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Construction Life Cycle Presentation

- What is the construction life cycle?
  - A structured process that outlines the key stages of a construction project—from the initial idea to completion.
- Why is it important?
  - It ensures that projects are completed efficiently, safely, and within budget while meeting quality and client expectations.
- What are the 6 phases of the construction life cycle?
  - Phase 1: Conception
  - Phase 2: Design
  - Phase 3: Pre-Construction
  - Phase 4: Procurement
  - Phase 5: Construction
  - Phase 6: Closeout
- What is Phase 1: Conception?
  - Where ideas take shape through planning, feasibility studies, and initial funding.
- What is Phase 2: Design?
  - Turning concepts into detailed drawings and plans.
- What is Phase 3: Pre-Construction?
  - Winning the job and planning how to begin the work behind the scenes.
- What is Phase 4: Procurement?
  - Acquiring materials, services, and equipment needed to start construction.
- What is Phase 5: Construction?
  - The execution phase where the project comes to life with safety, quality, schedule, and cost controls.
- What is Phase 6: Closeout?
  - Final inspections, documentation, approvals, and handing over the project to the client.
- What is a general contractor(gc)?
  - The main company or person responsible for managing an entire project from start to finish, coordinating subcontractors (like plumbers, electricians), materials, budget, schedule, and ensuring the project meets quality and safety standards for the owner.
- What is a subcontractor?
  - A specialized company or individual hired by a general contractor (GC) to perform specific, skilled tasks, like electrical, plumbing, or HVAC.
  - Rather than managing the entire project; they are independent, experts in their trade, and report to the GC, who remains responsible to the project owner.

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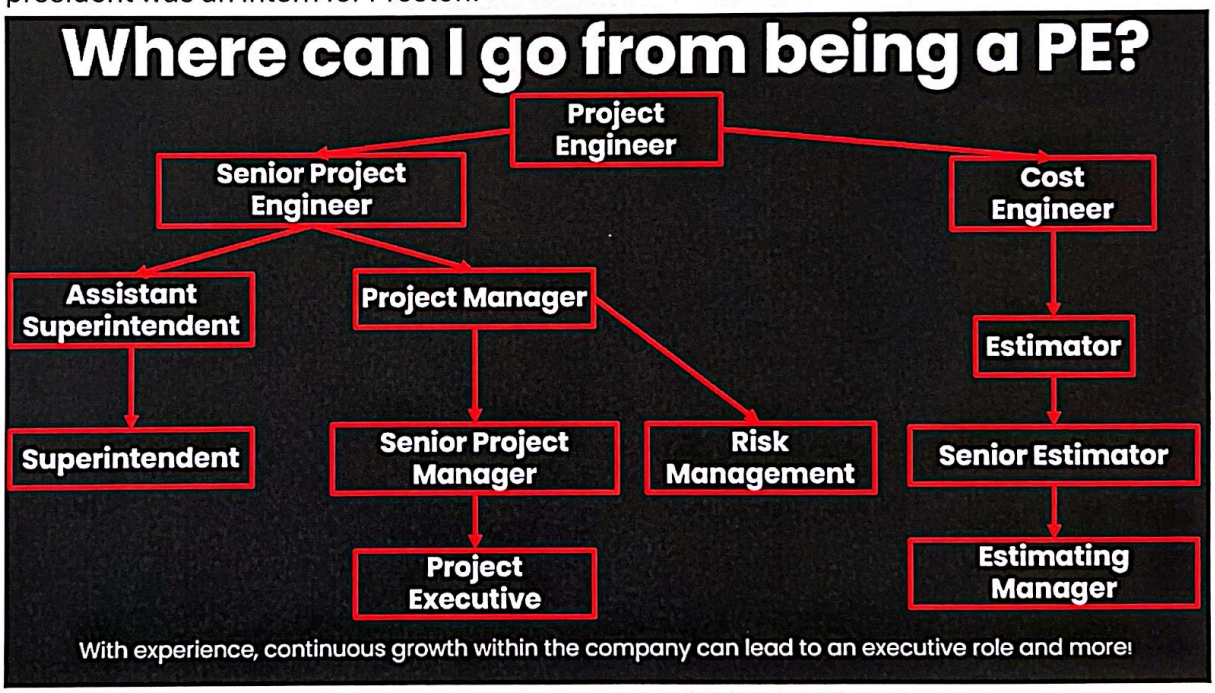
Intro to Being a PE Presentation

