



HARDIN COUNTY
Board of Supervisors

Wednesday, October 13, 2021

NOTICE: Public meetings will be held electronically and in-person. To access and participate in meetings remotely, please call 641-939-8108 for meeting information.

1. 9:00 A.M. Call To Order
Courthouse Large Conference Room
2. Pledge Of Allegiance
3. Approval Of Agenda
4. Approval Of Minutes

Documents:

[09-29-2021 MINUTES.PDF](#)
[09-29-2021 CHAT LOG.PDF](#)
[10-06-2021 MINUTES.PDF](#)
[10-06-2021 CHAT LOG.PDF](#)

5. Approval Of Claims For Payment

Documents:

[VENDOR PUBLICATION REPORT 10.13.2021.PDF](#)

6. Marian Kuper, Re: Policy For Responding To CO2 Pipeline Leak

Documents:

[REQUEST RE EMERGENCY PREPAREDNESS - CO2 PIPELINE.PDF](#)

7. Utility Permits & Secondary Roads Department

Documents:

[IPL UTILITY PERMIT APPLICATION UT-21-015.PDF](#)

8. Approve Final Plans For FM-C042(109)—55-42 - HMA Paving Of S75 From 310th Street To Co Hwy E18

Documents:

[42-CO42-109.PDF](#)

9. Auditor's Monthly Report

Documents:

[AUDITORS MONTHLY REPORT.PDF](#)

10. Recorder's Monthly Report

Documents:

[RECORDERS MONTHLY REPORT.PDF](#)

11. Changes Of Status – Conservation

12. Changes Of Status – Sheriff's Office

Documents:

[CHANGES OF STATUS - SHERIFFS OFFICE.PDF](#)

13. Other Business

14. Adjournment/Recess

15. 9:30 A.M. Drainage
Courthouse Large Conference Room

HARDIN COUNTY BOARD OF SUPERVISORS
MINUTES – SEPTEMBER 29, 2021
WEDNESDAY - 8:30 A.M.
COURTHOUSE LARGE CONFERENCE ROOM

Chair BJ Hoffman called the meeting to order. Also present were Supervisors René McClellan and Lance Granzow; and Angela De La Riva and Angela Silvey.

McClellan moved, Granzow seconded to enter closed session pursuant to Iowa Code Sections 21.5(1)(a), 22.7(3), and 22.7(8) to discuss economic development projects. Roll Call Vote: “Ayes” McClellan, Granzow, and Hoffman. “Nays” None. Motion carried. The Board entered closed session at 8:30 a.m.

Following discussion, Granzow moved, McClellan seconded to exit closed session. Roll Call Vote: “Ayes” Granzow, McClellan, and Hoffman. “Nays” None. Motion carried. Closed session ended at 8:56 a.m.

Granzow moved, McClellan seconded to adjourn. Motion carried.

At 9:00 a.m. Chair Hoffman called the regular meeting to order. Also present were Supervisors McClellan and Granzow; and Michael Pearce, Thomas Craighton, Jolene Pieters, Angela De La Riva, Machel Eichmeier, Taylor Roll, Connie Mesch, Ken Nason, Darrell Meyer, Dave McDaniel, and Angela Silvey. Attending via Zoom: Curt Groen, Cheryl Lawrence, Megan Harrell, Donna Juber, Lisa Lawler, Tifani Eisentrager, Jessica Sheridan, JD Holmes, Matt Rezab, Pauline Lloyd, Rocky Reents, Julie Duhn, Denise Smith, Elaine Loring, Kristi Swalve, Allison Munro, and Mark Buschkamp.

The Pledge of Allegiance was recited.

McClellan moved, Granzow seconded to approve the agenda as posted. Motion carried.

Granzow moved, McClellan seconded to approve the minutes of August 30, 2021 and September 21, 2021. Motion carried.

McClellan moved, Granzow seconded to approve the September 29, 2021 claims for payment. Motion carried.

Utility Permits: None.

Secondary Roads:

County Engineer Taylor Roll gave project updates and advised the road crew is ready for snow.

McClellan moved, Granzow seconded to approve a 28E agreement between the Iowa Department of Natural Resources and Hardin County for private well permitting. Motion carried.

McClellan moved, Granzow seconded to approve the Application for Use of Courthouse Grounds submitted by Life Chain Hardin County for a Life Chain 2021 event slated for October 3, 2021. Motion carried.

Discussion was held on Hardin County possibly becoming the Central Iowa Community Services (CICS) employer of record. Granzow preferred that the Central Iowa Juvenile Detention Center fill that role, and McClellan agreed. It was decided the County had no interest in taking on CICS. No action taken.

McClellan moved, Granzow seconded to approve the resignation of Heather Johlas, Sheriff/Communications Assistant Director, effective 10/11/2021. Motion carried.

Granzow moved, McClellan seconded to approve the hiring of Gillian Gear, part-time Communications Operator, at a rate of \$18.78/hour, effective 10/11/2021. Motion carried.

McClellan moved, Granzow seconded to approve raising the pay of full-time Communications Specialists \$1.00/hour and part-time Communications Specialists to full-time starting base pay, effective 09/25/2021. Motion carried.

Other Business:

Treasurer Machel Eichmeier reminded the public that property taxes are due September 30, 2021.

Assessor Connie Mesch advised that County employees will be out assessing properties. Mesch added that building permits can be obtained from Zoning Administrator Jessica Sheridan or online.

Hoffman reviewed the procedures for public comment.

McClellan moved, Granzow seconded to adjourn. Motion carried.

BJ Hoffman, Chair
Board of Supervisors

Jolene Pieters
Hardin County Auditor

Chat Log from 9/29/2021

09:04:02 From Jessica Sheridan to Everyone:

Just added stipulations for wells near contaminated sites.

09:08:39 From Julie Duhn to Everyone:

Is Hardin County a 'red zone' for covid? What does Rocky say?

09:10:04 From Julie Duhn to Everyone:

When it comes to covid, ignorance is bliss apparently.

09:12:13 From Jessica Sheridan to Everyone:

Jessica Sheridan - (641) 939-8135 or (641) 849-7372

09:13:10 From Jessica Sheridan to Everyone:

Let me unmute.

09:14:56 From Julie Duhn to Everyone:

The form is laughable.

HARDIN COUNTY BOARD OF SUPERVISORS
MINUTES – OCTOBER 6, 2021
WEDNESDAY - 9:00 A.M.
COURTHOUSE LARGE CONFERENCE ROOM

Chair BJ Hoffman called the meeting to order. Also present were Supervisors McClellan and Granzow; and Michael Pearce, Thomas Craighton, Jolene Pieters, Taylor Roll, Dave McDaniel, Darrell Meyer, and Angela Silvey. Attending via Zoom: Cheryl Lawrence, Connie Mesch, Curt Groen, Jamie Geisler, Lori Kadner, Matt Rezab, Ken Nason, Michelle Kuechenberg, JD Holmes, Elaine Loring, Julie Duhn, and Pauline Lloyd.

The Pledge of Allegiance was recited.

McClellan moved, Granzow seconded to approve the agenda as posted. Motion carried.

Granzow moved, McClellan seconded to approve the minutes of September 22, 2021 and September 28, 2021. Motion carried.

McClellan moved, Granzow seconded to approve the October 6, 2021 claims for payment. Motion carried.

Utility Permits: None.

Secondary Roads:

County Engineer Taylor Roll updated the Board on paving and bridge projects.

McClellan moved, Granzow seconded to approve the Sheriff's Monthly Report for September 2021. Motion carried.

Granzow moved, McClellan seconded to approve the WageWorks benefit renewal and open enrollment. Motion carried.

McClellan moved, Granzow seconded to approve the hiring of Michelle Kuechenberg, Drainage Clerk, at a rate of \$17.00/hour, effective 10/04/2021. Motion carried.

Granzow moved, McClellan seconded to approve the promotion of Travis Prochaska to full-time Truck Driver, at a rate of \$22.13/hour, effective 10/25/2021. Motion carried.

McClellan moved, Granzow seconded to approve the promotion of Andrew Jeske to Motor Grader Operator, at a rate of \$22.16/hour, effective 10/11/2021. Motion carried.

Granzow moved, McClellan seconded to approve the resignation of David Michael Burk, Sheriff's Deputy, effective 10/22/2021. Motion carried.

McClellan moved, Granzow seconded to approve the retirement of Edward Lepley, Sheriff's Deputy, effective 10/08/2021. Motion carried.

Discussion was held on a payroll error wherein Secondary Roads and IRVM employees received FY 2022 raises three days early, and the following action was taken:

McClellan moved, Granzow seconded to approve changing the effective date of the FY 2022 wage adjustment from 07/01/2021 to 06/28/2021 for affected Secondary Roads and IRVM employees. Motion carried.

Other Business: None.

Granzow moved, McClellan seconded to adjourn. Motion carried.

BJ Hoffman, Chair
Board of Supervisors

Jolene Pieters
Hardin County Auditor

Chat Log from 10/6/2021

09:03:59 From Julie Duhn to Everyone:

Have there been any requests for public comment? Where is the form?

09:07:18 From Julie Duhn to Everyone:

where online?



Hardin County

Vendor Publication Report

Payment Date Range: 10/13/2021 - 10/13/2021

Vendor Name	Vendor Number	Total Payments
Ackley Publishing Co. Inc	1387V	390.00
Ahlers & Cooney-P.C.	61244V	1,775.60
Alliant Energy	4253V	368.72
American Business Phones	6369V	66,815.34
Angela De La Riva	100411	93.15
Black Hawk County Treasurer	61719V	70.00
Bonnie Wiederkehr	2485V	153.60
Brennen Reysack	100348	160.00
Casey's General Store-IFalls	100007	25.01
Central Lock & Key, Inc	2316V	305.00
CenturyLink 2956	4569V	281.34
Cintas-Chicago	2475V	194.62
City of Alden	512V	29.45
City of Eldora	510V	3,747.60
City of Radcliffe	517V	65.80
CivicPlus LLC	2697V	9,500.00
Cooley Pumping LLC	61963V	205.00
Corporate Translation Services Inc dba Language Link	100375	7.41
Counsel Office & Document	63896V	18.61
Country Car Shop	63592V	987.98
Culligan	857V	299.65
Culligan Water	100455	120.80
Dale Howard	855V	722.34
DLT Solutions	1470V	1,607.55
Donald C Orgel	116E	105.00
Eichmeier Motor Co	100382	228.77
Eldora Family Dentistry LLC	1108V	880.00
Eldora Hardware	2647V	36.41
Eldora Tire & Alignment	62947V	23.36
Fareway Food Stores-Eldora	4728V	140.00
Galls Incorporated	1389V	1,061.94
GECRB/AMAZON	2403V	363.30
Gehrke Quarries, Inc.	145V	41,311.71
General Basic Fund	1270V	38.75
GeoComm Inc	62046V	4,590.00
Greenbelt Home Care	61807V	8,049.25
Hardin Co Tire & Service	100446	69.45
Hardin Co Tire & Service Inc	4240V	42.95
Hardin County Solid Waste & Recycling	4322V	170.00
Heart of Iowa	6335V	3,181.93
HOLIDAY INN AIRPORT	4412V	732.48
ICEA Service Bureau	61595V	1,150.00
Innovative Ag Services Hubbard	868V	983.78
Iowa Department of Revenue	232V	633.00
Iowa Law Enforcement Academy	1810V	175.00
Iowa Regional Utilities Assoc.-Newton	62036V	238.03
IP Pathways	2217V	14,253.87
ISAC	920V	210.00
James or Mary Meyer	100806	200.00
Knight Sanitation	993V	307.00
LaVelle Lawn Care LLC	63690V	1,720.00
Liberty Mutual Insurance	100704	1,980.00
Linn Adams	9245E	40.00
Linn County Sheriffs Office	61480V	36.42
M & G Tire Service	2615V	46.36

Vendor Publication Report

Payment Date Range: 10/13/2021 - 10/13/2021

Vendor Name	Vendor Number	Total Payments
Martin Marietta Aggregate	4141V	290.19
Mary J Swartz	302E	230.72
Medical Priority Consultants, Inc	63475V	2,560.00
Mend Correctional Care PLLC	2724V	10,838.39
Mid American Energy	728V	66.25
Mid-America Publishing Corp	62056V	110.00
MTI Distributing, Inc	806V	115.09
NAPA Auto Parts	4290V	62.94
NAPA Auto Parts Eldora	617V	4.99
Orkin, 538-Waterloo	100827	60.00
Outdoor And More	2496V	144.72
Peterson Contractors Inc	2337V	313,330.30
Pitney Bowes Inc-Reserve	773V	5,000.00
Positive Promotions, Inc.	100702	365.27
Premier Office Equipment, Inc.	62320V	125.78
Quaker Security LLC	100507	1,275.00
Radcliffe Telephone Co	4207V	313.57
RC Systems- Waterloo Office	2077V	2,652.50
Region Six Planning Commission	1201V	11,970.00
Ricoh USA Inc	2864V	8.79
Scenic Living Communities Inc. / Scenic Manor	100941	200.00
Scott's Sales Co	1214V	150.00
Steven G Recker	219E	159.00
Storey Kenworthy	61798V	498.36
Summit Food Service LLC	2332V	4,628.78
Times Citizen	538V	244.80
Treasurer State of Iowa	455V	13,864.00
Union Auto Inc.	1523V	834.48
Van Wall Equipment, Inc.	2924V	1,481.97
Veridian Credit Union	63561V	981.05
Verizon Connect	100836	101.80
Verizon Wireless	63648V	7.02
Verlyn Mensing	100703	80.00
VISA	150V	2,022.97
Walmart Community/Capital One	62446V	336.03
Windstream	84V	540.39
Z & Z Glass	62420V	90.00
Ziegler Incorporated	1463V	1,146.03
Grand Total:	547,834.51	

Requesting to Place an Item on the Agenda

Persons requesting to place an item on the agenda must make a request to the board chair prior to the drafting of the tentative agenda, and at least five business days prior to the board meeting. This request should be in writing, and must state the person's name, address, purpose of the presentation, board action desired, and pertinent background information, including prior steps taken to resolve the situation at other levels. Requests from the public may be added to the tentative agenda at the discretion of the board chair after consultation with legal counsel.

Purpose of the presentation: On Wednesday, Sept. 8, a spokesman for Summit Carbon Solutions LLC presented a summary of the company's proposal to build a liquefied CO2 pipeline across almost 2000 miles in 5 Midwestern states to the Hardin County Board of Supervisors. The spokesman indicated that the "industry" had a "twenty year record of safety" and "zero fatalities;" he said "Safety is our number one priority." He made no mention of a CO2 pipeline rupture that had occurred 18 months earlier near Satartia, MS that resulted in the need to evacuate 300 people, hospitalize 100 people, haul several dozen unresponsive people to safety, outfit emergency personnel with oxygen to enable them to do their jobs properly, and deal with the legal and medical aftermath of being almost completely unprepared to effectively deal with the disaster. Since it appears that Summit Carbon Solutions LLC is unwilling to provide the kind of detailed answers that would allow Hardin County residents a realistic sense of the danger that such a CO2 pipeline rupture could pose to county residents that may happen to be in the vicinity of this pipeline, once it's operable, in the event of a leak or rupture of this nature, I urge the BOS to require that the county emergency management coordinator prepare a written document that details the extent to which Hardin County Emergency Management personnel are, or will be, equipped and trained to deal with a liquefied CO2 pipeline leak or rupture of a similar nature to the Satartia disaster, and to disseminate that writing so that Hardin County residents could most effectively take steps to protect themselves in the event of a similar episode.

Intent to Address the Board Form:

Name Marian Kuper
Street 10749 County Highway 555
City Ackley
Phone 641-640-0022
Email marian.kuper@gmail.com

Have you attempted to have your concern mitigated with any county official previously? If yes, who?

