Transcription: Grand Canyon Historical Society

Interviewee: Andy McLeroy (AM)
Interviewer: Tom Martin (TM)
Subject: Part 2 Navajo Bridge Build
Date of Interview: December 11, 2022
Method of Interview: Telephone

Transcriber: Susan Seibel

Date of Transcription: December 31, 2022 **Transcription Reviewers:** Tom Martin

Keys: David Meche, Ronnie "Mac" McFarland, Ed Kent, Greg Reese, 1994 Navajo Bridge construction, American Cranes, Manitowoc Company, crane operation, rough-terrain crane, ironworker and crane operator communication, safety practices, man-basket fishing, falls and injuries, Traylor Brothers, Navajo ironworkers, monsoons, rafters, spectators

TM: Today is Sunday, December 11, 2022. This is Part 2 of a Grand Canyon oral history interview with Andy McLeroy. My name is Tom Martin. Good morning, Andy. How are you today?

AM: I'm doing good, thank you.

TM: Good. Andy, may we have your permission to record this oral history over the telephone?

AM: Yes, you can.

TM: Thank you. Andy, at the end of Part 1, you'd mentioned you got contacted by a man named David Meche, and you'd worked with David once before. And he had a job going out in Northern Arizona and asked if you were interested. I'm curious to know—this was in the spring of 1994—when you arrived at the job site, what was the first thing you saw and thought?

AM: Well, I was—I really didn't know what I was getting into. It was something I've never done. It was kind of scary looking, but I had the faith in everybody out there, so I kind of thought, "Well, this might be fun."

TM: Okay.

AM: So then I guess the first thing I do is look at the crane, see what I got.

TM: What did you have?

AM: I don't remember the numbers. It was 5960 American, something like that. It was—I think it was 100-ton crane, but when they put it on that frame that they built, it reduced it to about a 60-ton crane.

TM: Let's talk about that for a minute. So—

AM: Fifty-nine, thirty. I can't remember the number on it.

TM: Okay. I think I can look that up. But just the concept—when I think of a crane, and I'm not an ironworker and I'm not a crane operator— I'm just an ordinary guy that sees cranes when I drive by construction sites. They're typically on some sort of a crawler mechanism.

AM: Right.

TM: Or some sort of crawlers, or maybe they're on rubber tires. And there's a bunch of rubber tires, kind of, the bigger the crane. They go slowly when I drive past them on the highway—

AM: Yeah, they do.

TM: —if they're rubber-tired. So when you say 100-ton or a 60-ton, for a layman like me, what do you want me to think of? How big is the crane itself with the spool of cable and the cab that you're in? Is that as big as my living room, or is it as big as my pickup truck? What are we talking about here?

AM: Probably about as big as a pickup truck. You got a little bitty— On this crane, you had a little bitty cab that was only, like 7-foot wide, maybe 6-foot wide, the cab. And then you had your jaw works that turn all your drums and stuff is all to your left but in the back. And then you had the motor that set in the back, the very back. I guess that helps with the counterweight system. You know, you put all your weight in the back.

TM: That makes sense. Okay.

AM: It wasn't— It's not real big, but—

TM: Well, sir, I've looked at your Facebook page, and when you say real big, I fall over. I mean the size of crane that you're driving is bigger than my house or three or four of my houses.

AM: That one was, yeah. That one was— That's the biggest crane that Manitowoc makes.

TM: Wow. So this was a little bitty thing compared to that.

AM: Yeah, but I wasn't on the big one before that. This was really new to me. You know, starting out, I'd only been in it, what, 10 years. This was kind of small but really interesting because of the frame that they had built up under it.

TM: Can you tell me about that? How would you describe it?

AM: Well, it was just a square. I mean, it was built the width of the bridge, the frame was.

TM: Oh, wow. That's a wide bridge.

AM: Yeah, and I got to thinking that was really amazing how we got both sides to match up, that I thought that was really good on the engineering part.

TM: Nice.

AM: They done their homework on it. But the frame, I've never seen nothing like it. And when I first seen it, the crane was already built and sitting on top of it when I got there. And my first thought was, well, it's still up. I guess that's a good sign. I don't know how long they had it up, maybe two weeks or so before I got there.

