

Big Picture Podcast – Episode 18

The Value of Communication

Interview with Stephanie Kellar, Civil Engineer

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While on the road, host John Suchocki interviews Stephanie Kellar, a senior engineer of the City of Encinitas, California. Stephanie describes how college helped prepare her for a career where she was surprised to find communication skills to be far more critical than technical skills. She describes her experience with the Beacon's Beach staircase project, proposed as a remedy to a landslide prone path down a sea bluff but met with much resistance from the community. Duration: 25:37.

John: Welcome back to the Big Picture podcast. My name is John Suchocki. Your host. Today we are here with Stephanie Kellar. Stephanie works as a civil engineer in the engineering department for the city of Encinitas, California. Stephanie, thank you so much for joining us here at the Big Picture podcast.

Stephanie: Thank you, it's a pleasure to be here with you.

John: Stephanie, could you describe for us the work that you do?

Stephanie: Sure. Working for a city, I'm a senior civil engineer. So I lead the team of people that builds municipal projects, city projects. And that means we built everything from parks to lifeguard stations to sewer systems.

John: To that rotary in the highway.

Stephanie: We do all kinds of projects and we take them from start to finish. So we come up with a concept and have a particular goal in mind for a site will generate a series of alternatives, come up with a design, take it through public all the way through building and constructing it. The whole thing

John: Hire

Stephanie: Start

John: The right

Stephanie: To

John: People,

Stephanie: Finish.

John: Make sure it's up to code.

Stephanie: Yes, all of all of that fun stuffs. And there's a lot of project management and there's a little bit of design and a lot of construction management actually instructing the contractor out in the field how to do it, what he needs to do, how to do it right.

John: Could you define what we mean by engineering?

Stephanie: In this case, engineering is the engineering I do as civil engineering, meaning that we we work on civil infrastructure projects. So your erodes water sewer. Things like that. We also have geotechnical engineers, structural engineers on staff. So

John: Geo technical

Stephanie: Geo

John: Like

Stephanie: Technical.

John: The earth,

Stephanie: Yeah, earthwork soils engineers and.

John: So the water flows how it should flow and not flood.

Stephanie: Yes. And you build upon soil that is firm and designed to actually accept what you're building on it and designed to last based on the input that you get from a field investigation or we have structural engineers that are making sure that our structures are going to stand up in a seismic event. Things like that. So engineering is really such a huge word. I like to think

John: Think of

Stephanie: Of

John: It

Stephanie: It

John: As

Stephanie: As just

John: Just building.

Stephanie: Scientific problem solving. It's bigger than building to me.

John: They need to know how to build it, what to build, why

Stephanie: Yes,

John: To build.

Stephanie: All of that. I think it's a very big field of a number of different specialties in the field. Mine is I'm trained in structural engineering and then I practice in civil.

John: I want to ask you about a project in Encinitas, a relative to a sort of steps or of a path that went down a cliff to the beach property. Could you describe that project?

Stephanie: You're talking about our Beacon's Beach project.

John: Yes.

Stephanie: I assume? Yes.

John: Yes. OK.

Stephanie: Okay,

John: Well,

Stephanie: Well, that's

John: That's

Stephanie: That's

John: That's

Stephanie: Very

John: Very

Stephanie: Exciting.

John: Exciting.

Stephanie: And

John: Encinitas

Stephanie: Cinetis

John: Is

Stephanie: Is a

John: A coastal

Stephanie: Coastal community,

John: Community.

Stephanie: So

John: So we

Stephanie: We

John: Are

Stephanie: Are

John: Right

Stephanie: Right

John: On

Stephanie: On

John: The

Stephanie: The

John: Ocean

Stephanie: Ocean. And

John: Because

Stephanie: Because

John: There's

Stephanie: There's

John: So

Stephanie: So

John: Much

Stephanie: Much

John: Seismic

Stephanie: Seismic activity

John: Activity in

Stephanie: In California.

John: California.

Stephanie: The

John: The

Stephanie: Interesting

John: Interesting thing

Stephanie: Thing about

John: About

Stephanie: Being

John: Being

Stephanie: Coastal

John: Coastal

Stephanie: In

John: And that's

Stephanie: Encinitas

John: Nita's is

Stephanie: Is that

John: That our

Stephanie: Our bluff

John: Bluff nearest

Stephanie: Nearest to

John: To the

Stephanie: The

John: Water's

Stephanie: Water's

John: Edge

Stephanie: Edge

John: Sits

Stephanie: Sits

John: About

Stephanie: About 80

John: Eighty

Stephanie: To

John: To one

Stephanie: 120

John: Hundred and twenty

Stephanie: Feet

John: Feet

Stephanie: Higher

John: Higher

Stephanie: Than

John: Than

Stephanie: Sea

John: Sea level.

Stephanie: Level. So

John: So

Stephanie: You

John: You

Stephanie: Stand

John: Stand

Stephanie: On

John: On the

Stephanie: The top

John: Top

Stephanie: Of

John: Of

Stephanie: The

John: The bluff

Stephanie: Bluff and

John: And the

Stephanie: The

John: Ocean

Stephanie: Ocean

John: Is

Stephanie: Is

John: Way

Stephanie: Way down

John: Down

Stephanie: There.

John: There. People

Stephanie: People

John: Need

Stephanie: Need

John: A

Stephanie: A way

John: Way to

Stephanie: To

John: Get

Stephanie: Get from

John: From that

Stephanie: That top

John: Top of

Stephanie: Of the

John: The

Stephanie: Bluff

John: Bluff down

Stephanie: Down

John: To

Stephanie: To the

John: The

Stephanie: Ocean.

John: Ocean.

Stephanie: And

John: And

Stephanie: We

John: We

Stephanie: Have

John: Have only

Stephanie: Only

John: A

Stephanie: A

John: Few

Stephanie: Few spots

John: Spots physically

Stephanie: Physically

John: Where

Stephanie: Where

John: It's

Stephanie: It's possible

John: Possible to

Stephanie: To

John: Do

Stephanie: Do

John: That.

Stephanie: That. And Beacon's

John: Beacon's is

Stephanie: Is

John: One

Stephanie: One

John: Of

Stephanie: Of them

John: Them because

Stephanie: Because Beach

John: Beach

Stephanie: Is

John: Is a

Stephanie: A famous

John: Famous surfing

Stephanie: Surfing beach.

John: Beach. It's

Stephanie: It's a

John: A

Stephanie: Great

John: Great

Stephanie: Spot.

John: Spot. It's

Stephanie: It's been

John: Been there

Stephanie: There

John: Forever

Stephanie: Forever. And

John: And

Stephanie: People

John: People have

Stephanie: Have

John: Been

Stephanie: Been accessing

John: Accessing it.

Stephanie: It since

John: The

Stephanie: The

John: 30s

Stephanie: 30s

John: Or

Stephanie: Or 40s

John: 40s in

Stephanie: In

John: A

Stephanie: A

John: Kind

Stephanie: Kind

John: Of

Stephanie: Of

John: Formal

Stephanie: Formal

John: Way,

Stephanie: Way.

John: They've

Stephanie: They've

John: Constructed

Stephanie: Constructed

John: Their

Stephanie: Their

John: Own

Stephanie: Own

John: Stairs

Stephanie: Stairs to

John: To get

Stephanie: Get

John: Down

Stephanie: Down

John: Their

Stephanie: There.

John: Path, going down the block.