Yes. On Oct. 3, 2021, I sent an email to Thomas Craighton, Hardin County Emergency Management Coordinator, subtitled "question about emergency preparedness" asking to know the "extent to which Hardin County Emergency Management personnel are, or will be equipped and trained — that is, prepared — to deal with a liquefied CO2 pipeline leak or rupture" similar to the CO2 pipeline rupture that occurred in February, 2022 near Satartia, MS. I copied Supervisor Hoffman on the email. I have not had a reply from either gentleman. I have attached a copy of that email to this form. I have also attached a printed copy of "The Gassing of Satartia" published August 26, 2021 in the Huffington Post. You can find the online version of the article at https://www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f

Please list any details you wish to share with the board:

Please turn this sheet into the Board Secretary in order to speak in front of the board.



question about emergency preparedness

Marian Kuper <marian.kuper@gmail.com>
To: tcraighton@hardincountyia.gov
Cc: BJ Hoffman <bhoffman@hardincountyia.gov>

Sun, Oct 3, 2021 at 11:07 AM

Dear Mr. Craighton,

A liquefied CO2 pipeline is being proposed to cross Hardin County by Summit Carbon Solutions LLC (Please see reference #1 at the conclusion of this email). The company is in the process of seeking permanent easements from county landowners in order to build and maintain this pipeline.

Assuming it gets built and becomes operative, the contents of the pipeline would be under enormous pressure. Should a pipeline leak or rupture occur, the cold, pressurized liquid CO2 could burst forth in the form of a cold, fast-moving and ground-hugging cloud of CO2 gas (it would be heavier than air) that would pose a danger of suffocation to humans and animals in its path. In February of 2020, such an accident occurred near Satartia, MS, a small rural community located about a quarter mile from the pipeline rupture point (Reference #2).

Victims of the Satartia accident did not die, but dozens passed out and had to be hauled out of danger. Internal combustion engines quit working in this sort of situation because those engines require oxygen to function, and CO2 displaces oxygen. First responders to the Satartia accident were unaware, at first, that they needed to carry oxygen on their persons in order to deal with the disaster. Also, the hospital to which victims were taken had no staff that had been trained to treat victims of CO2 poisoning.

Both first responders and hospital staff, in the Satartia situation, assumed initially that what must have happened was a natural gas pipeline leak. (There are several different kinds of pipeline in that area.) But that's a totally different thing than a liquefied CO2 leak. A natural gas leak, for instance, would be combustible. A CO2 leak isn't combustible at all. CO2 is a fire retardant.

The Pipeline and Hazardous Materials Safety Administration (PHMSA) has not yet issued its full report on the Satartia accident. This may be because litigation is involved.

I would like to know the extent to which Hardin County Emergency Management personnel are, or will be, equipped and trained -- that is, prepared -- to deal with a liquefied CO2 pipeline leak or rupture of this nature.

#1. <https://www.youtube.com/watch?v=jiG4gha88F4>

#2. https://www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f

Respectfully,

Marian Kuper
Ackley



Illustration by Hokyoun Kim for HuffPost

The Gassing Of Satartia

A CO2 pipeline in Mississippi ruptured last year, sickening dozens of people. What does it forecast for the massive proposed buildout of pipelines across the U.S.?

By Dan Zegart
August 26, 2021

It was just after 7 p.m. when residents of Satartia, Mississippi, started smelling rotten eggs. Then a greenish cloud rolled across Route 433 and settled into the valley

surrounding the little town. Within minutes, people were inside the cloud, gasping for air, nauseated and dazed.

Some two dozen individuals were overcome within a few minutes, collapsing in their homes; at a fishing camp on the nearby Yazoo River; in their vehicles. Cars just shut off, since they need oxygen to burn fuel. Drivers scrambled out of their paralyzed vehicles, but were so disoriented that they just wandered around in the dark.

The first call to Yazoo County Emergency Management Agency came at 7:13 p.m. on February 22, 2020.

“CALLER ADVISED A FOUL SMELL AND GREEN FOG ACROSS THE HIGHWAY,” read the message that dispatchers sent to cell phones and radios of all county emergency personnel two minutes later.

First responders mobilized almost immediately, even though they still weren't sure exactly what the emergency was. Maybe it was a leak from one of several nearby natural gas pipelines, or chlorine from the water tank.

The first thought, however, was not the carbon dioxide pipeline that runs through the hills above town, less than half a mile away. Denbury Inc, then known as Denbury Resources, operates a network of CO2 pipelines in the Gulf Coast area that inject the gas into oil fields to force out more petroleum. While ambient CO2 is odorless, colorless and heavier than air, the industrial CO2 in Denbury's pipeline has been compressed into a liquid, which is pumped through pipelines under high pressure. A rupture in this kind of pipeline sends CO2 gushing out in a dense, powdery white cloud that sinks to the ground and is cold enough to make steel so brittle it can be smashed with a sledgehammer.

Even Durward Pettis, a contract welder for Denbury and chief of the local Tri-Community Volunteer Fire Department, didn't figure out that the mystery fog was CO2 for a full 15 minutes. He'd directed first responders to set up three roadblocks to prevent traffic from entering the area. But it wasn't until 7:30 p.m. that word went out that they'd need self-contained breathing apparatus, or SCBA, to enter Sartartia and evacuate the town's 42 residents, many of them elderly, and about 250 others who lived just outside town. By then, rescuers and residents were already in motion, fleeing the gas or evacuating others.

Even once Pettis figured it out, none of the sheriffs' deputies and volunteer firefighters had any emergency training in CO2 leaks. Neither did staff at two area hospitals, which had detrimental consequences for gas victims, according to interviews with many of the 49 who were hospitalized.

"It was bad enough that I thought my mama wouldn't make it, and she still has trouble breathing," said Army veteran Hugh Martin, who fled Satartia in a pickup truck with his 78-year-old mother as he struggled to remain conscious. "She never had asthma or COPD, now she's on inhalers full time."

Even months later, the town's residents reported mental fogginess, lung dysfunction, chronic fatigue and stomach disorders. They said they have trouble sleeping, afraid it could happen again.

This story is the result of a 19-month HuffPost/Climate Investigations Center investigation into the Satartia pipeline rupture, and the safety of CO2 pipelines. It is based on interviews with more than 60 witnesses, victims, first responders, lawyers, medical and toxicological experts, pipeline and petroleum experts, and public health officials; and a review of medical records, police and fire reports, 911 recordings, emergency dispatch logs, internal documents from the Mississippi Emergency Management Agency and the state Department of Environmental Quality, as well as federal pipeline incident reports.

Meanwhile, the federal government is taking the first steps to vastly increase the size of the nation's carbon dioxide pipeline network as a way of fighting climate change. Our investigation reveals that such pipelines pose threats that few are aware of and even fewer know how to handle.

"We got lucky," said Yazoo County Emergency Management Agency director Jack Willingham, who oversaw the rescue effort. "If the wind blew the other way, if it'd been later when people were sleeping, we would have had deaths."

A Deadly Gas

Carbon dioxide has long been used to euthanize laboratory rodents and other small animals, a practice animal welfare organizations now consider inhumane due to the

suffering the gas inflicts on the animals. Each year, CO2 accidents kill about 100 workers worldwide — often in basements of restaurants that use CO2-charged systems for their bar mixers — or in industrial accidents.

Carbon dioxide is an asphyxiant that displaces ambient oxygen, making it more difficult to breathe. Smaller exposures cause coughing, dizziness and a panicky feeling called “air hunger.” As CO2 concentrations get higher and exposure times longer, the gas causes a range of effects from unconsciousness to coma to death. Even at lower levels, CO2 can act as an intoxicant, impairing cognitive performance and inducing a confused, drunken-like state.

Denbury’s entire business is built around piping carbon dioxide to oilfields and a few industrial users in two operational centers in the Gulf Coast and the Rockies. It owns or has an interest in 14 oil fields in Mississippi, Texas and Louisiana, which are connected by five CO2 pipelines spanning 925 miles. Among its properties is Tinsley Field, adjacent to Satartia, which became Mississippi’s first commercially successful oil field in 1939.



Left: The Tinsley oil field in Tinsley, Mississippi, on July 23, 2021. Right: A CO2 gas pipeline remains active in Satartia, Mississippi, that same day.

Rory Doyle for HuffPost

In 2007, Denbury built its 31-mile Delta pipeline to connect Tinsley to the Jackson Dome, an extinct volcano under Jackson, Mississippi, whose 4.6 trillion cubic feet of naturally occurring CO2 gas supplies all of the company’s fields. Denbury extended

the Delta line 77 miles to Louisiana's Delhi field in 2009.

Denbury uses the CO2 for enhanced oil recovery, or EOR, which uses the gas to flush more oil out of wells. About 20% to 40% of the oil in a field can be recovered through conventional drilling and injecting water into the reservoir. Injecting CO2 after that can increase the yield up to 60%.

CO2 use in oil fields has resulted in accidents in several states and abroad. Tinsley itself suffered a sizeable CO2 "blowout" — where injected CO2 explodes out of the ground along with water, mud and drilling fluids — in 2011 that took 37 days to bring under control, sickened one worker, and killed deer, birds, fish and other animals.

Denbury had already had two other blowouts in Mississippi, one requiring the evacuation of local homes in Amite County in 2007. Another underground CO2 blowout at Delhi field in 2013 lasted for more than six weeks and contaminated the air with unsafe levels of both CO2 and methane.

Denbury and other companies that do EOR are well versed in the dangers of CO2. At Denbury's Heidelberg Field in eastern Mississippi, signs warn of a CO2 hazard and say SCBA must be worn, and there are muster stations where workers gather if there is a release. The company also has safety pamphlets on its website — one for the public called "Pipeline Safety Is Everybody's Responsibility" and another for first responders titled, "AWARE: Tactics for Responding to a CO2 Pipeline Leak." None of the emergency workers interviewed for this story had seen either.

While the risks of CO2 exposure were well established, the Satartia gassing was the first known instance of an outdoor mass exposure to piped CO2 gas anywhere in the world, according to Marcelo Korc, chief of the World Health Organization's Climate Change and Environmental Determinants of Health Unit, whose staff researched injuries from CO2 pipeline leaks in response to an inquiry from HuffPost.





The sun sets on the village of Satartia alongside the Yazoo River in July.
Rory Doyle for HuffPost

Korc's staff also found that CO₂ from the Jackson Dome is contaminated with hydrogen sulfide, a deadly gas that likely worsened residents' symptoms and also accounts for the gas cloud's odor and greenish color, since pure CO₂ is odorless and colorless.

Denbury declined to answer specific questions for this story, sending only a statement:

On February 22, 2020, at approximately 7:00 p.m., Denbury Enterprises' Delta pipeline experienced a sudden rupture and release of CO₂ gas near Satartia, Mississippi. Before, during, and after the event, Denbury's main interest has been the health and safety of the residents in the vicinity of the release and the surrounding environment. Denbury and its personnel were quickly in the community, working directly with nearby leadership and any individual residents affected by the event to ensure that any needs arising from the event were met. We have continued to work closely with the community and have made

significant contributions to local emergency response organizations to support the important role they play in keeping the community safe. Denbury has cooperated fully with all federal, state, and local agencies who responded to the incident. The federal agency charged with regulating the pipeline continues its review and investigation of the incident, and Denbury continues to cooperate fully with their efforts.

Beyond the suffering of those who lived through it, the fact that the Biden administration is poised to commit unprecedented billions to carbon capture and sequestration (CCS) technology — putting CCS at the center of the country's strategy for reducing greenhouse gas emissions — further magnifies the importance of Satartia's CO2 accident.

The historic hike in federal support for CCS infrastructure includes taking the first steps toward the construction of a continent-spanning network of pipelines in order to move America's many millions of tons of CO2 to storage areas where, theoretically, the gas can be injected deep underground and sequestered indefinitely.

Some experts estimate this network will need to be as large as or even larger than the 2.6 million miles of existing petroleum pipelines. Meanwhile, there are only 5,000 miles of existing CO2 lines, meaning there is little experience with a wide range of operational — and safety — issues likely to arise from such a massive new system.

Nevertheless, Biden's climate team; his Department of Energy and three of its former secretaries; most utilities; the coal industry and the governments of several coal states; ExxonMobil, the rest of Big Oil and other major industrial corporations; several climate NGOs; the AFL-CIO; and a bipartisan group that spans both houses of Congress all support CCS and the pipeline expansion in some form.

"We want to build more pipes," DOE Secretary Jennifer Granholm told a reporter in June. "There's a lot of jobs that are associated with decarbonizing ... and I think pipes are one of those opportunities."

But the rush to build and operate an integrated CCS and pipeline system has so far taken place with little examination of the safety issue, as the people of Satartia learned.

Korc of the WHO worried that the basic science done long ago on many toxic chemicals, including petroleum products, has never been done for CO2.

“The exposure studies simply don’t exist,” he said.

Satartia was, in effect, an unwitting case study for a monumental project.



Gas victim DeEmmeris Burns in July 2021, near the site where he was rescued in Satartia.

Rory Doyle for HuffPost

“They Can’t Come Evacuate Y’all”

DeEmmeris Burns was returning to his mother’s house in Satartia from a fishing trip with his brother Andrew Burns and cousin Victor Lewis when they heard an

explosion and then a deafening roar, like a jet engine. The stench of rotten eggs filled the car.

DeEmmeris Burns immediately thought: pipeline explosion. He knew there was one nearby, but other than its approximate location, knew nothing else about it.

They were driving on Perry Creek Road, a gravel and dirt country lane that hugs its namesake waterway and passes close to but below the location of the pipe rupture. They were almost at his mother's house.

He called his mother's cellphone at 7:18 p.m. and told her there had been a gas explosion.

"You got to get out. We're close, we're coming to get you," Burns shouted over the roar of escaping gas.

On the other end of the call, 65-year-old Thelma Brown was trying to figure out why her son sounded so strange. He was hollering, breathing heavily, not making sense. She knew the pipeline he was talking about; it runs about half a mile from her house. But she hadn't smelled anything. She heard her son frantically repeating, "Cut the air! Cut everything off! Cut the air!" And then, silence.

She tried calling him back. No answer. She rang the other two men's cell phones, but got nothing.

Inside the car, the three men rolled up the windows to keep out whatever it was they were driving through. Then the engine died.

"Hunh," Burns said. "Car shut off."

Minutes later, Thelma's sister, Linda Garrett, who lived just down the road, smelled the gas and called too. Thelma repeated what her sons had told her before their call dropped.

Garrett hung up with Thelma and called 911, but the dispatcher didn't seem to know about a gas leak.

"Do I need to be getting out of here?" Garrett asked. The 911 operator said she'd call her back and let her know.

“She can’t breathe. She’s on the floor right now”

-3:43

Garrett noticed her own breathing was becoming labored. Then her daughter Lynett Garrett and 14-year-old granddaughter, Makaylan Burns, who had been out picking up a pizza for dinner, staggered in the door.

Makaylan seemed to be in full-blown respiratory distress, and Lynett was unable to talk. She pounded on the dining room table and panted.

“What is it? What’s wrong? What is it?” Garrett shouted.

Makaylan dropped to the floor, unconscious.

Garrett tried 911 again. This time the operator acknowledged that there was a gas leak.

“They have shut the highway down because of it. They’re not letting anyone in, they can’t come evacuate y’all,” she said.

Garrett was afraid if they left the house, all three of them would pass out. She insisted on an ambulance. The dispatcher said one would meet them outside of town.





Gas victims Linda Garrett (right) and her granddaughter, Makaylan Burns, in Garrett's kitchen in Satartia in July.
Rory Doyle for HuffPost

Garrett and Lynett carried Makaylan out to the car. Garrett had a bad back and both adults were having trouble breathing, but they managed to get the teenager into the back seat, still unconscious.

Lynett drove and Garrett stayed on the phone with 911 as the operator told them the best route out of town. But after a few minutes, Garrett's breath "just cut out." "We ain't going to make it," she said, before she blacked out. Lynett drove to where they were supposed to meet the ambulance, but it didn't show up, and she had to drive to the hospital.