TM: And this is on the Flagstaff side?

AM: Yes.

TM: Okay. So when I think of a crane, I think of a backhoe, which I can kind of understand. It has little legs that go out either side to keep it from tipping over. So when I think of a big crane like that American you were seeing there, the crane itself must be on a turret. And the turret is sitting on a really big frame to keep it from falling over. Is that right?

AM: Yeah, but what I've seen, the steel up underneath wasn't all that big.

TM: Okay. Okay.

AM: I thought about that. And that's why I did say, well, it's still sitting there, so that must be a good sign.

TM: And I imagine that— Well, do you have any recollection of the first pieces of steel you would have put up with that crane?

AM: Yeah, the first one, I set the base plate down in front of me down in the bottom, at the very bottom. And it had a cuff. It was cut out on top for a pin to set on.

TM: Okay.

AM: And—I don't know—that thing had 12 or 15 holes in it. It was a big base plate.

TM: Oh. Hang on a second. Now, again, as a layman, let me make sure I understand this. So there would have been some concrete poured down there with threaded bolts embedded in it.

AM: Right.

TM: You're going to drop down this plate that's going to sit on those bolts and—

AM: That plate was probably two, three inches—probably three or four inches thick.

TM: Wow.

AM: Yeah, it's probably four inches thick.

TM: So it's a heavy piece of metal.

AM: Yeah, it was heavy, but it was up close to me, so it wasn't no—

TM: Okay.

AM: I was still curious on the crane itself, doing that, because I'd never done nothing like this before. But when we set the base plate, the holes for the bolts to go through, there was a bunch of them that didn't line up.

TM: Okay. Now, hang on a second. As a layman, I'm going to back up a minute. So I'm thinking I've got this concrete base with these threaded bolts sticking out of it, and I have to set the plate down on the bolts.

AM: Right.

TM: But the holes in the plate aren't lining up with the bolts in the concrete?

AM: Right.

TM: What did you do?

AM: We pulled it back out. They marked everything that needed to be redrilled, and that took—They found some company around there, maybe in Flagstaff or somewhere.

TM: Or Phoenix—

AM: Or Phoenix. It was probably Phoenix.

TM: —where there would be a machine shop big enough to handle stuff like that.

AM: Yeah, it was a pretty big piece. Ed Kent and them found the place, pulled it back out, and loaded it on the truck and sent it off. And I heard that they had to have— Whoever was going to drill the holes had to have a diamond drill bit to be able to cut through that metal.

TM: Wow.

AM: And it took about a week and a half before we got it back.

TM: What did you do in the meantime?

AM: Just sorting through iron that we got and made sure we had all the iron at the beginning that we needed.

TM: And was it all kind of laid out on the hillside right behind where the crane was so you could turn a crane around and pick up a piece and then turn it back around again and drop it down to where it needed to go?

AM: At the beginning, yes. And we had, I guess, a 60-ton RT crane.

TM: What does RT mean?

AM: I don't remember that operator's name, but he lived in— Oh, what's that town?

TM: Is that Page you're thinking of?

AM: Page. Yeah. He lived there.

TM: Okay.

AM: If we had iron too far away from me, he would pick it up and bring it up there to me and set it down. Then they would line it up, what we needed next. We just got everything lined up, ready for when it come back, and we'd just go back to work.

TM: Okay. Andy, you mentioned the 60-ton RT. What does that stand for?

AM: It means rough terrain.

TM: Okay. Was that, like, rubber tire, or did they have crawlers? Would it crawl?

AM: No, it was rubber tire, but you could drive it and operate it from the same cab.

TM: Oh, wow. Okay.

AM: But to go from one job to another, you would have to load it up on a truck and haul it to the next job. You couldn't drive it— You can drive it a little bit on the road, but it's pretty slow.

TM: Okay. Okay. So a week and a half later, then, these base plates showed back up again.

AM: Yeah.

TM: And everybody must—

AM: I think we did check both base plates, because you'd have one on one side, and one on the other. And I don't really remember. I'm thinking the other one might have fit, but maybe it didn't. Maybe we had to take both of them to get them drilled.

TM: Okay.

AM: I'm sure we checked them. That was David Meche's job.