Stephanie: It's a

John: It's

Stephanie: It's

John: A

Stephanie: A path

John: Path

Stephanie: Connecting

John: Connecting stairs

Stephanie: Stairs

John: That

Stephanie: That

John: Are

Stephanie: Are

John: Cut

Stephanie: Cut

John: In

Stephanie: In

John: To.

Stephanie: To the sand,

John: Stairs cut into

Stephanie: Stairs

John: The sand,

Stephanie: Cut

John: Cut

Stephanie: Into

John: Into cement.

Stephanie: Cemented sand.

John: So

Stephanie: So people

John: People

Stephanie: Have

John: Have

Stephanie: Gone

John: Gone

Stephanie: Out

John: Out

Stephanie: With

John: With shovels

Stephanie: Shovels

John: And

Stephanie: And they've

John: Just

Stephanie: Just kind of

John: Cleared

Stephanie: Cleared the

John: The

Stephanie: Way

John: Way

Stephanie: Over the years. And they've created as zigzag a path

John: 20

Stephanie: That goes from about 120

John: Feet.

Stephanie: Feet above sea level, down to sea level.

John: They

Stephanie: And they created

John: Created

Stephanie: This

John: This

Stephanie: Unknowingly in a landslide

John: Landslide.

Stephanie: Area. So

John: So

Stephanie: This

John: This

Stephanie: Is

John: Is

Stephanie: An

John: An

Stephanie: Area

John: Area

Stephanie: That

John: That

Stephanie: Is

John: Is

Stephanie: Very

John: Very susceptible

Stephanie: Susceptible to

John: To Earth.

Stephanie: Earth movement. We've

John: We've

Stephanie: Had

John: Had

Stephanie: Several

John: Several

Stephanie: Landslides

John: Landslides

Stephanie: There

John: There in

Stephanie: In recent

John: Recent history.

Stephanie: History. The

John: The

Stephanie: Next

John: Next

Stephanie: Landslide

John: Landslide.

Stephanie: Will remove the whole

John: Whole

Stephanie: Beach,

John: Beach access

Stephanie: Access the

John: The whole

Stephanie: Whole

John: Bluff

Stephanie: Bluff,

John: And

Stephanie: And

John: Will

Stephanie: Will

John: Likely

Stephanie: Likely remove

John: Is part

Stephanie: Part

John: Of

Stephanie: Of the

John: The

Stephanie: Parking

John: Parking lot.

Stephanie: Lot, the public parking lot. That's up on the top of the bluff.

John: So not good.

Stephanie: So not good. Not

John: Not.

Stephanie: A situation that we like to see.

John: So

Stephanie: So

John: You have some responsibility there? We

Stephanie: We have

John: Have responsibility.

Stephanie: Responsibility there. We need to keep people safe and we want to preserve this ability to access the beach. There

John: There are

Stephanie: Are

John: A

Stephanie: A number

John: Number

Stephanie: Of

John: Of

Stephanie: Different

John: Different ways

Stephanie: Ways

John: To

Stephanie: To do

John: Do that.

Stephanie: That. The

John: The tricky

Stephanie: Tricky part

John: Part

Stephanie: Is

John: Is

Stephanie: Finding

John: Finding

Stephanie: A

John: A solution

Stephanie: Solution that

John: That works

Stephanie: Works from

John: From

Stephanie: An

John: An engineering

Stephanie: Engineering standpoint

John: Point

Stephanie: That is also

John: Also

Stephanie: Appealing to the community

John: Because

Stephanie: Because those

John: Those

Stephanie: Are

John: Are two

Stephanie: Two very different

John: Different

Stephanie: Types

John: Types

Stephanie: Of

John: Of solutions.

Stephanie: Solutions. From

John: From

Stephanie: An

John: An

Stephanie: Engineering

John: Engineering

Stephanie: Perspective,

John: Perspective,

Stephanie: We note that the landslide

John: It's

Stephanie: Is just

John: Just

Stephanie: Going

John: Going

Stephanie: To

John: To

Stephanie: Cave in and

John: Take

Stephanie: It will

John: A

Stephanie: Take

John: Lot

Stephanie: All that

John: Of

Stephanie: Material

John: Material.

Stephanie: And dump it on the bottom of the beach.

John: So within a few years it could be any time, 10 years, 20

Stephanie: It

John: Years

Stephanie: Could

John: Could be

Stephanie: Be any

John: Any time.

Stephanie: Time it's

John: It's

Stephanie: Probabilistic,

John: Probabilistic,

Stephanie: But

John: But.

Stephanie: Given even a relatively small seismic event or a heavy rain year, it could happen tomorrow.

John: So

Stephanie: So a

John: A

Stephanie: Solution

John: Solution needed

Stephanie: Needed

John: To

Stephanie: To be

John: Be.

Stephanie: Implemented quickly, we still haven't been able to implement our quick solution

John: The

Stephanie: Steps

John: Step system.

Stephanie: As a step system. So

John: So

Stephanie: What

John: What

Stephanie: Needs

John: Needs to

Stephanie: To be

John: Be done

Stephanie: Done to

John: To

Stephanie: Preserve

John: Preserve

Stephanie: Long

John: Long term

Stephanie: Term access

John: Access

Stephanie: Is

John: Is

Stephanie: To

John: To have

Stephanie: Have a

John: A

Stephanie: Step

John: Step

Stephanie: System

John: System

Stephanie: That

John: That

Stephanie: Won't

John: Won't fail

Stephanie: Fail when

John: When

Stephanie: The

John: The landslides.

Stephanie: Landslide slides. So

John: So

Stephanie: To

John: To do

Stephanie: Do that,

John: That,

Stephanie: You

John: You

Stephanie: Need

John: Need to

Stephanie: To go

John: Go

Stephanie: All

John: All

Stephanie: The

John: The way

Stephanie: Way through

John: Through

Stephanie: The

John: The

Stephanie: Unsuitable

John: Unsuitable

Stephanie: Material

John: Material.

Stephanie: And

John: And

Stephanie: Anchor

John: Anchor into

Stephanie: Into the

John: The

Stephanie: Firm

John: Firm

Stephanie: Material

John: Material that's

Stephanie: That's

John: Underneath

Stephanie: Underneath. That's

John: That's

Stephanie: About

John: About

Stephanie: 30

John: 30

Stephanie: Feet

John: Feet

Stephanie: Deep

John: Deep.

Stephanie: In the case of this blast.

John: By the ocean, it's sandy material that makes up the coastal bluff.

Stephanie: It's sandy material and that sand can be loose and susceptible to sliding or it can be cemented. In which case

John: It's

Stephanie: It's

John: Like a sandstone.

Stephanie: Like a sandstone pretty

John: Yeah.

Stephanie: Firm bearing. So in this case, you'll need to drill down about 30 to 40 feet to hit that supportive material.

John: So what's the problem? And just can you just build this stair system

Stephanie: The

John: Problem?

Stephanie: Problem is that the community loves their beach and they don't want that access to change. They don't want their beach to look any different. They don't want there to be a landslide either, as so

John: So that pathway down that they built over

Stephanie: Many

John: Many years, maybe even generations,

Stephanie: Generations.

John: Is a tradition, then it's it's an identity for that area. And

Stephanie: Exactly.

John: But

Stephanie: But surely

John: Surely you

Stephanie: You

John: Just

Stephanie: Just need

John: Need

Stephanie: To

John: To let

Stephanie: Let them

John: Them

Stephanie: Know

John: Know

Stephanie: It's

John: It's a

Stephanie: A

John: Hazard

Stephanie: Hazard.

