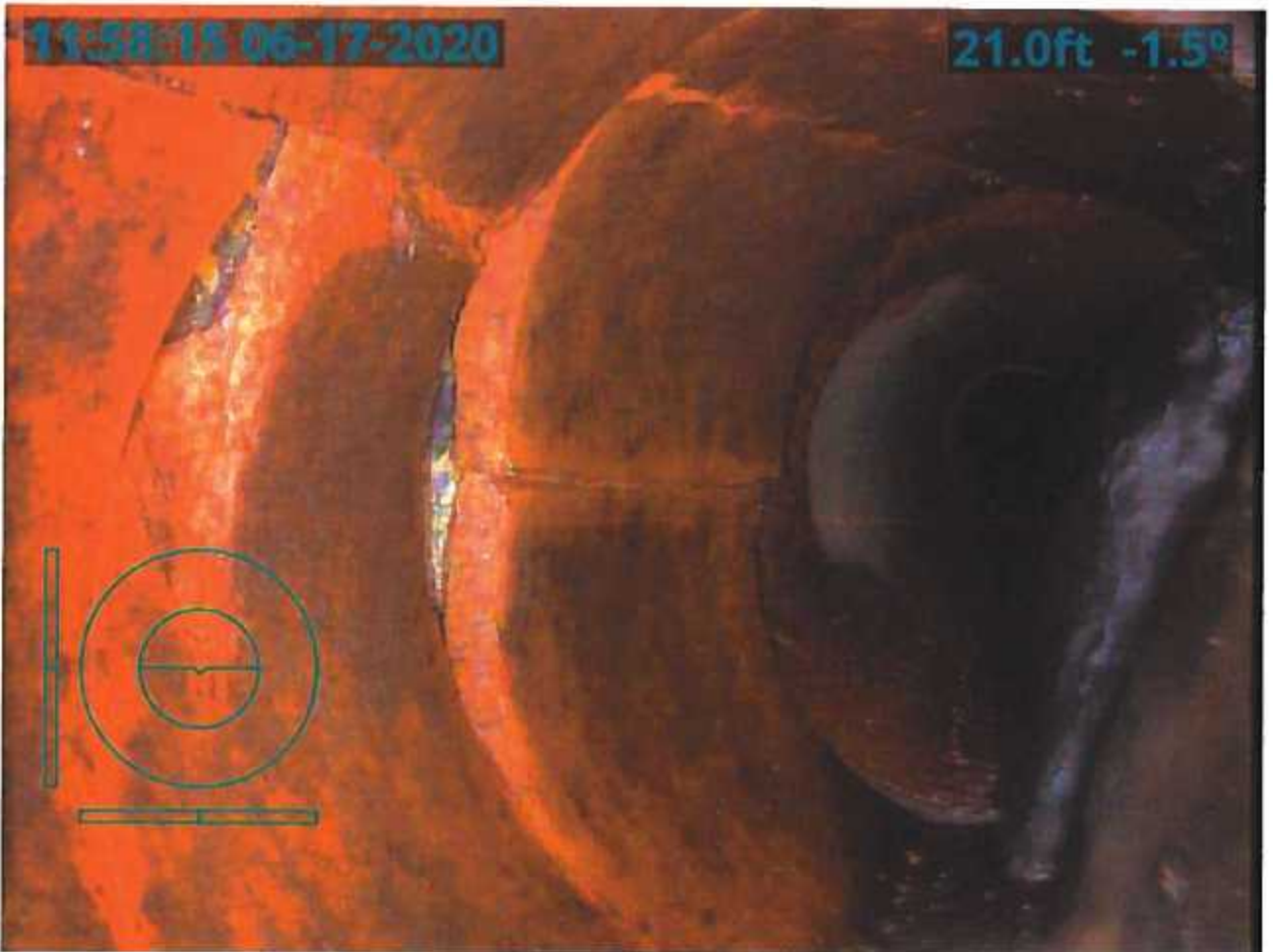


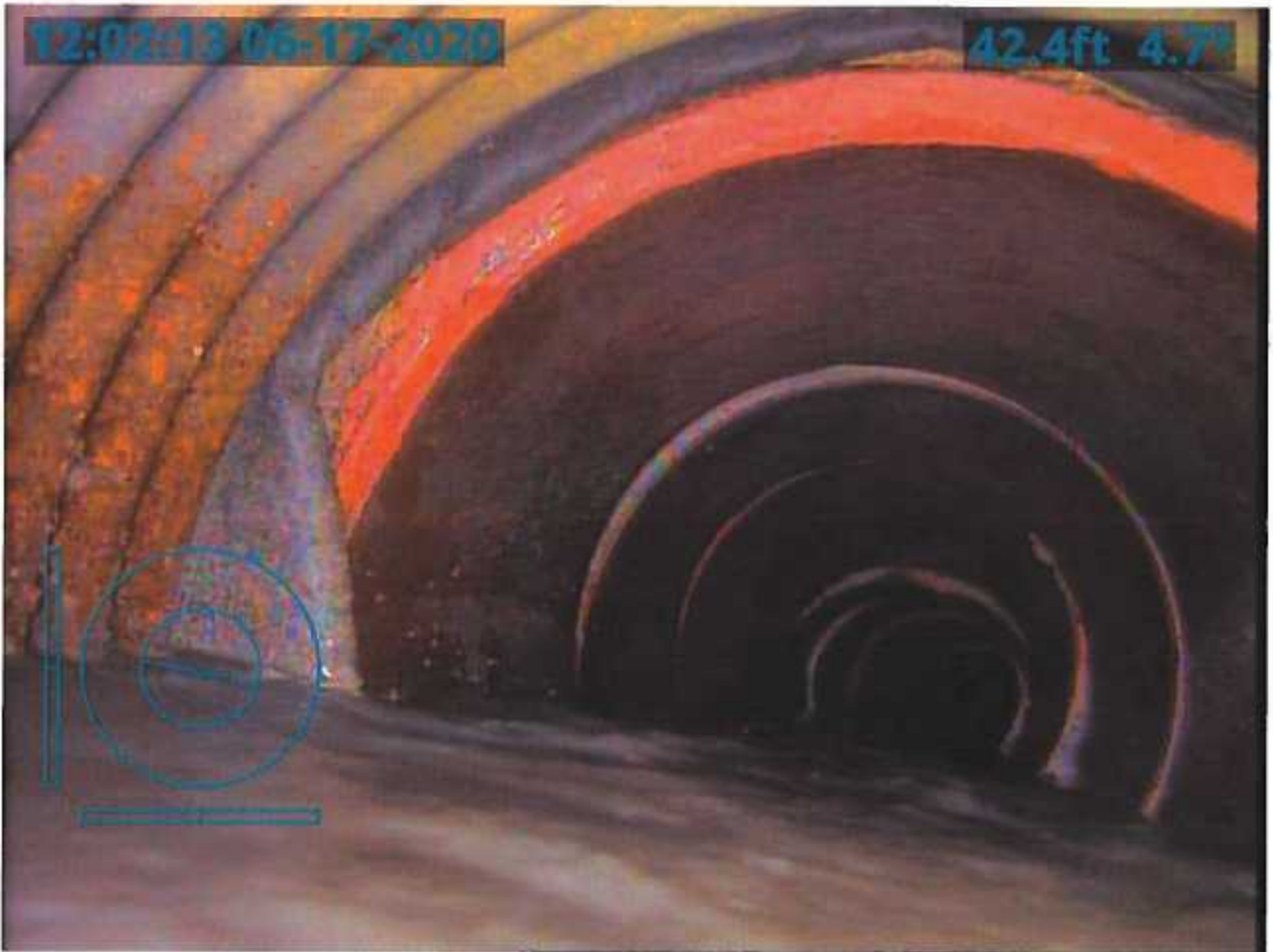
MC 2020_06_17-12_00_19_434.jpg



B 2020_06_17-12_12_01_891.jpg







12:06:51 06-17-2020

49.9ft -0.8°



12:12:01 06-17-2020

108.4ft -2.0°



12:13:30 06-17-2020

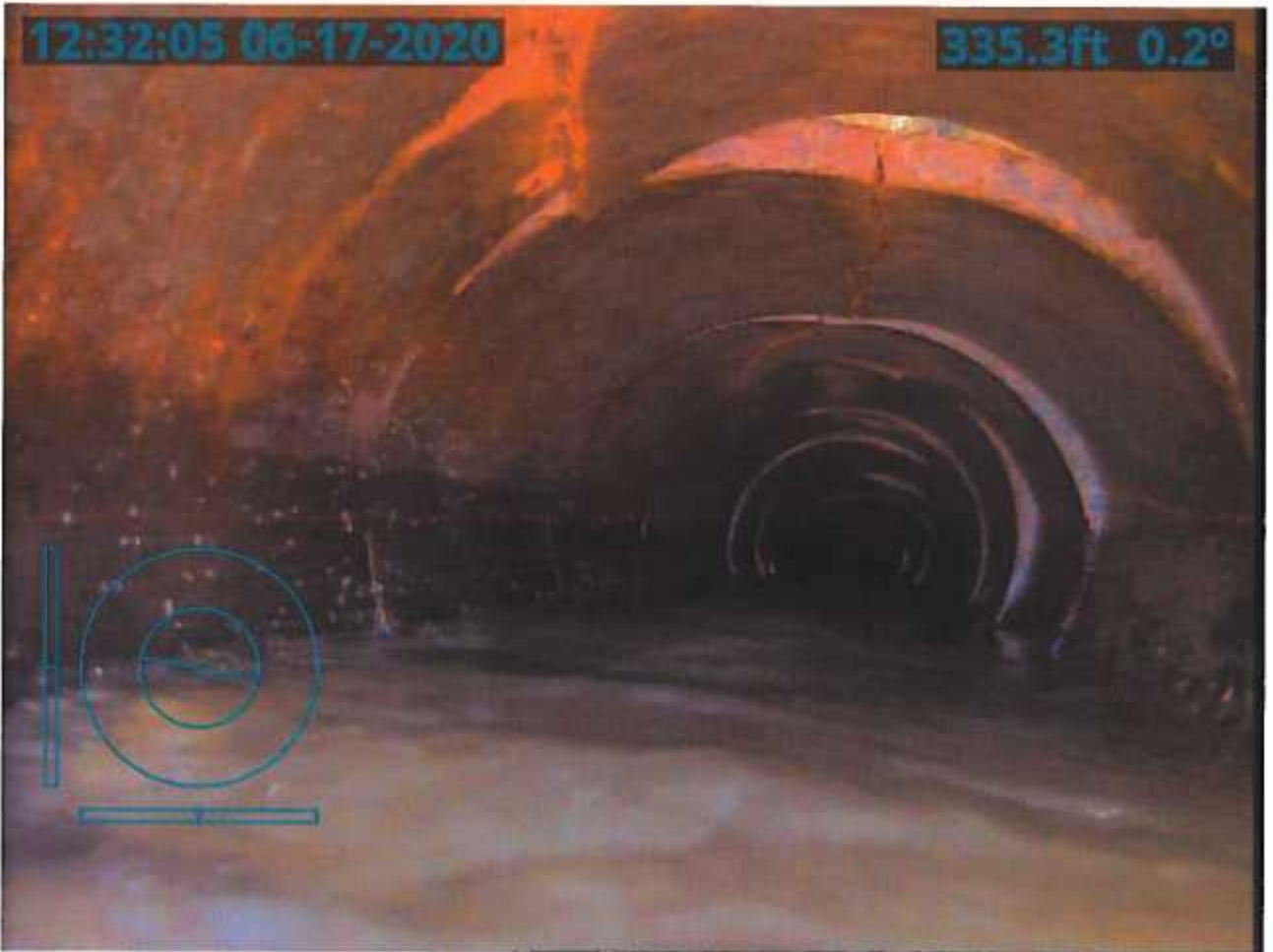
118.4ft -0.6°

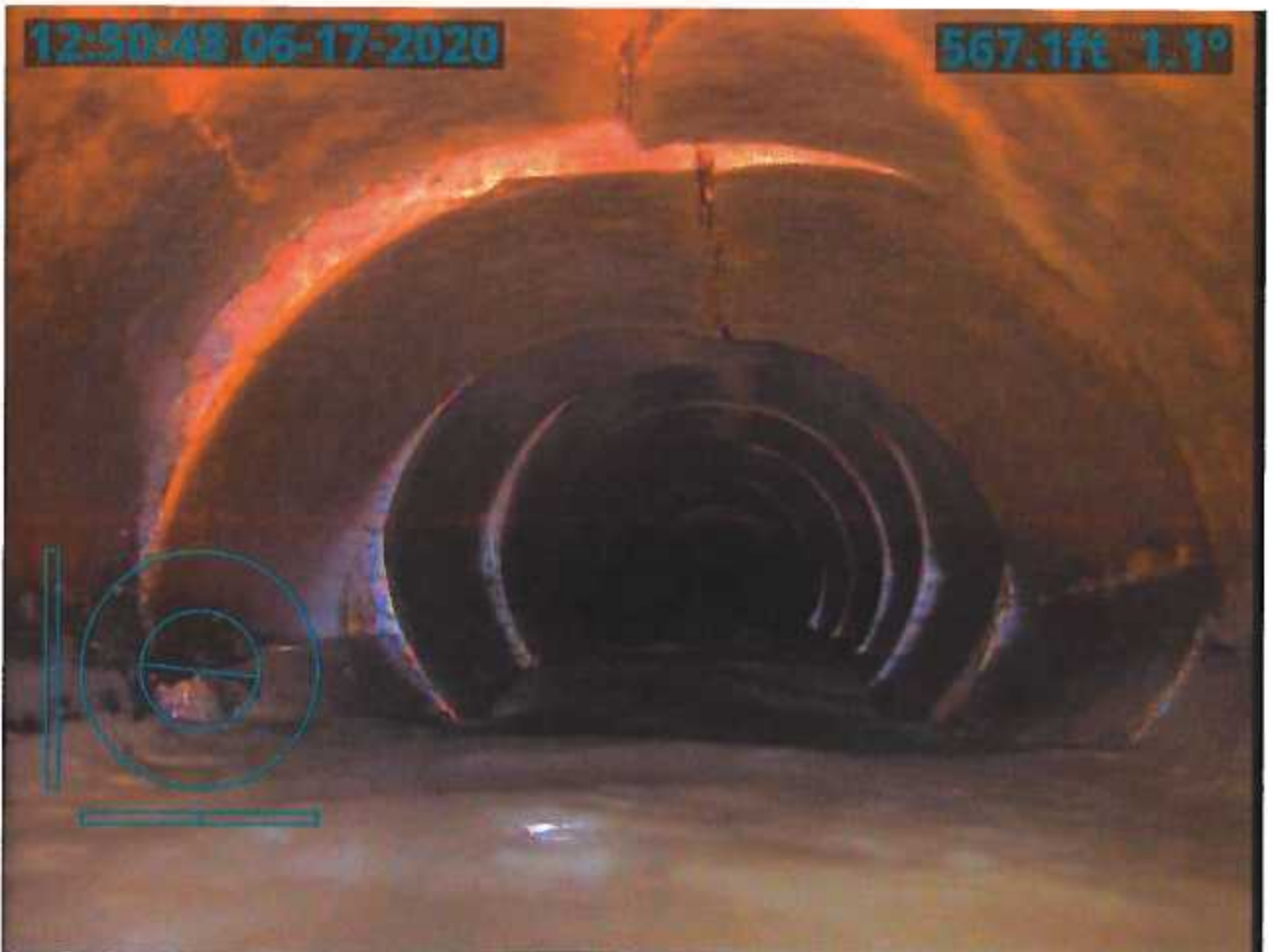


12:18:16 06-17-2020

194.2ft -4.1°







Inspection Report

Produced on behalf of – HARDIN CO

Site location – ,

Survey reference – W/O 295

Date – 170620

WILLIAMS UNDERGROUND SVCS.

102 INDUSTRIAL DRIVE, ACKLEY, IOWA

50601,

641-485-3925

Contents

1	Drain / Sewer Survey	Error! Bookmark not defined.
1.1	Site information	<i>Error! Bookmark not defined.</i>
1.2	Drain / Sewer Details	<i>Error! Bookmark not defined.</i>
1.3	Survey Details	<i>Error! Bookmark not defined.</i>
1.4	Drain / Sewer Diagram	<i>Error! Bookmark not defined.</i>
1.5	Observations	<i>Error! Bookmark not defined.</i>
1.6	Photographs.....	<i>Error! Bookmark not defined.</i>
2	Drain / Sewer Survey	Error! Bookmark not defined.
2.1	Site information	<i>Error! Bookmark not defined.</i>
2.2	Drain / Sewer Details	<i>Error! Bookmark not defined.</i>
2.3	Survey Details	<i>Error! Bookmark not defined.</i>
2.4	Drain / Sewer Diagram	<i>Error! Bookmark not defined.</i>
2.5	Observations	<i>Error! Bookmark not defined.</i>
2.6	Photographs.....	<i>Error! Bookmark not defined.</i>