TM: Okay. So the base plates came back, and you dropped them down one at a time, and they would have fit. So they would have— I'm kind of having a hard time figuring this out. So when I think of a big, thick sheet of steel, it's got holes in it. How would you hook your cable on to that so that it could drop down there and your hook-on, what you hooked on, wouldn't be in the way of dropping the thing onto the foundation?

AM: Plus you had to have it in that right leaning—

TM: Orientation. Oh, wow.

AM: Yeah, orientation. It's not vertical or horizontal. You had to have a little tilt to it for it to go on. We just played with it up on land to try to get the right pitch on it. Then, you know, using chain come-alongs and stuff. For me, I just did whatever they told me to do: Pick up. Set down.

TM: Okay. Ed and David would have worked it out, how to hook it on to the crane. And then you'd pick it up, and they'd look at it and go, "Yeah, let's try that."

AM: From the hook up was my responsibility. From the hook below was their responsibility.

[Laughter]

TM: So then you picked that thing up, and you would swing it around and drop it, what, 50 feet or so over the edge, down to where the foundation was down there.

AM: Yeah, 50, 60 foot.

TM: Okay.

AM: I've got pictures of the beam we set next.

TM: So once the plates were on, then was it a horizontal beam going from plate to plate?

AM: Well, we had to set the pin down there on it. And then we set that beam onto the pin. And I guess we might have put some falsework up under it, under that beam, close to the end so we could add an— to build it up, that first bay, so it would support itself. Then we started adding, started building bay by bay by bay. And that's where them four 400-ton jacks—had two on each side—they're hydraulic jacks that would help raise it or lower it. They had an elevation that they had to keep right at. So you would build a bay— That first part is kind of fuzzy. I kind of don't really remember because I couldn't see it. I had to go by— At first, they gave me a telephone radio. I had a headset that went over my ears, and then they had a thing down there. It'd run a solid wire all the way down. And they had, like, a telephone, them old telephones, you know, that stick to your ear, and then you'd talk through the bottom of it. They would flag me like that. That didn't work very long because they would set the phone down, and I'd hear this loud noise in my ears when they set it down—

TM: Oh, when they put it down, it would go clunk.

AM: Yeah. It was really loud because it was magnified. I think we might have used that a week or two, and I finally told them no more. I can't do this. It's blowing my eardrums out.

TM: Let's back up a minute. For the— I'm sorry. I shouldn't have interrupted you there. What did you do with the telephone radio? How did you change that out to?

AM: We went to some little walkie talkies. Once we got out— It was probably two or three bays out is where I could finally start seeing them a little bit. But we always stayed a bay behind. So, like, I would be at the edge of the first bay. Then we'd build that next bay up and then, I think, we— This is all at the beginning. Built the first bay up; and then the second bay, we built it up.

And then that's when I moved one bay, which we always kept one bay built up for me while we worked on the third bay. And then when we was working on the third bay, that's when I could kind of see them. Not really at the bottom, but when we come up to the top, I could see them, so I didn't really need radios then.

TM: You could do hand signals.

AM: Hand signals, yeah.

TM: Okay. Let's back up a minute. You mentioned that the base plate went on, the two pins went on either base plate. And then this horizontal beam. Then there must have been some big uprights coming up for that first bay.

AM: Yeah.

TM: Was there something to attach them to the land? I mean, your crane is there, and you're on your platform. There must have been some way to when those uprights came up, they would connect—

AM: The first bottom beams that we set against the base plate and the pin, I think they might have either tied it off to the rock, or we set some kind of falsework up under it. I couldn't see all that, so I don't really remember what all they did down there because it was right in front of me, and it was, what, 60 foot down.

TM: Over the edge, and you can't see down there. Sure.

AM: Yeah, I couldn't see.

TM: But eventually you would have sent enough steel over the edge that it would have come up to your eyesight.

AM: Yeah, that would be the top chords.

TM: Right. And then were they anchored back to some sort of dead-man anchors back in the rock there on your side?

AM: Yeah, that's where the 1,600-ton jacks were involved.

TM: Okay.