Back at her house, Thelma Brown ran outside to round up her 8- and 3-year-old grandchildren. She brought them into her bedroom, along with her 2-month-old grandson. The oldest, who has asthma but hadn't suffered an attack for some time, was having trouble breathing, so she gave him his albuterol inhaler. She gave some to the 3-year-old too, since she had been outside. Brown closed the windows and blocked air from coming in under the door with a wet towel.

Other relatives called, urging her to get out. But her pickup had a flat, and she was alone with three children. Her daughter was supposed to come get the kids after work, but called and told Brown that all the roads into the area were blocked off. Garrett told Brown what 911 had told her: that emergency workers were not coming into town to evacuate victims.

“I talked to the Lord. I said, ‘Lord, me and these kids going to bed,’” recalled Brown. “And I said, ‘We’re going to stay here until somebody comes and gets us out of here.’”

She waited for her son and the others to show up. She fell asleep.



Gas victim Thelma Brown in July, near the site where two of her sons and one of her nephews were rescued in Satartia.

Rory Doyle for HuffPost

At the same time, a group of friends were cooking crayfish and sipping beer at a fishing camp along the Yazoo River. It was getting dark when Hugh Martin noticed the rotten egg smell. Soon they were all wheezing and breathing hard. Martin’s friend, Casey Sanders, collapsed onto the ground, then quickly came to.

Coughing and choking, everyone somehow made it to their vehicles. Martin jumped

into his white pickup truck and drove up onto the levee that separates the town from the river. The glare of his headlights illuminated a green, misty fog. The suffocating feeling was nearly intolerable. “Only thing I been through worse than this was the gas chamber when I was in the Army training for Desert Storm,” he said. “And that was cyanide gas.”

He called his elderly mother, Marguerite Vinson, who told him she was feeling dizzy.

“Got your shoes on, mama?” he asked, trying to keep the anxiety out of his voice. He told her to meet him in the carport of their home, not far from the fishing camp. After stopping once to throw up out of the truck window, he made it home.

“I saw mama standing there, holding her phone, and she was weak at the knees. And I just grabbed her and throwed her in the truck,” said Martin. “Then I just took off and headed for the highway.”

At the stop sign at Route 3 was a checkpoint, but he blew by it, heading north to the hospital in Yazoo City. His mother lay motionless on the passenger’s seat: Her eyes were open, but she stared blankly ahead when he spoke to her.

At the hospital, he found others from the crayfish cook, including Casey Sanders, and learned that her teenage son, Nathan Weston Sanders, and his girlfriend were missing, after leaving the fishing camp minutes before the explosion.

The girlfriend had called in a panic — their pickup was dead, and Nathan Weston Sanders had collapsed. She couldn’t revive him and didn’t know where they were. Now, Sanders’ father and another man from the crayfish gathering were driving back into the fog to look for them.

An Improvised Response

Sheriff’s Officer Terry Gann was at a grocery store, taking a break from a long day working a double homicide when he received an EMS alert about a motorist who had a seizure due to a “green fog” crossing Route 433 east of the town.

“My friend, she’s laying on the ground, she’s shaking, she’s drooling out of the mouth”

-2:51

Yazoo is Mississippi’s biggest county at 923 square miles, but it’s an economically disadvantaged one, with just 11 sheriff’s officers who get called in for everything from tornadoes and floods to industrial accidents. Even though he is the county’s only criminal investigator, Gann works the disasters too. At 7:32 p.m., he headed toward Satartia in his truck.

EMS advised responders that self-contained breathing apparatus was required to enter the “hot zone” inside the roadblocks, where the gas had settled. Gann didn’t have SCBA with him, but he went in anyway.

At the command post south of Satartia on Route 3, a man told Gann his daughter had gone missing in the gas plume, not far from the ruptured pipe. The cloud was moving slowly northwest, so first Gann took the road over the levee to enter the village from the south to evacuate any remaining residents.





Terry Gann, chief investigator for the Yazoo County Sheriff's Department, with the truck he used to rescue gas victims in Satartia.

Rory Doyle for HuffPost

He did a round of checks on houses, banging on doors and peering through windows, but found no one. Around him he saw — and felt — the cloud. “It’s like I just ran a mile as fast as I could. My ears were popping. My face was burning like a sunburn.”

His pickup also started to choke on the fumes. He raced back over the Yazoo River, out of the cloud, to catch his breath and get the vehicle running, then returned to check more houses. Just outside of town, he found a young man and woman pacing the middle of an intersection.

“It was almost like something you’d see in a zombie movie. They were just walking in circles,” he said. “I kept telling ‘em, ‘Y’all get in the truck.’ And they would just look at me with this blank look on their face. And the girl was holding a phone up to her head but she wasn’t saying nothing. ... Finally I just yelled at ‘em, I said, ‘Get in the truck or you’re gonna die!’”

Gann shoved the dazed teenagers into the back seat, not knowing it was Nathan Weston Sanders and his girlfriend.

After picking up a woman he found unresponsive in a stalled car, his engine began sputtering again, so he returned to the command post to meet the ambulance. By the time they got there, Gann himself could barely breathe and had to be given oxygen.

He did one last search of Satartia, then messaged dispatch, “Everyone evacuated” at 9 p.m. He radioed that he was heading for Perry Creek Road, which hadn’t yet

been searched.

That worried Jack Willingham, director of Yazoo County Emergency Management Agency, since Gann had been breathing high levels of CO2 for nearly two hours and was panting audibly over the radio. His speech was often slurred and when it wasn't, it didn't always make sense. Willingham ordered Gann to leave the "hot zone" immediately and get medical attention.

But Gann, disoriented by the lack of oxygen, got lost and never made it to Perry Creek. With radio guidance, he met an ambulance that took him to a hospital in Yazoo City. After two hours of oxygen treatments, he went home, utterly spent.

Finally I just yelled at 'em, I said, 'Get in the truck or you're gonna die!'

By then, however, a three-man team of Vicksburg firefighters was on its way to Perry Creek Road.

They were driving a UTV, or utility task vehicle, a small ATV-like two-seater with an open cargo bed in back that held spare air bottles and tools. Jerry Briggs, fire coordinator for Warren County, squatted in the cargo area with Warren County 911 director Shane Garrard, while Lamar Frederick, a Vicksburg fire chief, drove. Each wore 60 pounds of fire protective clothing and gear, including SCBA.

After making their own fruitless search of the village, they decided that rather than return empty handed, they would enter the blast area via Perry Creek Road. The roar of the ruptured pipeline was deafening as they approached.

A half mile up Perry Creek Road, they saw a car with its lights on and windows up just as the UTV began stalling.

"We got victims," Frederick yelled above the roar.

Inside the small red Cadillac sedan were three men: DeEmmeris and Andrew Burns,

and Victor Lewis. DeEmmeris Burns lay across the backseat in the fetal position. The other two were slumped against the windows, white foam coming out of their noses and mouths, their clothes stained with urine and excrement. The firemen thought they were too late.

The doors were stuck, so Briggs smashed the right rear window. The three were still breathing, though just barely. The rescuers shook them and tried sternum rubs, but got no reaction.



Warren County firefighter Jerry Briggs in July with the utility task vehicle he used during the February 2020 gas leak in Satartia.

Rory Doyle for HuffPost

Panting in exhaustion and sweating under all their gear, they managed to get all three out and cram them into the UTV.

They headed toward the south command post. After a few minutes of fresh air, the victims began to stir. Then they tried to stand up. They seemed about to fall off when a truck full of county deputies met up with the UTV, and one of the deputies bear-hugged the men into place until they met the ambulance.

The firemen had just a few minutes to breath fresh air and chug water before Willingham sent them to evacuate a group of mostly elderly residents just across the river. Willingham and the National Weather Service office in Jackson were tracking the plume as it headed northwest, and Willingham was determined to get ahead of it.

By now, six Denbury officials had arrived on the scene along with Denbury's air monitoring contractor, the Center for Toxicology and Environmental Health; the environmental remediation firm E3; an investigator for the federal Pipeline Hazardous Materials Safety Administration (PHMSA); and officials from the Mississippi's Emergency Management Agency and Department of Environmental Quality.

At 11:06 p.m., the Denbury team "observed no product coming from the failure location," according Denbury's report to PHMSA. The leak was officially declared over.

A Massive Buildout

Once the province of a few policy wonks and coal companies, shipping carbon dioxide and storing it underground has gotten much more mainstream attention in recent years amid a tsunami of conferences, draft legislation and interest groups.

The fossil fuel industry has gotten behind CCS as a technology that, it hopes, would allow continued production so long as the emissions are buried underground. But the immense network of pipelines needed to transport carbon dioxide to locations where it would be stored deep below ground weren't discussed publicly until recently, nor was how such a rapid, unprecedented pipeline buildout could be done.

A much-touted December 2020 Princeton University study — funded in part by the oil industry — calls for a 65,000-mile system by 2050, which means adding 60,000 miles to the current 5,000 miles of CO2 pipeline. The new svstem would be

organized into a spider web of continent-spanning trunk lines as large as 4' in diameter — twice the size of the Satartia pipeline — fed by a system of smaller spur lines.

2050 totals: 21,000 km trunk lines + 85,000 km spur lines
(equivalent to ~22% of US natural gas transmission pipeline total)



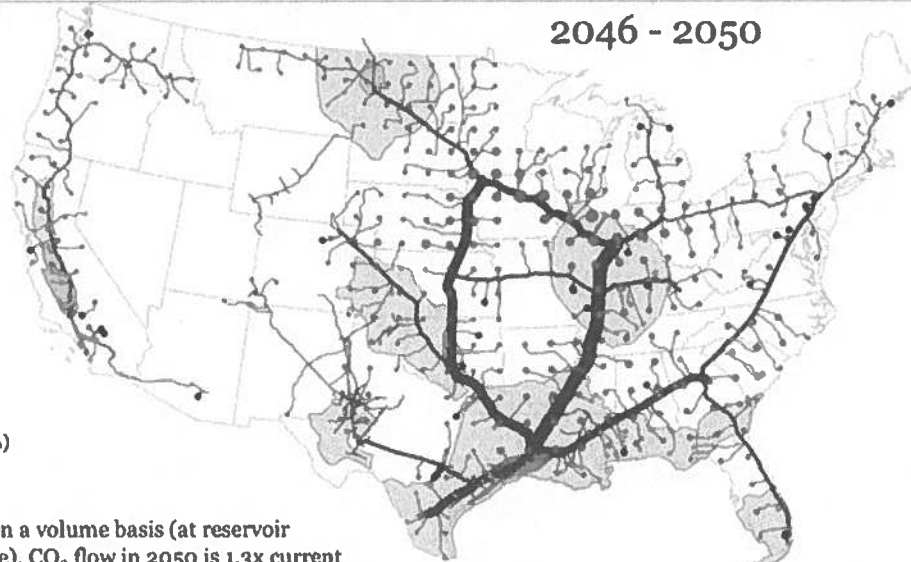
E+ scenario

929 million tCO₂/y
106,000 km pipelines
Capital in service: \$170B

- CO₂ point source type
- CO₂ point sources
 - BECCS - power and fuels
 - Cement w/ CCS
 - Natural gas power CCS oxyfuel

- CO₂ captured (MMTPA)
- 0.0006449
 - 7.9144
 - 15.8282
 - 23.7419

- Trunk Lines (capacity in MMTPA)
- 5
 - 166.667
 - 328.333
 - 490



Note: On a volume basis (at reservoir pressure), CO₂ flow in 2050 is 1.3x current U.S. oil production and 1/4 of current oil + gas production.



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High Meadows Environmental Institute

Carbon Mitigation Initiative

Princeton Net-Zero America Report

But even 65,000 miles of pipeline could only move 15% of current U.S. greenhouse gas emissions. To have any effect on climate change “would entail CO₂ pipeline capacity larger than the existing petroleum pipeline system,” which totals 2.6 million miles, according to a 2020 study in Biophysical Economics and Sustainability.

Beginning with the Bush administration, the U.S. government has spent over \$8 billion to promote carbon capture and storage (CCS). But almost all of the CO₂ in current pipelines is used for enhanced oil recovery rather than being injected deep into the earth for secure geologic storage, and enhanced oil recovery produces more emissions than it sequesters. Almost none of today’s CO₂ is manmade, but comes from natural sources like the Jackson Dome.

Proposals like Princeton’s would likely require extending CO₂ pipelines into heavily populated areas, across mountains and other natural barriers. The cost of such an

enormous system is driving some to suggest simply repurposing existing natural gas pipelines to move CO2.

But because CO2 is corrosive and will eat through the carbon steel used in petroleum pipelines if contaminated with even small amounts of water, CO2 pipelines have to be manufactured to a higher standard and the purity of the gas carefully monitored. And research shows that CO2 from a commonly used carbon capture technique is particularly likely to have water in it. CO2 pipelines also run at significantly higher pressures than natural gas pipelines, which in turn requires more energy-gobbling compressor stations along the line to keep the CO2 in a liquid state.

That's why a 2019 National Petroleum Council report warned against using existing natural gas pipelines to move CO2. The American Petroleum Institute has also highlighted the risks.

Yet an influential white paper produced jointly by the Energy Futures Initiative, headed by former U.S. Energy Secretary Ernest Moniz, and the AFL-CIO proposes doing just that. "Repurposing the expansive U.S. network of existing oil and gas pipelines presents a ripe opportunity to lower costs for CO2 transport," said the report.

Moniz was Biden's energy adviser in his 2020 presidential campaign, and oversaw billions in spending on CCS in his time at the Department of Energy. He and his team are considered leading experts on both natural gas and carbon dioxide infrastructure. Yet the petroleum industry's own longstanding warnings about mixing gas technology with carbon dioxide are nowhere to be found in a 79-page report or its 299 footnotes.

"So much of it is about cost cutting, finding ways to do things cheaper and where can you make compromises," said Carroll Muffett, president of the Center for International Environmental Law and co-author of a highly critical report on CCS and pipelines.

Muffett noted that CO2 behaves differently from natural gas inside a pipeline — in ways that make a CO2 rupture uniquely dangerous.

"Because of the intense pressures involved, explosive decompression of a CO2 pipeline releases more gas more quickly than an equivalent explosion in a gas

pipeline releases more gas, more quickly, than an equivalent explosion in a gas pipeline,” noted a report by CIEL and the Environmental Working Group, and “even a modest rupture can spread freezing CO2 over a wide area within seconds.”

A complicating factor in the Satartia accident was the presence of hydrogen sulfide. A Mississippi Emergency Management Agency email from the night of the accident said the leak contained an “unknown amount of pressurized CO2 with H2S.” CO2 is often contaminated with hydrogen sulfide, and Muffett points out that not only does H2S increase the corrosiveness of CO2, but it has serious health effects that can include damage to the nervous system, lungs, liver and heart.

Even CO2 by itself, however, can be quite lethal. On a summer day in 1986, a thick plume of CO2 from a volcanic lake in Cameroon killed 1,746 people. Birds dropped out of the sky and whole families died together in minutes.

Short of death, however, there is a wide range of CO2 inhalation effects, which include dizziness, headache, nausea, shortness of breath, increased heart rate, memory disturbances, lack of concentration, disorientation, convulsions, and unconsciousness — symptoms that closely track those of Satartia’s gassing victims.

Unfortunately, few emergency rooms are familiar with the range of its effects.

A Scramble At The Hospital

When DeEmmeris Burns woke up, he was sitting in a chair near a nurse’s station. He had no idea how he got to the hospital.

An IV was running down his arm, and his brother and cousin were in adjoining chairs. His lungs burned and his head ached. He was still in his soiled clothes.

“They didn’t put us in rooms. I mean, it was just all bad,” he remembered. “The nurses weren’t prepared for this.”

The hospitals told HuffPost that they responded appropriately under standard protocols for a mass toxic incident, but would not comment on specific cases.

At around 12:30 a.m., Sarah Belk, who had grown up with the Burns brothers, found the three sitting in chairs, wrapped in a single blanket. Belk had brought her own mother and daughter to the ER after they escaped from Satartia.