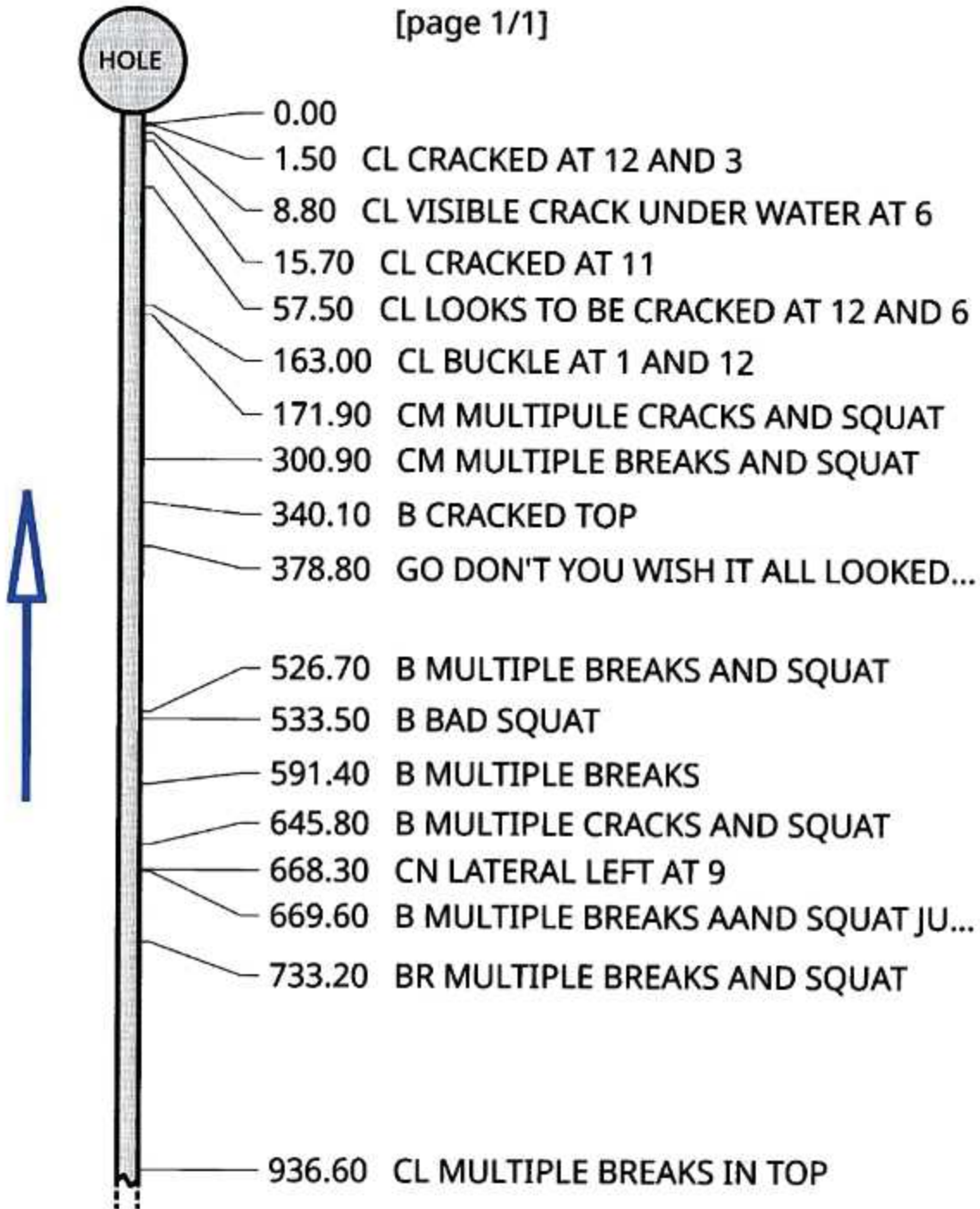
1 Drain / Sewer Survey

1.1 Survey Header









1.1.1	Surveyed by (Operator)	PAUL
1.1.2	Contract no.	6756.7
1.1.3	Job no.	W/O 295
1.1.4	Catchment (Drainage area)	DD 11
1.1.5	Division	
1.1.6	District	
1.1.7	Pipeline length ref	1000
1.1.8	Date	170620
1.1.9	Time	14:23
1.1.10	Location	
1.1.11	Start manhole no.	HOLE 392
1.1.12	Start depth	m
1.1.13	Start cover level	
1.1.14	Start invert level	
1.1.15	Finish manhole no.	
1.1.16	Finish depth	m
1.1.17	Finish cover level	
1.1.18	Finish invert level	
1.1.19	Use of Drain	W
1.1.20	Direction	U
1.1.21	Size 1 (diameter/height)	21mm
1.1.22	Size 2 (width)	mm
1.1.23	Shape	C
1.1.24	Material	VC
1.1.25	Lining	
1.1.26	Pipe length	1000m
1.1.27	Total length	
1.1.28	Year laid	
1.1.29	Video cassette number	
1.1.30	Comments: General	
1.1.31	Purpose	F
1.1.32	Sewer category	Z
1.1.33	Pre-cleaning	
1.1.34	Weather	
1.1.35	Location code	
1.1.36	Further location details	









1.2 Diagram

[page 1/1]



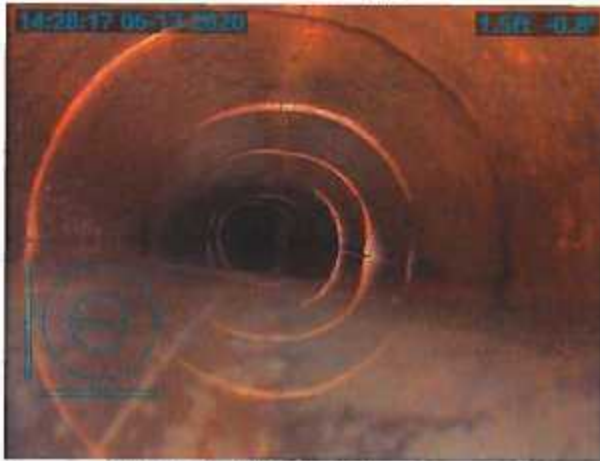
1.3 Observations

Video Ref	Dist (ft)	Cont Defect	Code	Photo Ref	Diameter/ Dimension	Clock		Intrusion		Remarks
						At	To	%	mm	
0:01:04	1.5		CL	2020_06_17-14_28_17_621.jpg 		12				CRACKED AT 12 AND 3
0:02:19	8.8		CL	2020_06_17-14_30_17_404.jpg 		06				VISIBLE CRACK UNDER WATER AT 6
0:03:15	15.7		CL	2020_06_17-14_31_45_663.jpg 		11				CRACKED AT 11
0:07:08	57.5		CL	2020_06_17-14_36_00_095.jpg 		00				LOOKS TO BE CRACKED AT 12 AND 6
0:13:54	163.0		CL	2020_06_17-14_43_22_128.jpg 		01				BUCKLE AT 1 AND 12
0:14:28	171.9		CM	2020_06_17-14_44_27_712.jpg 		12	03			MULTIPLE CRACKS AND SQUAT
0:24:08	300.9		CM	2020_06_17-14_54_52_873.jpg 		12	11			MULTIPLE BREAKS AND SQUAT
0:26:54	340.1		B	2020_06_17-14_58_24_390.jpg 		12	12			CRACKED TOP
0:28:53	378.8		GO	2020_06_17-15_01_02_821.jpg 						DON'T YOU WISH IT ALL LOOKED LIKE THIS?
0:40:16	526.7		B	2020_06_17-15_13_26_542.jpg 		10	06			MULTIPLE BREAKS AND

