

Engineer's Report

Bridge No. MED-42-0310L (SFN 5200962)

Carrying Southbound USR 42 over USR 224

Bridge Hit on Span #2- Beam #1 (Left Fascia) & Beam #2

PID 122151

General Information

- (1) **Bridge No.:** MED-42-0310L **SFN:** 5200962
- (2) **Bridge Location:** USR 42 over USR 224, Medina County, OH

Location Map - See Attachment A
- (3) **Date & Time of Crash:** Friday, June 28, 2024 mid-afternoon

Crash and Damage Information

- (1) **Police Report:** The Ohio State Highway Patrol report 52-0237-52 is included in Attachment B .
- (2) **Damage Details:** A low-boy semi carrying an over-height load violently collided with the bridge the afternoon of Friday, June 28, 2024. A very heavy and stout steel lifting clamp destined for the steel mill in Cleveland, OH struck the bridge when the truck driver deviated from the permitted route. The Highway Patrol estimated the height of the load to be 15'-0". The bridge vertical clearance was 14'-9". The load originated in Norwalk.

The clamp struck the bridge at a high rate of speed (approximately 55 mph) and inflicted significant damage to the bridge. The overhead sign attached to the bridge parapet over the eastbound 224 lane was hit first and brought it down. The thick steel apparatus then struck the bottom flange of beam 1, the fascia beam. The bottom half of the beam was driven inward over much of the length of span 2. The bottom flange was seriously distorted locally at the point of impact.

The underside of the deck cantilever spalled off along the beam top flange above the point of impact. With the beam globally rolling inward there is an 1/8 inch gap between the flange and bottom of the deck. The back side of the beam top flange was forced upward into the deck and there is no spalling of the deck haunch on the this side of beam 1.

This interaction between the 67,000 lb clamp and beam 1 tilted the load backward, with the front lifting upward as it was forced under beam 1. It struck beam 2 squarely in the web. It punched through the web at the point of impact and drove the back end of the clamp down, shearing through the low-boy trailer's steel frame, and approximately 6 inches down into the asphalt pavement on USR 224. Beam 2 was bent upward and is parallel to the underside of the concrete bridge deck. The bottom flange of the beam is within a couple inches of the bridge deck presently and slight spalling on the deck indicates that the bottom flange actually hit the underside of the deck during the collision. There is also a crack in the web, approximately 6 inches long, running parallel to the bottom flange. It emanates from broken welded connection to a crossframe angle.

The force of the collision was great enough to displace beam 2 about three inches on the pier 1 sliding plate bearing. The lateral displacement continued on into adjacent span 1.

There was mild spalling of the deck haunch at beam 2 at multiple locations in span 2. Beam 2 was so twisted that the top flange is almost perpendicular to the underside of the deck in places. Outside of the area of direct impact, the beam flange was displaced laterally and is no longer supporting the deck within the confines of the original haunch.

There are five sets of crossframes, comprised of three steel angle members, in each of the four bays between beams in span 2.

The first four crossframes in bay 1 from pier 1 have various levels of damage. Crossframes 1 and 4 have broken welded connections to the beams and buckling while crossframes 2 and 3, that bracket the point of impact, show the broken welds and much more pronounced distortion of the angles.

The crossframe conditions in bay 2 are similar. Crossframe 1 has moderately buckled angles. Crossframes 2 and 3 are destroyed. The crossframe 4 angles exhibit buckling and cracked paint, at minimum, at the welded connections to the beams.

The remaining three beams in span 2 and crossframes in the two bays between them appear to be undamaged by the collision. There was an accident in 2018 where all five beams were hit above the eastbound lane. A minor localized bend in the bottom flanges of beams 3 and 4 is visible but does not affect the performance of the bridge, nor is it related to the 2024 collision.

The west side deck haunch at beam 3 exhibits spalling between crossframes 2 and 3. It is the result of a previous collision. It is shallow and there is no gap between the beam top flange and concrete deck.

The bearings throughout the bridge give indications that impact from the collision affected the entire superstructure. The beam 1 bearing at the rear abutment is unaffected. The remaining bearings, 2-5, show lateral displacement of the beam sole plates in relation to the masonry plates at the bearing sliding surfaces. All displacements are to the east in the direction of collision. Some of the bearings exhibit cracked paint and welds between steel members.

At the pier 1 expansion bearing, the beam 1 sole plate has shifted to the east at least $\frac{1}{4}$ inch on the sliding surface. Beam 2 over pier 1, as mentioned, was shifted three inches east because of the collision. Only the right edge of the beam sole plate is in contact with the bearing masonry plate. Beam 3 was displaced laterally at least $\frac{1}{4}$ inch. The masonry plate pack on this bearing has curled from previous pack rust and only the outside edges – through the pack rust – are providing any support for the beam at pier 1. Beam 4 exhibits the same conditions as beam 3 except the lateral displacement is slightly less than $\frac{1}{4}$ inch. Beam 5 at pier 1 does not exhibit any effects from the collision.

The bearings on pier 2 are fixed and welded in place. They do not exhibit any effects from the collision.

The forward abutment bearings, although furthest from the impact zone, do exhibit some collision-related distress. The beam 1 bearing was painted relatively recently. The paint is cracked and the beam sole plate has shifted about ¼ inch to the east. Remaining beams 2 through 5 are similar with about 3/16 inch of shifting.

It looks as if globally parts of this bridge were permanently shifted to the east by the impact. There is evidence of movement at the bearings at both abutments and pier 1. These are all expansion bearings. The beams remained in their original position at fixed pier 2, possibly rotating imperceptibly to allow for the forward abutment bearings beyond to shift.

The top of the deck does not exhibit any distress such as sagging of the wearing surface or parapet. The end strip-sealed expansion joints also do not show any obvious misalignment from the collision.

(See photos – Attachment C)

- (3) **District Follow-Up:** District Bridge Engineer Kent Kapustar was on site about 4:45 PM the day of the collision. Based on the visible damage, the bridge and roadway below were closed indefinitely. On Monday July 1, 2024, the Bridge Engineer and Assistant Bridge Engineer Joseph Clark inspected the damage within arm's length using the District's platform truck. Joe Clark, and Bridge Specialists Rich Harding and Craig Penix used ladders on Tuesday to inspect the pier bearings.

The District Survey Department was on site Tuesday July 2 and Wednesday July 3 to do a full 3D scan of the bridge.

- (4) **Disposition:** The bridge and roadway below remain closed to traffic. Beam 2 in span 2 exhibits serious deformation as well as a sizeable puncture and a separate crack in the web. The deformation extends past the damaged pier 1 bearing into span 1. With its extensive damage, the beam is not a candidate for partial replacement with heat straightening. The damage extends almost the full length of span 2 and is present in span 1. Attempting to remove and replace this beam with the deck in place, constructing field splices at appropriate locations on the beam and possible heat

straightening of the existing beam is not a cost effective solution to the collision. That repair approach is very risky and may not be even be constructible.

Beam 1 exhibits a very serious localized kink with some steel section loss in the bottom flange at the actual point of impact in addition to serious deformation of the beam globally in span 2. This beam also interferes with work on the more seriously damaged beam 2. With these conditions, beam 1 must be removed from the bridge also.

The District discussed the situation with the Office of Structures about a plan moving forward. Given the situation, an emergency contract should be awarded to immediately remove the deck, beams 1 and 2 and the associated crossframes from span 2. The deck and beams will be cut over piers 1 and 2. The deck will be removed 18 inches off of beam 3 in bay 2 with appropriate preservation of existing deck transverse reinforcing steel. The demolition contractor should also erect a ground mounted sign for the USR 42/USR 224 interchange to replace the bridge mounted sign. The contractor should install a permanent zone with portable concrete barrier on USR 42 above.

With these immediate measures, the bridge and roadway below can be reopened to traffic.

The three-dimensional survey scan of the bridge will be evaluated looking for distortion to the remaining bridge. There is evidence the beams were shifted at the expansion bearings, but visually it was impossible to see noticeable deflections in the beams over the span lengths.

A future project, possibly design/build will complete the demolition of the deck and beams lines 1 and 2 in spans 1 and 3, and reconstruct the outer portion of the bridge restoring it to its original two lane configuration.

Site Conditions Prior to Incident

(1) Condition of structure prior to bridge hit:

- a) **Type:** Continuous steel beam with reinforced concrete deck and substructure.
- b) **Span:** 3 spans for a total length of 128 feet.
- c) **Clear Width:** Bridge Roadway Width – 33.5 feet.
- d) **Overhead Clearance:** 14'-9" Minimum.
- e) **Type & Condition of Wearing Surface:** 1 3/4" Microsilica Modified Concrete Overlay installed 2022; Condition Rating - 9 Excellent Condition.

- f) **Height of Roadway Above Water:** N/A.
- g) **Year Built:** 1958. Bridge was overlaid in 2022.
- h) **Overall Condition:** Good Condition – General Appraisal = 7. Structural elements show minor deterioration. Superstructure is in “7 - Good” condition; Protective Coating System is 5%-10% degraded and is rated “6 - Satisfactory”.
- i) **Warning Signs Present:** No.
- j) **Previous History:** The bridge required heat straightening in 1997 due to a collision. It was again hit in 2018, with contact and minor damage to all 5 beam lines.

(2) **Conditions of Approaches Prior to Crash:** Good. The U.S. Route 42 pavement approaching the bridge was recently paved. The accident did not take place on the bridge or overhead roadway. The USR 224 pavement below the bridge is also in good condition.

(3) **Previous Inspection Reports:** See Attachment D for 2022 and 2020 Inspection Reports, two of the last three Bridge Inspection Reports prior to the crash damage. The bridge has been rated in “Good” condition for these inspection cycles. Earlier reports are housed in the obsolete SMS bridge inspection program. SMS was not accessible at the time of this report.

(4) **Average Daily Traffic:**

USR 42 : 2023 AADT = 5,997

USR 224: 2023 AADT = 4,337

(5) **Future Maintenance and Repair Projects:** The bridge is not currently programmed for any maintenance or repair projects.