“I felt that they were not realizing the extent of what was going on with these people,” she said.

Sarah Belk

Andrew Burns asked where they were, and she told them they were at the hospital in Vicksburg, that their car stalled in the cloud of gas, and they'd been found unconscious. They were shivering “like they were in shock,” Belk said.

She saw their stained clothes and the dried foam on their faces. All three were thirsty. No one was attending to them, and the nurses seemed dismissive and rude, Belk said.

“I felt that they were not realizing the extent of what was going on with these people,” she said.

Belk's 16-year-old daughter, Ellie, had thrown up, and was still red-faced from the lack of air during her escape from Satartia. Belk's 57-year-old mother, who has COPD, was also struggling to breathe, and after more than an hour of gas exposure, her complexion “was gray.” But Belk said she still struggled to get them oxygen or basic attention. The hospital seemed overwhelmed.

Belk let the three men borrow her phone to call their families.

“I'm like, ‘What's going on?’” Berneva Lewis, Victor Lewis' mother, remembered. “‘We're at the hospital.’ That's all they could tell me on the phone. I'm like, ‘What happened?’ They're like, ‘They said we were in gas.’”

Given how disoriented they were, Lewis was startled to get a call at 2 a.m. saying the men were being released. “It was ridiculous. They were out before I could even get to the hospital,” she said.

Another relative picked them up at the hospital and drove them to Victor Lewis' father's home in Vicksburg. They were still in the same clothes they'd worn upon arrival.

Of some 49 gassing victims who went to the hospital, almost all were treated at

Merit Health River Region in Vicksburg or Baptist Memorial Hospital in Yazoo City. But the victims say neither facility seemed prepared for how to deal with this kind of disaster. In response to questions from HuffPost, both hospitals acknowledged they based treatment on standard toxic event protocols, which included setting up unheated outdoor decontamination tents to undress and wash victims — despite temperatures in the low 40s that day.

Neither hospital said they'd received any special training in handling a CO2 pipeline incident. Medical records for four gassing victims treated at Baptist Memorial — and for six of those from Merit River Region, including the Burns brothers and Lewis — seem to reflect confusion about what they were exposed to.

“Asphyxiation by environmental toxic gas, accidental or unintentional initial encounter. CO2, H2S, chlorine gas exposure from ruptured gas line,” reads the report for all four of the Baptist patients. Later the records cite “natural gas exposure.”

“They [were] nowhere near ready for something like that to happen,” Hugh Martin said. “They were understaffed, but they also didn't know what the hell they were dealing with.”

For Denbury, An “Incident” Without Consequences

Denbury knew about the accident before anyone. At 7:07 p.m., a low pressure alarm at its Texas headquarters alerted the company that the pipeline was leaking, and the company closed the main operating valves for the Satartia section of the line at 7:15 p.m., according to Denbury's incident report to the federal Pipeline and Hazardous Materials Safety Administration (PHMSA).

The report claimed that the company promptly notified local emergency responders, but both Fire Chief Durward Pettis and county Emergency Management Director Jack Willingham said nobody called them.

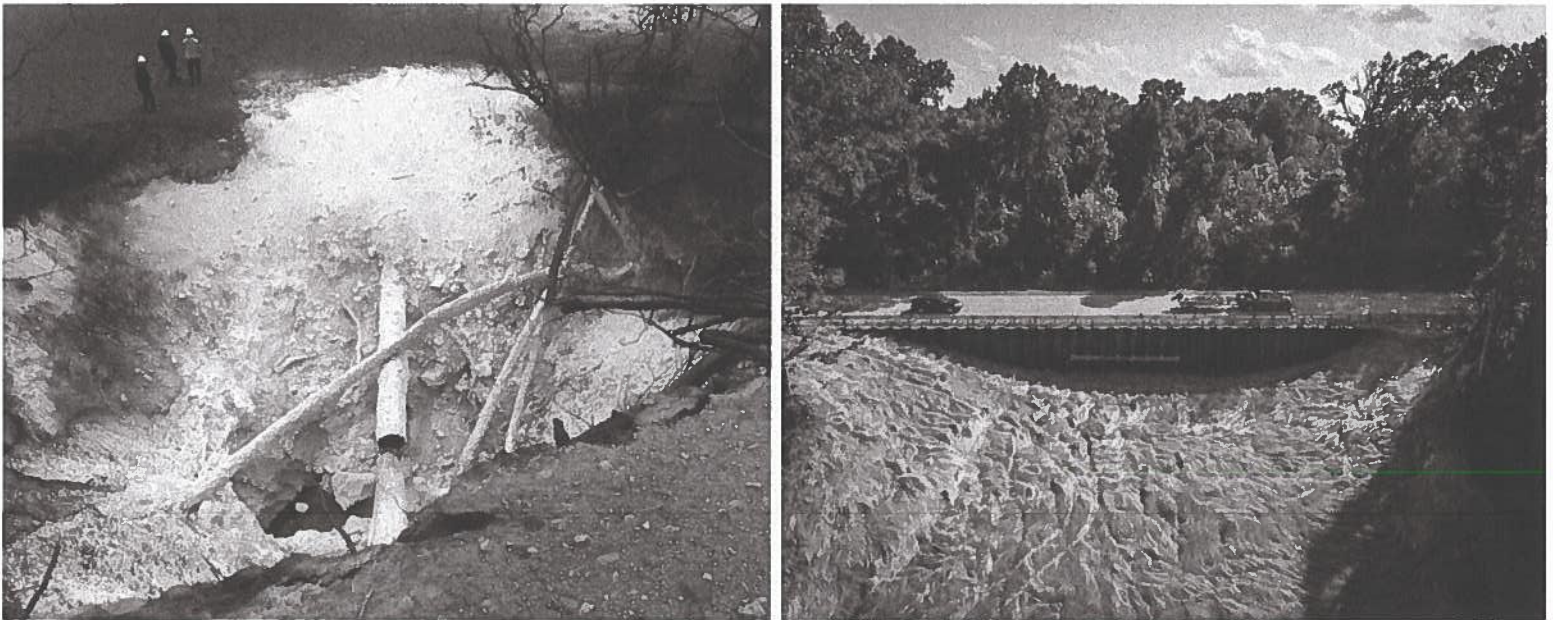
Denbury had no contact with them until Pettis called the company at about 7:45 p.m., according to the Yazoo County emergency dispatch log, and even then provided no guidance on the response or how to treat CO2 inhalation victims.

Without that guidance, 911 operators told callers there had been a natural gas

pipeline rupture. But natural gas and CO2 are quite different. Natural gas is lighter than air, travels straight up, and is highly flammable. Exposure to CO2 mixed with hydrogen sulfide, on the other hand, can cause death from asphyxiation as well as lung damage. Residents of Sartaria were given no information about how to respond to such a mixture.

In the weeks that followed, Denbury also appears not to have disclosed the extent of the pipeline breach to investors.

“The affected pipeline segment was [isolated] within minutes of detection,” Denbury’s Senior Vice President of Operations David Sheppard said during a Feb. 25 quarterly earnings call. “And as a precaution, the area surrounding the leak site was evacuated, including residents of the small nearby town of Satartia. No injuries to local residents, our employees, our contractors were reported in association with the leak.”



LEFT: The CO2 pipeline rupture. RIGHT: Vehicles pass over the pipeline explosion site in Satartia in July.

Yazoo County Emergency Management Agency/Rory Doyle for HuffPost

To date, that is Denbury’s most detailed public statement on the CO2 pipeline leak. Its filings with the Securities and Exchange Commission make no mention of a pipeline accident or leak, the evacuation, the injuries to residents, or any other

details. Its 2021 annual report made two oblique references to the explosion, noting an oil production decline in 2020 at its Delhi, Louisiana, oil field “due to the lack of CO2 purchases between late-February and late-October 2020 as a result of the Delta-Tinsley CO2 pipeline being down for repair during that period” and “\$4.3 million of costs associated with the Delta-Tinsley CO2 pipeline repair.”

Denbury did disclose a total of 46 hospitalizations and 200 evacuees — the latter a little lower than the number reported by other sources — in its incident report to PHMSA.

Denbury also did not disclose that on Oct. 7, 2020, there was another accident while reconnecting the damaged pipeline section. While workers did a “controlled blow-down” to remove any remaining CO2 from the section, a valve “froze in the open position due to internal ice formation” and gas poured out, according to Denbury’s report to the state Department of Environmental Quality. Multiple attempts to close it failed, and some residents had to be evacuated that night on short notice. But the second incident lasted longer — almost an entire day— and released 41,000 barrels of CO2, according to Denbury, while the Feb. 22 incident lasted four hours and released 31,407 barrels.

Why the pipeline initially ruptured also has yet to be determined. A PHMSA spokesman declined to comment on when its official report on the incident might be released.

Meanwhile, Denbury sent a section of the pipeline to a metallurgical lab for testing. Based on those findings and its contention that the pipeline was “code compliant,” it theorized in its report to PHMSA that soil movement caused by persistent heavy rains “induced axial stresses” that caused a rupture.



Berneva Lewis plays a video of an October 2020 gas leak in Satartia.
Rory Doyle for HuffPost.

Heavy rains beginning in late January 2020 did cause widespread flooding and evacuations along the Yazoo and Mississippi rivers. But Chad Jones, a plaintiff's lawyer representing gassing victims who is also a geologist, said flooding is common in the Delta, and should have been anticipated when the pipeline was built in 2007. Jones noted several other factors that should have been taken into account during construction as well: the soil in the area, called loess, is unstable and prone to shifting and mudslides, and building a pipeline through such soil requires special techniques because any rupture in that area would send the gas downhill into Satartia.

"They might claim an act of God," said Jones, "but I mean, we can prove that it wasn't."

Denbury Resources filed for bankruptcy five months after the incident, citing the pandemic crash in oil prices. It emerged from Chapter 11 in September 2020 after shedding \$2.1 billion in debt and its old name. In March 2021, the newly restructured Denbury Inc. gave a presentation at the 26th Annual Credit Suisse Energy Summit recounting highlights of 2020, including "record levels of safety performance for the fourth consecutive year."

Among the new capital investments for 2021 that Denbury CEO Chris Kendall and other officials unveiled was a \$7 million plan boosting CO₂ based drilling

Other officials unveiled was a \$7 million plan boosting CO2-based drilling operations in the Tinsley field — using the same pipeline that ruptured in 2020.

The Next Day

Officer Terry Gann got three hours of sleep before heading back to Satartia.

Abandoned vehicles were everywhere — doors ajar, many with their windows smashed from the rescue efforts. Gann had the keys to several, and rescuers set up a kind of lost and found on the side of the road.

Gann helped Denbury personnel, including technicians with gas measuring equipment, escort villagers back to their homes. The rotten egg odor was still heavy in the air.

As soon as Linda Garrett and her family walked in her kitchen door, the technician's gas meter hit the red zone, and they had to leave until levels went down.

That evening, Satartia Mayor Kathy Nesbit, Pettis and several Denbury representatives presided over a standing-room-only meeting at First Baptist Church. Bruce Augustine, Denbury's operations manager, told the crowd that the company was "very happy that the air monitoring we've done shows that everyone can now return to their homes."

Denbury officials said they would be stationed at the town hall to deal with any problems or complaints, and that residents would be promptly reimbursed for medical bills. While there was some discussion of safety measures to prevent a repeat disaster, nothing definite was promised.

Nesbit, an intensive care nurse who had been working at River Region hospital the night before, tried to dispel fears of long-term health effects. "It is a natural chemical in our bodies," she said. "So it's not a poison that's going to infiltrate you and eventually kill you."

That was cold comfort to many survivors, some of whom noted pointedly that Nesbit hadn't been in town that night and didn't experience being inside the plume.

When it was over, Thelma Brown and Berneva Lewis thanked Vicksburg firefighters Jerry Briggs and Shane Garrard for saving their sons. "That was when they actually

told us about the condition that the guys were in and how they were very near death and foaming at the mouth,” Brown said.



Warren County firefighters Shane Garrard (left) and Lamar Frederick in Vicksburg, Mississippi, in July. They're next to the utility task vehicle they used during the February 2020 gas leak in Satartia.

Rory Doyle for HuffPost.

DeEmmeris and Andrew Burns and Victor Lewis were still in no shape to go to any meetings. After a sleepless night, more vomiting and severe headaches, they spent early Sunday on oxygen, being monitored and having bloodwork done at the University of Mississippi Medical Center in Jackson, the state's flagship teaching hospital. Even after that, Lewis told his mother, who is a nurse, that he still felt terrible.

She took all three to another doctor the next day, and tests revealed that their blood CO₂ levels were still alarmingly high. The doctor said they would need to

blood CO2 levels were still alarmingly high. The doctor said they would need to remain on oxygen until the numbers came down, and sent them to a pulmonologist.

Denbury called victims to ask whether they needed anything and reimbursed medical bills quickly. Residents were asked to drop by Town Hall to discuss compensation for other losses, like pain and suffering. Those who accepted were paid on the spot, but waived their right to sue or discuss the settlement.

But many victims, some of whom say they are still sick, anxious and unable to fully return to their previous lives, weren't interested in a deal and decided to sue. The Burns brothers and Lewis hired Robert Gibbs, a well known lawyer from Jackson. Their suit will claim Denbury failed to properly maintain the pipeline or take necessary safety precautions to prevent exposure to hazardous gas, Gibbs said.

Another who decided to sue was Martin, whose occasional breathing difficulties from mild COPD have required much more frequent use of his inhaler since the February 2020 incident.

Medical records also show that months after the incident, his 78-year-old mother, who had no previous history of breathing difficulties, was using albuterol constantly, getting oxygen treatments, and had to be hospitalized for a week in March 2020 after he found her lying unresponsive in bed and having trouble breathing.

Marguerite Vinson was frustrated that not only was she not recovering, she seemed to be getting sicker.

"I can't think half-right! And I just wear out. Anything I try to do, it's hard to do if it requires exertion," she said.

Linda Garrett said Denbury asked to meet with her three weeks after the incident and offered her a package deal — \$5,000 each for her, her daughter and granddaughter, which she refused. She said she heard one neighbor, who is white, had been offered \$10,000, and that another white neighbor had been given \$18,000 compensation for cows that miscarried after the incident.

"They value a cow more than they do a human," Garrett said.

Gibbs' three clients, however, did get some extra attention from Denbury.

Not long after the gassing, DeEmmeris Burns' phone rang. According to Burns, the

voice on the other end identified himself as Denbury CEO Chris Kendall.

“He asked me ‘How’s everything going?’” said Burns. “I just told him I’ve got someone talking for me now.”

“You Should’ve Told Us.”

Over a year and a half after the gassing incident, the Burns brothers and Lewis still have not returned to work. They were under a doctor’s care until February 2021, when they were taken off oxygen, said Gibbs. DeEmmeris Burns moved out of his mother’s house because, he said, it’s too painful for him to drive up Perry Creek Road.

Gibbs said his and some nine other law firms representing the Satartia CO2 plaintiffs have joined forces as the Denbury Litigation Group. While Gibbs represents only the three Perry Creek Road victims, some lawyers have as many as 60 or 70 clients. None has yet filed suit, awaiting the long-delayed Pipeline and Hazardous Materials Safety Administration report on the reasons for the accident.

Martin said he hopes a lawsuit will pry out all the facts about what happened that night and why.

“If there’s this many malfunctions in that one section of pipeline, somebody was at fault, or they were passing inspections they shouldn’t have passed,” said Martin. “That’s what we need to find out.”

Nevertheless, opinions differ as to how or even whether Denbury should be held accountable. One reason may be an inherent reluctance to criticize the oil and gas industry, a source of scarce well-paid jobs as well as a statewide political power. Some are willing to consider the pipeline rupture “an act of God,” though gassing victims point out that many who believe that were not in town the night of the disaster.





The sun sets on the village of Satartia alongside the Yazoo River in July.
Rory Doyle for HuffPost

Interestingly, only a few of the residents interviewed for this article had heard of carbon capture and sequestration — and none knew about plans for a greatly expanded CO2 pipeline network.