AM: Let's see—800 tons on one side; 800 tons on the other side. And the top chords, when you put them in, then that joined together where it was braced off to the rocks, where the I-beams were going down into the rocks to put your jacks. They had some kind of frame built where the jacks would just lay in there above each other.

TM: And those jacks must have been working horizontally. They clearly could handle tension well, because I think that as you guys built that, kind of, basically a diving board out over a big swimming pool, those jacks would have been in tension.

AM: Yeah, and the more you went out, the more pressure on your jacks. At the beginning, I'm sure they had to, once we joined the top chord, they had to, maybe, use some shims. Because them jacks, they might've only had a six-inch stroke or an eight-inch stroke. You know, it would come out eight inches or so. So they had to use their shimming and stuff to get everything right to go ahead and take off.

TM: Okay. Would there have been a surveyor, like, right there on site all day long with a transit set up to survey and do level shots on things and try to make sure everything was set up?

AM: Yeah, I think that's where Greg Reese would come in. I'm not sure where they would shoot it at or where he was at to shoot it. But, yeah, they would go out there with a measuring tape, and he would take shots of it, record it, and then they would go through the blueprints to see what elevation we was needing to be at from what I gather. But I never did really see where they were shooting at to check the elevation. I think sometimes they might have been shooting it on top of the other bridge, but I'm not real sure on that.

TM: That would have made sense because it was right close, but it was far enough away to be safe, kind of, out of your line of fire.

AM: I was remembering something about— I believe it was that week that the base plates didn't fit and they had to have them redrilled, we was doing some playing around. We had a man basket out there. It'd only hold, I think, three people in it. They said, well, let's see how far down we can go till I run out of cable on my drum. So I said, "Alright. Maybe we can go fishing from up there." So I boomed down as far as I could to try and get them out away from the edge and dropped them down. And I think David Meche might have went down. And they were flagging me all the way down, and I got— I think by OSHA, you should have, like, three wraps left on your drum to be safe, and don't go no more.

TM: Yeah, that makes sense because it's, like, friction on the drum for the cable, I guess, and—

AM: Yeah, but you got a wedge that when you first start your cable onto the drum, there's a wedge. You gotta go through the drum and back out a little bit. And you got a wedge in there, and you suck it in there tight so your drum will wrap up it's supposed to, nice and straight. But I went down about three wraps, and I stopped. I think it was David Meche, he said, "Well, we need about another 100 foot or 150 foot." And I thought that was pretty cool. I said, "Well, we can add more chokers and drop the basket down lower, get you all down there closer, you can go fishing."

TM: Right.

AM: Yeah, we never did. That was really kind of funny.

TM: Fun. That's a different job. You don't get to do that every day, see these guys go fishing off of the basket of the crane. You know, Andy, there's—I can't figure this out. It sounds like one fellow fell there during the construction of the first bay or maybe the second. Do you remember that?

AM: Yeah, you know that picture you sent me with boys topping out?

TM: Yes.

AM: I'm not sure he's not there. It was one guy that they hired for Traylor Brothers. He wasn't an Indian, but he's a white guy. I think after— I don't know, he might have stayed there. That might have been him beside me in that picture. Now, I don't know if you really know who I was, but I had a blue, like, a Levi's shirt, long sleeves. I had a hat, a little regular hat on, and I was looking sideways to my right when the picture was taken. I was on the righthand side of the picture. And he was on my left right there with a little mustache. I was sitting there, looking at the picture a while ago before you called. I'm thinking that was him, but he stepped out on the little wooden platform. It was probably four-foot by four-foot. It had rope on each corner, and they had big knots in the bottom of them so, you know, it couldn't go through the platform. And they were using a hydraulic jack for some reason over there. I couldn't see it. I'm just going by what I was told. And some of the oil had leaked onto that wooden platform, and he stepped down on it. And I guess he didn't tie off. He was fixing to tie off when he got on it, but he wasn't tied off when he stepped on it. I guess that oil was slick, and he slipped and fell off of it. It was, I don't know, what, 20 feet or something like that. And what— Did it break his arm of something, I think?

TM: I don't know for sure, I heard about it. I know he broke something, but I've heard he broken arm, he broke a leg, he broke this, he broke—I don't know, but he hurt himself.