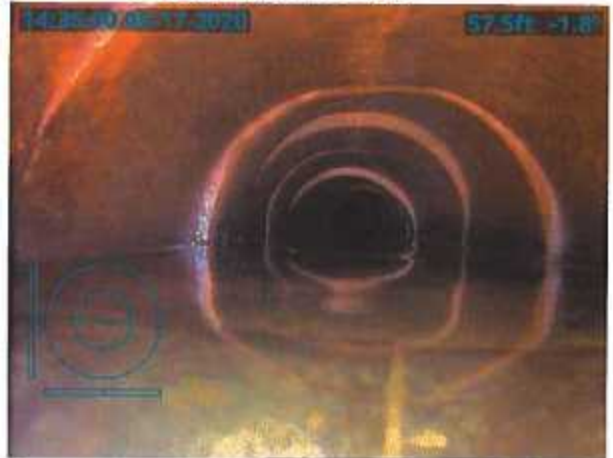
Video Ref	Dist (ft)	Cont Defect	Code	Photo Ref	Diameter/ Dimension	Clock		Intrusion		Remarks
						At	To	%	mm	
										SQUAT
0:41:11	533.5		B	2020_06_17-15_15_35_850.jpg 		10	06			BAD SQUAT
0:49:35	591.4		B	2020_06_17-15_24_28_350.jpg 		12	11			MULTIPLE BREAKS
0:53:26	645.8		B	2020_06_17-15_28_43_526.jpg 		06	05			MULTIPLE CRACKS AND SQUAT
0:55:10	668.3		CN	2020_06_17-15_31_02_162.jpg 	67	09				LATERAL LEFT AT 9
0:55:50	669.6		B	2020_06_17-15_33_04_893.jpg 		12	11			MULTIPLE BREAKS AAND SQUAT JUST UPSTREAM OF LATERAL LEFT
0:59:39	733.2		BR	2020_06_17-15_37_42_522.jpg 	9	09	03			MULTIPLE BREAKS AND SQUAT
1:10:12	936.6		CL	2020_06_17-15_49_14_555.jpg 		01				MULTIPLE BREAKS IN TOP