“That doesn’t make any sense,” said Martin. “Not when they can’t control what they’ve already got. I think there’s real basic questions that need to be answered first.”

Linda Garrett said she still struggles with back pain from carrying Makaylan to the car that day. Makaylan’s asthma, which had been in remission, is worse than ever, and both her daughter and granddaughter remain traumatized. She wants the company punished.

Denbury, she said, should have warned the town before there was an emergency.

“If you cared about us, you and the pipeline, you should have let us know,” Garrett said. “But you didn’t let us know nothing. You just telling us now. That doesn’t seem right to me. Sometimes we have to be held accountable for the things that happen.”

CORRECTION: An earlier version of this article misidentified a person affected as Lynett Burns. The woman’s name is Lynett Garrett.

Reporting Dan Zegart **Additional reporting** Alan Huffman **Editor** Kate Sheppard **Copy Editor** Nora Biette-Timmons **Art Director** Rebecca Zisser **Photo Editor** Damon Scheleur **Illustration** Hokyoung Kim **Photography** Rory Doyle **Engineer** Andy Read



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HARDIN COUNTY UTILITY PERMIT APPLICATION



Permit No: UT-21-015

Underground
 Aerial

Permanent Installation
 Temporary Installation

This is a Utility Permit Application for telecommunications, electric, gas, water and sewer utilities. The applicant agrees to comply with the following permit requirements. Compliance shall be determined by the sole discretion of the County Engineer as deemed necessary to promote public health, safety, and general welfare. These requirements shall apply unless waived in writing by the County Engineer prior to installation.

APPLICANT NAME: Interstate Power & Light Co. (Alliant Energy)

STREET ADDRESS: 1911 E Anson St

CITY: Marshalltown STATE: IA ZIP: 50158

PHONE: 641-648-7605 FAX: _____ CONTACT PERSON: Chris Jess

TYPE OF WORK: Installing new Underground Electric and removing existing overhead facilities along G Avenue due to access concerns with the bridge #05106 weight restrictions.

1. LOCATION PLAN

An applicant shall file a completed location plan as an attachment to this Utility Permit Application. The location plan shall set forth the location of the proposed line on the secondary road system and include a description of the proposed installation.

2. WRITTEN NOTICE

At least five (5) working days prior to the proposed installation, an applicant shall file with the County Engineer a written notice stating the time, date, location, and nature of the proposed installation.

3. INSPECTION

The County Engineer may provide a full-time inspector during the installation of all lines to ensure compliance with this Utility Permit. The inspector shall have the right, during reasonable hours and after showing proper identification, to enter any installation site in the discharge of the inspector's official duties, and to make any inspection or test that is reasonably necessary to protect the public health, safety, and welfare.

4. INSPECTION FEES

The applicant shall pay actual costs directly attributable to the installation inspection conducted by the County Engineer. Within thirty (30) days after completion of the installation, the County Engineer shall submit a statement for inspection services rendered. The applicant agrees to reimburse the county within thirty (30) days of billing.

5. REQUIREMENTS

The installation inspector shall assure that the following requirements have been met:

- A. Construction signing shall comply with the Manual on Uniform Traffic Control Devices
- B. Depth – (Add additional depth if ditch has silted to the thickness of the deposited silt.) The minimum depth of cover shall be as follows:

Telecommunications....	36"	Electric.....	48"
Gas.....	48"	Water.....	60"
Sewer.....	60"		
- C. Minimum roadway overhead clearance for utility lines shall be 20 feet.
- D. The applicant shall use reference markers in the right-of-way (ROW) boundary to locate line and changes in alignment as required by the County Engineer. A permanent warning tape shall be placed one (1) foot above all underground utility lines.
- E. All tile line locations shall be marked with references located in the ROW line.
- F. No underground utility lines shall cross over a crossroad drainage structure without approval from the County Engineer.
- G. Residents along the utility route shall have uninterrupted access to the public roads. An all weather access shall be maintained for residents adjacent to the project.
- H. After construction, granular surfacing shall be added to the road by the applicant to restore the road to its original condition. After surfacing has been applied, the road surface shall be reviewed by the County Engineer once the road has been saturated, to determine if additional surfacing on the roadway by the applicant is necessary.
- I. All damaged areas within the ROW shall be repaired and restored to at least their former condition by the applicant or the cost of any repair work caused to be performed by the county will be assessed against the applicant.
- J. Areas disturbed during construction which present an erosion problem shall be solved by the applicant in a manner approved by the County Engineer.
- K. All trenches, excavations, and utilities that are knifed shall be properly tamped.
- L. All utilities shall be located between the bottom of the backslope and the bottom of the foreslope, unless otherwise approved in writing by the County Engineer prior to installation.
- M. Road crossing shall be bored. The depth below the road surface shall match the minimum depth of cover for the respective utility.

6. NON-CONFORMING WORK

The County Engineer may halt the installation at any time if the applicant's work does not meet the requirements set forth in this Utility Permit Application.

7. COUNTY INFRACTION

Violation of this permit is a county infraction under Iowa Code Section 331.307, punishable by a civil penalty of \$100 for each violation. Each day that a violation occurs or is permitted to exist by the applicant constitutes a separate offense.

8. HOLD HARMLESS

The utility company shall save this county harmless of any damages resulting from the applicant's operations. A copy of a certificate of insurance naming this county as an additional insured for the permit work shall be filed in the County Engineer's Office prior to installation. The minimum limits of liability under the insurance policy shall be \$1,000,000.


9. PERMIT REQUIRED

No applicant shall install any lines unless such applicant has obtained a Utility Permit from the County Engineer and has agreed in writing that said installation will comply with all ordinances and requirements of the county for such work. Applicants agree to hold the county free from liability for all damage to applicant's property which occurs proximately as a result of the applicant's failure to comply with said ordinances or requirements.

10. RELOCATION

The applicant shall, at any time subsequent to installation of utility lines, at the applicant's own expense, relocate or remove such lines as may become necessary to conform to new grades, alignment or widening of ROW resulting from maintenance or construction operations for highway improvements.

DATE: 10/1/21 COMPANY: Interstate Power & Light (Alliant Energy)

SIGNATURE: Jon Richenberger 

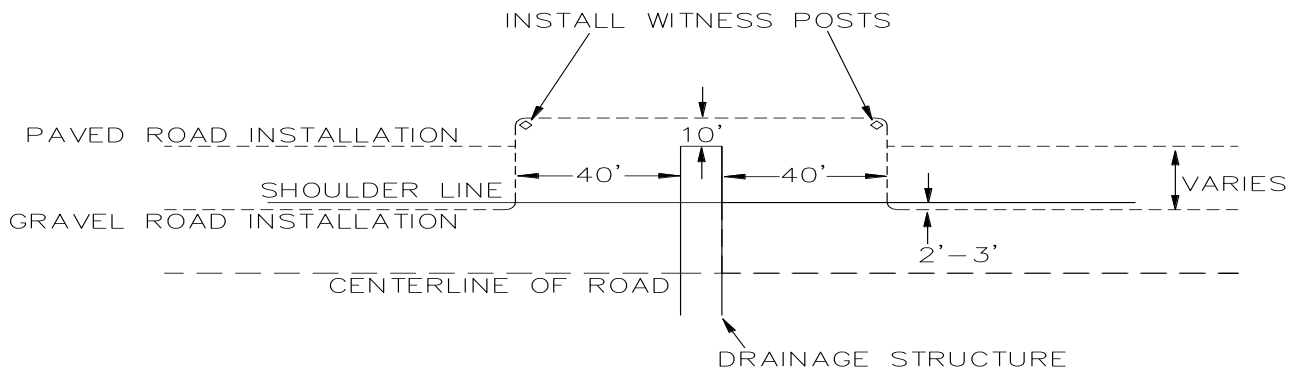
RECOMMENDED FOR APPROVAL:

DATE: _____ COUNTY ENGINEER

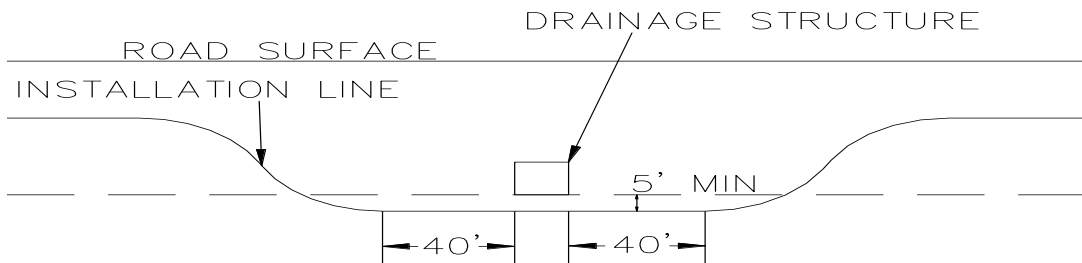
APPROVAL:

DATE: _____ CHAIRMAN, BOARD OF SUPERVISORS

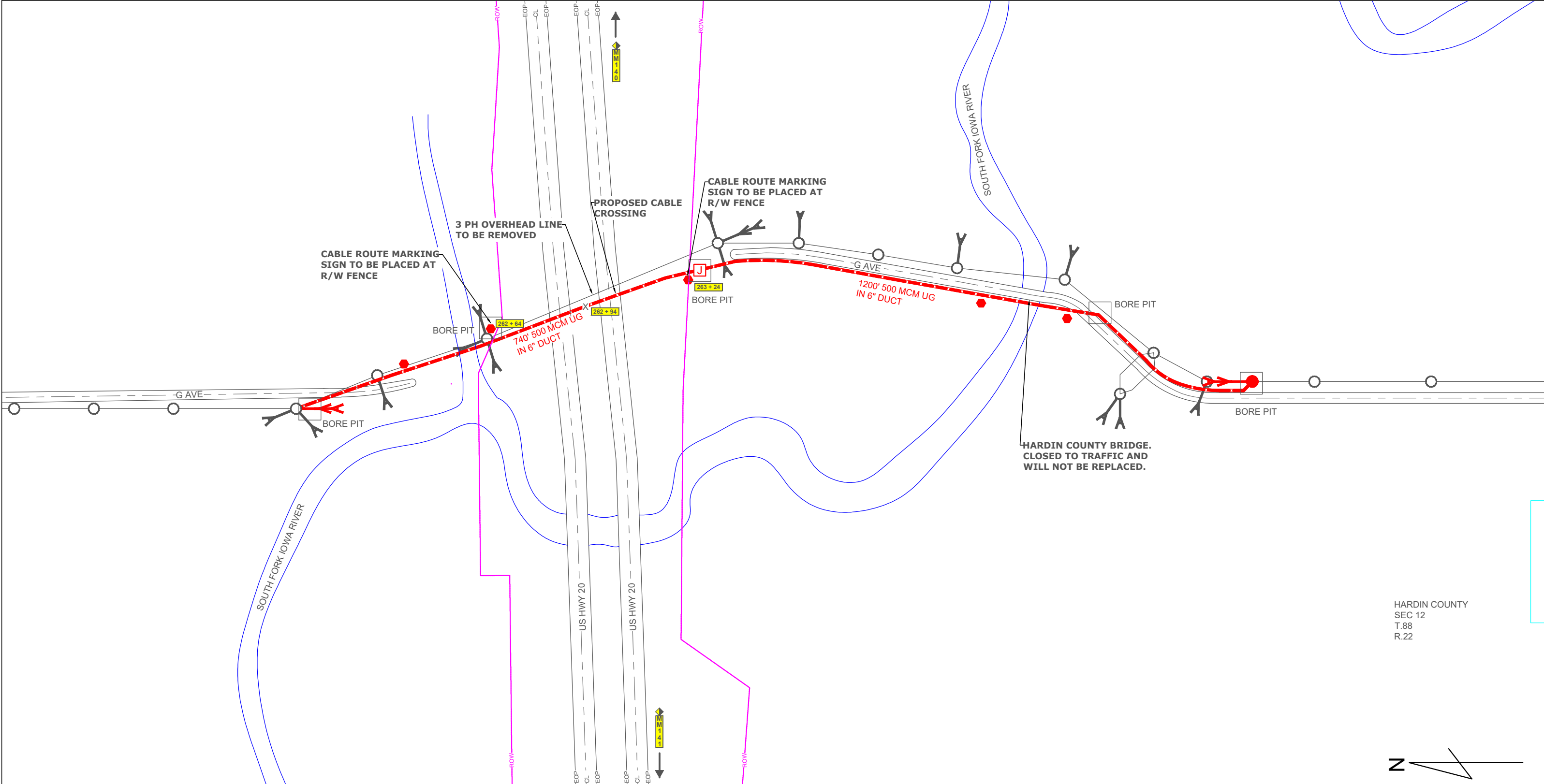
NON-BORED INSTALLATION DETAIL



BORED INSTALLATION DETAIL



UTILITIES SHOWN ON THIS PLAN ARE INDICATED IN ACCORDANCE WITH AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES FROM FIELD VERIFICATION AND CONTACT WITH UTILITY OWNERS. CONTRACTOR IS TO FOLLOW NESC CODE AND ALLIANT ENERGY IPL CONSTRUCTION STANDARDS AT ALL TIMES. GUYING, ANCHORING, POLE LOCATION AND CONDUCTOR ARE SHOWN TO REFLECT GENERAL REAL WORLD LOCATIONS AND DIRECTION, AND SHOULD NOT BE INTERPRETED AS EXACT. SOME INTENDED STRUCTURE LOCATIONS AND DIRECTIONS ARE MANIPULATED FOR DRAWING NEATNESS AND CLARITY. FIELD VERIFICATION IS REQUIRED PRIOR TO CONSTRUCTION. RIGHT OF WAY AND PARCELS ARE DEPICTED IN ACCORDANCE WITH AVAILABLE COUNTY GIS DATA.



HARDIN COUNTY
SEC 12
T.88
R.22



ALLIANT ENERGY HAS DIRECTED THAT ENGINEERING RISING TO THE LEVEL OF PROFESSIONAL ENGINEERING IS NOT REQUIRED OR INTENDED FOR THIS PLAN. A MI-TECH ENGINEER DOES NOT REVIEW THE PLAN SET, INCLUDING ALL CALCULATIONS OR ANALYSIS, FOR THE INTENT OF PROVIDING PROFESSIONAL ENGINEERING SERVICES. ALL PROFESSIONAL ENGINEERING OR DESIGN ISSUES OR QUESTIONS SHALL BE DIRECTED TO ALLIANT ENERGY. MI-TECH WILL USE INDUSTRY STANDARDS FOR REVIEWS AND COMPLETION OF THE SCOPE OF SERVICES FOR ALLIANT ENERGY.