AM: I never did see it. I just heard about it. And we had a man basket, and I brought him out and set him up on land up there. And I think Ed Kent or somebody might have took him to the hospital because it was too far for an ambulance to come out there. And it wasn't life threatening. I'm thinking he broke his arm when he hit. And later on, one of the inspectors had fell, the state inspector had felled, but we had nets up under it then. As we got out, and you built your bottom chord, then we would go up and hang nets. Two nets, there was two nets. They had one kind of a rope net. It was first, then you had a little screen, a little small screen net that went above it, so that caught him. But nothing happened to him. I mean, it wasn't a very big fall, five foot or so.

TM: Okay. So down into the net.

AM: I didn't get to see that either.

TM: Okay. So I'm kind of putting this together in my mind. You got the base plates and the pins and the horizontal bar, and then you build these uprights and anchor that into the land. And then you start building out instead of verticals, and but they're not horizontal either. They got some angle to them, the bottom chords coming out.

AM: Yeah. The top was pretty straight going across. But the bottom, it was just like the old bridge, you know. It tilted up, made like a big U.

TM: So you send the bottom cord down, and they would then bolt that to the to the upright. Then you could let go of it, and it would stay there by itself.

AM: The bottom chords, we would set. And I think they would come-along it up to the next bay closer, the bottom chord. Then I would send down two big plates that bolted it together. There was probably 40 bolts on each side. I mean, each side of the plate. Then you had about, I don't know, 80 bolts for both sides. And then they would bolt that up, and then they would cut the come-along. They probably left the come-along like that to adjust it later. And then they'd do the other bottom chord the same way when you start hanging your vertical pieces.

TM: So you put the two chords out on the bottom, the two bottom chords, then would you connect the free ends of them to each other? Was that the next piece of steel that went down?

AM: I think we would build side to side, tying each chord in on the bottom. We would tie side to side, kind of get that built to help it, support it. And then we would start with the verticals because once we did the verticals on the top, I couldn't really get back down in there to send the iron back in there, so we would have to build the bottom first and work our way up toward me, to the top.

TM: And then once you have that bay all done, and you topped out the top chords, you do that twice, I guess, when you started out. And then how would you move the crane out over the completed bay?

AM: David had— I don't know. We had probably 100-foot cable, 120-foot cable. And we had a little snatch block on my left side of the frame. Then we had a snatch block on the right side of my frame, and he'd run the cables through it. Like, I'd have my block, and I would pick it up, the cable—it was pretty long—and then you kind of halved it to where it would hang equally. Then he'd run it through them snatch blocks on both sides of me, and then run out to the end of that first bay in front of me and tie them off. And I was on I don't know what size Hilti rollers. They're little bitty rollers—well, they wasn't really little—but they were on each corner of my frame. And they had a, I guess it's a C-channel, a piece of steel that set on top, and it has sides on it, oh, about an inch, and inch and a half tall. And that's what I could roll on to keep it from falling off or anything. You know, you had them sides.

TM: Okay. So the sides kept the rollers—

AM: Maybe they tacked that C-channel down to where it wouldn't move. And whenever I got stationary or whenever I was stationary and good where I needed to be, they had these two all-threads bolts, and with a plate that went across my frame above the roller. And then they had a piece of steel up underneath with a hole on each side of it for the all-threads to go through and with a nut. Then they would clamp it down, you know, tighten it up on all four corners and that's what would keep me stationary. So whenever I got ready to move, I got my choker in front of me tight, then they would go down there and loosen up all those all-thread bolts on all four corners. And I would pick up, and it would pull me ahead.

TM: Oh, wow. So in the crane, you would run your cable up, and the cable divided in two and went down and then pulleyed itself around to your frame, so you would pull yourself forward.

AM: Yes.

TM: Wow.

AM: And they would stay there. They had somebody on each corner making sure everything was doing right. Yeah, it was— That was kind of nerve wracking at the very first. I have a lot of pictures in my head of accidents tipping over or something, but it worked real smooth. I was surprised after we'd done the first couple times, it was just another day.