1.4 Photographs

CL 2020_06_17-14_28_17_621.jpg



CL 2020_06_17-14_36_00_095.jpg



CL 2020_06_17-14_30_17_404.jpg



CL 2020_06_17-14_43_22_128.jpg



CL 2020_06_17-14_31_45_663.jpg



CM 2020_06_17-14_44_27_712.jpg



CM 2020_06_17-14_54_52_873.jpg



B 2020_06_17-15_13_26_542.jpg



B 2020_06_17-14_58_24_390.jpg



B 2020_06_17-15_15_35_850.jpg



GO 2020_06_17-15_01_02_821.jpg



B 2020_06_17-15_24_28_350.jpg



B 2020_06_17-15_28_43_526.jpg



BR 2020_06_17-15_37_42_522.jpg



CN 2020_06_17-15_31_02_162.jpg

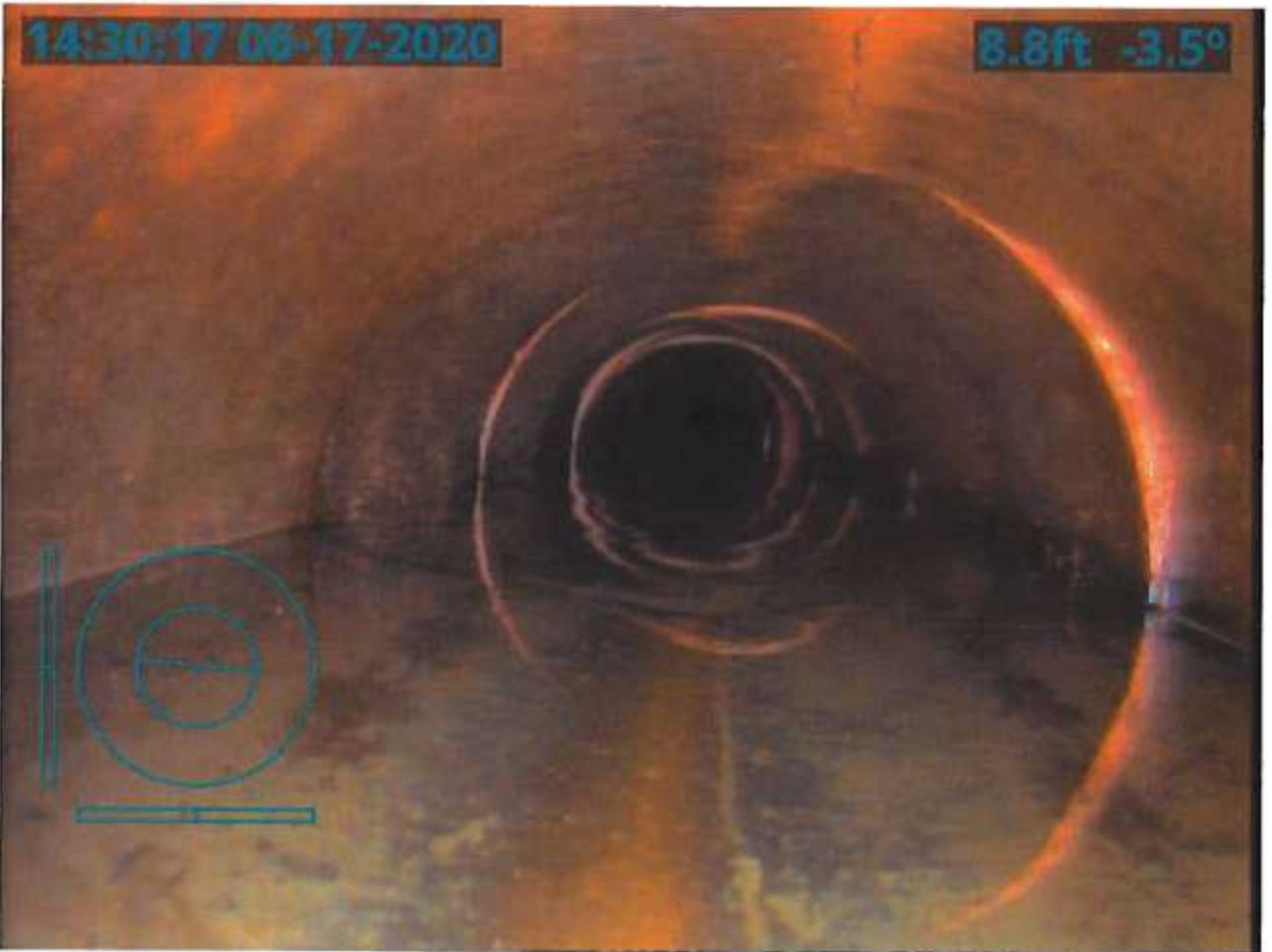
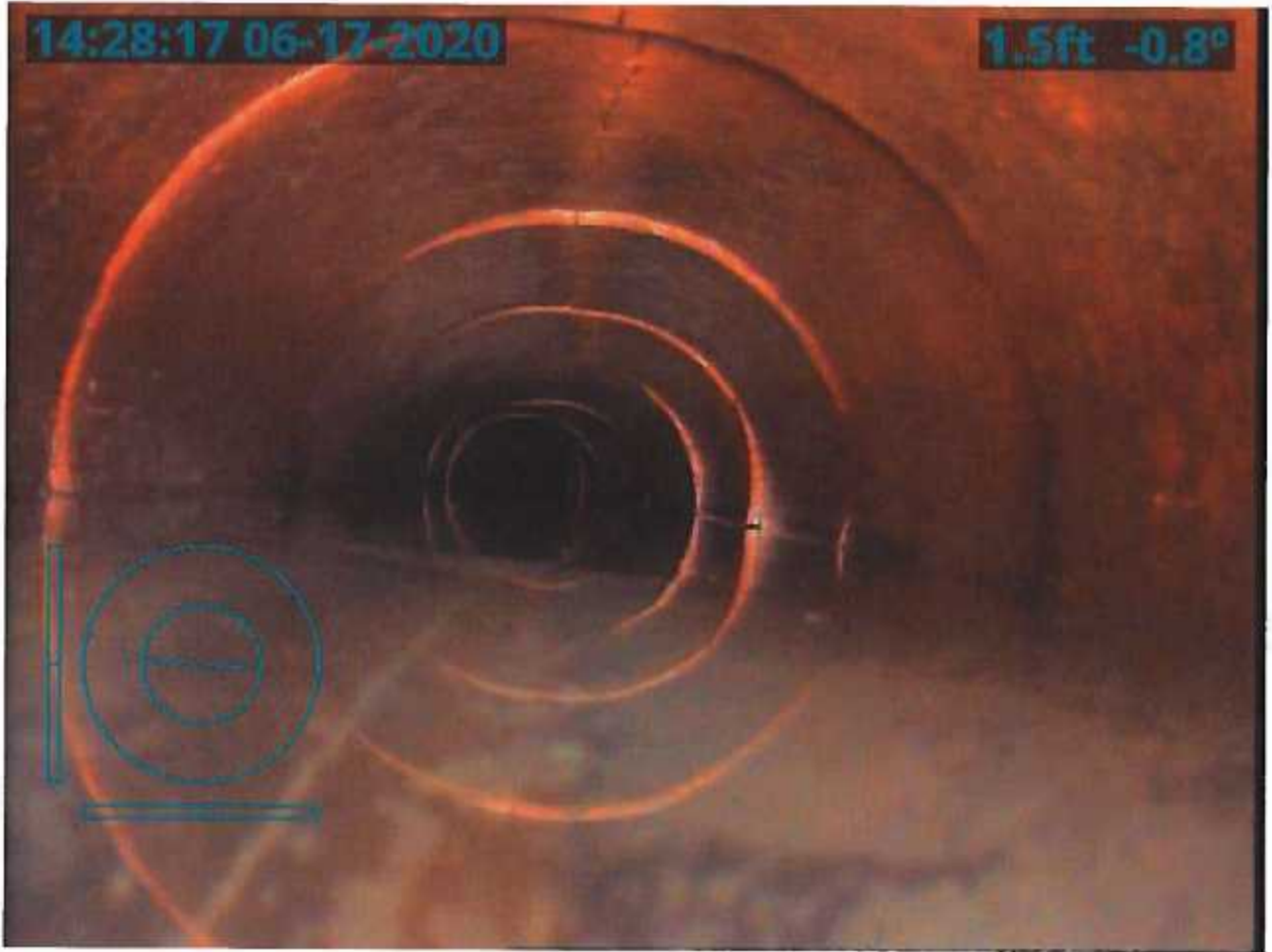