Demolition / Repair Project Planning

(1) PID: 122151 (Demo Only)/ TBD (Complete the demo of beam lines 1 and 2 and reconstruction)

(2) Proposed Repair Work:

a. PID 122151 Type 2 Emergency Demolition Project:

- i. Contractor will remove the deck over damaged beam lines 1 and 2 in span 2 over the USR 224 roadway. The existing transverse reinforcing steel extending from beam 3 into bay 2 will be partially preserved to

allow for splicing on new bars in future reconstruction. The contractor will then cut and remove damaged beam lines 1 and 2 from the bearings on piers 1 and 2. The removal of the crossframes in bays 1 and 2 will also be removed as part of the operation. The crossframes will be removed withing two inches of the beam 3 web to facilitate speedy removal. Any cracked welded connections found at the beam 3 web will require full crossframe angle removal followed by grinding the weld off of beam 3.

- ii. Contractor will erect the USR 42 interchange sign directing USR 224 eastbound traffic on ground mounted posts. The sign was knocked off the bridge parapet by the collision but is relatively undamaged.
- iii. The Contractor will erect portable concrete barrier and appropriate signage reducing USR 42 to one lane over the bridge. This material will need to stay in place for months until the future reconstruction contractor takes control of the area to rebuild the bridge. This will require payment to the demolition contractor well past the immediate bridge removal effort.
- iv. With this work the traffic on the bridge and below it can be restored.

b. PID: TBD Possible Design/Build Partial Superstructure Replacement Contract

- i. After the span 2 bridge demolition and the area re-opened, there should be little effect to the original traffic flow. The second lane of USR 42 – now removed – is part of a short stretch of roadway that merges down to one lane. Shortening this merge by 300 feet at the bridge should have negligible impact on the traffic pattern. The original traffic pattern below the bridge on USR 224 will return. With this, a second contract – likely design/build – can be let to restore the bridge to its full width.
- ii. The construction contractor will need to coordinate with the demo contractor to remove and reconstruct the protective concrete barrier on USR 42.
- iii. The Contractor will start by removing the deck over beam lines 1 and 2, again preserving the existing transverse reinforcing steel. The two partially remaining beams lines in spans 1 and 3 cannot be incorporated into new construction as a new field splice cannot be added at the piers. These beams and their associated crossframes will be removed.

- iv. The Contractor will address the existing pier and abutment bearings by jacking the remaining existing bridge and replacing the bearings with new elastomeric bearings.
- v. The Contractor will erect new beam lines 1 and 2 with contractor-designed bolted field splices at the points of contraflexure and new elastomeric bearings at all substructure units. New crossframes will need to be installed. All new steelwork will need painted.
- vi. The Contractor will construct a new portion of concrete deck from the existing cut line near existing beam 3 out to the original deck width. The cut existing transverse reinforcing steel in span 2 will need to be tied new reinforcing steel with mechanical connectors. Depending on the Contractor's methods, he may retain sufficient bar length in spans 1 and 3 to use lap splices on the transverse bars.
- vii. New portions of the end strip-sealed expansion joints will need to be installed by field welding to the existing joints. This will require some demolition of the existing abutment backwalls to install the new steel armor.
- viii. The Contractor will build new concrete parapet on the outside of the new deck. It will be sealed with epoxy-urethane.
- ix. The Contractor will erect a new sign for the USR 42 NB/USR 224 EB interchange on the parapet to replace the sign brought down by the collision.

(3) Estimated Construction Cost:

- a. The estimated demolition of span 2; and installation of portable concrete barrier and MOT signage is to be accelerated to get the roadways open as soon as possible. This work will carry a premium with it. The estimated construction cost is \$600,000.
- b. A second contract to finish the demolition of beam lines 1 and 2 and the reconstruction of this portion of the bridge is roughly estimated to cost about \$2 million. The contract is likely to be let as a design/build contract with consultant engineering costs included in the overall construction cost.

- (5) District Field Work to Date: The District Bridge Engineering Team made a visit to the site shortly after the collision. Two subsequent site visits with different means of access were made the following business days to catalog the damaged members.

The damage is so extensive that field measurements were not taken during the visits. The District Survey Department spent two day scanning the bridge. Information from the generated point cloud will be used to evaluate the magnitude of the deformations and subtle distortions of the members to remain in place.

The District is developing sketches and a scope of work for the Type 2 Emergency Demolition Contractor.

The follow up reconstruction plans for the bridge will need to be designed by a consultant and will likely be done as part of a design build project.

- (4) Anticipated Schedule: The District would like to have the Type 2 Emergency contract in place by the end of the week of July 12th. The demolition contractor should be able to have the roadway opened well before the end of July.

The District can begin scoping the subsequent contract to demolish the remainder of beam line 1 and 2 immediately. With expedited letting, the design build team could be on site in early 2025 for the demolition and begin reconstruction in the Spring. The project could be completed and the bridge fully restored in the Summer of 2025.

Attachment A Location Map



Attachment B
Ohio State Highway Patrol
Incident Report

July 10, 2024

TRAFFIC CRASH REPORT

*DENOTES MANDATORY FIELD FOR SUPPLEMENT REPORT

LOCAL REPORT NUMBER *

52-0237-52

<input checked="" type="checkbox"/> PHOTOS TAKEN	<input checked="" type="checkbox"/> OH-2	<input checked="" type="checkbox"/> OH-3	LOCAL INFORMATION P24062800001799
<input type="checkbox"/> SECONDARY CRASH	<input type="checkbox"/> OH-1P	<input type="checkbox"/> OTHER	REPORTING AGENCY NAME * Ohio State Highway Patrol
<input type="checkbox"/> PRIVATE PROPERTY			NCIC * OHP52
HIT/SKIP 1 - SOLVED 2 - UNSOLVED	NUMBER OF UNITS 1	UNIT IN ERROR 1 98 - ANIMAL 1 99 - UNKNOWN	

COUNTY* 52	LOCALITY* 3 1 - CITY 2 - VILLAGE 3 - TOWNSHIP	LOCATION: CITY, VILLAGE, TOWNSHIP* Harrisville (Township of)	CRASH DATE / TIME* 06/28/2024 15:01	CRASH SEVERITY 5 1 - FATAL 2 - SERIOUS INJURY SUSPECTED 3 - MINOR INJURY SUSPECTED 4 - INJURY POSSIBLE 5 - PROPERTY DAMAGE ONLY
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ROUTE TYPE US	ROUTE NUMBER 224	PREFIX 1 - NORTH 2 - SOUTH 3 - EAST 4 - WEST	LOCATION ROAD NAME	ROAD TYPE	LATITUDE DECIMAL DEGREES 41.026539
ROUTE TYPE	ROUTE NUMBER	PREFIX	REFERENCE ROAD NAME (ROAD, MILEPOST, HOUSE #) 6	ROAD TYPE MP	LONGITUDE DECIMAL DEGREES -82.052246

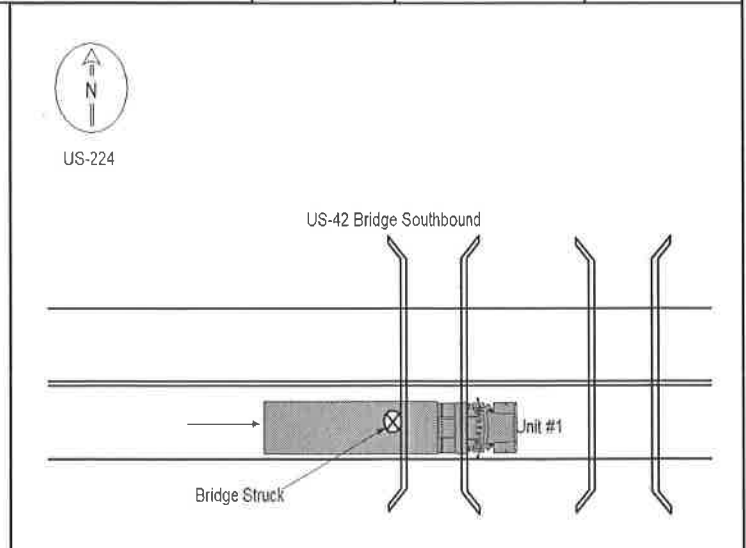
REFERENCE POINT 2 1 - INTERSECTION 2 - MILE POST 3 - HOUSE #	DIRECTION FROM REFERENCE 3 1 - NORTH 2 - SOUTH 3 - EAST 4 - WEST	ROUTE TYPE IR - INTERSTATE ROUTE (TP) US - FEDERAL US ROUTE SR - STATE ROUTE CR - NUMBERED COUNTY ROUTE TR - NUMBERED TOWNSHIP ROUTE	ROAD TYPE AL - ALLEY AV - AVENUE BL - BOULEVARD CR - CIRCLE CT - COURT DR - DRIVE HE - HEIGHTS	ROAD TYPE HW - HIGHWAY LA - LANE MP - MILEPOST OV - OVAL PK - PARKWAY PI - PIKE PL - PLACE	RD - ROAD SQ - SQUARE ST - STREET TE - TERRACE TL - TRAIL WA - WAY	INTERSECTION RELATED <input type="checkbox"/> WITHIN INTERSECTION OR ON APPROACH <input type="checkbox"/> WITHIN INTERCHANGE AREA NUMBER OF APPROACHES
DISTANCE FROM REFERENCE 0.29	DISTANCE UNIT OF MEASURE 1 1 - MILES 2 - FEET 3 - YARDS					ROADWAY <input type="checkbox"/> ROADWAY DIVIDED