EXISTING SECONDARY/SERVICE	LINETYPES
NEW SECONDARY	EASEMENT
EXISTING LINE UG	GAS
NEW 1PH LINE UG	WATER
NEW 3PH LINE UG	ELECTRICAL
EXISTING LINE OH	STORM
NEW 3PH LINE OH	SANITARY
NEW 1PH LINE OH	CABLE TV
	TELEPHONE

TRANSFORMER 3PH PAD MOUNTED NEW	TRANSMISSION POLE NEW
TRANSFORMER 3PH PAD MOUNTED EXISTING	TRANSMISSION POLE EXISTING
TRANSFORMER 1PH PAD MOUNTED NEW	POLE EXISTING
TRANSFORMER 1PH PAD MOUNTED EXISTING	ANCHOR NEW
TRANSFORMER 3PH POLE MOUNTED NEW	ANCHOR EXISTING
TRANSFORMER 3PH POLE MOUNTED EXISTING	FUSE NEW
TRANSFORMER 2PH POLE MOUNTED NEW	FUSE EXISTING
TRANSFORMER 2PH POLE MOUNTED EXISTING	GROUND NEW
TRANSFORMER 1PH POLE MOUNTED NEW	GROUND EXISTING
TRANSFORMER 1PH POLE MOUNTED EXISTING	

TRANSFORMER 3PH PAD MOUNTED NEW	TRANSMISSION POLE NEW
TRANSFORMER 3PH PAD MOUNTED EXISTING	TRANSMISSION POLE EXISTING
TRANSFORMER 1PH PAD MOUNTED NEW	POLE EXISTING
TRANSFORMER 1PH PAD MOUNTED EXISTING	ANCHOR NEW
TRANSFORMER 3PH POLE MOUNTED NEW	ANCHOR EXISTING
TRANSFORMER 3PH POLE MOUNTED EXISTING	FUSE NEW
TRANSFORMER 2PH POLE MOUNTED NEW	FUSE EXISTING
TRANSFORMER 2PH POLE MOUNTED EXISTING	GROUND NEW
TRANSFORMER 1PH POLE MOUNTED NEW	GROUND EXISTING
TRANSFORMER 1PH POLE MOUNTED EXISTING	

SYMBOL LEGEND	
CAPACITOR NEW	NEW POLE
CAPACITOR EXISTING	POWER PED NEW
SWITCH N.O. NEW	POWER PED EXISTING
SWITCH N.O. EXISTING	METER
SWITCH N.C. NEW	PHASING
SWITCH N.C. EXISTING	SIGNS
	STREET LIGHT
	COMM PEDESTAL



ALLIANT ENERGY WORK REQUEST #	
4235609	
FIELD BY: J.G.	DATE: 6/8/2021
DRAFT BY: T.J.	DATE: 8/12/2021
DESIGNED BY: J.G.	DATE: 7/1/2021
IOWA PE: A.S.	APPROVAL DATE:

LOCATION:	
ALDEN, IA	
N	E
W	PERMIT
S	

HARDIN / MARSHALL COUNTY HMA RESURFACING

FM-CO42(109)--55-42

Letting Date **JANUARY 19, 2022**

UTILITY CONTACTS		
UTILITY	CONTACT	PHONE #
GAS	NORTHERN NATURAL GAS COMPANY - JIM JOHNSON	402-530-6625
GAS	ALLIANT ENERGY - RANDY CIK	641-648-7601
ELECTRIC (OVERHEAD)	ALLIANT ENERGY - RANDY CIK	641-648-7601
TELEPHONE	CENTURYLINK - SADIE HULL	918-544-0147
WATER	IOWA REGIONAL UTILITY ASSOCIATION - SANJO SPANGENBURG	319-824-5920
FIBER OPTIC	HEART OF IOWA - JAY DUNCAN	641-686-2211
CITY OF LISCOMB	CITY OF LISCOMB - LINDA GROSS	641-946-5419

IOWA DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION PLANS OF PROPOSED IMPROVEMENT ON THE FARM TO MARKET SYSTEM HARDIN / MARSHALL COUNTIES HMA RESURFACING

ON S-75 (MARSH AVE), FROM E-18 (MARBLE RD) N 1.5 MILES TO HARDIN COUNTY LINE
AND
ON S75, FROM 340TH STREET NORTH 3 MILES TO 310TH STREET

REFER TO THE PROPOSAL FORM FOR LIST OF APPLICABLE SPECIFICATIONS.

PROJECT TRAFFIC CONTROL PLAN
THIS ROAD WILL REMAIN OPEN TO THROUGH TRAFFIC DURING CONSTRUCTION. TRAFFIC WILL BE DIRECTED AROUND THE CONSTRUCTION WITH FLAGGERS AND A PILOT CAR. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, PLACED, AND MAINTAINED BY THE CONTRACTOR.
TRAFFIC CONTROL DEVICES, PROCEDURES, LAYOUTS, SIGNING, AND PAVEMENT MARKINGS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AS ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC) CHAPTER 130.

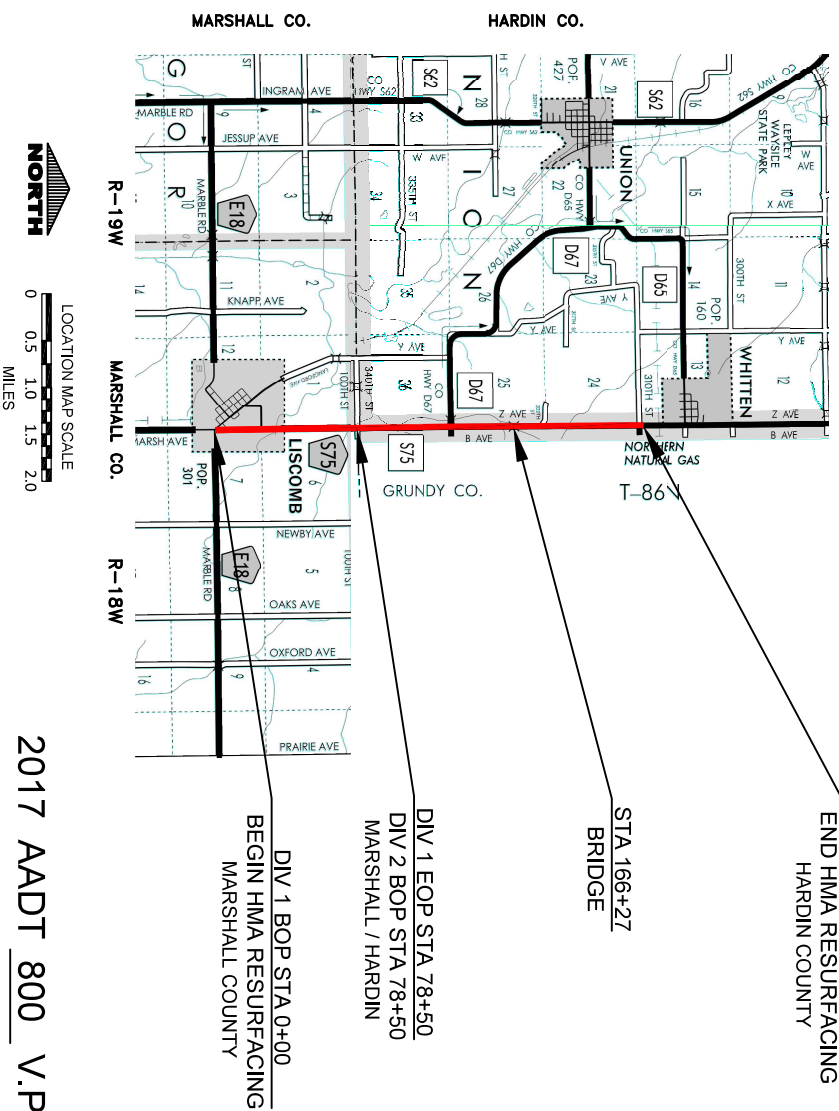
TOTAL SHEETS - 4

PROJECT NUMBER: FM-CO42(109)--55-42

INDEX OF SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATE OF QUANTITIES AND REFERENCE NOTES
3	TYPICAL CROSS SECTION
4	TABULATIONS

MILEAGE SUMMARY		
DIV.	LOCATION	LN.FT. MILES
1	STA 0+00 - 78+50	7,850.0 1.487
2	STA 78+50 - 238+15 LESS BRIDGE AND APPROACHES AT STA 166+27	15,965.0 3.024 193.0 0.037
TOTAL PROJECT		23,622.0 4.474

STANDARD ROAD PLANS		
NUMBER	DATE	TITLE
PM-110	04-21-20	LINE TYPES
PM-120	10-21-14	STOP LINES AND ISLANDS
PM-420	10-15-19	TWO-LANE ROADWAY WITH NO TURN LANES (ONE WAY STOP CONDITION)
PM-520	10-15-19	TWO-LANE ROADWAY WITH NO TURN LANES (TWO-WAY STOP CONDITION)
PV-202	04-21-20	HOT MIX ASPHALT RESURFACING
TC-1	10-15-19	WORK NOT AFFECTING TRAFFIC (TWO-LANE OR MULTI-LANE)
TC-213	10-15-19	LANE CLOSURE WITH FLAGGERS
TC-214	04-21-20	LANE CLOSURE WITH FLAGGERS FOR USE WITH PILOT CAR
TC-233	10-17-17	PAVEMENT MARKING OPERATIONS TWO-LANE
TC-282	10-15-19	UNEVEN LANES



2017 AADT 800 V.P.D.

HARDIN / MARSHALL COUNTY

PROJECT NUMBER: FM-CO42(109)--55-42

SHEET 1 OF 4



Chairperson	BJ Hoffman
	Renee McClellan
	Lance Granzow
Approved Board of Supervisors	

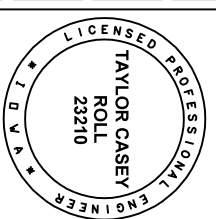
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.

Signature: Taylor Casey Roll Date: _____

Printed or Typed Name: Taylor Casey Roll

My license renewal date is: December 31, 2021

Pages or sheets covered by this seal: Sheets 1 thru 4



ESTIMATE REFERENCE INFORMATION

ESTIMATED QUANTITIES							
ITEM NO.	ITEM CODE	ITEM	UNIT	DIV. 1 Marshall Co.	DIV. 2 Hardin Co.	TOTAL	AS BUILT QTY.
1	2121-7425020	GRANULAR SHOULDER, TYPE B	TON	4185.0	8295.0	12,480.0	
2	2210-0475105	CHOKe STONE BASE	TON	2308.0	4637.0	6,945.0	
3	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING	CY	34.5	71.5	106.0	
4	2214-5145150	PAVEMENT SCARIFICATION	SY	1,524.44	1,466.67	2,991.11	
5	2216-0994000	CRACKING AND SEATING OF PCC PAVEMENT	SY	19,189.0	38,554.00	57,743.00	
6	2303-1032750	HMA STANDARD TRAFFIC, INTERMEDIATE, 3/4" MIX	TON	2697.00	5,167.00	7,864.00	
7	2303-1033504	HMA STANDARD TRAFFIC, SURF, 1/2" MIX, FRIC L-4	TON	2612.00	5,104.00	7,716.00	
8	2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	TON	318.54	616.26	934.80	
9	2303-6911000	HMA PAVEMENT SAMPLE	LS	0.5	0.5	1.00	
10	2303-7000610	PAVEMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)	EACH	2654.50	5,135.50	7,790.00	
11	2303-7000620	PAVEMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)	EACH	2654.50	5,135.50	7,790.00	
12	2526-8285000	CONSTRUCTION SURVEY	LS	0.5	0.5	1	
13	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE/SOLVENT BASED	STA	350.63	500.78	851.41	
14	2528-8445110	TRAFFIC CONTROL	LS	0.5	0.5	1	
15	2528-8445113	FLAGGER	EACH			PER PROPOSAL	
16	2528-8445115	PILOT CAR	EACH			PER PROPOSAL	
17	2533-4980005	MOBILIZATION	LS	0.5	0.5	1	

GENERAL NOTES:

THIS PROJECT INVOLVES PAVEMENT SCARIFICATION, CRACK & SEAT, 2" CHOKe STONE BASE, INTERMEDIATE HMA, SURFACE HMA, GRANULAR SHOULDERS AND PAVEMENT MARKINGS.

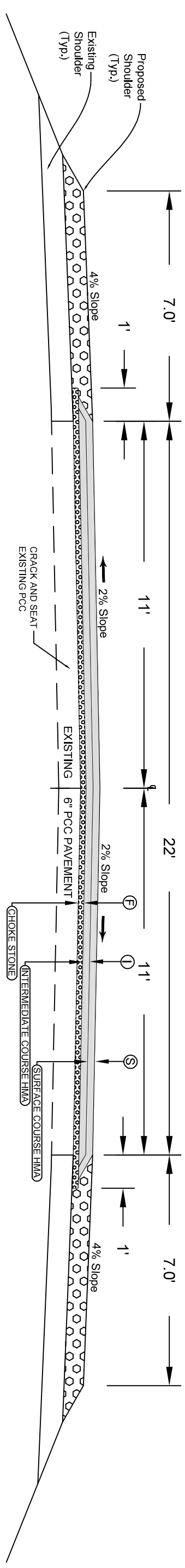
HARDIN COUNTY WILL MARK OUT SCARIFICATION LIMITS.

THE CONTRACTOR SHALL MAINTAIN CONTINUOUS PAVING. IF CONTINUOUS PAVING CANNOT BE MAINTAINED, PAVING OPERATIONS WILL BE SHUTDOWN UNTIL THE CONTRACTOR DEMONSTRATES THE ABILITY TO MAINTAIN CONTINUOUS PAVING.

THE CONTRACTOR SHALL VISIT THE SITE TO ENSURE THEY ARE FAMILIAR WITH EXISTING SITE CONDITIONS.

- 1 THE CONTRACTOR SHALL FURNISH CLASS "A" CRUSHED STONE TO BRING THE SHOULDERS UP TO THE HEIGHT OF THE NEW HMA PAVEMENT. THE CONTRACTOR SHALL DELIVER THE STONE TO THE JOBSITE AND PLACE IT THROUGH A SPREADER. THIS MATERIAL SHALL HAVE SUFFICIENT MOISTURE TO PROVIDE PROPER COMPACTION. THE FINAL COMPACTION PASS SHALL BE MADE WITH A STEEL DOUBLE DRUM ROLLER. ESTIMATED PROJECT QUANTITY INCLUDES AN ADDITIONAL 5% FOR ANY IRREGULARITIES.
- 2 CHOKe STONE BASE SHALL BE A NOMINAL 2" THICKNESS AT CENTERLINE WITH A 2% CROSS SLOPE. MATERIAL DENSITY OF 140 PCF WAS USED TO CALCULATE TONNAGE. ESTIMATED PROJECT QUANTITY INCLUDES AN ADDITIONAL 5% FOR ANY CROSS SECTION IRREGULARITIES.
- 3 THIS ITEM INCLUDES ALL MATERIAL TO BE REMOVED FROM THE EXISTING GRAVEL SURFACED SIDE ROAD INTERSECTIONS. THE GRAVEL SHALL BE REMOVED TO ALLOW AN AVERAGE OF 7" HMA TO BE PLACED AT THE SIDE ROAD INTERSECTION. ALL GRAVEL MATERIAL CAN BE LEFT ON SITE AND USED ON THE EXISTING GRAVEL ROAD AS A TIE INTO THE NEW HMA SURFACE. SEE FILLET FOR NON-PAVED SIDE ROAD DETAIL ON SHEET 4 FOR LOCATIONS.
- 4 THIS ITEM INCLUDES THE MILLING OF BOTH HMA AND PCC SURFACES ALONG THE PROJECT. SEE SHEET 3 FOR TIE-IN HEADER AND RUNOUT DETAILS @ BRIDGE ENDS AND AT THE END OF PROJECT. SEE SHEET 4 FOR LOCATIONS OF SIDEROAD INTERSECTION MILLING. SCARIFIED MATERIAL TO BE LOADED DIRECTLY INTO TRUCKS AND SHALL BECOME PROPERTY OF THE CONTRACTOR. IMMEDIATELY FOLLOWING THE SCARIFICATION OF ROADWAY HEADER LOCATIONS, THE CONTRACTOR SHALL PLACE A WEDGE OF MILLINGS ALONG THE HEADERS TO MAINTAIN TRAFFIC AND TO PROTECT THE EDGES OF THE ADJACENT ROADWAY.
- 5 SEE SHEET 4 FOR TABULATION 110-6 REGARDING BREAKING UP PAVEMENT.
- 6 A. THE FINAL MIXTURE SIZE OF THE HMA MATERIAL SHALL BE 3/4". CERTIFIED PLANT INSPECTION IS REQUIRED.
B. ITEM 7 B,C,D, AND E SHALL ALSO APPLY.
- 7 A. THE FINAL MIXTURE SIZE OF THE HMA MATERIAL SHALL BE 1/2" AND SHALL CONTAIN NOT LESS THAN 75% CRUSHED PARTICLES. CERTIFIED PLANT INSPECTION IS REQUIRED.
B. CONTRACTOR SHALL CONSTRUCT HMA PAVEMENT AS SHOWN IN THE TYPICAL CROSS SECTION ON SHEET 3 WITH A SINGLE LANE PICK-UP PAYER EQUIPPED WITH AN AUTOMATIC SCREED CONTROL.
C. MATERIAL FOR FILLETS AT ENTRANCES AND ASPHALT RUNOUTS AT GRAVEL INTERSECTIONS IS INCLUDED.
D. A WEIGHT OF 145 POUNDS PER CUBIC FOOT WAS USED TO ESTIMATE THE QUANTITY FOR THE HMA.
E. THE MAT SHALL BE CLEANED AND TACKED BETWEEN LIFTS WITH GSS-1 APPLIED AT A RATE OF 0.06 GALLON PER SQUARE YARD. TACK OF FILLETS AND ASPHALT RUNOUTS SHALL BE INCLUDED IN THIS OPERATION.
- 8 FOR ESTIMATING PURPOSES, THE BASIC ASPHALT BINDER CONTENT FOR THE INTERMEDIATE AND SURFACE MIX SHALL BE 6%.
- 9 INCLUDES DELIVERING SAMPLES TO THE IOWA D.O.T. DISTRICT 1 MATERIALS OFFICE IN AMES.
- 12 CONTRACTOR SHALL LOCATE AND PRESERVE ALL LAND SURVEY CONTROL MONUMENTS LOCATED IN THE PROJECT AREA. SURVEY RECORDS ARE AVAILABLE AT THE COUNTY RECORDER AND COUNTY ENGINEER OFFICES. UPDATED CORNER CERTIFICATES AND MONUMENT PRESERVATION CERTIFICATES SHALL BE SUBMITTED TO HARDIN COUNTY UPON COMPLETION OF THE PROJECT. ALL OTHER CONSTRUCTION STAKING SHALL BE PERFORMED BY HARDIN COUNTY.
- 13 SEE TAB 108-22 ON SHEET 4, BROKEN CENTERLINE, DOUBLE CENTERLINE, AND NO PASSING ZONE LINE ESTIMATED FOR TWO APPLICATIONS AND WHITE EDGE LINE ESTIMATED FOR ONE APPLICATION.
- 14 SEE SHEET 1 FOR TRAFFIC CONTROL PLAN.