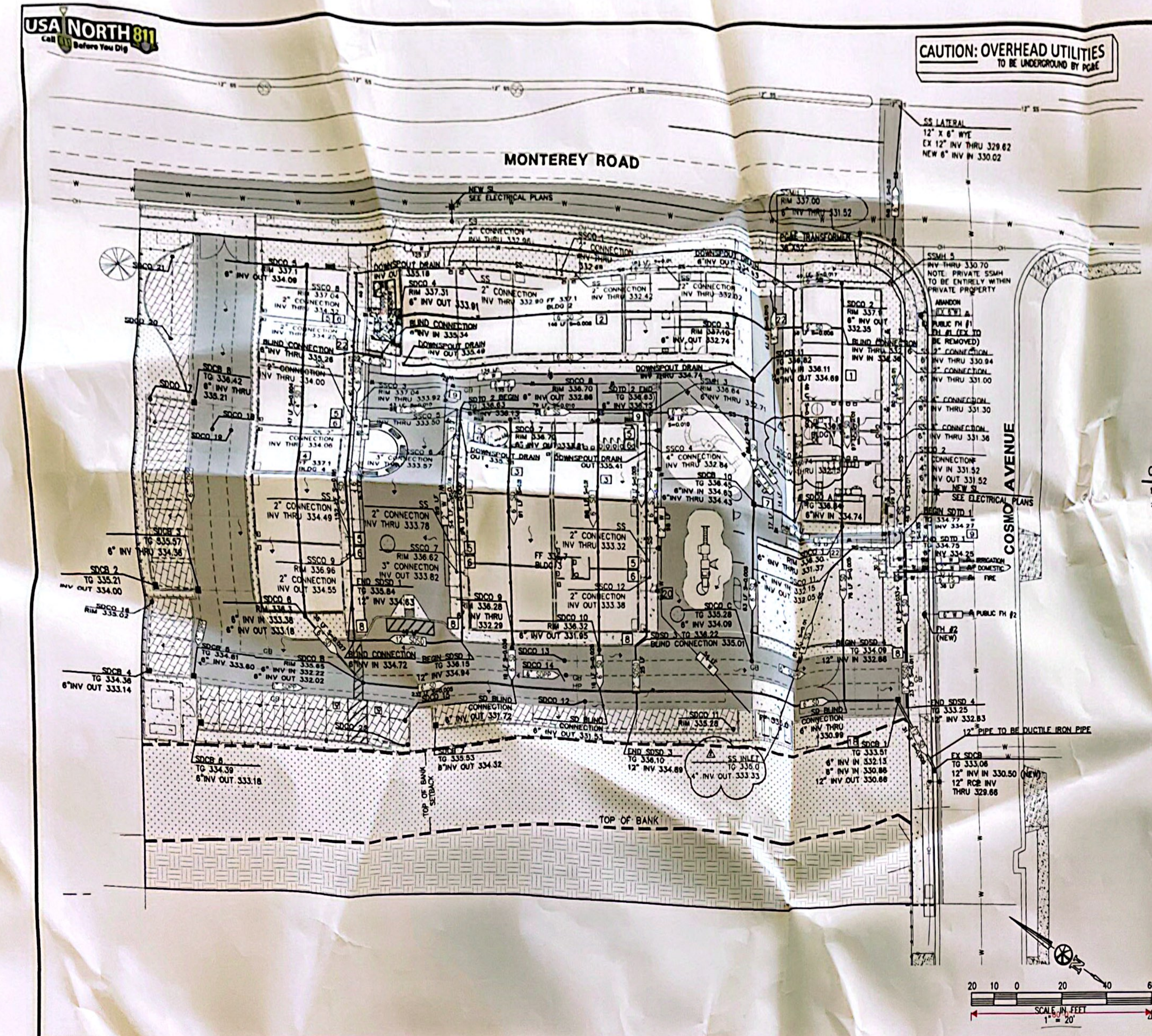
- What is a Project Engineer (PE)?
  - A technical and administrative support role, bridging design and field work, responsible for tasks like scheduling, document control, quality control, cost tracking, subcontractor coordination, safety oversight, and technical problem-solving to help the Project Manager and Superintendent ensure projects are built safely, on time, and within budget, often spending significant time on-site.
- Is there PE growth within Preston?
  - Yes, our PE's have gone into many different roles within Preston. Even our current company president was an intern for Preston!
  - 