John: And it's about to collapse.

Stephanie: Surely that's all that it will take

John: Right.

Stephanie: If you if you just present this argument logically, everybody will fall in line, right.

John: Can't

Stephanie: But

John: You have both? Can you have the staircase and.

Stephanie: You can and in fact, we we

John: We propose

Stephanie: Propose

John: To

Stephanie: To do

John: Do exactly

Stephanie: Exactly

John: That.

Stephanie: That, to have both a staircase and to keep the path.

John: But

Stephanie: But

John: In

Stephanie: In that

John: That

Stephanie: Case,

John: Case,

Stephanie: The

John: The

Stephanie: Community

John: Community was.

Stephanie: Was concerned that

John: If

Stephanie: If we

John: We

Stephanie: Had

John: Had an

Stephanie: An alternate

John: Ultimate access.

Stephanie: Access that would remain stable, like a staircase,

John: Yes.

Stephanie: That

John: That

Stephanie: After

John: After

Stephanie: A

John: A

Stephanie: Landslide

John: Landslide and

Stephanie: Event,

John: Then

Stephanie: The

John: The city

Stephanie: City would

John: Would not

Stephanie: Not commit

John: Commit its

Stephanie: Its resources

John: Resources

Stephanie: To

John: To

Stephanie: Rebuilding

John: Rebuilding the

Stephanie: The

John: Park.

Stephanie: Path because

John: Because

Stephanie: There

John: While

Stephanie: Would be

John: The

Stephanie: Another

John: Other

Stephanie: Way

John: Way

Stephanie: Down.

John: Down,

Stephanie: So they.

John: So they would be all gone.

Stephanie: Yes.

John: Yes. So

Stephanie: So the

John: The

Stephanie: Community

John: Community

Stephanie: Sentiment

John: Sentiment

Stephanie: Was

John: Was

Stephanie: That

John: That

Stephanie: They

John: They

Stephanie: Didn't

John: Didn't

Stephanie: Want

John: Want

Stephanie: A

John: A

Stephanie: Backup

John: Backup

Stephanie: Method

John: Method

Stephanie: Because

John: Because the

Stephanie: The backup

John: Backup

Stephanie: Method

John: Method

Stephanie: Would

John: Would

Stephanie: Provide

John: Provide

Stephanie: An

John: An

Stephanie: Alternative

John: Alternative

Stephanie: To

John: To

Stephanie: This

John: This

Stephanie: Character,

John: Character.

Stephanie: Heritage,

John: Heritage, personality,

Stephanie: Personality, kind

John: Kind of

Stephanie: Of

John: Access.

Stephanie: Access that they already have.

John: So as the lead civil engineer within the city of Encinitas, what role did you play in communicating the engineering with the general public?

Stephanie: I got to be the face of the project, which was hugely enjoyable on this one. I should also say that I live in the community where this project is being considered.

John: Considered so

Stephanie: So the

John: The people

Stephanie: People that

John: That I

Stephanie: I talk

John: Talk

Stephanie: To

John: To

Stephanie: About

John: About the

Stephanie: The projects,

John: Projects,

Stephanie: They're

John: They're my

Stephanie: My

John: Neighbors,

Stephanie: Neighbors. They

John: They're

Stephanie: Are people

John: People that

Stephanie: That live,

John: Live.

Stephanie: You know, within

John: Within half

Stephanie: Half

John: A

Stephanie: A

John: Mile,

Stephanie: Mile of

John: If

Stephanie: Me.

John: I

Stephanie: I

John: Don't

Stephanie: Don't

John: Tell

Stephanie: Tell

John: Them

Stephanie: Them

John: Where

Stephanie: Where

John: I

Stephanie: I live

John: Live

Stephanie: Because

John: Because

Stephanie: There

John: There would

Stephanie: Would

John: Be

Stephanie: Be

John: So

Stephanie: So

John: Much,

Stephanie: Much

John: There's a convention,

Stephanie: There's

John: There's

Stephanie: Would be

John: So

Stephanie: So

John: Much

Stephanie: Much

John: Content

Stephanie: Contention.

John: Therapy,

Stephanie: There be

John: So

Stephanie: So

John: Much

Stephanie: Much contention.

John: Contention. So

Stephanie: So

John: My

Stephanie: My

John: Role

Stephanie: Role was

John: Was through

Stephanie: Through a

John: A series

Stephanie: Series of

John: Of public

Stephanie: Public events,

John: Events, both

Stephanie: Both

John: Held

Stephanie: Held at

John: At the

Stephanie: The

John: Beach

Stephanie: Beach and

John: And held

Stephanie: Held at

John: At City

Stephanie: City

John: Hall

Stephanie: Hall

John: And

Stephanie: And

John: Other

Stephanie: Other

John: Public

Stephanie: Public

John: Venues

Stephanie: Venues to

John: To

Stephanie: Try

John: Try to

Stephanie: To

John: Communicate

Stephanie: Communicate

John: To

Stephanie: To

John: The

Stephanie: The

John: Public

Stephanie: Public

John: The

Stephanie: The

John: Need

Stephanie: Need

John: For

Stephanie: For

John: The

Stephanie: The project,

John: Project, specifically

Stephanie: Specifically

John: To

Stephanie: To

John: Try

Stephanie: Try

John: To

Stephanie: To

John: Explain

Stephanie: Explain that

John: That

Stephanie: A

John: Landslide

Stephanie: Landslide

John: There,

Stephanie: There,

John: Although

Stephanie: Although

John: It's

Stephanie: It's

John: Probabilistic

Stephanie: Probabilistic when it will

John: Occur.

Stephanie: Occur.

John: It

Stephanie: It

John: Is

Stephanie: Is

John: An

Stephanie: An

John: Eventuality.

Stephanie: Eventuality.

John: So

Stephanie: So

John: The

Stephanie: The

John: Fact

Stephanie: Fact

John: That

Stephanie: That

John: I

Stephanie: I

John: Can't

Stephanie: Can't

John: Tell

Stephanie: Tell

John: You

Stephanie: You when

John: When

Stephanie: It will

John: It happened

Stephanie: Happen doesn't

John: Doesn't mean

Stephanie: Mean

John: That

Stephanie: That

John: It

Stephanie: It won't

John: Won't happen.

Stephanie: Happen.

John: And

Stephanie: And communicating

John: Communicating that

Stephanie: That was

John: Was a

Stephanie: A

John: Tremendous

Stephanie: Tremendous

John: Struggle.

Stephanie: Struggle. Ben,

John: Then a

Stephanie: A very

John: Very significant

Stephanie: Significant

John: Struggle.

Stephanie: Struggle, because

John: We

Stephanie: We

John: Tried

Stephanie: Tried

John: To

Stephanie: To we

John: We being

Stephanie: Being

John: The

Stephanie: The project

John: Project team.

Stephanie: Team,

John: We

Stephanie: We

John: Try

Stephanie: Try to

John: To come

Stephanie: Come

John: At

Stephanie: At

John: This

Stephanie: This

John: Problem

Stephanie: Problem

John: With

Stephanie: With logic

John: Logic and

Stephanie: And

John: Facts.