Tack Coat estimated for 1 application. Not a bid item.
Quantities include HMA for Entrance Fillets.

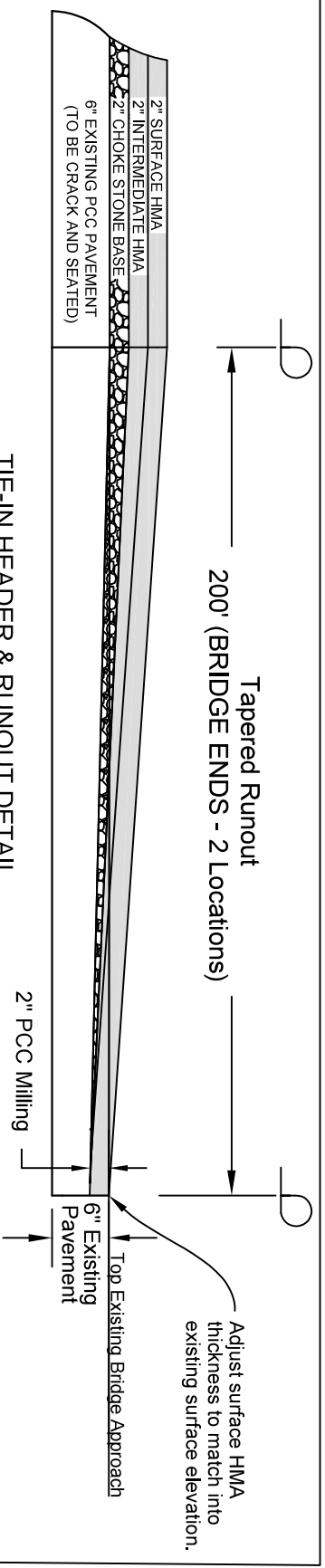


TYPICAL CROSS SECTION
DIVISIONS 1 AND 2
EXISTING 22' X 6" PCC PAVEMENT
(Crack & Seat PCC, then resurface w/ 2" Choke Stone Interlayer, 2" Intermediate HMA and 2" Surface HMA)

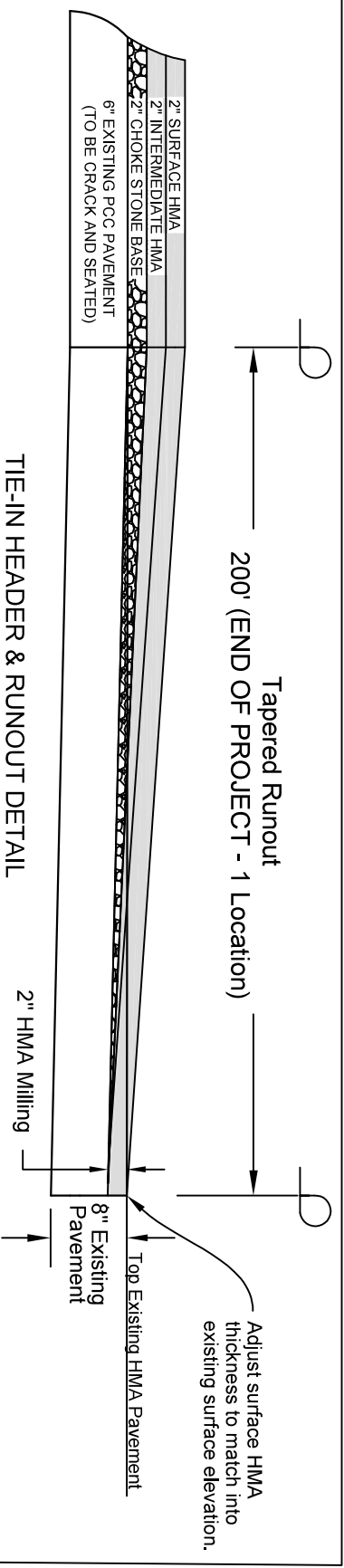
ITEM	RATE
Surface Course	145 lbs./cu.ft
Intermediate Course	145 lbs./cu.ft
3/4" Choke Stone	140 lb./cu.ft.
Tack Coat	0.06 gal./sq.yd.
Asphalt Binder	6% of Total HMA
Granular Shoulders	140 lbs./cu.ft.

ROAD IDENTIFICATION	LOCATION	STATION TO STATION	TABLE OF MAINLINE DESIGN QUANTITIES			HOT MIX ASPHALT ^(Tons)			CHOKES STONE			REMARKS
			(F) Inches	(I) Inches	(S) Inches	SURFACE	INTERMEDIATE	CHOKES STONE	DIVISION 1	DIVISION 2 BOP TO SOUTH BRIDGE APPROACH	DIVISION 2 NORTH BRIDGE APPROACH TO BOP	
S75	0+00	78+50	2.0	2.0	2.0	2191.0	2191.0	2308				
S75	78+50	165+30	2.0	2.0	2.0	2423.0	2423.0	2551				
S75	167+23	238+15	2.0	2.0	2.0	1980.0	1980.0	2086				
TOTALS						6594.0	6594.0	6945				

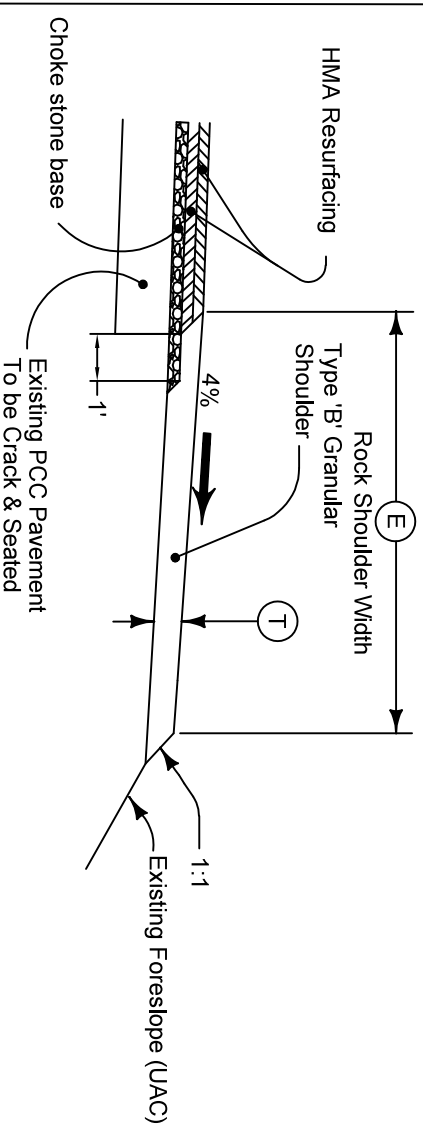
TYPICAL CROSS SECTION
MAINLINE HMA RESURFACING



TIE-IN HEADER & RUNOUT DETAIL
@ BRIDGE ENDS
EXISTING 22' X 6" PCC PAVEMENT
(Mill 2" of PCC for 200' tapering in to existing road, then resurface w/ 2" Choke Stone Interlayer, 2" Intermediate HMA and 2" Surface HMA)



TIE-IN HEADER & RUNOUT DETAIL
@ EOP
EXISTING 22' X 8" HMA PAVEMENT
(Mill 2" of HMA for 200' tapering in to existing road, then resurface w/ 2" Choke Stone Interlayer, 2" Intermediate HMA and 2" Surface HMA)



TYPICAL SECTION FOR TYPE
'B' GRANULAR SHOULDER
ADJACENT TO HOT MIX ASPHALT
RESURFACING

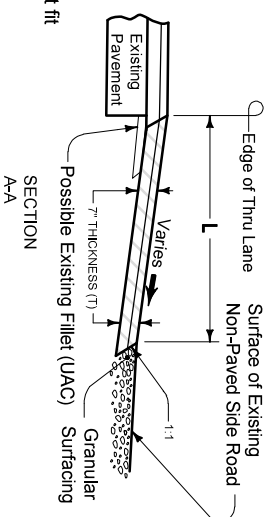
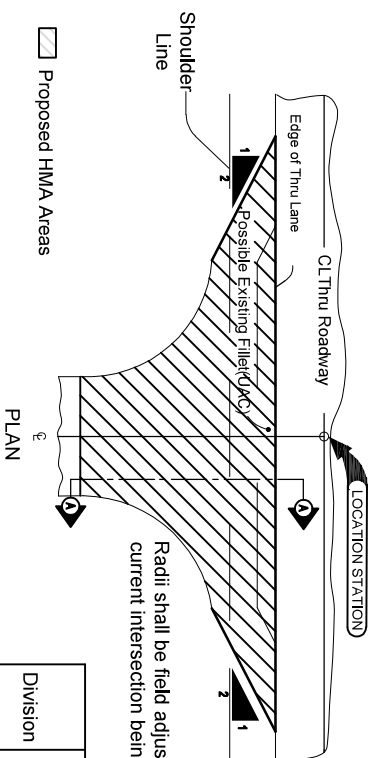
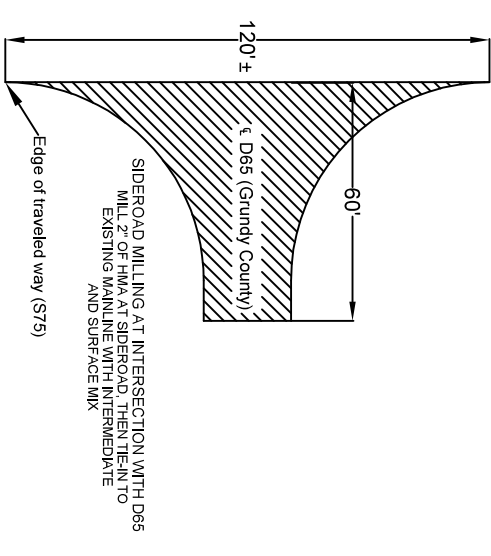
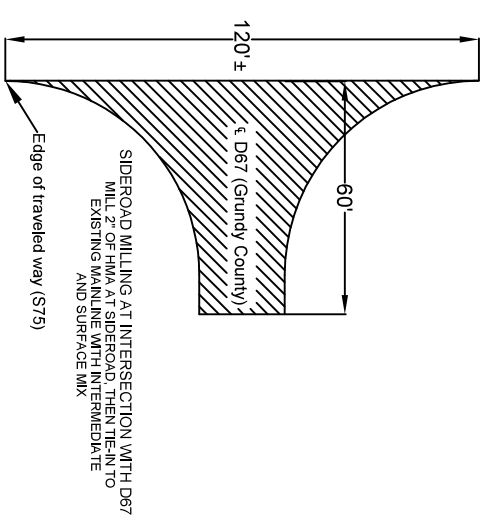
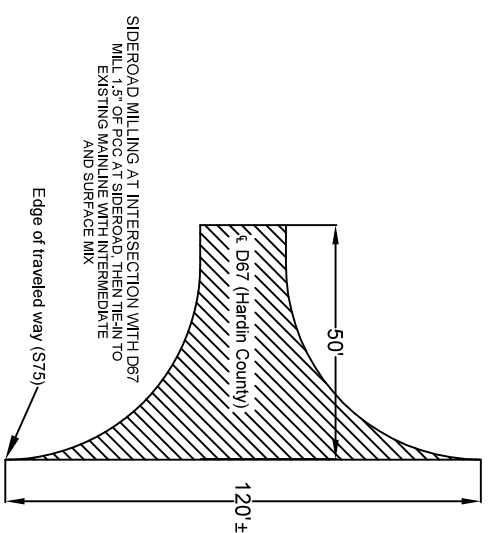
ROAD IDENTIFICATION	LOCATION	STATION TO STATION	SIDE	T		E	
				Inches	Feet	Inches	Feet
S57	0+00	165+30	Both	6	7		
S57	167+23	238+15	Both	6	7		

7135
10-15-13

BREAKING UP PAVEMENT

This Data Entry Sheet fills Tab 110-6 effective 08-01-08

Station to Station	Width	Area SY	Remarks	
+00.00	78+50.00	22.0	19,189.0	Division 1
78+50.00	165+30.00	22.0	21,218.0	Division 2 South of Bridge
167+23.00	238+15.00	22.0	17,336.0	Division 2 North of Bridge
TOTAL:			57,743.0	



Division	Location	Side	T Inches	L Feet	HOT MIX ASPHALT Tons (Per Location)
1	George St.	Left	7	50	30
1	North St.	Left	7	50	55
2	340th	Left	7	75	45
2	100th	Right	7	75	60
2	320th St.	Left	7	75	45
2	310th St.	Left	7	75	45

Note:

Payment for Excavation, Class 13, For Widening will be the contract unit price per cubic yard.
Seven inches of HMA will then be placed, four inches of intermediate and three inches of surface, and the stockpiled material will be used to blend the existing gravel surface into the HMA header.