LOCATION OF FIRST HARMFUL EVENT 1 1 - ON ROADWAY 2 - ON SHOULDER 3 - IN MEDIAN 4 - ON ROADSIDE 5 - ON GORE 6 - OUTSIDE TRAFFIC WAY 7 - ON RAMP 8 - OFF RAMP	9 - CROSSOVER 10 - DRIVEWAY/ALLEY ACCESS 11 - RAILWAY GRADE CROSSING 12 - SHARED USE PATHS OR TRAILS 13 - BIKE LANE 14 - TOLL BOOTH 99 - OTHER / UNKNOWN	MANNER OF CRASH COLLISION/IMPACT 1 1 - NOT COLLISION BETWEEN TWO MOTOR VEHICLES IN TRANSPORT 2 - REAR-END 3 - HEAD-ON 4 - REAR-TO-REAR 5 - BACKING 6 - ANGLE 7 - SIDESWIPE, SAME DIRECTION 8 - SIDESWIPE, OPPOSITE DIRECTION 9 - OTHER / UNKNOWN	DIRECTION OF TRAVEL 3 1 - NORTH 2 - SOUTH 3 - EAST 4 - WEST	MEDIAN TYPE 2 1 - DIVIDED FLUSH MEDIAN (< 4 FEET) 2 - DIVIDED FLUSH MEDIAN (> 4 FEET) 3 - DIVIDED, DEPRESSED MEDIAN 4 - DIVIDED, RAISED MEDIAN (ANY TYPE) 9 - OTHER / UNKNOWN
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<input type="checkbox"/> WORK ZONE RELATED <input type="checkbox"/> WORKERS PRESENT <input type="checkbox"/> LAW ENFORCEMENT PRESENT <input type="checkbox"/> ACTIVE SCHOOL ZONE	WORK ZONE TYPE 3 1 - LANE CLOSURE 2 - LANE SHIFT/ CROSSOVER 3 - WORK ON SHOULDER OR MEDIAN 4 - INTERMITTENT OR MOVING WORK 5 - OTHER	LOCATION OF CRASH IN WORK ZONE 2 1 - BEFORE THE 1ST WORK ZONE WARNING SIGN 2 - ADVANCE WARNING AREA 3 - TRANSITION AREA 4 - ACTIVITY AREA 5 - TERMINATION AREA	CONTOUR 1 1 - STRAIGHT LEVEL 2 - STRAIGHT GRADE 3 - CURVE LEVEL 4 - CURVE GRADE 9 - OTHER /UNKNOWN	CONDITIONS 1 1 - DRY 2 - WET 3 - SNOW 4 - ICE 5 - SAND, MUD, DIRT, OIL, GRAVEL 6 - WATER (STANDING, MOVING) 7 - SLUSH 9 - OTHER / UNKNOWN	SURFACE 2 1 - CONCRETE 2 - BLACKTOP, BITUMINOUS, ASPHALT 3 - BRICK/BLOCK 4 - SLAG, GRAVEL, STONE 5 - DIRT 9 - OTHER / UNKNOWN
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LIGHT CONDITION 1 1 - DAYLIGHT 2 - DAWN/DUSK 3 - DARK - LIGHTED ROADWAY 4 - DARK - ROADWAY NOT LIGHTED 5 - DARK - UNKNOWN ROADWAY LIGHTING 9 - OTHER / UNKNOWN	WEATHER 1 1 - CLEAR 2 - CLOUDY 3 - FOG, SMOG, SMOKE 4 - RAIN 5 - SLEET, HAIL	6 - SNOW 7 - SEVERE CROSSWINDS 8 - BLOWING SAND, SOIL, DIRT, SNOW 9 - FREEZING RAIN OR FREEZING DRIZZLE 99 - OTHER / UNKNOWN
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NARRATIVE
Unit #1 was traveling Eastbound on US-224 when it struck a sign and bridge.



CRASH REPORTED DATE / TIME 06/28/2024 15:01	DISPATCH DATE / TIME 06/28/2024 15:01	ARRIVAL DATE / TIME 06/28/2024 15:20	SCENE CLEARED DATE / TIME 06/28/2024 19:16	REPORT TAKEN BY <input checked="" type="checkbox"/> POLICE AGENCY <input type="checkbox"/> MOTORIST
TOTAL TIME ROADWAY CLOSED	OTHER INVESTIGATION TIME	TOTAL MINUTES 255	OFFICER'S NAME* Yurek, Tara	CHECKED BY OFFICER'S NAME* Bittinger, Jason
			OFFICER'S BADGE NUMBER* 1608	CHECKED BY OFFICER'S BADGE NUMBER* 0877
				SUPPLEMENT (CORRECTION OR ADDITION TO AN EXISTING REPORT SENT TO ODPS)

OWNER

UNIT # 1 **OWNER NAME:** LAST, FIRST, MIDDLE (☐ SAME AS DRIVER)
KINDRED SPIRIT LOGISTIC LLC

OWNER PHONE: INCLUDE AREA CODE (☐ SAME AS DRIVER)
979-446-4630

OWNER ADDRESS: STREET, CITY, STATE, ZIP (☐ SAME AS DRIVER)
4914 PARK LAND DRIVE, BRYAN, TX, 77801

COMMERCIAL CARRIER: NAME ADDRESS CITY STATE ZIP
KINDRED SPIRIT LOGISTIC LLC, 4914 PARK LAND DRIVE, BRY

COMMERCIAL CARRIER PHONE: INCLUDE AREA CODE

LP STATE TX **LICENSE PLATE #** R540153 **VEHICLE IDENTIFICATION #** 1XKADB9X06J114298 **VEHICLE YEAR** 2006 **VEHICLE MAKE** KENWORTH

INSURANCE VERIFIED **INSURANCE COMPANY** OOIDA RISK RETENTION GROUP **INSURANCE POLICY #** PL19953300B **COLOR** BLU **VEHICLE MODEL** T6 SERIES

COMMERCIAL **GOVERNMENT** **IN EMERGENCY RESPONSE** **US DOT #** 2357253 **TOWED BY:** COMPANY NAME HOOK N HAUL

INTERLOCK DEVICE EQUIPPED **HIT/SKIP UNIT** **# OCCUPANTS** 1 **VEHICLE WEIGHT GVWR/GCWR** 3 **HAZARDOUS MATERIAL** **RELEASED** **PLACARD** **CLASS #** **PLACARD ID #**

UNIT TYPE 15

1 - PASSENGER CAR	6 - VAN (9-15 SEATS)	12 - GOLF CART	18 - LIMO (LIVERY VEHICLE)	23 - PEDESTRIAN/SKATER
2 - PASSENGER VAN (MINIVAN)	7 - MOTORCYCLE 2-WHEELED	13 - SNOWMOBILE	19 - BUS (16+ PASSENGERS)	24 - WHEELCHAIR (ANY TYPE)
3 - SPORT UTILITY VEHICLE	8 - MOTORCYCLE 3-WHEELED	14 - SINGLE UNIT TRUCK	20 - OTHER VEHICLE	25 - OTHER NON-MOTORIST
4 - PICK UP	9 - AUTOCYCLE	15 - SEMI-TRACTOR	21 - HEAVY EQUIPMENT	26 - BICYCLE
5 - CARGO VAN	10 - MOPED OR MOTORIZED BICYCLE	16 - FARM EQUIPMENT	22 - ANIMAL WITH RIDER OR ANIMAL-DRAWN VEHICLE	27 - TRAIN
	11 - ALL TERRAIN VEHICLE (ATV/UTV)	17 - MOTORHOME		99 - UNKNOWN OR HIT/SKIP

OF TRAILING UNITS

WAS VEHICLE OPERATING IN AUTONOMOUS MODE WHEN CRASH OCCURRED? 2

0 - NO AUTOMATION
1 - DRIVER ASSISTANCE
2 - PARTIAL AUTOMATION
3 - CONDITIONAL AUTOMATION
4 - HIGH AUTOMATION
5 - FULL AUTOMATION
9 - OTHER/UNKNOWN

SPECIAL FUNCTION 1

1 - NONE	6 - BUS - CHARTER/TOUR	11 - FIRE	16 - FARM	21 - MAIL CARRIER
2 - TAXI	7 - BUS - INTERCITY	12 - MILITARY	17 - MOWING	99 - OTHER / UNKNOWN
3 - ELECTRONIC RIDE SHARING	8 - BUS - SHUTTLE	13 - POLICE	18 - SNOW REMOVAL	
4 - SCHOOL TRANSPORT	9 - BUS - OTHER	14 - PUBLIC UTILITY	19 - TOWING	
5 - BUS - TRANSIT/COMMUTER	10 - AMBULANCE	15 - CONSTRUCTION EQUIP.	20 - SAFETY SERVICE PATROL	

CARGO BODY TYPE 10

1 - NO CARGO BODY TYPE / NOT APPLICABLE	4 - LOGGING	7 - GRAIN/CHIPS/GRAVEL	11 - DUMP	99 - OTHER / UNKNOWN
2 - BUS	5 - INTERMODAL CONTAINER CHASSIS	8 - POLE	12 - CONCRETE MIXER	
3 - VEHICLE TOWING ANOTHER MOTOR VEHICLE	6 - CARGOVAN /ENCLOSED BOX	9 - CARGO TANK	13 - AUTO TRANSPORTER	
		10 - FLAT BED	14 - GARBAGE/REFUSE	

VEHICLE DEFECTS

1 - TURN SIGNALS	4 - BRAKES	7 - WORN OR SLICK TIRES	9 - MOTOR TROUBLE	99 - OTHER / UNKNOWN
2 - HEAD LAMPS	5 - STEERING	8 - TRAILER EQUIPMENT DEFECTIVE	10 - DISABLED FROM PRIOR ACCIDENT	
3 - TAIL LAMPS	6 - TIRE BLOWOUT			

NON-MOTORIST LOCATION AT IMPACT

1 - INTERSECTION - MARKED CROSSWALK	4 - MIDBLOCK - MARKED CROSSWALK	7 - SHOULDER/ROADSIDE	10 - DRIVEWAY ACCESS	99 - OTHER / UNKNOWN
2 - INTERSECTION - UNMARKED CROSSWALK	5 - TRAVEL LANE - OTHER LOCATION	8 - SIDEWALK	11 - SHARED USE PATHS OR TRAILS	
3 - INTERSECTION - OTHER	6 - BICYCLE LANE	9 - MEDIAN/CROSSING ISLAND	12 - FIRST RESPONDER AT INCIDENT SCENE	

ACTION 3

PRE-CRASH ACTIONS 1

1 - NON-CONTACT	1 - STRAIGHT AHEAD	9 - LEAVING TRAFFIC LANE	15 - WALKING, RUNNING, JOGGING, PLAYING	21 - STANDING OUTSIDE DISABLED VEHICLE
2 - NON-COLLISION	2 - BACKING	10 - PARKED	16 - WORKING	99 - OTHER / UNKNOWN
3 - STRIKING	3 - CHANGING LANES	11 - SLOWING OR STOPPED IN TRAFFIC	17 - PUSHING VEHICLE	
4 - STRUCK	4 - OVERTAKING/PASSING	12 - DRIVERLESS	18 - APPROACHING OR LEAVING VEHICLE	
5 - BOTH STRIKING & STRUCK	5 - MAKING RIGHT TURN	13 - NEGOTIATING A CURVE	19 - STANDING	
9 - OTHER / UNKNOWN	6 - MAKING LEFT TURN	14 - ENTERING OR CROSSING SPECIFIED LOCATION	20 - OTHER NON-MOTORIST	
	7 - MAKING U-TURN			
	8 - ENTERING TRAFFIC LANE			