Stephanie: Facts

John: And

Stephanie: And a

John: Very

Stephanie: Very rationally

John: Rationally

Stephanie: Laid

John: Laid out

Stephanie: Out argument

John: Argument

Stephanie: That

John: That

Stephanie: We hope

John: It is

Stephanie: Is intelligible

John: Intelligible, that

Stephanie: To someone

John: Someone

Stephanie: Who's

John: Is not

Stephanie: Not

John: In

Stephanie: In the

John: The

Stephanie: Field,

John: Fields,

Stephanie: But

John: But somebody

Stephanie: Somebody

John: Who

Stephanie: Who

John: Opposes

Stephanie: Opposes it

John: It really

Stephanie: Really

John: Just

Stephanie: Just needs

John: Needs

Stephanie: To

John: To

Stephanie: Say,

John: Say, well,

Stephanie: Well, I

John: I

Stephanie: Don't

John: Don't think

Stephanie: Think

John: That's

Stephanie: That's

John: True.

Stephanie: True.

John: And

Stephanie: And that

John: That

Stephanie: Kind

John: Kind

Stephanie: Of

John: Of caps

Stephanie: Caps

John: The

Stephanie: The conversation.

John: Conversation. That's.

Stephanie: That's that's

John: The

Stephanie: The

John: End

Stephanie: End

John: Of

Stephanie: Of

John: It.

Stephanie: It.

John: So

Stephanie: So being

John: In

Stephanie: A

John: A

Stephanie: Diplomat,

John: Diplomatic.

Stephanie: Being open,

John: Open,

Stephanie: Being

John: Being extremely

Stephanie: Extremely

John: Impatient.

Stephanie: Patient,

John: Approaching

Stephanie: Approaching

John: The

Stephanie: The

John: Problem,

Stephanie: Problem,

John: Knowing

Stephanie: Knowing

John: That

Stephanie: That

John: Each

Stephanie: Each

John: Person

Stephanie: Person that

John: That

Stephanie: Speaks

John: Speaks to

Stephanie: To you

John: You has

Stephanie: Has

John: A

Stephanie: A different

John: Different background

Stephanie: Background and

John: And

Stephanie: A

John: A

Stephanie: Different

John: Different skill

Stephanie: Skill set.

John: Set.

Stephanie: Chances

John: Chances

Stephanie: Are

John: Are

Stephanie: It's

John: It's not

Stephanie: Not an

John: An

Stephanie: Engineering

John: Engineering.

Stephanie: Mindset. That's

John: That's

Stephanie: All crucially

John: Crucially

Stephanie: Important

John: Important, too.

Stephanie: To

John: Really,

Stephanie: Really any

John: Any

Stephanie: Project.

John: Project.

Stephanie: But this is a good example of

John: In

Stephanie: That.

John: A previous episode on the Big Picture podcast, we dedicated

Stephanie: Dedicate

John: Some

Stephanie: Some

John: Time

Stephanie: Time

John: To

Stephanie: To

John: The

Stephanie: The

John: Idea

Stephanie: Idea

John: Of

Stephanie: Of

John: Frames

Stephanie: Frames.

John: A

Stephanie: Frame

John: Frame as

Stephanie: Is

John: A

Stephanie: A

John: Mental

Stephanie: Mental

John: Construct

Stephanie: Construct

John: Built

Stephanie: Built

John: Inside

Stephanie: Inside

John: One's

Stephanie: One's head,

John: Head. The

Stephanie: It

John: Colors,

Stephanie: Colors

John: One's

Stephanie: One's

John: View

Stephanie: View

John: Of

Stephanie: Of

John: The

Stephanie: The

John: World.

Stephanie: World.

John: And

Stephanie: And

John: You

Stephanie: You

John: Can

Stephanie: Can

John: Throw

Stephanie: Throw

John: All

Stephanie: All

John: The

Stephanie: The

John: Facts

Stephanie: Facts

John: And

Stephanie: And

John: Figures.

Stephanie: Figures.

John: We

Stephanie: We

John: Learn

Stephanie: Learned

John: To add

Stephanie: Had a

John: A

Stephanie: Frame

John: Frame and

Stephanie: And

John: They

Stephanie: They

John: Will

Stephanie: Will

John: Not

Stephanie: Not

John: Stick

Stephanie: Stick

John: If

Stephanie: If

John: They

Stephanie: They

John: Do

Stephanie: Do

John: Not

Stephanie: Not fit.

John: Fit. And

Stephanie: It

John: It

Stephanie: Sounds

John: Sounds like

Stephanie: Like

John: You

Stephanie: You just

John: Just ran

Stephanie: Ran into

John: Into exactly

Stephanie: Exactly

John: That

Stephanie: That. Where

John: Where

Stephanie: You

John: You were

Stephanie: Were

John: Literally

Stephanie: Literally providing

John: Providing these

Stephanie: These

John: Facts

Stephanie: Facts

John: And

Stephanie: And figures

John: Figures

Stephanie: About

John: About potential

Stephanie: Potential

John: Very

Stephanie: Very

John: Lethal,

Stephanie: Lethal, destructive

John: Destructive

Stephanie: Event.

John: Event. And because there was uncertainty in there, people couldn't really deal with that. And they they they were looking at it from a completely different frame, from a different point of view, from a historical point of view, from a OK. So there's some probabilistic stuff there. But but but I I'm going to ignore that now because over here it's much more important.

Stephanie: Exactly.

John: Wow.

Stephanie: Exactly. There that that's a wonderful analogy. The frame of reference for

John: Mm hmm.

Stephanie: The vast majority of the community that was really vocal on this project. Their frame of reference was one of

John: Mm

Stephanie: Heritage

John: Hmm.

Stephanie: And character and wanting things, things that feel really good to remain unchanged. I think the project teams frame of reference is, yes, we understand all of that and it is beautiful, but it is threatened.

John: Did you in any way or form perceive earlier on as you're moving into this career that this is the sort of task you would be encountering?

Stephanie: I think it really snuck up on me project by project. You know,

John: Mm

Stephanie: You

John: Hmm.

Stephanie: You start in your field and it's unlikely that your supervisor is going to hand, you know, Beacon's speech or any large contentious project. So you just are kind of going about your career and doing things that are more and more complex. And each year they get more complicated.

John: The project itself or the community involvement itself for

Stephanie: Both

John: Me

Stephanie: I think both both technically and

John: Socially?

Stephanie: Socially. It's a that's a good way to say it. They

John: They

Stephanie: Both

John: Both

Stephanie: Get

John: Get

Stephanie: More

John: More complicated,

Stephanie: Complicated, but

John: But

Stephanie: That

John: That

Stephanie: Community

John: Community outreach

Stephanie: Outreach piece

John: Piece.

Stephanie: Is by far the more difficult. You know, I

John: I

Stephanie: Work

John: Work

Stephanie: On

John: On

Stephanie: A

John: A team

Stephanie: Team of

John: Of

Stephanie: Capital

John: Capital engineers.

Stephanie: Engineers.

John: The

Stephanie: The

John: Reason

Stephanie: Reason that

John: That

Stephanie: There

John: There is

Stephanie: Is one

John: One of

Stephanie: Of me

John: Me

Stephanie: And

John: And several

Stephanie: Several of

John: Of

Stephanie: Them,

John: Them,

Stephanie: They're

John: They're all

Stephanie: All great

John: Great engineers

Stephanie: Engineers

John: Is

Stephanie: Is not

John: Not

Stephanie: That

John: That my

Stephanie: My

John: Engineering

Stephanie: Engineering

John: Skill

Stephanie: Skill set

John: Set is

Stephanie: Is really

John: Really

Stephanie: Any

John: Any

Stephanie: Different,

John: Different,

Stephanie: But

John: But that

Stephanie: That

John: I've

Stephanie: I've gained

John: Gained some

Stephanie: Some political

John: Political experience,

Stephanie: Experience and some

John: A

Stephanie: Communication

John: Communication.