FILLET FOR NON-PAVED GRAVEL SIDE ROADS

PAVEMENT MARKING LINE TYPES

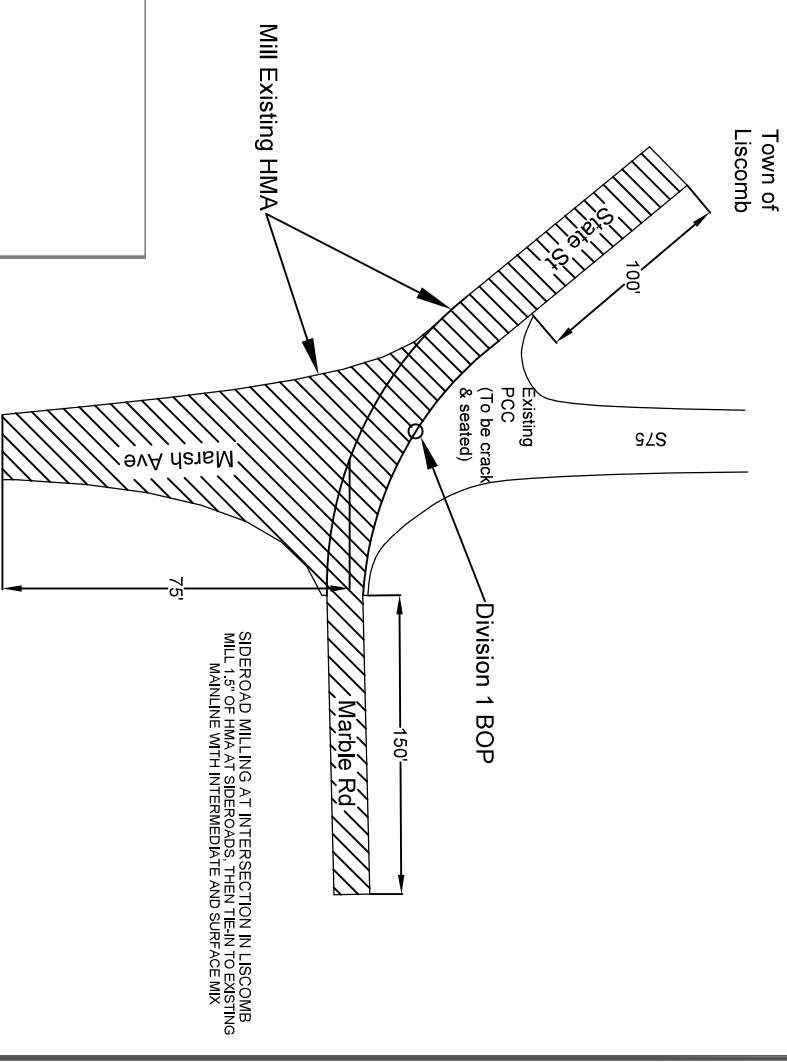
See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.

BCY4: Broken Centerline (Yellow) @ 0.25 CY4: Double Centerline (Yellow) @ 2'
BLW4: Broken Lane Line (White) @ 0.25 LRW4: Edge Line Right (White) @ 1.0 ELLW4: Edge Line Left (White) @ 1.00

Road ID	Station to Station	Length (STA)	Dir. of Travel	Marking Type	Length by Line Type (Unfactored)						Stop	Remarks
					BCY4*	DCY4	NPY4**	BLW4	ELLW4	ELRW4		
S75	0+00	78.50	BOTH	Waterborne/Solvent Paint	21.60	25.05	31.85	-	78.50	78.50		Division 1
S75	78+50	238+15	BOTH	Waterborne/Solvent Paint	115.80	9.30	34.55	-	159.65	159.65		Division 2
Totals (Unfactored)					137.40	34.35	66.40		238.15	238.15		0.50
Factor					0.25	2.00	1.25	0.25	1.00	1.00		6.00
Totals (Per Application)					34.35	68.70	83.00	0.00	238.15	238.15		3.00
Totals (Contract Quantities)					68.70	137.40	166.00	0.00	238.15	238.15		3.00

Centerline yellow estimated for 2 applications and edge/line white estimated for 1 application



County Auditor's Report of Fees Collected

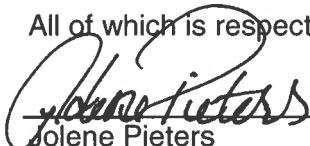
State of IOWA) SS:
County of) Hardin County

To the Board of Supervisors of HARDIN COUNTY:

I, Jolene Pieters, Auditor of the above named County and State, do hereby certify that the following is a true and correct statement of the fees collected by me in my office for the period of 9.1.2021 through 9.30.2021 and the same has been paid to the County Treasurer:

	No. Doc.	Fees collected
4150 Passport fees	8	\$280.00
4150 Photo fees	16	\$240.00
4150 Passport Postage	1	\$8.00
	Total	\$528.00

All of which is respectfully submitted.



Jolene Pieters
Hardin County Auditor

10.12.2021

Date

Chairperson, Board of Supervisors

Date

Recorder's Monthly Report to the Treasurer

09/01/2021 to 09/30/2021

Liability

Account Number	Description	Net
0001-1-07-8000-400000-2	Use Tax-DOR	(\$45.00)
0001-1-07-8000-400000-3	State Sales Tax-DOR	(\$2,916.00)
0001-1-07-8000-400000-4	Local Option Tax-DOR	(\$486.00)
0001-1-07-8000-401000-1	Snowmobile Registration Fees-State	(\$119.00)
0001-1-07-8000-401001	Snowmobile Titles - State	(\$19.50)
0001-1-07-8000-402000	RVVRS Boat Registration Fees - State	(\$137.60)
0001-1-07-8000-402001-1	RVVRS Boat Titles - State	(\$7.50)
0001-1-07-8000-402001-2	RVVRS Boat Titles - DOR	(\$25.00)
0001-1-07-8000-403000-1	Hunting & Fishing Fees-State	(\$1,165.50)
0001-1-07-8000-404000-2	Real Estate Transfer Tax-State	(\$8,439.23)
0001-1-07-8000-406000-1	Vitals Certified Copies-State	(\$836.00)
0001-1-07-8000-407000-1	ATV Registration Fees-State	(\$484.50)
0001-1-07-8000-407000-2	ATV Titles-State	(\$97.50)
0001-1-07-8000-407000-3	ATV Liens-State	(\$13.00)
0001-1-07-8000-413001-1	Marriage License-State	(\$465.00)
Total		(\$15,256.33)

Revenue

Account Number	Description	Net
0001-1-07-8000-400000	Recording of Instruments	(\$6,315.00)
0001-1-07-8000-400000-1	Over Payment	(\$5.00)
0001-1-07-8000-401000	Snowmobile Writing Fees (\$5.00)-County	(\$15.00)
0001-1-07-8000-402001	RVVRS Boat Titles - County	(\$25.00)
0001-1-07-8000-403000	Hunting & Fishing Fees-County	(\$37.50)
0001-1-07-8000-404000	Real Estate Transfer Tax-County	(\$1,759.17)
0001-1-07-8000-406000	Vitals Certified Copies-County	(\$304.00)
0001-1-07-8000-407000	ATV Writing Fees(\$5.00)-County	(\$85.00)
0001-1-07-8000-408000	RVVRS Writing Fees - County	(\$61.25)
0001-1-07-8000-410000	Auditor's Transfer Fees - \$5.00	(\$775.00)
0001-1-07-8000-413001	Marriage License-County	(\$60.00)
0001-1-07-8000-550000	Photocopy/Fax Fees	\$ 257.75 (\$258.50)
0024-1-07-0000-414000	Document Management Fees	(\$329.00)
5410-1-07-0000-416000	Electronic Transaction Fees	(\$329.00)
Total		(\$10,368.42)
Grand Total		(\$25,614.75)

Amt. to Treas. - \$10,357.67

.75¢ correction per Bowman & Miller.
Corrects surcharges on credit card transactions.

Recorder's Monthly Report to the Treasurer

09/01/2021 to 09/30/2021

Range Summary

Range	Account	Net
Department of Revenue		
	0001-1-07-8000-400000-4 Local Option Tax-DOR	(\$486.00)
	0001-1-07-8000-400000-3 State Sales Tax-DOR	(\$2,916.00)
	0001-1-07-8000-400000-2 Use Tax-DOR	(\$45.00)
	0001-1-07-8000-402001-2 RVVRS Boat Titles - DOR	(\$25.00)
	0001-1-07-8000-404000-2 Real Estate Transfer Tax-State	(\$8,439.23)
Department of Revenue		(\$11,911.23)
Hunting and Fishing		
	0001-1-07-8000-403000 Hunting & Fishing Fees-County	(\$37.50)
	0001-1-07-8000-403000-1 Hunting & Fishing Fees-State	(\$1,165.50)
Hunting and Fishing		(\$1,203.00)
Marriage Application		
	0001-1-07-8000-413001-1 Marriage License-State	(\$465.00)
	0001-1-07-8000-413001 Marriage License-County	(\$60.00)
Marriage Application		(\$525.00)
RVVRS County		
	0001-1-07-8000-408000 RVVRS Writing Fees - County	(\$61.25)
	0001-1-07-8000-401000 Snowmobile Writing Fees (\$5.00)-County	(\$15.00)
	0001-1-07-8000-402001 RVVRS Boat Titles - County	(\$25.00)
	0001-1-07-8000-407000 ATV Writing Fees(\$5.00)-County	(\$85.00)
RVVRS County		(\$186.25)
RVVRS State		
	0001-1-07-8000-401001 Snowmobile Titles - State	(\$19.50)
	0001-1-07-8000-402000 RVVRS Boat Registration Fees - State	(\$137.60)
	0001-1-07-8000-402001-1 RVVRS Boat Titles - State	(\$7.50)
	0001-1-07-8000-407000-2 ATV Titles-State	(\$97.50)
	0001-1-07-8000-407000-1 ATV Registration Fees-State	(\$484.50)
	0001-1-07-8000-401000-1 Snowmobile Registration Fees-State	(\$119.00)
	0001-1-07-8000-407000-3 ATV Liens-State	(\$13.00)
RVVRS State		(\$878.60)
Transfer Tax		
	0001-1-07-8000-404000 Real Estate Transfer Tax-County	(\$1,759.17)
	0001-1-07-8000-404000-2 Real Estate Transfer Tax-State	(\$8,439.23)
Transfer Tax		(\$10,198.40)
Vitals Certified Copies		
	0001-1-07-8000-406000-1 Vitals Certified Copies-State	(\$836.00)
	0001-1-07-8000-406000 Vitals Certified Copies-County	(\$304.00)
Vitals Certified Copies		(\$1,140.00)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: October 13, 2021

Name: Jensen, Alec

Address: Eldora, IA

Department: Sheriff's Office

Position: Correctional Officer

Fund _____

Gross _____

Salary or Hourly Rate: \$18.90/hr

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|----------------------------------|---|
| () Hired | (<input checked="" type="checkbox"/>) Resignation |
| () Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |
| () Leave of absence to: _____ | |
| (date) | |

() Other:

Dates of Employment: From: 12-03-2018 To 10-13-2021

Last day of work will be:

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp:

Authorized by:  Date: 10-05-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: October 18, 2021

Name: Hartgers, Sandra

Address: Des Moines, IA

Department: Sheriff's Office

Position: Correctional Officer- Sergeant

Fund _____

Gross _____

Salary or Hourly Rate: \$23.06/hr

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|---|--------------------|
| (<input checked="" type="checkbox"/>) Hired | () Resignation |
| () Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |
| () Leave of absence to: _____ | |
| (date) | |

() Other:


Dates of Employment: From: To

Last day of work will be:

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp:

Authorized by:  Date: 10-05-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: October 25, 2021

Name: Sorenson, John

Address: Eldora, IA

Department: Sheriff's Office

Position: Correctional Officer- Sergeant

Fund _____

Gross _____

Salary or Hourly Rate: \$23.06/hr

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|---|-------------------|
| (<input checked="" type="checkbox"/>) Hired | () Resignation |
| () Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |

() Leave of absence to: _____
(date)

() Other:


Dates of Employment: From: To

Last day of work will be:

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp:

Authorized by:  Date: 10-05-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: October 23, 2021

Name: Baade, Drake

Address: Eldora, IA

Department: Sheriff's Office

Position: Correctional Officer

Fund _____

Gross _____

Salary or Hourly Rate: \$18.90/hr

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|---|-------------------|
| () Hired | () Resignation |
| (<input checked="" type="checkbox"/>) Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |
| () Leave of absence to: _____ | |
| (date) | |

() Other: Part to Full Time


Dates of Employment: From: To

Last day of work will be:

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp:

Authorized by:  Date: 10-06-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: October 23, 2021

Name: Showers, Ian

Address: Conrad, IA

Department: Sheriff's Office

Position: Correctional Officer

Fund _____

Gross _____

Salary or Hourly Rate: \$18.90/hr

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|---|--------------------|
| () Hired | () Resignation |
| (<input checked="" type="checkbox"/>) Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |
| () Leave of absence to: _____ | |

(date)

() Other: Part to Full Time

Dates of Employment: From: _____ To _____

Last day of work will be: _____

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp: _____

Authorized by:  Date: 10-06-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: October 23, 2021

Name: Graham, Caleb

Address: Parkersburg, IA

Department: Sheriff's Office

Position: Correctional Officer

Fund _____

Gross _____

Salary or Hourly Rate: \$18.90/hr

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|---|-------------------|
| () Hired | () Resignation |
| (<input checked="" type="checkbox"/>) Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |

() Leave of absence to: _____
(date)

() Other: Part to Full Time

Dates of Employment: From: To

Last day of work will be:

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp:

Authorized by:  Date: 10-06-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: **October 23, 2021**

Name: **Schutt, Paula**

Address: **Iowa Falls, IA**

Department: **Sheriff's Office**

Position: **Correctional Officer**

Fund _____

Gross _____

Salary or Hourly Rate: **\$18.90/hr**

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|---|--------------------|
| () Hired | () Resignation |
| (<input checked="" type="checkbox"/>) Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |
| () Leave of absence to: _____ | |

(date)

() Other: **Part to Full Time**

Dates of Employment: From: To

Last day of work will be:

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp:

Authorized by:  Date: 10-06-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: October 23, 2021

Name: Schutt, Harli

Address: Eldora, IA

Department: Sheriff's Office

Position: Correctional Officer

Fund _____

Gross _____

Salary or Hourly Rate: \$18.90/hr

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|---|--------------------|
| () Hired | () Resignation |
| (<input checked="" type="checkbox"/>) Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |

() Leave of absence to: _____
(date)

() Other: Part to Full Time


Dates of Employment: From: To

Last day of work will be:

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp:

Authorized by:  Date: 10-06-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)

HARDIN COUNTY
Employee Change of Status Report

Please enter the following change(s) as of: **October 23, 2021**

Name: **Brittany Gronewold**

Address: **Eldora, IA**

Department: **Sheriff's Office**

Position: **Correctional Officer**

Fund _____

Gross _____

Salary or Hourly Rate: **\$18.90/hr**

STATUS () Full-time () Permanent Part-time () Temporary/Seasonal
Part-time

Reason for change:

- | | |
|---|--------------------|
| () Hired | () Resignation |
| (<input checked="" type="checkbox"/>) Promotion | () Retirement |
| () Demotion | () Layoff |
| () Pay Increase | () Discharge |

() Leave of absence to: _____
(date)

() Other: **Part to Full Time**


Dates of Employment: From: To

Last day of work will be:

Beyond the last day of work, the employee was (or will be) paid for:

Vacation:

Comp:

Authorized by:  Date: 10-06-2021
Elected Official or Department Head

Approved by: _____ Date: _____
Appropriate Board (If Applicable)



HARDIN COUNTY

Courthouse

HARDIN COUNTY COURTHOUSE
1215 EDGINGTON AVE.
ELDORA, IA 50627

HARDIN COUNTY Employee Change of Status Report

Please enter the following change(s) as of 10/25/2021
Date

Name: Jennifer Anne Kappel
Address: 1016 Worth Street
Ackley Iowa 50601
City State Zip Code

Department: Sheriff
Position: P/T Correctional Officer
Salary/Hourly Rate: \$18.90

Fund: 0001-05-1050-000-10108

Status: Full-time Permanent Part-time Temporary/Seasonal Part-time

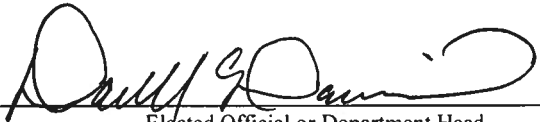
Reason of Change:

- Hired
 - Promotion
 - Demotion
 - Pay Increase
 - Leave of Absence
 - Resignation
 - Retirement
 - Layoff
 - Discharge
- _____ Dates

Other: _____

Dates of Employment: _____ to _____ Last Day of Work _____
From To (if applicable)

Beyond the last day of work, the following vacation time was (or will be paid): _____ to _____
From To

Authorized by:  _____
Elected Official or Department Head Date

Authorized by: _____
Board of Supervisors Date