CONTRIBUTING CIRCUMSTANCES 99

1 - NONE	8 - FOLLOWING TOO CLOSE /ACDA	13 - IMPROPER START FROM A PARKED POSITION	18 - OPERATING DEFECTIVE EQUIPMENT	23 - OPENING DOOR INTO ROADWAY
2 - FAILURE TO YIELD	9 - IMPROPER LANE CHANGE	14 - STOPPED OR PARKED ILLEGALLY	19 - LOAD SHIFTING /FALLING/SPILLING	99 - OTHER IMPROPER ACTION
3 - RAN RED LIGHT	10 - IMPROPER PASSING	15 - SWERVING TO AVOID	20 - IMPROPER CROSSING	
4 - RAN STOP SIGN	11 - DROVE OFF ROAD	16 - WRONG WAY	21 - LYING IN ROADWAY	
5 - UNSAFE SPEED	12 - IMPROPER BACKING	17 - VISION OBSTRUCTION	22 - NOT DISCERNIBLE	
6 - IMPROPER TURN				
7 - LEFT OF CENTER				

SEQUENCE OF EVENTS

EVENTS

1 - OVERTURN/ROLLOVER	7 - SEPARATION OF UNITS	12 - DOWNHILL RUNAWAY	19 - ANIMAL - OTHER	23 - STRUCK BY FALLING, SHIFTING CARGO OR ANYTHING SET IN MOTION BY A MOTOR VEHICLE
2 - FIRE/EXPLOSION	8 - RAN OFF ROAD RIGHT	13 - OTHER NON-COLLISION	20 - MOTOR VEHICLE IN TRANSPORT	24 - OTHER MOVABLE OBJECT
3 - IMMERSION	9 - RAN OFF ROAD LEFT	14 - PEDESTRIAN	21 - PARKED MOTOR VEHICLE	
4 - JACKKNIFE	10 - CROSS MEDIAN	15 - PEDALCYCLE	22 - WORK ZONE MAINTENANCE EQUIPMENT	
5 - CARGO / EQUIPMENT LOSS OR SHIFT	11 - CROSS CENTERLINE - OPPOSITE DIRECTION OF TRAVEL	16 - RAILWAY VEHICLE		
6 - EQUIPMENT FAILURE		17 - ANIMAL - FARM		
		18 - ANIMAL - DEER		

COLLISION WITH FIXED OBJECT - STRUCK

25 - IMPACT ATTENUATOR / CRASH CUSHION	31 - GUARDRAIL END	38 - OVERHEAD SIGN POST	45 - EMBANKMENT	52 - BUILDING
26 - BRIDGE OVERHEAD STRUCTURE	32 - PORTABLE BARRIER	39 - LIGHT / LUMINARIES SUPPORT	46 - FENCE	53 - TUNNEL
27 - BRIDGE PIER OR ABUTMENT	33 - MEDIAN CABLE BARRIER	40 - UTILITY POLE	47 - MAILBOX	54 - OTHER FIXED OBJECT
28 - BRIDGE PARAPET	34 - MEDIAN GUARDRAIL BARRIER	41 - OTHER POST, POLE OR SUPPORT	48 - TREE	99 - OTHER / UNKNOWN
29 - BRIDGE RAIL	35 - MEDIAN CONCRETE BARRIER	42 - CULVERT	49 - FIRE HYDRANT	
30 - GUARDRAIL FACE	36 - MEDIAN OTHER BARRIER	43 - CURB	50 - WORK ZONE MAINTENANCE EQUIPMENT	
	37 - TRAFFIC SIGN POST	44 - DITCH	51 - WALL	

FIRST HARMFUL EVENT 1 **MOST HARMFUL EVENT** 2

LOCAL REPORT NUMBER
52-0237-52

DAMAGE

DAMAGE SCALE

1 - NONE
2 - MINOR DAMAGE
3 - FUNCTIONAL DAMAGE
4 - DISABLING DAMAGE
9 - UNKNOWN

DAMAGED AREA(S)
INDICATE ALL THAT APPLY

NO DAMAGE [0] **UNDERCARRIAGE** [14]

TOP [13] **ALL AREAS** [15]

UNIT NOT AT SCENE [16]

INITIAL POINT OF CONTACT

0 - NO DAMAGE
1-12 - REFER TO UNIT DIAGRAM
13 - TOP
14 - UNDERCARRIAGE
15 - VEHICLE NOT AT SCENE
99 - UNKNOWN

TRAFFIC

TRAFFICWAY FLOW

1 - ONE-WAY
2 - TWO-WAY

TRAFFIC CONTROL

1 - ROUNDABOUT
2 - SIGNAL
3 - FLASHER
4 - STOP SIGN
5 - YIELD SIGN
6 - NO CONTROL

OF THROUGH LANES ON ROAD 2

RAIL GRADE CROSSING

1 - NOT INVOLVED
2 - INVOLVED-ACTIVE CROSSING
3 - INVOLVED-PASSIVE CROSSING

UNIT / NON-MOTORIST DIRECTION

FROM 4 TO 3

1 - NORTH
2 - SOUTH
3 - EAST
4 - WEST
5 - NORTHEAST
6 - NORTHWEST
7 - SOUTHEAST
8 - SOUTHWEST
9 - OTHER / UNKNOWN

UNIT SPEED 38

DETECTED SPEED

1 - STATED / ESTIMATED SPEED
2 - CALCULATED / EDR
3 - UNDETERMINED

POSTED SPEED

MOTORIST / NON-MOTORIST

LOCAL REPORT NUMBER
52-0237-52

UNIT # 1	NAME: LAST, FIRST, MIDDLE JOHNSON, DESHAWN	DATE OF BIRTH 12/14/1980	AGE 43	GENDER M
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ADDRESS: STREET, CITY, STATE, ZIP 4914 PARK LAND DRIVE, BRYAN, TX, 77801	CONTACT PHONE - INCLUDE AREA CODE 979-446-4630
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INJURIES 5	INJURED TAKEN BY 1	EMS AGENCY (NAME)	INJURED TAKEN TO: MEDICAL FACILITY (NAME, CITY)	SAFETY EQUIPMENT USED 4	<input type="checkbox"/> DOT-COMPLIANT MC HELMET	SEATING POSITION 1	AIR BAG USAGE 5	EJECTION 1	TRAPPED 1
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OL STATE TX	OPERATOR LICENSE NUMBER 12393782	OFFENSE CHARGED 4511.20	LOCAL CODE <input type="checkbox"/>	OFFENSE DESCRIPTION WANTON AND WILLFUL DISREGARD O	CITATION NUMBER OHP52160806282024171
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OL CLASS 1	ENDORSEMENT N	RESTRICTION SELECT UP TO 3 3	DRIVER DISTRACTED BY 1	ALCOHOL / DRUG SUSPECTED <input type="checkbox"/> ALCOHOL <input type="checkbox"/> MARIJUANA <input type="checkbox"/> OTHER DRUG	CONDITION 1	ALCOHOL TEST			DRUG TEST(S)		
STATUS		TYPE	VALUE	STATUS		TYPE	RESULTS SELECT UP TO 4				

UNIT #	NAME: LAST, FIRST, MIDDLE	DATE OF BIRTH	AGE	GENDER
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ADDRESS: STREET, CITY, STATE, ZIP	CONTACT PHONE - INCLUDE AREA CODE
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INJURIES	INJURED TAKEN BY	EMS AGENCY (NAME)	INJURED TAKEN TO: MEDICAL FACILITY (NAME, CITY)	SAFETY EQUIPMENT USED	<input type="checkbox"/> DOT-COMPLIANT MC HELMET	SEATING POSITION	AIR BAG USAGE	EJECTION	TRAPPED
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OL STATE	OPERATOR LICENSE NUMBER	OFFENSE CHARGED	LOCAL CODE <input type="checkbox"/>	OFFENSE DESCRIPTION	CITATION NUMBER
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OL CLASS	ENDORSEMENT	RESTRICTION SELECT UP TO 3	DRIVER DISTRACTED BY	ALCOHOL / DRUG SUSPECTED <input type="checkbox"/> ALCOHOL <input type="checkbox"/> MARIJUANA <input type="checkbox"/> OTHER DRUG	CONDITION	ALCOHOL TEST			DRUG TEST(S)		
STATUS		TYPE	VALUE	STATUS		TYPE	RESULTS SELECT UP TO 4				

UNIT #	NAME: LAST, FIRST, MIDDLE	DATE OF BIRTH	AGE	GENDER
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ADDRESS: STREET, CITY, STATE, ZIP	CONTACT PHONE - INCLUDE AREA CODE
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INJURIES	INJURED TAKEN BY	EMS AGENCY (NAME)	INJURED TAKEN TO: MEDICAL FACILITY (NAME, CITY)	SAFETY EQUIPMENT USED	<input type="checkbox"/> DOT-COMPLIANT MC HELMET	SEATING POSITION	AIR BAG USAGE	EJECTION	TRAPPED
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OL STATE	OPERATOR LICENSE NUMBER	OFFENSE CHARGED	LOCAL CODE <input type="checkbox"/>	OFFENSE DESCRIPTION	CITATION NUMBER
----------	-------------------------	-----------------	--	---------------------	-----------------

OL CLASS	ENDORSEMENT	RESTRICTION SELECT UP TO 3	DRIVER DISTRACTED BY	ALCOHOL / DRUG SUSPECTED <input type="checkbox"/> ALCOHOL <input type="checkbox"/> MARIJUANA <input type="checkbox"/> OTHER DRUG	CONDITION	ALCOHOL TEST			DRUG TEST(S)		
STATUS		TYPE	VALUE	STATUS		TYPE	RESULTS SELECT UP TO 4				