TM: And then to go back— If you wanted to go back, you would simply turn your cab around? And they would set—

AM: No, you'd do the same thing. You'd pick up high. Your block would be up high and then they would cut everything loose. Then I would just lower it down, and I would move backwards to the next— We only had enough cable that you could only move one bay at a time. So I would just go backwards so we got where we needed to be. And to cut that long choker loose, on both sides they would have to tighten me back down with them all-threads on the four corners—

TM: To keep you from going anywhere.

AM: -from rolling, yeah.

TM: And then I'm imagining at one point you would turn the crane around, facing the land, and reach out. And then the land crane guy would be there, or somebody would be there to help pick up the next piece of steel, and you'd pick that up. And then you'd turn around and—

AM: Yeah, they had a— Once we got out there, oh, three or four bays out, I couldn't reach land no more. So they built this little carrying platform. It had Hilti {Hilman} rollers on it, too. It was just a little I-beam frame they built. They put a wooden floor on top, and the crane on the ground would load it up, four, five, six pieces, eight pieces, whatever. And then they had this air tugger attached to my frame on the crane, and they would operate it, and it would pull that platform out to me. Then I'd swing around and grab a piece, swing it back around in front of me, and set it. And we would do that back and forth until it was emptied. Then they would— I think he could just let off that air tugger, and I think the frame might have rolled back down there. I don't really remember how they got it back, but they would load it back up again, suck it back up to me.

TM: How did you know which one to pick up next?

AM: Oh, on the ground my hook-on guy, he knew.

TM: Okay.

AM: David would give him a list of what we needed in order. David Meche, he would give him a list. But once we got out, I'll say halfway out on the Flagstaff side, I could start feeling the bridge moving a little bit as I would swing around. Or when I'd swing around, I'd stop, and you could kind of feel it wiggle just a little, but it was a slow— It was a real slow wiggle. It wasn't fast. And when I would bring the piece down— This is with the heavy pieces, mainly with the bottom chords and the top chords because those were about the heaviest. I could feel when I'd stop, when they'd tell me to stop, I'd stop pretty quick right there, and you could kind of feel the bridge dip down, and then it would come back up. But it was just a real slow movement. It was

kind of strange. If you ever stop on a bridge, like in traffic, and you got trucks on the other side going by or something, you can feel the bridge move.

TM: Yeah, you can feel it, kind of, vibrating sort of deal.

AM: Yeah, it'd kind of bounce up and down a little bit. When I moved to the very end, it would move more. It moved a lot more. But it was still a real slow movement. That was kind of strange, but I'll never forget that.

TM: Again, as a layperson, when I think about this, you know, you're building a big diving board way out there, except it's almost like I'd pick up a 100-pound sack of concrete, and I'd stomp out on the diving board. And the diving board would go up and down at every step I took. And if I turned around at the end of the diving board, that board would wobble side to side because I've got this mass, this 100-pound sack of concrete, that I'm hanging on to, just as an example.

AM: A diving board would just, more or less, do up and down. I don't really think they go side to side.

TM: Right. Okay. But you being way out there it would. Now I'm thinking that the ironworkers who were looking at you or looking at the steel coming down, and you got your radio man there telling you farther and this and that. And they've got their bolts and they're ready to pin that thing in there and get it—the erecting crew kind of get that thing set in place. They would be aware of the up and down and side to side that was gonna happen because they're watching it.

AM: I feel they might have felt it. I'm sure they had to have felt it.

TM: I bet they did, but I was thinking of the bolt-up crew who wouldn't be paying attention to you. And those guys, they'd be dealing with trying to put bolts in, all of a sudden, their world would move.

AM: Well, it's not a lot of movement. But you could feel a little bit. I don't know exactly— It wasn't a lot of movement, but it moved.

TM: I would imagine that would just add a little spice to the anxiety of the day.

AM: Yeah. About the first two months I guess I was there, I was really unsure of what I got myself into.

TM: Really? Oh my.

AM: I'd never done this. I'd never been on a crane that had T-iron frame with the turntable sitting right in the center of it. I was just amazed how all that was supporting the crane and not just falling through. I wasn't there— You know, when we went to the second side, the Marble Canyon side, I don't really remember much about putting the crane together. I'm kind of blank right in there. I don't really remember what happened or how we did it. And I don't really remember how much of the frame we took apart to move it to the other side. All that's kind of blank, for some reason.