- What is Preconstruction?
  - This is the foundational stage before any physical building starts, focusing on detailed planning to set the project up for success.
- Wha is during Construction?
  - This is the physical building phase where the plans are executed on-site.
- What is Closeout (after construction)?
  - This final stage involves wrapping up the project and transitioning it to the owner/general contractor.

Utility Sheet Takeoff Activity

Samia Bandekar

#	QUESTION	ANSWER
1)	Find the north arrow on your sheet. Which direction is the top of the page?	Northeast
2)	Look for the scale. How many feet in the field equal 1 inch on the utility sheet?	20 feet 1" = 20'
3)	Locate SDCO B and SDCO 6 on the utility sheet. Using the abbreviations legend in the upper right corner, write down what SDCO stands for.	Storm Drain Cleanout
4)	Using your engineering ruler, measure the distance between SDCO B and SDCO 6. What is that distance?	35 feet.
5)	Locate PUBLIC FH #2. Using the abbreviations legend, write down what "FH" stands for.	Fire Hydrant.
6)	How long is the portion of piping between the FH and the water main in the street?	~ 22 feet.
7)	What is the abbreviation for a sanitary sewer manhole?	SSMH
8)	Find Sanitary Sewer Manhole #1. The abbreviations "RIM" and "INV THRU" are shown next to it. RIM = elevation of the manhole lid. INV THRU = elevation of the bottom of the structure. What is the depth of this manhole?	337 (rim) − 331.52 (inv) = 5.48 feet.
9)	Locate the median on Monterey Road and measure the distance between the median and the curb on the northeast side of the new building.	~ 50 feet → ~50'.
10)	There is one domestic water lateral serving the property. Identify the location where this lateral connects to the water main within the public right-of-way.	waterline (W). 2" W → Domestic.
11)	This domestic water service requires one water meter and one backflow prevention device. Identify the locations where these appurtenances are to be installed.	BFP → Domestic. WM
12)	Measure the distance from the offsite water main to the backflow prevention device.	32'
13)	A domestic water POC (point of connection) is the location where the water piping connects to a building. Count the number of domestic water POCs on the plan.	25.
14)	Where is Waldo?	[5, 6].



LEGEND

- PROPOSED SD PIPE
- PROPOSED SANITARY SEWER
- PROPOSED WATER
- PROPOSED SD TRENCH DRAIN
- PROPOSED SD PERFORATED PIPE
- PROPOSED SD SLOTTED DRAIN
- PROPOSED SD CLEANOUT
- PROPOSED SD ATRIUM GRATE
- PROPOSED SD INLET
- PROPOSED SD MANHOLE
- PROPOSED SS MANHOLE
- PROPOSED SS INLET
- PROPOSED SS CLEAN OUT
- PROPOSED WATER GATE VALVE
- PROPOSED BACKFLOW PREVENTER
- PROPOSED WATER METER
- EXISTING SS MANHOLE (TO ABANDON)
- EXISTING SS LINE (TO ABANDON)
- GB — GRADE BREAK
- PROPERTY LINE