INJURIES	SEATING POSITION	AIR BAG	OL CLASS	OL RESTRICTION(S)	DRIVER DISTRACTION	TEST STATUS
1 - FATAL 2 - SUSPECTED SERIOUS INJURY 3 - SUSPECTED MINOR INJURY 4 - POSSIBLE INJURY 5 - NO APPARENT INJURY	1 - FRONT - LEFT SIDE (MOTORCYCLE DRIVER) 2 - FRONT - MIDDLE 3 - FRONT - RIGHT SIDE 4 - SECOND - LEFT SIDE (MOTORCYCLE PASSENGER) 5 - SECOND - MIDDLE 6 - SECOND - RIGHT SIDE 7 - THIRD - LEFT SIDE (MOTORCYCLE SIDE CAR) 8 - THIRD - MIDDLE 9 - THIRD - RIGHT SIDE 10 - SLEEPER SECTION OF TRUCK CAB 11 - PASSENGER IN OTHER ENCLOSED CARGO AREA (NON-TRAILING UNIT, BUS, PICK-UP WITH CAP) 12 - PASSENGER IN UNENCLOSED CARGO AREA 13 - TRAILING UNIT 14 - RIDING ON VEHICLE EXTERIOR (NON-TRAILING UNIT) 15 - NON-MOTORIST 99 - OTHER / UNKNOWN	1 - NOT DEPLOYED 2 - DEPLOYED FRONT 3 - DEPLOYED SIDE 4 - DEPLOYED BOTH FRONT/SIDE 5 - NOT APPLICABLE 9 - DEPLOYMENT UNKNOWN EJECTION 1 - NOT EJECTED 2 - PARTIALLY EJECTED 3 - TOTALLY EJECTED 4 - NOT APPLICABLE TRAPPED 1 - NOT TRAPPED 2 - EXTRICATED BY MECHANICAL MEANS 3 - FREED BY NON-MECHANICAL MEANS	1 - CLASS A 2 - CLASS B 3 - CLASS C 4 - REGULAR CLASS (OHIO = D) 5 - M/C MOPED ONLY 6 - NO VALID OL OL ENDORSEMENT H - HAZMAT M - MOTORCYCLE P - PASSENGER N - TANKER Q - MOTOR SCOOTER R - THREE-WHEEL MOTORCYCLE S - SCHOOL BUS T - DOUBLE & TRIPLE TRAILERS X - TANKER / HAZMAT GENDER F - FEMALE M - MALE U - OTHER / UNKNOWN	1 - ALCOHOL INTERLOCK DEVICE 2 - CDL INTRASTATE ONLY 3 - CORRECTIVE LENSES 4 - FARM WAIVER 5 - EXCEPT CLASS A BUS & CLASS B BUS 6 - EXCEPT CLASS A & CLASS B BUS 7 - EXCEPT TRACTOR-TRAILER 8 - INTERMEDIATE LICENSE RESTRICTIONS 9 - LEARNER'S PERMIT RESTRICTIONS 10 - LIMITED TO DAYLIGHT ONLY 11 - LIMITED TO EMPLOYMENT 12 - LIMITED - OTHER 13 - MECHANICAL DEVICES (SPECIAL BRAKES, HAND CONTROLS, OR OTHER ADAPTIVE DEVICES) 14 - MILITARY VEHICLES ONLY 15 - MOTOR VEHICLES WITHOUT AIR BRAKES 16 - OUTSIDE MIRROR 17 - PROSTHETIC AID 18 - OTHER	1 - NOT DISTRACTED 2 - MANUALLY OPERATING AN ELECTRONIC COMMUNICATION DEVICE (TEXTING, TYPING, DIALING) 3 - TALKING ON HANDS-FREE COMMUNICATION DEVICE 4 - TALKING ON HAND-HELD COMMUNICATION DEVICE 5 - OTHER ACTIVITY WITH AN ELECTRONIC DEVICE 6 - PASSENGER 7 - OTHER DISTRACTION INSIDE THE VEHICLE 8 - OTHER DISTRACTION OUTSIDE THE VEHICLE 9 - OTHER / UNKNOWN CONDITION 1 - APPARENTLY NORMAL 2 - PHYSICAL IMPAIRMENT 3 - EMOTIONAL (E.G., DEPRESSED, ANGRY, DISTURBED) 4 - ILLNESS 5 - FELL ASLEEP, FAINTED, FATIGUED, ETC. 6 - UNDER THE INFLUENCE OF MEDICATIONS / DRUGS / ALCOHOL 9 - OTHER / UNKNOWN	1 - NONE GIVEN 2 - TEST REFUSED 3 - TEST GIVEN, CONTAMINATED SAMPLE / UNUSABLE 4 - TEST GIVEN, RESULTS KNOWN 5 - TEST GIVEN, RESULTS UNKNOWN ALCOHOL TEST TYPE 1 - NONE 2 - BLOOD 3 - URINE 4 - BREATH 5 - OTHER DRUG TEST TYPE 1 - NONE 2 - BLOOD 3 - URINE 4 - OTHER DRUG TEST RESULT(S) 1 - AMPHETAMINES 2 - BARBITURATES 3 - BENZODIAZEPINES 4 - CANNABINOIDS 5 - COCAINE 6 - OPIATES / OPIOIDS 7 - OTHER 8 - NEGATIVE RESULTS

OCCUPANT / WITNESS ADDENDUM

LOCAL REPORT NUMBER
52-0237-52

OCCUPANT	UNIT #	NAME: LAST, FIRST, MIDDLE			DATE OF BIRTH	AGE	GENDER		
	ADDRESS: STREET, CITY, STATE, ZIP				CONTACT PHONE - INCLUDE AREA CODE				
INJURIES	INJURED TAKEN BY	EMS AGENCY (NAME)	INJURED TAKEN TO: MEDICAL FACILITY (NAME, CITY)	SAFETY EQUIPMENT	<input type="checkbox"/> DOT-COMPLIANT MC HELMET	SEATING POSITION	AIR BAG USAGE	EJECTION	TRAPPED
UNIT #	NAME: LAST, FIRST, MIDDLE			DATE OF BIRTH	AGE	GENDER			
ADDRESS: STREET, CITY, STATE, ZIP				CONTACT PHONE - INCLUDE AREA CODE					
INJURIES	INJURED TAKEN BY	EMS AGENCY (NAME)	INJURED TAKEN TO: MEDICAL FACILITY (NAME, CITY)	SAFETY EQUIPMENT	<input type="checkbox"/> DOT-COMPLIANT MC HELMET	SEATING POSITION	AIR BAG USAGE	EJECTION	TRAPPED
UNIT #	NAME: LAST, FIRST, MIDDLE			DATE OF BIRTH	AGE	GENDER			
ADDRESS: STREET, CITY, STATE, ZIP				CONTACT PHONE - INCLUDE AREA CODE					
INJURIES	INJURED TAKEN BY	EMS AGENCY (NAME)	INJURED TAKEN TO: MEDICAL FACILITY (NAME, CITY)	SAFETY EQUIPMENT	<input type="checkbox"/> DOT-COMPLIANT MC HELMET	SEATING POSITION	AIR BAG USAGE	EJECTION	TRAPPED
UNIT #	NAME: LAST, FIRST, MIDDLE			DATE OF BIRTH	AGE	GENDER			
ADDRESS: STREET, CITY, STATE, ZIP				CONTACT PHONE - INCLUDE AREA CODE					
INJURIES	INJURED TAKEN BY	EMS AGENCY (NAME)	INJURED TAKEN TO: MEDICAL FACILITY (NAME, CITY)	SAFETY EQUIPMENT	<input type="checkbox"/> DOT-COMPLIANT MC HELMET	SEATING POSITION	AIR BAG USAGE	EJECTION	TRAPPED

INJURIES	SAFETY EQUIPMENT USED	SEATING POSITION	AIR BAG USAGE
1 - FATAL 2 - SUSPECTED SERIOUS INJURY 3 - SUSPECTED MINOR INJURY 4 - POSSIBLE INJURY 5 - NO APPARENT INJURY	1 - NONE USED - VEHICLE OCCUPANT 2 - SHOULDER BELT ONLY USED 3 - LAP BELT ONLY USED 4 - SHOULDER & LAP BELT USED 5 - CHILD RESTRAINT SYSTEM - FORWARD FACING 6 - CHILD RESTRAINT SYSTEM - REAR FACING 7 - BOOSTER SEAT 8 - HELMET USED 9 - PROTECTIVE PADS USED (ELBOWS, KNEES, ETC) 10 - REFLECTIVE CLOTHING 11 - LIGHTING - PEDESTRIAN / BICYCLE ONLY 99 - OTHER / UNKNOWN	1 - FRONT - LEFT SIDE (MOTORCYCLE DRIVER) 2 - FRONT - MIDDLE 3 - FRONT - RIGHT SIDE 4 - SECOND - LEFT SIDE (MOTORCYCLE PASSENGER) 5 - SECOND - MIDDLE 6 - SECOND - RIGHT SIDE 7 - THIRD - LEFT SIDE (MOTORCYCLE SIDE CAR) 8 - THIRD - MIDDLE 9 - THIRD - RIGHT SIDE 10 - SLEEPER SECTION OF TRUCK CAB 11 - PASSENGER IN OTHER ENCLOSED CARGO AREA (NON-TRAILING UNIT SUCH AS A BUS, PICK-UP WITH CAP) 12 - PASSENGER IN UNENCLOSED CARGO AREA 13 - TRAILING UNIT 14 - RIDING ON VEHICLE EXTERIOR (NON-TRAILING UNIT) 15 - NON-MOTORIST 99 - OTHER / UNKNOWN	1 - NOT DEPLOYED 2 - DEPLOYED FRONT 3 - DEPLOYED SIDE 4 - DEPLOYED BOTH FRONT/SIDE 5 - NOT APPLICABLE 9 - DEPLOYMENT UNKNOWN
INJURED TAKEN BY			EJECTION
1 - NOT TRANSPORTED / TREATED AT SCENE 2 - EMS 3 - POLICE 9 - OTHER / UNKNOWN			1 - NOT EJECTED 2 - PARTIALLY EJECTED 3 - TOTALLY EJECTED 4 - NOT APPLICABLE
GENDER			TRAPPED
F - FEMALE M - MALE U - OTHER / UNKNOWN			1 - NOT TRAPPED 2 - EXTRICATED BY MECHANICAL MEANS 3 - FREED BY NON-MECHANICAL MEANS

WITNESS	NAME: LAST, FIRST, MIDDLE	DATE OF BIRTH	AGE	GENDER
	ADDRESS: STREET, CITY, STATE, ZIP		CONTACT PHONE - INCLUDE AREA CODE	
WITNESS	NAME: LAST, FIRST, MIDDLE	DATE OF BIRTH	AGE	GENDER
	ADDRESS: STREET, CITY, STATE, ZIP		CONTACT PHONE - INCLUDE AREA CODE	
WITNESS	NAME: LAST, FIRST, MIDDLE	DATE OF BIRTH	AGE	GENDER
	ADDRESS: STREET, CITY, STATE, ZIP		CONTACT PHONE - INCLUDE AREA CODE	

LOCAL REPORT NUMBER 52-0237-52	REPORTING AGENCY Ohio State Highway Patrol	DATE OF CRASH 06/28/2024
IN COUNTY OF Medina County	ACCIDENT LOCATION 224	

Reference Point: End of guard rail south side of US-224

-Baseline is white fog line south side of US-224

-Reference Point to "0": 13'8"

VEHICLE DAMAGE ANALYSIS:

-**Unit #1:** tractor: TX: (R540153), make: Kenworth, model: T6 Series, color: blue, year: 2006, VIN: 1XKADB9X06J114298, damage: none.