TM: But clearly once the Flagstaff side was built out halfway, you would have had to retreat. You'd have had to back the crane all the way off the bridge.

AM: And then the crane that's on the ground tore me apart. Take me apart.

TM: So you would then lower your boom all the way down to the ground so the boom is then resting on some blocks of wood or whatnot.

AM: I couldn't go all the way to the ground because I was too high up on that frame. I would go below—

TM: How did you do that then? How did you take the thing apart?

AM: Well, I do remember I would go down to my zero-degree boom angle, zero. And you can go a little bit—you can go five degrees below, but the best way is to keep it level, zero degrees. And then we had that other crane on the ground that they would take the jib off. He would hook up to it; then they would cut the— The ironworkers crawled out there on my boom, got out there to my jib and took the pennant lines off. And then they would pick up on the jib to get the weight of it, and then they would knock the two pins that attached to my main boom. They'd knocked them out, and then he would just swing it out and put it down on the ground.

TM: Oh, wow. Okay. So the second crane would basically hook on to your boom and take the weight off of where the pins hooked it to your cab. So then the second crane was basically taking the weight of the boom. And then they would take it away and set it on the ground.

AM: Yes.

TM: Wow. Okay. That makes sense.

AM: And then they would tear it apart on the ground.

TM: Got it. And then they could load it on a semi and drive it across the old bridge and then rebuild it over there. Clever. Very clever.

AM: We tore it all apart and set it down there. How did we do that? We had to have another crane sometime because he had to be able to load it on the truck. And then you had another crane on the other side to unload it. So you'd have to have another crane that some time. I don't remember that.

TM: Ronnie Mac talked about the RT crane and running that back and forth across the bridge. So they used that to tear you apart, your crane apart, and then drove it across.

AM: Maybe that's what they did because I don't remember another crane being out there, so maybe that's what they did. We'd load up a couple of trucks, and then send everybody to the other side, unload it. Everybody had to come back.

TM: Back and forth.

AM: I guess, yeah. That makes sense.

TM: Okay. That seemed to be what he was saying. And this is, you know, 30 years ago, and memory is a fickle thing to remember, but, yeah, that sounds about right. But it all makes sense. So then your cab with the motor, the diesel engine, and your drum, and your cables, and all that work, your controls—

AM: That's all one piece.

TM: And then they would be able to pick that up and put it on a flatbed semi and drive it around, I suppose.

AM: You'd have to take the channel weights off of it. They had one counterweight on the back, and you would have to take it off.

TM: Okay. Again, with another crane?

AM: We call it a house. I call it a house that the operator sits in with the drums and the engine motor and everything and all that. I call it a house.

TM: Okay. Very good. So the counterweight is in the back of the house, and that counters the boom and the steel that the boom is holding.

AM: Right. And that's what made it about a— I'm thinking it was about a 60-ton what they engineered for the counterweight, what size.

TM: Right. I don't have that with me, but the guys with Traylor Brothers, I reached out to them. They were very kind. They actually sent me some documentation about that. They worked with American Crane to beef that crane up. And with the big platform it was on and the counterweights and all this stuff, and they had a pretty good rating on that thing. I was surprised.

AM: Yeah, Yeah,

TM: But that makes sense.

AM: You know, I don't think I never did get no load charts for that crane. I don't remember having any load charts.

TM: They sent me those. I can send them to you if you want them.

AM: The load charts on that frame?

TM: I think so. I don't know. They sent me some stuff, and I'm gonna send it on to the National Park Service for curation, but I—

AM: I may have some, but I don't remember any.

TM: I can send you—

AM: It was kind of a guessing game.

TM: —photographs of what they sent. Yeah, it was pretty neat.

AM: 5930? 6230? I don't remember the number on that crime.

TM: That's written down, and again, I apologize for not having that stuff right here where I can add that to this to discussion. Anyway, you guys tore everything down and drove it around to the other side and then put it all back together again.

AM: Yes, and when we got to the other side is when David Meche and a couple of us said that we was going to lay off the Navajos because that was the American side. Oh, they started pitching a fit. "No! Don't lay us off! No! No!" But we were just kidding with them.