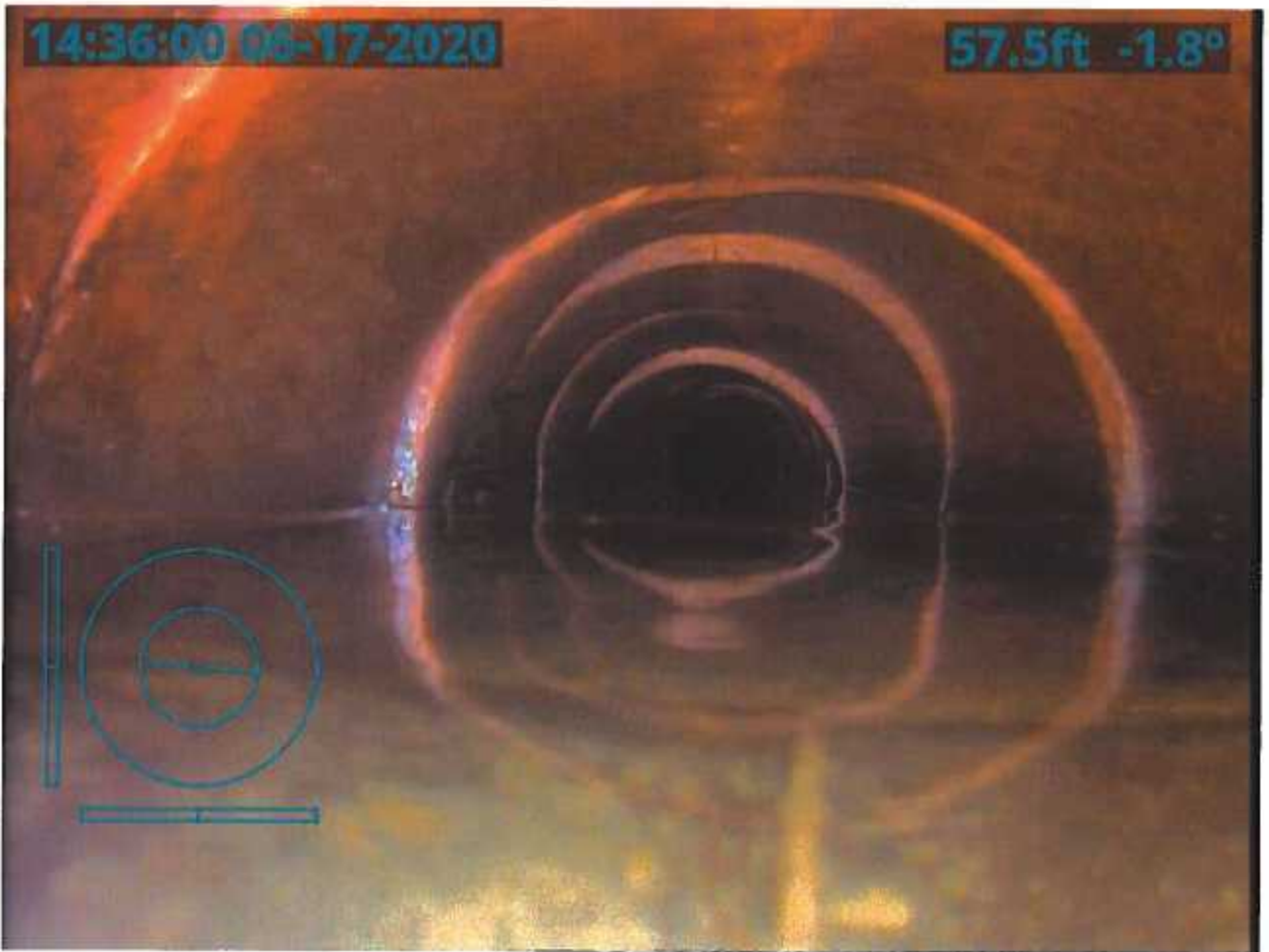
CL 2020_06_17-15_49_14_555.jpg



B 2020_06_17-15_33_04_893.jpg















15:28:43 06-17-2020

645.8ft -1.6°



15:31:02 06-17-2020

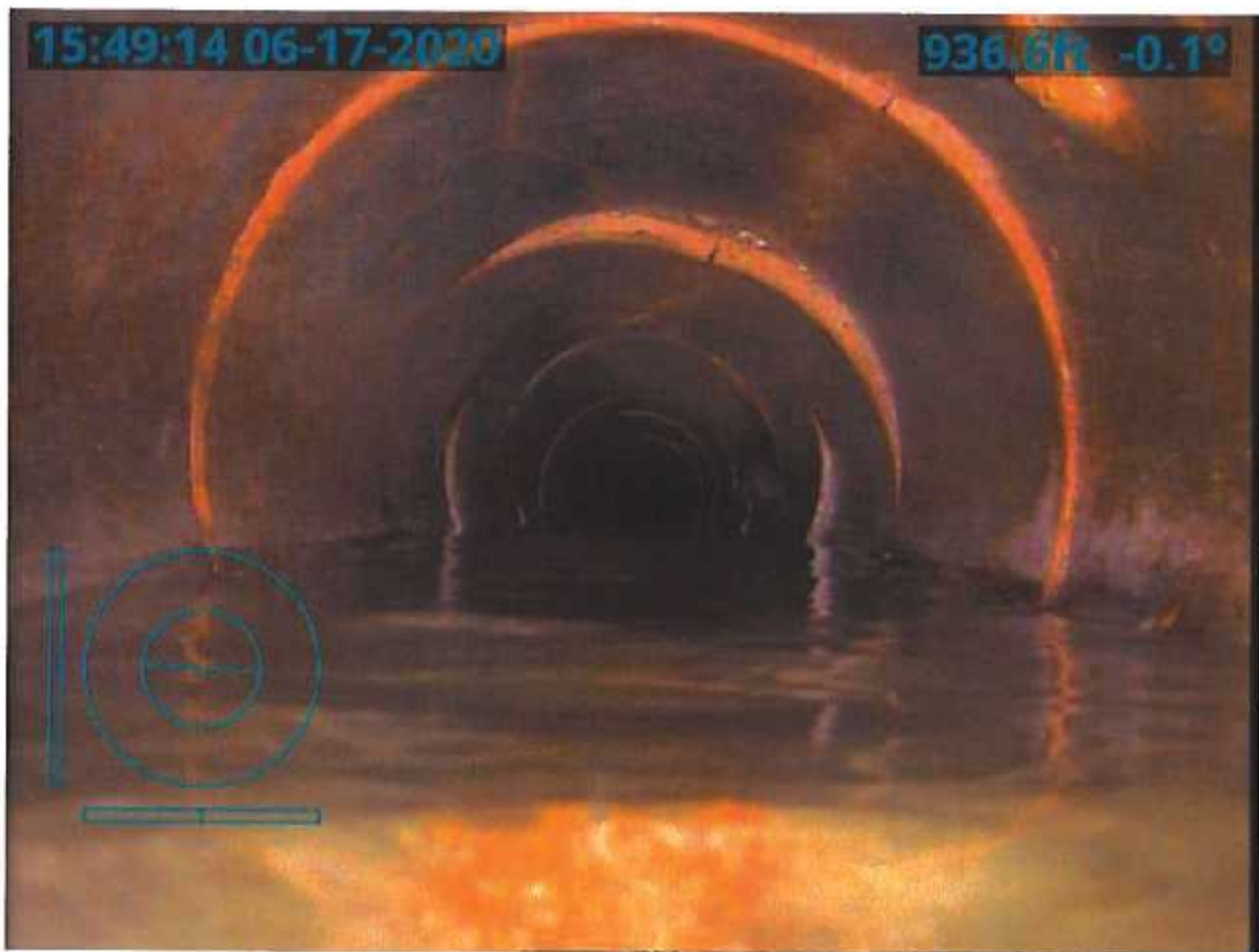
668.3ft -1.0°





15:49:14 06-17-2020

936.6ft -0.1°



6756 BUCKEYE 2020-06-18 DP

320,3615120.403,4954117.674,1156.066,CPT 1/2 IRS
390,3617794.436,4956071.863,1142.777,gs above tile
391,3617829.995,4956083.523,1142.984,gs above tile
392,3617804.485,4956075.353,1138.008,TILE TOP 21" CLAY 1.79'TOPTOFL
393,3617827.092,4956081.777,1137.820,TILE TOP 21" CLAY 1.72'TOPTOFL
394,3617844.617,4956086.984,1137.608,TILE TOP 21" CLAY 1.72'TOPTOFL
395,3617886.545,4956099.047,1142.190,GS TILE LOCATE
396,3617933.617,4956131.299,1142.097,GS TILE LOCATE
397,3617963.536,4956155.836,1141.948,GS TILE LOCATE
398,3617996.131,4956185.693,1141.928,GS TILE LOCATE
399,3618015.397,4956203.794,1141.719,GS TILE LOCATE
400,3618048.658,4956235.273,1141.479,GS TILE LOCATE
401,3618076.049,4956260.655,1141.334,GS TILE LOCATE
402,3618108.393,4956291.219,1141.113,GS TILE LOCATE
403,3618132.895,4956313.630,1141.013,GS TILE LOCATE
404,3618155.157,4956334.848,1140.998,GS TILE LOCATE
405,3618189.746,4956367.039,1141.057,GS TILE LOCATE
406,3618209.505,4956383.766,1141.097,GS TILE LOCATE
407,3618232.271,4956404.513,1141.047,GS TILE LOCATE
408,3618247.334,4956418.358,1140.795,GS TILE LOCATE
409,3618264.056,4956433.994,1140.737,GS TILE LOCATE
410,3618282.303,4956448.945,1140.650,GS TILE LOCATE
411,3618288.853,4956454.033,1140.588,GS TILE LOCATE
412,3618305.947,4956468.984,1140.448,GS TILE LOCATE END TILE IN FL
413,3617756.520,4956059.852,1142.659,GS TILE LOCATE
414,3617710.224,4956044.598,1142.672,GS TILE LOCATE
415,3617659.684,4956028.147,1142.704,GS TILE LOCATE
416,3617609.085,4956010.781,1142.812,GS TILE LOCATE
417,3617560.396,4955996.027,1143.225,GS TILE LOCATE
418,3617506.870,4955979.096,1143.461,GS TILE LOCATE
419,3617444.177,4955958.398,1143.936,GS TILE LOCATE
420,3617378.699,4955936.642,1144.379,GS TILE LOCATE
421,3617328.456,4955920.863,1144.660,GS TILE LOCATE
422,3617270.743,4955902.120,1144.857,GS TILE LOCATE
423,3617208.776,4955882.235,1145.286,GS TILE LOCATE
424,3617144.452,4955862.030,1145.791,GS TILE LOCATE