-**Unit #1** trailer: TX: (211C464) make: KALYN SIBERT, year: 2002, color: black, VIN: 5DDKE293321000554, damage: entire back of trailer where load pierced through, under-carriage damage.

-**Unit #1 Load:** yellow machinery used for steel mills. rough weight of 67,000

INSURANCE: CANOPIUS US INSURANCE INC. POLICY: IDA001 23 1020, OOIDA RISK RETENTION GROUP INC POLICY: PL199533000B

PROPERTY DAMAGE ANALYSIS:

***US-42 Southbound side of Bridge and top support beams.**

-Owner: ODOT was notified of damage.

Bridge Inspector came out. (The bridge height is 14'9" where it was struck. The load and trailer height is 15'5")

-Address: 3220 Medina Road, Medina Ohio 44256

-Phone Number: 419-281-0513

***US-224 eastbound lane of travel: where the load and trailer gouged into the roadway.**

-Owner ODOT was notified of damage.

-Address: 3220 Medina Road, Medina Ohio 44256

-Phone Number: 419-281-0513

***Struck US-224 - US-42 sign that was on the front of the bridge:**

-Owner ODOT was notified of damage.

-Address: 3220 Medina Road, Medina Ohio 44256

-Phone Number: 419-281-0513

OFFICER NOTES:

-There were photos taken and a field sketch obtained with the assistance of Tpr. D. Shubert U-0185.

-Tpr. DJ Harrison U-1865 LCS came out to the scene to offer assistance.

-Medina County Sheriff's Department offered assistance for traffic control.

-The permit was reviewed, and the driver of Unit #1 was off route. His truck is not within the correct dimensions

OFFICERS SIGNATURE	BADGE NO. 1608
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OHIO TRAFFIC ACCIDENT - OH2 NARRATIVE

LOCAL REPORT NUMBER 52-0237-52	REPORTING AGENCY Ohio State Highway Patrol	DATE OF CRASH 06/28/2024
IN COUNTY OF Medina County	ACCIDENT LOCATION 224	

for the off route he took.

-OS-1A (REV01) MUST ACCOMPANY PERMIT. He did not have this on him with the permit.

-There was no lead car with a pole, or a rear car that should have accompanied him for the route.

-ODOT was on scene setting up road closure for US-42 for Southbound bridge which is permanently closed.

-Hook N Haul is going to tow trailer with load once it is removed from being stuck under the bridge on US-224 Eastbound.

-Bridge Inspector came out to evaluate the bridge, and said it will be permanently closed until repairs are made.

Tpr. D.J. Harrison U-1865 completed a level three inspection for this crash.

I	149'1" E	3'6"N	Unit #1 steer tire right side final rest
H	126'8" E	3'6"N	Unit #1 right rear tire of cab at final rest
G	105'4" E	6'9"N	End of bridge damage
F	103'2" E	2'10"N	End of road damage
E	90'10" E	3'6"N	Trailer right side rear tire at final rest Unit #1
D	90'11" E	6'9"N	Unit #1 impact with bridge
C	87'10" E	6'9"N	Unit #1 impacted with the sign
B	84'8"E	0	Struck sign at final rest
A	78'5"E	3'6"N	Unit #1 trailer right rear tire at final rest
PT	AE	FE	Description

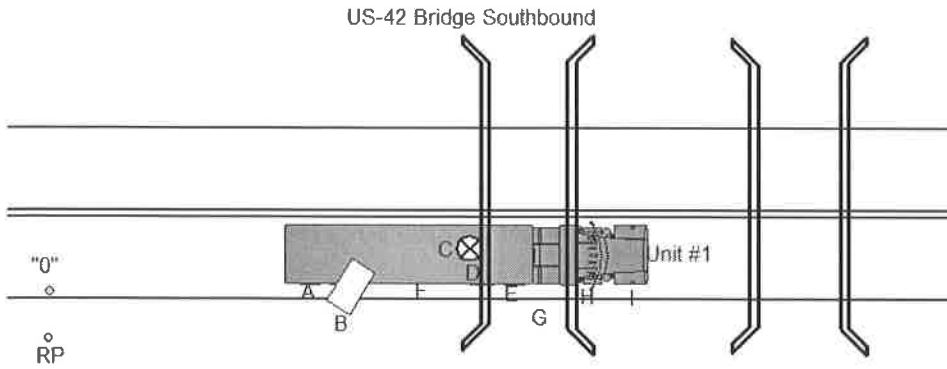
OFFICERS SIGNATURE	BADGE NO. 1608
--------------------	--------------------------

OHIO TRAFFIC ACCIDENT - OH2 DIAGRAM

LOCAL REPORT NUMBER 52-0237-52	REPORTING AGENCY Ohio State Highway Patrol	DATE OF CRASH 06/28/2024
IN COUNTY OF Medina County	ACCIDENT LOCATION 224	



US-224



Not To Scale

OFFICERS SIGNATURE

BADGE NO.

1608

Attachment C Damage Photographs



Photo # 1: Post-collision – beam 1 at right.



Photo # 2: Beam 1 and beam 2 impacts.

July 10, 2024



Photo # 3: Beam 1 alignment with respect to pier 1.



Photo # 4: Localized beam 1 flange damage at point of impact



Photo # 5: Beam 1 top flange gap with spalled deck cantilever.



Photo # 6: Beam 1 inside face at point of impact. (Load has been moved from under bridge.)



Photo # 7: Bay 1 crossframe 3 (fore) damage looking south.



Photo # 8: Beam 2 top flange rotated almost 90 degrees at point of impact.



Photo # 9: Beam 2 distortion at point of impact – note damage to deck from beam bottom flange.



Photo # 10: Beam 2 puncture at point of impact.



Photo # 11: Beam 2 horizontal crack in web at broken lower crossframe 2 connection weld.



Photo # 12: Bay 2, crossframe 3 damage.



Photo # 13: Stress cracks in paint from lateral deflection at crossframe 4, span 2, beam 1

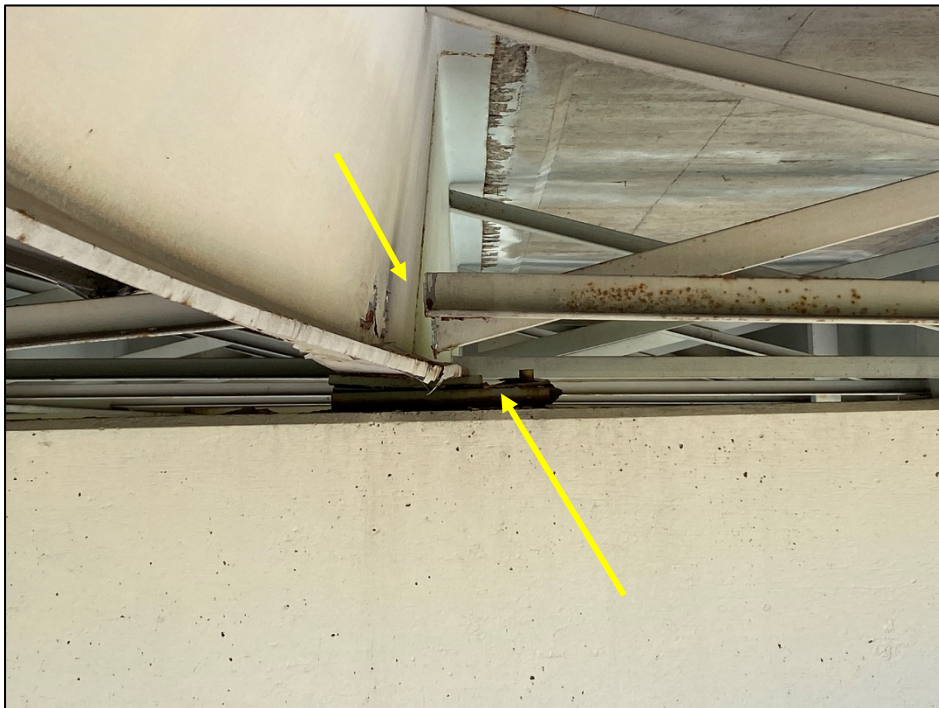


Photo # 14: Beam 2 over pier 1 – note beam deflection, broken crossframe, shifting on sliding plate bearing and deck spalling in span 1.



Photo # 15: Displacement of bearing 4 at rear abutment. (Typical to interior beams at rear abutment.)



Photo # 16: Lateral displacement of beam 3 bearing over pier 1.



Photo # 17: Lateral displacement from collision, beam 2 bearing over pier 1.



Photo # 18: Lateral displacement from collision, beam 2 bearing at forward abutment.



Photo # 19: Lateral displacement of beam 5 bearing at forward abutment. This bearing is furthest from the collision point.