CITY STANDARD DETAILS & NOTES

1. SANITARY SEWER PIPES SHALL BE PVC SDR 26 OR APPROVED EQUAL. SANITARY SEWERS AND CLEANOUTS SHALL BE CONSTRUCTED PER CITY STANDARD DETAILS S-1-III AND S-1-14.
2. STORM DRAIN SHALL BE CONSTRUCTED PER CITY STANDARD DETAILS SD-I & II, SD-1 TO 4, AN STORM DRAIN PIPES AND PERFORATED PIPES TO BE PVC SDR 35 OR APPROVED EQUAL.
3. ALL GRATES TP BE TRAFFIC RATED, ADA COMPLIANT AND HEEL PROOF.
4. FOUNDATION DRAINS TO USE NDS 6" ROUND ATRIUM GRATES WITH NDS CATCH BASIN OR APPRO EQUAL.
5. ALL WATER LATERAL PIPES SHALL BE CONSTRUCTED PER CITY STANDARD DETAILS W-I-IV, 1, 9, 14 AND 16-19. PRIVATE FIRE WATER SYSTEM TO BE C900 (OR APPROVED EQUAL). PRIVATE DOMESTIC WATER SYSTEM TO BE SCH 40 (OR APPROVED EQUAL).
6. DOMESTIC WATER LATERAL MANIFOLD PER CITY STANDARD DETAIL W-3.
7. BACKFLOW PREVENTERS PER CITY STANDARD DETAILS W-6 (IRRIGATION), 7 (DOMESTIC) & 10.
8. FIRE HYDRANT PER CITY STANDARD DETAIL W-13.
9. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF THE EXISTING WATER LINE ALONG MONTEREY RD. NOTIFY THE CITY ENGINEER AND CITY PUBLIC WORKS INSPECTOR IF THE WATER LINE WILL BE UNDER NEW CURB AND GUTTER

CONSTRUCTION NOTES

1. BLDG 1 FOUNDATION DRAIN GRATES TO BE SET AT TOP OF RAT SLAB TG=FF-2.33'= 334.57
2. BLDG 2 FOUNDATION DRAIN GRATES TO BE SET AT TOP OF RAT SLAB TG=FF-2.33'= 334.77
3. BLDG 3 FOUNDATION DRAIN GRATES TO BE SET AT TOP OF RAT SLAB TG=FF-2.33'= 334.37
4. BLDG 4 FOUNDATION DRAIN GRATES TO BE SET AT TOP OF RAT SLAB TG=FF-2.33'= 334.77
5. SEE PLUMBING PLANS FOR SS CONNECTIONS AT FRONT OF BLDG & INVERT ELEVATIONS
6. SEE PLUMBING PLANS FOR WATER CONNECTIONS AT FRONT OF BLDG & INVERT ELEVATIONS
7. WATER AND STORM UTILITY CROSSING SEE DETAIL F/13.
8. SEE DETAIL E/13 FOR 6" SD PIPE CONNECTIONS TO 12" SLOTTED DRAIN.
9. SEE DETAIL E/12 FOR 6" TD TO 6" SD CONNECTION.
10. 6" PVC SDR 35 BLIND CONNECTION STORM DRAIN WITH 6" PVC SDR 35 TO USE FERNCO PROFLEX 6" COUPLER.
11. 6" STORM DRAIN TRENCH DRAIN PER DETAIL E/12.
12. 12" PERF. PIPE SLOTTED DRAINS PER DETAIL A/18.
13. 6" STORM DRAIN CLEAN OUTS PER DETAIL B/18.
14. SEE LANDSCAPE PLANS FOR IRRIGATION DESIGN.
15. THE FIRE RISERS ARE PROPOSED TO HAVE A CAGE. THE FINAL LOCATION OF THE FIRE RISERS TO BE DETERMINED BY THE UNDERGROUND FIRE SERVICE SUBMITTAL.
16. DOWNSPOUTS FOR BUILDINGS 1,2, 3 AND 4 TO CONNECT BELOW GRADE AT FRONT OF BUILDING AT CONNECTION POINTS SHOWN.
17. STORM DRAIN INLETS TO BE CONSTRUCTED WITH TRASH CAPTURE DEVICE PER DETAIL C/18.
18. SDCB 1 TO BE INSTALLED WITH A SUMP SEE DETAIL I/12.
19. FOR PERFORATED PIPE AND STORM DRAIN INLET CONNECTIONS SEE DETAIL G/13.
20. 2" X 2" X 1" TEE FOR WATER CONNECTION TO TRASH ENCLOSURE
21. SSMH 5, 1, AND 3 AND SSCO 8 SHALL BE DESIGNATED SANITARY SEWER TEST MANHOLES FOR BUILDING 1, 2, 3 AND 4 RESPECTIVELY.
22. MINIMAL CLEARANCE BETWEEN SEWER AND STORM PIPE. ADD CONCRET CAP OR EQUAL