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426,3617026.303,4955826.141,1146.867,GS TILE LOCATE
427,3616963.566,4955807.859,1147.270,GS TILE LOCATE
428,3616903.614,4955789.317,1147.106,GS TILE LOCATE
429,3616874.365,4955779.766,1147.225,GS TILE LOCATE END CABLE
430,3617551.528,4956070.130,1144.595,GS BEAN DAMAGE
431,3617900.958,4956083.145,1142.359,GS BEAN/CORN DAMAGE
432,3617766.676,4956083.960,1143.649,GS BEAN/CORN DAMAGE
433,3617738.753,4956083.917,1143.965,GS BEAN/CORN DAMAGE
435,3617570.610,4956084.472,1145.082,GS BEAN/CORN DAMAGE
436,3617570.029,4956089.061,1145.138,GS CORN DAMAGE
437,3617213.073,4956073.029,1150.058,GS BEAN DAMAGE

6756 BUCKEYE 2020-06-18 DP

438,3617213.491,4956087.438,1149.850,GS BEAN/CORN DAMAGE
439,3617213.134,4956091.061,1149.693,GS CORN DAMAGE
440,3616570.170,4956092.512,1149.778,GS CORN DAMAGE
441,3616570.654,4956087.991,1149.804,GS BEAN/CORN DAMAGE
442,3616572.458,4956075.955,1149.901,GS BEAN DAMAGE
443,3615982.348,4956078.511,1149.331,GS BEAN DAMAGE
444,3615981.966,4956090.214,1149.024,GS BEAN/CORN DAMAGE
445,3615982.820,4956137.156,1148.983,GS CORN DAMAGE
446,3616010.475,4956115.325,1148.071,GS CORN DAMAGE
447,3616029.785,4956100.250,1148.066,GS CORN DAMAGE
448,3616052.361,4956094.171,1148.223,GS CORN DAMAGE
449,3615933.139,4956081.434,1152.817,CL GRAVEL
450,3617844.616,4956086.984,1135.890,EXIST FL
451,3617804.485,4956075.353,1136.220,EXIST FL
452,3617822.763,4956080.623,1138.178,TILE TOP 24"HDPE NONPERF 2.14'OPTOFL
453,3617827.657,4956082.050,1138.145,TILE TOP 24"HDPE NONPERF 2.14'OPTOFL
454,3617613.055,4956058.222,1143.332,GS BEAN DAMAGE
455,3617660.592,4956037.001,1142.797,GS BEAN DAMAGE
456,3617677.742,4956007.776,1142.806,GS BEAN DAMAGE
457,3617823.637,4956007.117,1142.592,GS BEAN DAMAGE
458,3617900.967,4956037.523,1142.409,GS BEAN DAMAGE
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461,3617797.977,4956125.120,1143.827,GS CORN DAMAGE
462,3617778.361,4956105.990,1143.881,GS CORN DAMAGE
463,3617737.438,4956106.252,1144.433,GS CORN DAMAGE
464,3617710.142,4956088.792,1144.271,GS CORN DAMAGE
465,3617626.187,4956088.866,1144.690,GS CORN DAMAGE
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