Attachment D
Bridge Inspection Reports
2022
2020

Reports housed in the SMS bridge report software were inaccessible as of 7/5/2024

Inspector: Harding, Rich
 Inspection Date: 12/12/2022

Structure Number: 5200962
 Facility Carried: USR 42

Bridge Inspection Report

Ohio Bridge Inspection Summary Report

MED-00042-0310L (5200962)

2: District 34104 - HARRISVILLE TWP (MED county)
 District 03

5A: Inventory Route 1 00042

21: Major Maint A/B 01 - State Highway Agency /
 225 Routine Main A/B 01 - State Highway Agency /
 221 Inspection A/B 01 - State Highway Agency /
 220: Inv. Location DISTRICT 03

7: Facility On USR 42
 6: Feature Ints OVER MED-224-0633
 9: Location SR 42 OVER US 224
 Lat, Lon 41.026461 , -82.052094

Condition	Structure Type
-----------	----------------

58: Deck **7 - Good Condition**
 58.01 Wearing Surface 9 - Excellent
 58.02 Joint 9- Excellent
59: Superstructure **7 - Good Condition**
 59.01 Paint & PCS 6 - Satisfactory (5-10% corr.)
60: Substructure **7 - Good Condition**
61: Channel **N**
61.01 Scour **N - Not Applicable**
62: Culverts **N - Not Applicable**

43: Bridge Type 4 - Steel continuous
 02 - Stringer/Multi-beam or Girder
 N- Not Applicable
 45: Spans Main / Approach 3 / 0
 107: Deck Type 1 - Concrete Cast-in-Place
 408: Composite Deck N - Non-composite Construction
 414A Joint Type 1 8 - Elastomeric Strip Seal
 414B: Joint Type 2 N - None
 108A: Wearing Surface 2 - Integral Concrete (separate non-modified layer of concrete added to structural deck)
 2- MicroSilica

67.01 GA **7**

Appraisal	Inspection
-----------	------------

Sufficiency Rating 92.0 SD/FO 0 - ND
 36: Rail, Tr, Gd, Term Std 1 1 1 1
 72: Approach Alignment 8 - Equal to present desirable criteria
 113: Scour Critical N - Not over waterway
 71: Waterway Adequacy N - Not Applicable

422: WS Date 06/30/2022
 423: WS Thick (in) 1.75
 482: Protective Coating 5 - Paint System OZEU
 483: PCS Date 01/01/1990
 453: Bearing Type 1 3 - Sliding (Bronze)
 455: Bearing Type 2 N - None
 528: Foundn: Abut Fwd 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)
 533: Foundn: Abut Rear 2 - Cast-in-Place reinforced Concrete Piles (Other diameter)
 536: Foundn: Pier 1 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)
 539: Foundn: Pier 2 N - None (Such as most Culverts)

Geometric	Inspection
-----------	------------

48: Max Span Length (ft) 47.5
 49: Structure Length (ft) 131.0
 52: Deck Width, Out-To-Out (ft) 36.5
 424: Deck Area (sf) 4781.5
 32: Appr Roadway Width (ft) 44.0
 51: Road Width, Curb-Curb (ft) 33.3
 50A: Curb/SW Width: Left (ft) 0
 50A: Curb/SW Width: Right (ft) 0
 34: Skew (deg) 0
 33: Bridge Median 0 - No median
 54B: Min Vert Underclearance (ft) 14.75
 336A: Min Vert Clrnce IR Cardinal (ft) 99
 336B: Min V Clr IR Non-Cardinal (ft) 0
 578: Culvert Length (ft) 0

Age and Service	Inspection
-----------------	------------

27: Year Built/ 106 Rehab 1958 / 0000
 42A: Service On 1 - Highway
 42B: Service Under 1 - Highway, with or w/out pedestrian
 28A: Lanes on 02
 28B: Lanes Under 02
 19: Bypass Length 0
 29: ADT 2199
 109: % Trucks (%) 22

Load Posting	Inspections
--------------	-------------

41: Op/Post/Closed A - Open
 70: Posting 5 - Equal to or above legal loads
 70.01: Date
 70.02: Sign Type

Inspections		
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	Months	
90: Routine Insp.	24	12/12/2022
92A: FCM Insp.	N	0
92B: Dive Insp.	N	0
92C: Special Insp.	N	0
92D: UBIT Insp.	N	0
92E: Drone Insp.	N	0

Inspector: Harding, Rich
Inspection Date: 12/12/2022

Structure Number: 5200962
Facility Carried: USR 42

Bridge Inspection Report

734: Percent Legal (%) 150
704: Analysis Date 07/01/1973
63: Analysis Method 7 - Allowable Stress (AS) rating reported by rating factor (RF) method using MS18 loading.

Inspector Harding, Rich

Inspector: Harding, Rich
Inspection Date: 12/12/2022

Structure Number: 5200962
Facility Carried: USR 42

Bridge Inspection Report

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12-Reinforced Concrete Deck	3 - Mod.	4782	sq. ft.	4732	0	50	0
<p>2022-Deck edges have been composite fiber wrap rest patch and sealed with project (21) 0531 PID 79761</p> <p>CS3-2020 Some spalling & rust staining along top flanges (CS3), some from previous beam hit.; Deck loose from beams</p>							
510-Wearing Surfaces		4367	sq. ft.	4367	0	0	0
<p>2022 New wearing surface with project (21) 0531 PID 79761</p>							
107-Steel Open Girder/Beam	3 - Mod.	655	ft.	553	67	35	0
<p>CS2-A couple beams w/ small scrapes on bottom flange from over-height loads (LT 2 beams over WB lane).; Heat straightening repairs made to superstructure by proj. #646(97) for bridge hit (Span #2 / EB lane).</p> <p>CS3-Fascia beam ends @ abutments: heavy rust pitting (flanges & webs), along w/ section loss - some severe;</p> <p>NOTE-2:2019 (11/25/19): Medina County forces repaired Beam #4 (FWD), as per Dist. Bridge Engineer plans. Steel plate was added and bolted over crack. Crack had die penetrant used to find end of crack and hole drilled to arrest crack. (See Photos).; ***Previously-2019 (CS4-1 LF), FWD Beam #4, over Bearing: Vertical crack extends from Top flange top, 14.25" down (photo, 10/01/19). Widest point was 0.08" (photo). Starts about 6.5" from end extends to about 10.5" from end (photo).- Repaired 11/26/19.</p> <p>NOTE-1: Heat straightening repairs made to superstructure by proj. #646(97) for bridge hit (Span #2 / EB lane).; 1-18-2018 Reported Bridge Hit - All 5 beams over EB lane w/ contact (LT fascia beam w/ bottom flange bent upward & very slight inward sweep @ initial POI ("point of impact") followed by reduced damage @ beams #2, #3, #4, (*See Supplemental Photos);</p>							
515-Steel Protective Coating		6896	sq. ft.	3900	2410	579	7
<p>CS2-Small gouges, scrapes, & scuffs @ impact points, existing scrapes plus PCS repairs @ previous bridge hit areas.; Light rust on x-frame ends @ jct. w/ web & bottom flanges @ piers plus scattered areas of rust developing throughout.</p> <p>CS3-Some areas starting to fail, mainly @ abut. bearings & bottom flanges.</p>							
205-Reinforced Concrete Column	3 - Mod.	6	each	6	0	0	0
<p>2022-Pier 1 column 1 and 2 patch with project (21) 0531 PID 79761</p> <p>NOTE: 2010 NBIS QAR DECAL #03-0006 located @ Rear face (P1C2).</p>							
215-Reinforced Concrete Abutment	3 - Mod.	73	ft.	69	4	0	0
<p>CS2-2020 FWD RT corner: cracked (photo), NOT under bearing.; 2018: Seat area cleaned. A few scattered hairlines & cracks.</p>							
234-Reinforced Concrete Pier Cap	3 - Mod.	73	ft.	73	0	0	0
300-Strip Seal Expansion Joint	3 - Mod.	73	ft.	63	10	0	0
<p>CS2-Both: offset.; FWD w/ nicks & gouges from snowplows</p>							

Inspector: Harding, Rich
Inspection Date: 12/12/2022

Structure Number: 5200962
Facility Carried: USR 42

Bridge Inspection Report

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
311-Movable Bearing	3 - Mod.	20	each	18	2	0	0
2022 Refurbish bearing 1 rear, fwd bearing 1,5 and 6 with project (21) 0531 PID 79761 Sliding Plate CS2-Pack Rust-Areas of heavy pack rust @ abutment sliding plate bearing assemblies (sole, masonry, & shim plates).							
321-Reinforced Concrete Approach Slab	3 - Mod.	2200	sq. ft.	2200	0	0	0
2022-Fwd and rear appr. slab patched at joints with project (21) 0531 PID 79761							
331-Reinforced Concrete Bridge Railing	3 - Mod.	262	ft.	231	31	0	0
CS2-Rear RT: minor collision damage/scrapes/spalls. Faces: few scattered vertical hairlines; NOTE: Both Inside faces & LT outside face: sealed w/ proj. #248(08).							
815-Drainage	3 - Mod.	8	each	6	2	0	0
CS2-Some w/ flaky rust; NOTE: Downspouts previously extended							
830-Abutment Backwall	3 - Mod.	73	ft.	61	12	0	0
CS2- Faces: A few vertical hairlines w/ effl.; Tops @ W.S.: a few cracks; FWD & Rear @ jct. between appr. slab & top of backwall @ WS: small comp. seal missing (falling out / removed) - deterioration along top edge.							