Stephanie: Experience

John: That

Stephanie: That tends

John: Tends

Stephanie: To

John: To

Stephanie: Help

John: Help people

Stephanie: People relate

John: Relate to

Stephanie: To

John: Our

Stephanie: Our

John: Projects

Stephanie: Projects a

John: A little

Stephanie: Little

John: Bit

Stephanie: Bit better.

John: Better.

Stephanie: I feel

John: Feel like

Stephanie: Like

John: A

Stephanie: A

John: Huge

Stephanie: Huge

John: Part

Stephanie: Part

John: Of

Stephanie: Of

John: My

Stephanie: My

John: Job

Stephanie: Job

John: Is

Stephanie: Is

John: Working

Stephanie: Working

John: Through

Stephanie: Through

John: These

Stephanie: These issues

John: Issues with

Stephanie: With people

John: People

Stephanie: Who

John: Who come

Stephanie: Come

John: In.

Stephanie: In really angry

John: And

Stephanie: And there's

John: There's

Stephanie: No

John: No way

Stephanie: Way that

John: That you

Stephanie: You

John: Can

Stephanie: Can

John: Actually

Stephanie: Actually

John: Make

Stephanie: Make them

John: Them like

Stephanie: Like the

John: The project.

Stephanie: Project that that's

John: They're

Stephanie: Not

John: Not going

Stephanie: Going

John: To

Stephanie: To

John: Happen,

Stephanie: Happen. But

John: But you

Stephanie: You can

John: Can try

Stephanie: Try

John: To

Stephanie: To

John: Make

Stephanie: Make

John: Them

Stephanie: Them

John: Understand

Stephanie: Understand why

John: Why

Stephanie: The

John: The

Stephanie: City

John: City is

Stephanie: Is pursuing

John: Pursuing

Stephanie: It.

John: It.

Stephanie: And

John: And often

Stephanie: Often that's

John: That's

Stephanie: Really

John: Really all

Stephanie: All

John: They

Stephanie: They need.

John: Need.

Stephanie: They

John: They don't

Stephanie: Don't

John: Need

Stephanie: Need

John: To.

Stephanie: To grieve with it. Persay.

John: But

Stephanie: But they

John: They

Stephanie: Need

John: Need

Stephanie: To

John: To

Stephanie: Be

John: Be

Stephanie: Able

John: Able to

Stephanie: To make

John: Make some

Stephanie: Some peace

John: Peace with

Stephanie: With

John: It

Stephanie: It.

John: And

Stephanie: And

John: Understanding.

Stephanie: Understanding is a way for them to do that

John: You're doing a bit of hand-holding,

Stephanie: A little.

John: I

Stephanie: I

John: Guess.

Stephanie: Guess when

John: Nice.

Stephanie: I said when I. Yeah,

John: Yeah.

Stephanie: That

John: That

Stephanie: Makes

John: Makes

Stephanie: It

John: It

Stephanie: Sound.

John: Sound.

Stephanie: That makes it sound

John: I

Stephanie: Like

John: Can

Stephanie: I'm babysitting,

John: Beat you,

Stephanie: But. But

John: But

Stephanie: People

John: People

Stephanie: Are

John: Are

Stephanie: Intelligent

John: Intelligent

Stephanie: And

John: And they

Stephanie: They they get

John: Get

Stephanie: It,

John: It,

Stephanie: But

John: But

Stephanie: They're

John: They're

Stephanie: Getting

John: Getting

Stephanie: It

John: It from

Stephanie: From their

John: Their

Stephanie: Own

John: Own frame

Stephanie: Frame

John: Of

Stephanie: Of reference.

John: Reference. Yeah.

Stephanie: My

John: My

Stephanie: Job,

John: Job,

Stephanie: One

John: One

Stephanie: Of

John: Of my

Stephanie: My

John: Jobs

Stephanie: Jobs is

John: Is

Stephanie: To

John: To

Stephanie: Communicate

John: Communicate

Stephanie: To

John: To

Stephanie: Them

John: A

Stephanie: A different

John: Different frame

Stephanie: Frame of

John: Of reference.

Stephanie: Reference.

John: Wow. Could you compare how much you learned in college versus how much you've learned since college?

Stephanie: Well,

John: Well, I

Stephanie: I

John: Think

Stephanie: Think one of the most

John: It

Stephanie: Critical things I learned in college was just

John: Just

Stephanie: Figuring out what I wanted to do. That

John: Took

Stephanie: Took

John: Me

Stephanie: Me

John: A long

Stephanie: A long

John: Time.

Stephanie: Time. It wasn't clear to me when I graduated high school. So I actually went into college with a goal that was yet undefined. I guess

John: Yes. I

Stephanie: I

John: Knew

Stephanie: Knew

John: That

Stephanie: That

John: I

Stephanie: I wanted

John: Wanted a

Stephanie: A

John: College

Stephanie: College

John: Education.

Stephanie: Education.

John: I

Stephanie: I

John: Wasn't

Stephanie: Wasn't

John: Really

Stephanie: Really

John: Sure

Stephanie: Sure

John: What

Stephanie: What

John: I

Stephanie: I

John: Wanted

Stephanie: Wanted to

John: To study.

Stephanie: Study.

John: I

Stephanie: I

John: Thought

Stephanie: Thought

John: Sociology

Stephanie: Sociology

John: Was

Stephanie: Was

John: Interesting.

Stephanie: Interesting. So

John: So I

Stephanie: I

John: Majored

Stephanie: Majored in

John: In that.

Stephanie: That.

John: I

Stephanie: I

John: Thought

Stephanie: Thought

John: It

Stephanie: It

John: Was

Stephanie: Was

John: Good

Stephanie: Good

John: To

Stephanie: To

John: Have

Stephanie: Have

John: An

Stephanie: An understanding

John: Understanding of

Stephanie: Of financial

John: Financial

Stephanie: Management

John: Management and

Stephanie: And

John: Economics.

Stephanie: Economics. So

John: So

Stephanie: I

John: I majored

Stephanie: Majored

John: In

Stephanie: In

John: That

Stephanie: That

John: Too.

Stephanie: Too.

John: Then

Stephanie: Then

John: I

Stephanie: I

John: Graduated

Stephanie: Graduated with

John: With those

Stephanie: Those

John: Degrees

Stephanie: Degrees

John: And

Stephanie: And

John: Thought,

Stephanie: Thought how I

John: I really

Stephanie: Really

John: Don't

Stephanie: Don't

John: Want

Stephanie: Want

John: To

Stephanie: To

John: Do

Stephanie: Do

John: Either

Stephanie: Either

John: One.

Stephanie: One of these things.

John: And

Stephanie: And

John: That's

Stephanie: That's what

John: What college

Stephanie: College

John: Taught

Stephanie: Taught

John: Me,

Stephanie: Me,

John: Was

Stephanie: Was

John: That

Stephanie: That

John: I

Stephanie: I didn't

John: Didn't want

Stephanie: Want

John: Either

Stephanie: Either

John: One

Stephanie: One

John: Of

Stephanie: Of

John: Those

Stephanie: Those paths.

John: Paths. But let me interject. You just talked about two fields that you're specializing in now as an engineer.