REGISTERED PROFESSIONAL ENGINEER ALEXANDRA FARROS-HOLFNER No. 81247 CIVIL STATE OF CALIFORNIA

Revisions

NO.	DESCRIPTION	DATE	BY
2	SEWER ALIGNMENT & TRASH ENCLOSURE GRADES	11/09/23	AFH
1	SEWER TEST MANHOLES REDEFINED	09/21/23	AFH

WORK ACCEPTED: INSPECTOR:

IMPROVEMENT PLANS

BY: DATE:

DRAWN: PI DESIGN: AFH

CHECKED:

APPROVED: DATE:

Scott C. Creer RCE 58879 City Engineer Exp. Date 06/30/2025

HOR: 1"=20'
VERT: N/A
JOB NUMBER: 18105

CITY OF MORGAN HILL
City of Morgan Hill
Public Works Department
17575 Peak Ave, Morgan Hill, CA 95037 (408)778-6480, Fax (408)779-7236

UTILITY PLAN

FILE NUMBER: PWPR2020-0014
PRINT DATE: 11/14/2023
SHEET NUMBER: 11

20th Jan 2026

Preston Pipelines Shadow An Engineer — MESA.

Quality, integrity & service.

Brenda — Training Coordinator.

Oven ⇐ Vega Estimator

Liz — Senior HR Generalist.

family owned Biz.

Small fam. Tsunsparency → Financially.

Clients → Google, Apple, PLCs.

Mike Preston → CEO.

53 yrs exp.

Values	Culture	Safetty.
Customers	Teamwork	Vigilantly
Safety	Collab.	precautions
people	Impact.	
quality		
Financial		
responsibility		

opportunities.

Josh Young Rob
Preston pipelines, Dirt. ——
Chris Ramos.
Lauren Frekell. → VP.
Kyle Preston. Hardwork
Julia Salguero Honesty
D&T → Stronger. loyalty.

Career growth → High Value.

started as Project engineers to top.

Tips. — Build relations.
(Strong team behind)
Ego aside, proactive, absorb around
Communication is key → face to face
conversation
Construction is ever changing
environment

4 offices → near SJSU one

6-7 safety manager → safety crew.

15 estimators send to PM

4 Salesmen.

Laurie Cerrito → Boston

4 management groups.

PE open areas. Each office has proj exec.

Conner McGinnis - PE
Katie Westhoff

5-6 technicians shoot pipe which goes to CAD.

36 inch plans.

Fabian Perez → PE in the

7PL → 5PM → 1 Pex.

Equipment, material, processing

Dcan → Head of DTS patch.
250 calls/day 400 emails/day

Yard.
Nowlong to order material - PL

Utility - pump stations, storm water drains.

Bucket → Digging
Bucket → Ladder } → excavation

manhole →

waterfitting → 4 way.

25–30% restock charge
inventory tax.
Street sweeper → cleaner expensive
700 buckets/day.

Smallest truck → 5 yards dirt.
8 tons.

Water pipe → Duct pipe → PVC
fittings end of pipe.

8 feet wide manhole
4 feet wide usually.

fireline → Dedicated fire.

Supply rental material equipment

~~Straps~~ Water fill.
rings for manhole.
corrugated NDPE.

Reinforce concrete pipe → Heavy

Water pump → contaminated so dust down.

2 foot trenching bucket.

Sections of hydraulics.

pipe 24 inches. 12 feet deep.

eg:- Stanford project hydraulics

Soil engineers.

Storm & Sewer systems

VCP - Sewer systems - Cracks & leaks

City engineers should to make changes.

Catch Basin - Square grate on top.

Grattle - Pick up equipment in yard.

20 mechanics.

Sunny → custom welding.

~~40 pounds → a~~

excavators → 100 own

loaders → ≤4 own

≤2 crews → 2 excavators foreach.

Baid a poojeet → 12 inch pipe 400 ft/day.

~~mpasks~~ & spoils.

Buckets → expensive → rebuilt.

80,000 Pounds → spread badout.

Break on roads.

Comparing home depot → Plywood

Water WECO → solar ~~panels~~ light plants →

winter time usage.