Ohio Bridge Inspection Summary Report

MED-00042-0310L (5200962)

2: District 03 34104 - HARRISVILLE TWP (MED county)
 21: Major Maint A/B 01 - State Highway Agency /
 225 Routine Main A/B 01 - State Highway Agency /
 221 Inspection A/B 01 - State Highway Agency /
 220: Inv. Location MED

5A: Inventory Route 1 00042
 7: Facility On USR 42
 6: Feature Ints OVER MED-224-0633
 9: Location SR 42 OVER US 224

Condition

58: Deck **7 - Good Condition**
 58.01 Wearing Surface 7 - Good (1% distress)
 58.02 Joint 7- Good (no leaking)
59: Superstructure **7 - Good Condition**
 59.01 Paint & PCS 6 - Satisfactory (5-10% corr.)
60: Substructure **7 - Good Condition**
61: Channel **N**
61.01 Scour **N - Not Applicable**
62: Culverts **N - Not Applicable**
67.01 GA **7**

Structure Type

43: Bridge Type 4 - Steel continuous
 02 - Stringer/Multi-beam or Girder
 N- Not Applicable
 45: Spans Main / Approach 3 / 0
 107: Deck Type 1 - Concrete Cast-in-Place
 408: Composite Deck N - Non-composite Construction
 414A Joint Type 1 8 - Elastomeric Strip Seal
 414B: Joint Type 2 N - None
 108A: Wearing Surface 3 - Latex Concrete or similar additive
 N- Not Applicable

Appraisal

Sufficiency Rating 92.0 SD/FO 0 - ND
 36: Rail, Tr, Gd, Term Std 1 0 1 1
 72: Approach Alignment 8 - Equal to present desirable criteria
 113: Scour Critical N - Not over waterway
 71: Waterway Adequacy N - Not Applicable

422: WS Date 01/01/1990
 423: WS Thick (in) 1.2
 482: Protective Coating 5 - Paint System OZEU
 483: PCS Date 01/01/1990
 453: Bearing Type 1 3 - Sliding (Bronze)
 455: Bearing Type 2 N - None
 528: Foundn: Abut Fwd 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)
 533: Foundn: Abut Rear 2 - Cast-in-Place reinforced Concrete Piles (Other diameter)
 536: Foundn: Pier 1 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)
 539: Foundn: Pier 2 N - None (Such as most Culverts)

Geometric

48: Max Span Length (ft) 47.5
 49: Structure Length (ft) 131.0
 52: Deck Width, Out-To-Out (ft) 36.5
 424: Deck Area (sf) 4779.0
 32: Appr Roadway Width (ft) 44.0
 51: Road Width, Curb-Curb (ft) 33.3
 50A: Curb/SW Width: Left (ft) 0
 50A: Curb/SW Width: Right (ft) 0
 34: Skew (deg) 0
 33: Bridge Median 0 - No median
 54B: Min Vert Underclearance (ft) 14.75
 336A: Min Vert Clrnce IR Cardinal (ft) 99
 336B: Min V Clr IR Non-Cardinal (ft) 0
 578: Culvert Length (ft) 0

Age and Service

27: Year Built/ 106 Rehab 1958 / 0000
 42A: Service On 1 - Highway
 42B: Service Under 1 - Highway, with or w/out pedestrian
 28A: Lanes on 02
 28B: Lanes Under 02
 19: Bypass Length 0
 29: ADT 2199
 109: % Trucks (%) 22

Load Posting

41: Op/Post/Closed A - Open
 70: Posting 5 - Equal to or above legal loads
 70.01: Date
 70.02: Sign Type
 734: Percent Legal (%) 150
 704: Analysis Date 07/01/1973
 63: Analysis Method 7 - Allowable Stress (AS) rating reported by rating factor (RF) method using MS18 loading.

Inspections

90: Routine Insp. *Months* 12 11/04/2020
 92A: FCM Insp. N
 92B: Dive Insp. N 0
 92C: Special Insp. N 0
 92D: UBIT Insp. N
 92E: Drone Insp.
 Inspector Keener,Walter

Inspector: Walter Keener
 Inspection Date: 11/04/2020

Structure Number: 5200962
 Facility Carried: USR 42

Bridge Inspection Report

Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	3 - Mod.	4782	sq. ft.	4236	355	191	0
	<p>CS2-2020 Rear RT: spalled area w/ areas of delam. (photo).; A few scattered hairlines / cracks & small delam.; Edge: Fascia w/ horiz. hairlines, cracks, delam., spalls, heavy sat., effl. (photo); RT bottom edge w/ sat., rust stains, hairlines, stalactites.; Areas of sat. along fascia beams.</p> <p>CS3-2020 Rear RT: spalled area w/ exposed re-steel (photo).; Some small damp areas. Some spalling & rust staining along top flanges (CS3), some from previous beam hit.; Deck loose from beams;</p>						
510 - Wearing Surfaces		4367	sq. ft.	2172	2185	10	0
	<p>CS2-LT lane has two core holes, NOT fully filled.; Some scattered hairlines & cracks throughout w/ a few delam. areas. Some areas of delamination & intersecting cracks patterns.</p> <p>CS3-One area broken out w/ asphalt patched (CS3- 1'+ x 1'+).</p>						
107 - Steel Open Girder/Beam	3 - Mod.	655	ft.	553	67	35	0
	<p>CS2-A couple beams w/ small scrapes on bottom flange from over-height loads (LT 2 beams over WB lane).; Heat straightening repairs made to superstructure by proj. #646(97) for bridge hit (Span #2 / EB lane).</p> <p>CS3-Fascia beam ends @ abutments: heavy rust pitting (flanges & webs), along w/ section loss - some severe;</p> <p>NOTE-2:2019 (11/25/19): Medina County forces repaired Beam #4 (FWD), as per Dist. Bridge Engineer plans. Steel plate was added and bolted over crack. Crack had die penetrant used to find end of crack and hole drilled to arrest crack. (See Photos).; ***Previously-2019 (CS4-1 LF), FWD Beam #4, over Bearing: Vertical crack extends from Top flange top, 14.25" down (photo, 10/01/19). Widest point was 0.08" (photo). Starts about 6.5" from end extends to about 10.5" from end (photo).-Repaired 11/26/19.</p> <p>NOTE-1: Heat straightening repairs made to superstructure by proj. #646(97) for bridge hit (Span #2 / EB lane).; 1-18-2018 Reported Bridge Hit - All 5 beams over EB lane w/ contact (LT fascia beam w/ bottom flange bent upward & very slight inward sweep @ initial POI ("point of impact") followed by reduced damage @ beams #2, #3, #4, (*See Supplemental Photos);</p>						
515 - Steel Protective Coating		6896	sq. ft.	3900	2410	579	7
	<p>CS2-Small gouges, scrapes, & scuffs @ impact points, existing scrapes plus PCS repairs @ previous bridge hit areas.; Light rust on x-frame ends @ jct. w/ web & bottom flanges @ piers plus scattered areas of rust developing throughout.</p> <p>CS3-Some areas starting to fail, mainly @ abut. bearings & bottom flanges.</p>						

Inspector: Walter Keener
 Inspection Date: 11/04/2020

Structure Number: 5200962
 Facility Carried: USR 42

Bridge Inspection Report

Element Inspection

205 - Reinforced Concrete Column	3 - Mod.	6	each	4	2	0	0
<p>CS2-Pier #1 (P1C1, P1C2; photos): w/ vertical hairlines, cracks, delam. areas, & spalls in splash zone, both w/ exposed re-steel (see photos);</p> <p>NOTE: 2010 NBIS QAR DECAL #03-0006 located @ Rear face (P1C2).</p>							
215 - Reinforced Concrete Abutment	3 - Mod.	73	ft.	69	4	0	0
<p>CS2-2020 FWD RT corner: cracked (photo), NOT under bearing.; 2018: Seat area cleaned. A few scattered hairlines & cracks.</p>							
234 - Reinforced Concrete Pier Cap	3 - Mod.	73	ft.	73	0	0	0
300 - Strip Seal Expansion Joint	3 - Mod.	73	ft.	63	10	0	0
<p>CS2-Both: offset.; FWD w/ nicks & gouges from snowplows & debris build-up. 2018: Debris cleaned out.</p>							
311 - Movable Bearing	3 - Mod.	20	each	6	11	3	0
<p>Sliding Plate</p> <p>CS2-Pack Rust-Areas of heavy pack rust @ abutment sliding plate bearing assemblies (sole, masonry, & shim plates).</p> <p>CS3-Broken welds w/ heavy pack rust (F:#1, #5; R: #1, #3, #5; photos)</p>							
321 - Reinforced Concrete Approach Slab	3 - Mod.	2200	sq. ft.	2052	68	80	0
<p>CS2-Rear w/ cracked & delam. area plus spalling along trans. joint @ jct. w/ top of backwall. Compression seal torn.</p> <p>CS3-FWD @ jct. w/ top of backwall: trans. crack w/ delam. & areas breaking up (asphalt patched-CS3, photo); Some section loss & deterioration (pothole w/ asphalt patch, re-steel exposed-asphalt patched CS3);</p>							
331 - Reinforced Concrete Bridge Railing	3 - Mod.	262	ft.	231	31	0	0
<p>CS2-Rear RT: minor collision damage/scrapes/spalls. Faces: few scattered vertical hairlines;</p> <p>NOTE: Both Inside faces & LT outside face: sealed w/ proj. #248(08).</p>							
815 - Drainage	3 - Mod.	8	each	6	2	0	0
<p>CS2-Some w/ flaky rust;</p> <p>NOTE: Downspouts previously extended</p>							
830 - Abutment Backwall	3 - Mod.	73	ft.	61	12	0	0
<p>CS2- Faces: A few vertical hairlines w/ effl.; Tops @ W.S.: a few cracks; FWD & Rear @ jct. between appr. slab & top of backwall @ WS: small comp. seal missing (falling out / removed) - deterioration along top edge.</p>							

Attachment E
Construction Cost Estimate
Span 2 Demolition Only

July 10, 2024

PID 122151
MED - 42 - 0310L
Bridge Hit
Emergency Demolition Contract

Item	Unit	Description	Quantity	Unit Cost	Est. Const. Cost
202	Lump	Portions of Structure Removed over 20 Ft span			
	Lbs	Structural Steel	15000	\$ 20.00	\$ 300,000.00
	CY	Concrete Deck	26	\$ 1,000.00	\$ 26,000.00
	CY	Concrete Parapet	8	\$ 1,000.00	\$ 8,000.00
614	Lump	Maintaining Traffic	Lump		\$ 100,000.00
624	Lump	Mobilization	Lump		\$ 50,000.00
630	Lump	Erection of Ground Mounted Sign	Lump		\$ 5,000.00
Misc.	Lump	Incidentals, Bond, etc.	Lump		\$ 56,000.00
		Premium for Emergency Work (10% est.)			\$ 55,000.00
Estimated Construction Total =====>					\$ 600,000.00

These estimated construction costs reflect work necessary to safely reopen the bridge and roadway underneath to traffic

The work includes:

- A. Demolition of the span 2 deck over beam lines 1 and 2 including careful preservation of existing reinforcing steel.
- B. Removal of beams 1 and 2 from pier 1 to pier 2. Remove associated crossframes connecting these members.
- C. Erect the overhead sign knocked down from collision on ground mounted posts adjacent to the roadway.
- D. Install portable concrete barrier on USR 42 southbound to allow one lane of the roadway to be opened over the bridge.