Stephanie: Yes, there's absolutely some overlap, but I had imagined when I started

John: With

Stephanie: With

John: Sociology,

Stephanie: Sociology,

John: For

Stephanie: For

John: Instance,

Stephanie: Instance,

John: I

Stephanie: I

John: Had

Stephanie: Had

John: Imagined

Stephanie: Imagined that I might end up being a psychologist

John: Just

Stephanie: Or

John: Something.

Stephanie: Something along.

John: And

Stephanie: And

John: I

Stephanie: I

John: Guess

Stephanie: Guess a whole lot. Exactly.

John: That's

Stephanie: That's your

John: Your point.

Stephanie: Point. That

John: That

Stephanie: Educational

John: Educational

Stephanie: Background

John: Background.

Stephanie: Is not

John: Not

Stephanie: Irrelevant.

John: Relevant. It

Stephanie: It

John: Is

Stephanie: Is

John: Relevant

Stephanie: Relevant

John: To

Stephanie: To

John: What

Stephanie: What

John: I

Stephanie: I

John: Do,

Stephanie: Do.

John: Absolutely,

Stephanie: Absolutely.

John: But

Stephanie: But

John: I

Stephanie: I

John: Didn't

Stephanie: Didn't really

John: Really know

Stephanie: Know what

John: What I

Stephanie: I

John: Truly

Stephanie: Truly

John: Wanted

Stephanie: Wanted

John: Until

Stephanie: Until

John: I

Stephanie: I kind

John: Kind of

Stephanie: Of

John: Progressed

Stephanie: Progressed

John: Through

Stephanie: Through

John: College

Stephanie: College

John: And

Stephanie: And

John: Was

Stephanie: Was

John: Exposed

Stephanie: Exposed

John: To

Stephanie: To more

John: More

Stephanie: Different

John: Different kinds

Stephanie: Kinds of

John: Of topics.

Stephanie: Topics that

John: That

Stephanie: Led

John: Led

Stephanie: Me

John: Me

Stephanie: Ultimately

John: Ultimately

Stephanie: To

John: To

Stephanie: Engineering.

John: Engineering.

Stephanie: So I went back

John: Back to

Stephanie: To

John: College

Stephanie: College before

John: Before I

Stephanie: I had really

John: Really left

Stephanie: Left

John: It.

Stephanie: It and got another degree.

John: It's just like your third degree.

Stephanie: That's

John: It's my

Stephanie: My third

John: Third

Stephanie: Degree.

John: Degree. Well,

Stephanie: But

John: They're

Stephanie: They're

John: All

Stephanie: All bachelors

John: Bachelors

Stephanie: Degrees.

John: Degree. So

Stephanie: They don't

John: Then

Stephanie: They

John: I'd

Stephanie: Don't

John: Set up

Stephanie: Build upon each other.

John: A

Stephanie: Yeah. So three bachelors.

John: Bachelors.

Stephanie: That was the major takeaway, I think from my college experience was just having an ethics spoke to to find something that was right for me. So

John: So

Stephanie: What

John: What

Stephanie: You're

John: You're saying

Stephanie: Saying

John: Is

Stephanie: Is that

John: That you

Stephanie: You went

John: Went to

Stephanie: To college.

John: College and you learned that, which

Stephanie: Which

John: You

Stephanie: You

John: Didn't

Stephanie: Didn't

John: Want

Stephanie: Want

John: To

Stephanie: To

John: Do.

Stephanie: Do.

John: But still you're moving forward. And so that had value. Right.

Stephanie: It had tremendous value. I truly enjoyed my education and I wouldn't do it any differently, even knowing now what I know. I would not want to just jump right in and go directly from high school into engineering, really engineering community. Forgive me for saying this, but

John: But

Stephanie: Engineers

John: Engineers are

Stephanie: Are

John: A

Stephanie: A

John: Dime

Stephanie: Dime a dozen.

John: A dozen.

Stephanie: There

John: And there

Stephanie: Are

John: Are there

Stephanie: There

John: Are

Stephanie: Are engineers

John: Engineers

Stephanie: Out

John: Out

Stephanie: There

John: There

Stephanie: Working

John: Working on

Stephanie: On all

John: All

Stephanie: Kinds

John: Kinds

Stephanie: Of

John: Of

Stephanie: Different

John: Different

Stephanie: Projects.

John: Projects

Stephanie: And

John: And

Stephanie: Most

John: Most

Stephanie: Of

John: Of

Stephanie: Them

John: Them

Stephanie: Are

John: Are squirreled

Stephanie: Squirreled

John: Away

Stephanie: Away in

John: In offices.

Stephanie: Offices and they end up working

John: Working on

Stephanie: On very

John: Very minor.

Stephanie: Minor components of a larger whole. And

John: The

Stephanie: The

John: Thing

Stephanie: Thing

John: That

Stephanie: That

John: Allows

Stephanie: Allows a

John: A

Stephanie: Person

John: Person to

Stephanie: To move

John: Pass

Stephanie: Past

John: That

Stephanie: That and

John: And work

Stephanie: Work

John: On

Stephanie: On the

John: The bigger

Stephanie: Bigger

John: Picture,

Stephanie: Picture, the

John: The bigger

Stephanie: Bigger

John: Story

Stephanie: Story is

John: Is communication

Stephanie: Communication skills

John: Skills.

Stephanie: And the

John: The

Stephanie: Ability

John: Ability to

Stephanie: To relate

John: Relate

Stephanie: To

John: To

Stephanie: People

John: People

Stephanie: And

John: And

Stephanie: A

John: A

Stephanie: Willingness

John: Willingness

Stephanie: To

John: To

Stephanie: Understand

John: Understand

Stephanie: People.

John: People and

Stephanie: And being

John: Being

Stephanie: A

John: A

Stephanie: Bit

John: Bit

Stephanie: Of

John: Of

Stephanie: A

John: A

Stephanie: Generalist,

John: Generalist. I

Stephanie: I

John: Am

Stephanie: Am not

John: Not

Stephanie: The

John: The

Stephanie: Best

John: Best

Stephanie: Engineer

John: Engineer.

Stephanie: That I know. Far

John: Far

Stephanie: From

John: From

Stephanie: It.

John: It.

Stephanie: There

John: There

Stephanie: Are

John: Are

Stephanie: A

John: A

Stephanie: Lot

John: Lot

Stephanie: Of

John: Of people

Stephanie: People I

John: I work

Stephanie: Work

John: With

Stephanie: With that

John: That are

Stephanie: Are much

John: Much

Stephanie: Stronger

John: Stronger

Stephanie: Than

John: Than

Stephanie: I

John: I am

Stephanie: Am technically,

John: Technically, but

Stephanie: But my

John: My skill

Stephanie: Skill set

John: Set

Stephanie: Is

John: Is

Stephanie: Really

John: Really

Stephanie: Valuable

John: Valuable

Stephanie: Because

John: Because

Stephanie: It

John: It

Stephanie: Allows

John: Allows

Stephanie: Me

John: Me

Stephanie: To

John: To

Stephanie: Tackle

John: Tackle

Stephanie: The whole instead

John: Instead of

Stephanie: Of working

John: Working on

Stephanie: On just

John: Just

Stephanie: One

John: One small

Stephanie: Small piece

John: Piece

Stephanie: Of

John: Of

Stephanie: It

John: It and

Stephanie: And never

John: Never getting

Stephanie: Getting to

John: To see

Stephanie: See the

John: The forest.