TM: It's one thing that David mentioned and Ronnie Mac mentioned. It sounded like there was a good amount of camaraderie going on between everybody out there.

AM: Yeah, it was a really good time. I mean, nobody really got mad and pitched fits. The Navajos, I guess they was just more excited about working, having work right there.

TM: Yep. Good paying work close to home.

AM: Yeah. But we went to the other side. I wish I remembered all this, but I'm sure we built the frame up, put the crane back up there, and put it back together like we tore it apart.

TM: You know what, Andy, we've been—Let me look at the time here. What have we got? We've been talking just about an hour, not quite. I wonder if this might be a good time to put a comma in this oral history series, and we'll do one more to go the other way, to build out—

AM: To do the other side.

TM: And in between now and then, I'm going to e-mail you these photos that I've got from the Traylor Brothers about the crane, and that might jog your memory for some more things, too.

AM: Yeah, it might. Uh, I was—I can ask you when we get off the recording.

TM: Okay. Alright, hang on a second then. Let's go ahead at this point. Is there anything else you want to add about the first-half build that we haven't talked about?

AM: Uh, no, just— I was always a little nervous every day, because once the crane was out there, I would have to walk down the top main chord, one side, to walk to the crane, and that was always— I wasn't very good with heights. They didn't really bother me, but you still got it in your mind. But I would have to walk to the crane, then I had a ladder that I would have to climb up to get up on top of the frame to walk to the crane itself. That was always a little bit of nerve wracking.

TM: Were you tied in in any way? Did you have a little safety line or something?

AM: Yeah, we had a safety line that run down the edges. They were about four foot high. I think I had a harness. That was about the time the harnesses and stuff was coming in. Because I do remember going to— I guess they had a harness class set up one day that we had somebody come out there that would explain how the harnesses work. I remember we had two bucks of scaffolding, just two high, and he sent this machine up there. And he had a big, heavy dummy, and he could release it and let it drop and showed you how the harness and your piece that hooks back behind you—shoot, I forget the name—but how that worked to slow you down as you fall.

TM: Nice.

AM: Yeah, we had a little class on that. I had me a harness. Once I got up to the top, I'd just take it off.

TM: Right. So let me make sure I understand this. You mentioned the four-foot-high safety line. You would clip onto that and then walk out and then unclip and then clip on again where there must have been some sort of upright every now and then.

AM: Angle iron. A little piece of angle iron sticking up that was bolted to the iron. And then they had cable running through it. So, yeah, you would have to unhook, go to the other side, hook it back, and then keep walking until your next one.

TM: Got it. And that could be a place where you could fall, where you unhooked to rehook.

AM: Yes.

TM: Okay. So that must have been— Was it ever windy when you were walking out there?

AM: Not really, but we did have some storms. What you call monsoons?

TM: Yes.

AM: We did have monsoons come through, and you could see them coming. There was a couple of times that I think we would shut down and to get everybody off the iron when that monsoon was coming.

TM: Because of lightning?

AM: Because of the lightning and heavy winds and rain.

TM: Okay.

AM: We would stop. It wasn't but a couple of them that really come through as we was working there. I mean, I think there was some in the evenings and stuff, but we weren't out there working. But you could see it coming from a long way away. It'll be just a dark black cloud coming. It was pretty fun having that park ranger or state ranger—no, park ranger, I guess—

down there on the river that would radio me when we had rafters coming. I think I already talked about that. But that was pretty cool, watching rafters come down. We were way, what, we were 900 foot up. You could see them coming through. They had quite a bit of rafters coming through. And there was people who'd stop on the bridge, the old bridge, and watch us work.

TM: Oh, wow. You mean they parked right on the old bridge?

AM: Vacationers or something, they would just, kind of, stop by. They'd sit there a good hour—

TM: Wow.

AM: —taking a break, I guess, watching us work.

TM: Cool. Alright. We should probably wrap this up here, and we'll pick it up again. And I'm making some notes about rafters and spectators.

AM: Yeah.

TM: Fun. Alright. Well, Andy McLeroy, thank you so very, very much for this oral history interview. Today is December 11, 2022. This will conclude Part 2 Grand Canyon oral history interview. My name is Tom Martin. Andy, thank you so very much.

AM: You're very welcome.