Stephanie: Forest.

John: So working on the full I would imagine is much more rewarding for you.

Stephanie: That's

John: That's

Stephanie: Where

John: Where

Stephanie: The

John: The passion

Stephanie: Passion

John: Comes

Stephanie: Comes from.

John: From.

Stephanie: May.

John: You

Stephanie: You

John: Could

Stephanie: Could be

John: Be

Stephanie: Designing

John: Designing.

Stephanie: The pavement

John: Pavement

Stephanie: That

John: That

Stephanie: You're

John: You're

Stephanie: Going

John: Going to

Stephanie: To install

John: Install

Stephanie: At

John: At

Stephanie: The

John: The

Stephanie: Park,

John: Park,

Stephanie: Which

John: Which

Stephanie: Is

John: Is nice.

Stephanie: Nice. Or

John: Or

Stephanie: You

John: You

Stephanie: Could

John: Could

Stephanie: Be

John: Be

Stephanie: Designing

John: Designing.

Stephanie: The park, you know,

John: And

Stephanie: So. And really

John: Really

Stephanie: Getting to

John: Factor.

Stephanie: Factor into them that the pavement design and what's the playground equipment going to look like? There's a whole like skill set

John: Yeah.

Stephanie: There. What are the ball fields going to look like? All of that.

John: And

Stephanie: And

John: You

Stephanie: You

John: Get

Stephanie: Get to

John: To

Stephanie: Pick

John: Pick

Stephanie: Up

John: Up all

Stephanie: All

John: These

Stephanie: These additional

John: Additional

Stephanie: Little

John: Little

Stephanie: Pieces

John: Pieces of

Stephanie: Of information

John: Information.

Stephanie: Because you are managing the big picture.

John: For a student, even though you might not know where you're headed, the key is to understand is that you are headed somewhere, but only.

Stephanie: Only if you keep moving forward, wherever

John: Wherever you

Stephanie: You

John: Are

Stephanie: Are

John: And

Stephanie: And

John: Whatever

Stephanie: Whatever

John: You're

Stephanie: You're

John: Pursuing.

Stephanie: Pursuing.

John: Invest

Stephanie: Invest

John: In

Stephanie: In

John: That.

Stephanie: That. Put

John: Put yourself

Stephanie: Yourself into

John: Into

Stephanie: That.

John: That.

Stephanie: And

John: And if

Stephanie: If it's

John: It's

Stephanie: Not

John: Not that

Stephanie: Their trajectory

John: Trajectory.

Stephanie: That you were

John: We're hoping

Stephanie: Hoping you

John: You would

Stephanie: Would

John: Be

Stephanie: Be on,

John: On

Stephanie: Then

John: Then take

Stephanie: Take

John: The

Stephanie: The

John: Time

Stephanie: Time

John: To

Stephanie: To

John: Figure

Stephanie: Figure

John: Out

Stephanie: Out

John: What

Stephanie: What

John: That.

Stephanie: That trajectory

John: Is

Stephanie: Is.

John: It the

Stephanie: The

John: Important

Stephanie: Important

John: Thing

Stephanie: Thing is

John: To

Stephanie: To

John: Keep

Stephanie: Keep

John: Moving?

Stephanie: Moving forward.

John: Get

Stephanie: Get the

John: The.

Stephanie: Experience. Learn

John: Learn

Stephanie: How

John: How

Stephanie: To

John: To

Stephanie: Bring

John: Bring

Stephanie: That

John: That

Stephanie: Varied

John: Varied experience

Stephanie: Experience together

John: Together

Stephanie: Into

John: Into a

Stephanie: A

John: Package

Stephanie: Package

John: That

Stephanie: That makes

John: Makes

Stephanie: You who

John: You

Stephanie: You

John: Want

Stephanie: Want to

John: To be

Stephanie: Be.

John: Beautiful.

Stephanie: In

John: In

Stephanie: College,

John: College,

Stephanie: I

John: I

Stephanie: Learned

John: Learned how

Stephanie: How to

John: To

Stephanie: Be

John: Be a

Stephanie: A part

John: Part

Stephanie: Of

John: Of a

Stephanie: A team,

John: Team,

Stephanie: You

John: You

Stephanie: End

John: End up

Stephanie: Up

John: Kind

Stephanie: Kind of

John: Of fluctuating

Stephanie: Fluctuating

John: In

Stephanie: In the

John: That

Stephanie: Leadership

John: Leadership

Stephanie: Team

John: Team

Stephanie: Member

John: Member.

Stephanie: Role in your career, or

John: Or

Stephanie: At

John: At least

Stephanie: Least

John: I

Stephanie: I

John: Do

Stephanie: Do in

John: Mine.

Stephanie: Mine. Sometimes

John: Sometimes

Stephanie: I

John: I'm

Stephanie: Am

John: Team

Stephanie: Team

John: Meet

Stephanie: Lead and

John: And

Stephanie: Sometimes

John: Sometimes.

Stephanie: I'm a member of a team and I'm reporting to somebody else. And

John: And that

Stephanie: That is

John: Is

Stephanie: Something

John: Something that

Stephanie: That I

John: I learned

Stephanie: Learned

John: How

Stephanie: How to

John: To do

Stephanie: Do

John: Really

Stephanie: Really well

John: Well

Stephanie: In

John: In

Stephanie: College

John: College

Stephanie: Through

John: Participation

Stephanie: Participation

John: On

Stephanie: On

John: Projects

Stephanie: Projects

John: And

Stephanie: And other

John: Other

Stephanie: Team

John: Team's skills.

Stephanie: Skills. So I

John: I think

Stephanie: Think

John: The

Stephanie: The

John: Actual

Stephanie: Actual content

John: Content

Stephanie: Of

John: Of

Stephanie: My

John: My classes,

Stephanie: Classes, the

John: The

Stephanie: Details,

John: Details, I

Stephanie: I

John: Don't

Stephanie: Don't

John: Really

Stephanie: Really use

John: Use them.

Stephanie: Them on

John: On a

Stephanie: A day

John: Day to

Stephanie: To day.

John: Day,

Stephanie: I

John: I use

Stephanie: Use

John: A

Stephanie: A

John: Lot

Stephanie: Lot

John: Of

Stephanie: Of math.

John: Math.

Stephanie: I

John: I use

Stephanie: Use a little

John: A little bit

Stephanie: Bit

John: Of

Stephanie: Of chemistry.

John: Chemistry's.

Stephanie: I use a lot of

John: Physics,

Stephanie: Physics, but

John: But not

Stephanie: Not

John: To

Stephanie: To the

John: The

Stephanie: Level

John: Level

Stephanie: That

John: That I

Stephanie: I

John: Did

Stephanie: Did

John: In

Stephanie: In

John: School.

Stephanie: School.

John: In

Stephanie: In

John: Simple

Stephanie: School

John: Exercises.

Stephanie: Exercises. More

John: More

Stephanie: Than

John: Than

Stephanie: That,

John: That, I

Stephanie: I

John: Use

Stephanie: Use

John: I

Stephanie: I think

John: Think I've

Stephanie: I gained

John: Gained the

Stephanie: The

John: Ability

Stephanie: Ability to

John: To

Stephanie: Problem

John: Problem

Stephanie: Solved

John: Solved

Stephanie: And

John: And

Stephanie: To think

John: Think

Stephanie: Logically

John: Logically

Stephanie: Through

John: Through concepts

Stephanie: Concepts

John: And

Stephanie: And

John: Kind

Stephanie: Kind of

John: Of

Stephanie: Break

John: Break

Stephanie: Them

John: Them

Stephanie: Down

John: Down and

Stephanie: And

John: Make

Stephanie: Make

John: Connections

Stephanie: Connections to

John: To

Stephanie: Build

John: Build them

Stephanie: Them back

John: Back up.

Stephanie: Up. Yes, this is a way

John: Mm

Stephanie: To say

John: Hmm.

Stephanie: It. So.

John: You're pointing there to something we often refer to in the Big Picture podcast. Is

Stephanie: Is

John: That

Stephanie: That

John: There's

Stephanie: There's

John: So

Stephanie: So

John: Much

Stephanie: Much

John: More

Stephanie: More

John: Going

Stephanie: Going on

John: On as

Stephanie: As

John: You're

Stephanie: You're

John: Learning

Stephanie: Learning

John: Content.

Stephanie: Content.

John: You're

Stephanie: You're

John: Not

Stephanie: Not

John: Just

Stephanie: Just

John: Learning

Stephanie: Learning

John: This

Stephanie: This

John: Stuff.

Stephanie: Stuff.

John: Well,

Stephanie: Well,

John: Let

Stephanie: Let

John: Me

Stephanie: Me

John: Say,

Stephanie: Say,

John: As

Stephanie: As

John: You're

Stephanie: You're

John: Learning

Stephanie: Learning

John: This

Stephanie: This

John: Stuff,

Stephanie: Stuff,

John: You're

Stephanie: You're

John: Learning

Stephanie: Learning

John: So

Stephanie: So

John: Much

Stephanie: Much

John: More

Stephanie: More

John: Than

Stephanie: Than just

John: Just the

Stephanie: The

John: Stuff

Stephanie: Stuff

John: You're

Stephanie: You're

John: Learning

Stephanie: Learning

John: About

Stephanie: About

John: Yourself.

Stephanie: Yourself.

John: You're

Stephanie: You're

John: Learning

Stephanie: Learning

John: How

Stephanie: How

John: To

Stephanie: To

John: Work

Stephanie: Work

John: With

Stephanie: With

John: Others.

Stephanie: Others.

John: You're

Stephanie: You're

John: Gaining

Stephanie: Gaining

John: Certain

Stephanie: Certain

John: Thinking

Stephanie: Thinking

John: Skills

Stephanie: Skills. That

John: That become

Stephanie: Because

John: Life

Stephanie: Life

John: Skills

Stephanie: Skills

John: That

Stephanie: That

John: You

Stephanie: You carry

John: Carry

Stephanie: With

John: With you.

Stephanie: You. Right.

John: And

Stephanie: You're

John: You're just

Stephanie: Just

John: Pointing

Stephanie: Pointing

John: Out

Stephanie: Out here

John: Here

Stephanie: That.

John: That you

Stephanie: He's

John: Start using

Stephanie: Using

John: And

Stephanie: And

John: Probably

Stephanie: Probably

John: Have

Stephanie: I've

John: Forgotten

Stephanie: Forgotten

John: A

Stephanie: A lot

John: Lot of

Stephanie: Of the

John: The detailed

Stephanie: Detailed stuff

John: Stuff

Stephanie: That

John: That you

Stephanie: You

John: Learned

Stephanie: Learned

John: In

Stephanie: In physics

John: Physics, chemistry.

Stephanie: Chemistry.

John: But there's some broad brush stroke stuff that you got. And you've got some basic understanding

Stephanie: Right.

John: You can talk intelligently about maybe some chemistry. You don't have the nitty-gritty detail in there.

Stephanie: Exactly.

John: But what you got from that chemistry course is far more than the nitty-gritty detail. It's those life skills.

Stephanie: Exactly. So really just I think college can teach a person how to think logically and how to break down a problem and make

John: Make connections

Stephanie: Connections

John: Between

Stephanie: Between

John: Things

Stephanie: Things

John: That

Stephanie: That

John: May

Stephanie: May

John: Initially

Stephanie: Initially

John: Seem

Stephanie: Seem

John: Desperate.

Stephanie: Desperate. That is key to success in my field. Regardless

John: Regardless,

Stephanie: Of what type of project I'm working on.

John: Those are things you mean you're really using day to day basis?

Stephanie: Yes.

John: Yes.

Stephanie: Those are those are the skills that define my job much more than your engineering

John: Engineering's.

Stephanie: Skill set.

John: It's

Stephanie: It's much

John: Much

Stephanie: More

John: More

Stephanie: Broad than that. We have all

John: All

Stephanie: Kinds

John: Kinds

Stephanie: Of

John: Of specialists

Stephanie: Specialists that

John: That

Stephanie: Can weigh

John: Way.

Stephanie: In to

John: You

Stephanie: Tell

John: Tell

Stephanie: Me

John: Me

Stephanie: What

John: What

Stephanie: Kind of concrete

John: Concrete

Stephanie: Design I need for this location.

John: Location

Stephanie: You know, the chemical properties that are going to work in this

John: Space

Stephanie: Space or when that landslide

John: Is likely

Stephanie: Is likely

John: To

Stephanie: To

John: Go.

Stephanie: Go, what's

John: What's

Stephanie: The

John: The

Stephanie: Probability

John: Probability of

Stephanie: Of it? There are all kinds of people that can weigh in on that.

John: Person

Stephanie: But what is more valuable is the person that can synthesize that information

John: Bringing

Stephanie: And bring it together

John: Together

Stephanie: Into a cohesive

John: A story

Stephanie: Story and then go about drawing connections and problem solving to try to

John: From

Stephanie: Move from that

John: That story?

Stephanie: Story into a solution.

John: But then beyond that, you are now the story holder put you in the position of telling that story to the general public. The people who will be living that story

Stephanie: Yes.

John: Down to the staircase at Encinitas.

Stephanie: It that. Exactly. Exactly. And that's

John: The

Stephanie: In the

John: Office

Stephanie: Office. We

John: Will

Stephanie: Talk

John: Talk about

Stephanie: About this a lot on a day to day. How are we going to communicate

John: This

Stephanie: This

John: Story.

Stephanie: Story? What exactly does the public need to understand and how can we break that down into bytes that are going to make sense to someone

John: Yeah,

Stephanie: Who's not coming from the same type of background?

John: Yeah. Well, what's

Stephanie: So

John: The challenge?

Stephanie: It's a lot of fun.

John: Stephanie, thank you so much for joining us here at the Big Picture podcast. It's an honor to have you on board. All the best to you, especially that staircase and this

Stephanie: Thank you very much. My pleasure.

John: Stephanie Keller, one happy senior civil

Stephanie: It's.

John: Stephanie Keller, one happy senior civil engineer, city of Encinitas, California. For more on the Beacon Beach Staircase project, visit our show notes at [Conceptual Science.com](http://ConceptualScience.com). Epilogue: A year following this interview, Seacliffs in Encinitas, not far from the proposed staircase, collapsed, killing three people. Theme Music by Zach Jeffrey. Musical Flourishes by John Andrew. Our thanks to Stephanie Kellar, civil engineer, project manager and communicator. Production assistance from Greg Simmons and CPro Music. Note of appreciation to all instructors using Conceptual Academy. Thank you for your support and to the hardworking student. Our thanks to

you as well for your learning efforts, which we see as the path to making this world a better place. There's a bigger picture. That's good chemistry. Good chemistry to you.