96 inch pipe → 4-5 miles

physically demeaning - laborious.

odd job hrs

personal property tax.

Grinders & loaders, oil pods.

trucks worn out → resubmit it

Biggest Water truck → 4000 gallon

Mixers

Red → Red equipment.

Diesel

Inspection 90 days → trucks.

trucking log → Monday.

300 vehicles on road.

Construction Life Cycle.

10yrs. → Jan McCoog Milpitas office
Project Exec.

4 → 1 in each office → Exec.

5 Key Phases of a Construction Project

Started in 2015 → Intern.

Guideline for engineer, owner, subcontractor.

Completed efficiently, safely & within budget while meeting quality.

P1 → Conception P2 → Design
P3 → Pre Construction P4 → Procurement
P5 → Construction P6 → closeout.

P1 → Planning, feasability & funding
Operational challenges → sites costly as feasability of land.
Environmental concerns.
Did project in Santa Clara → Contaminated groundwater feasability study.

P2 → Idea turn into buildable plans. Engineered drawings & specifications.

Owen → Budgeting → adjust design 3rd or 4th iteration of drawings. Schematic, Design development & Construction documents.

permissions & regulatory approval → 8 weeks. depends on agency & type of permit.

Budget cut ⇒ Balancing cost effectiveness & design.

Highest Quality not cheapest option.

2 Designable projects ⇒ pre construction phase involved → operate on relationship

P3 → Pre Construction phase.

General Contractor req. Subcontractor pricing & submit bid to owner

Most Contractor hire 30 Subcontractors

Review subcontract & read project docs.

Request control points from engineer for GPS as builts.

AutoCAD → control points to Calibrate System → Directions to specific Attings. Accuracy 0.1 feet. within 6 inches → BEAM Model

P4 → Procurement.
Submittals → Products ~~handed~~ submitted to engineer to see incompliance

NiKKi → Material Procurement deals.

P5 → low income housing project
Execution of work.
→ safety imp.

Change management → ~~Cost~~
field team worked with.
Schedule control
Cost control
Documentation.

Communication tool with owner & Contractor

→ Riser pipes., 3 water lines.
→ Nikki project engineer on job 23069.

GC verifies all scope work is complete.

Built BIM, warranties, Operations & Maintenance Manuals, training

Contracts Closeout.
Time impact analysis.
Request Equitable adjustment
Release retention.

Takeaways.

Structured process with defined phases.

Collab & Clear Comm at every stage.

Each phase builds on one bf it, helping project succeed.

Revit → Not used. AutoCad Navisworks viewer (CIVil | JD Tason)

end of 2022 – 2024 → Design & permit > 50% time

MKRi → 1 ½ yr → SJSU Alum Biochem.

Request info from engineer.

projects at once → 25.

PE:-

Entry level role in construction project management.

Performs mgmt & admin tasks in office.

Support for crews in field.

~~Works closely with:~~

Pre Construction → laying groundwork

Job info package.

Request for info (RFIs)

Material Quotes.

Material take-off.

laying groundwork.

subcontracts & submittals.

Budget Conform.

USA Tickets.

↳ Underground Service Alert.

Traffic Control plans & fix plan
Change Estimate tracking
timeland reviews.
Electric Plans Mgmt.
Plan change Pricing.

Reasons for Plan change occurs →
sidewalk round instead of sq-
Ordering materials.
Invoice processing.
Site visits/Meetings
Inspections & Requests
Testing.

Hoffman Construction check.
Closeout Permits.
Operation & Maintenance Manual
Warranty letter → 1 yr.

Utility sheet takeoff activity (Photo shared)

Moderator → Liz.

Speakers:- Reid Takamura

SJSU Alum → Angela Gonzalez

Jack Marangi - MS SJSU.

Cameron McGinnis

Brian Talentino → SJSU Alum

~~Alex~~

*Reid → Manual Work. Hand sketching Pricing. Physically looking timecards Bounce around 3 PMs.

Task driven.

Jack → Interned. ~~Being~~ full-time transitioned as he made relations

*Reid → Ready to work & learn. Deadlines, emergencies, phone calls.

Brian – Gathering all data. Checking Performance & materials. Risk Mgmt. SFO, Daly City, Treasure Island (current) → 3 projects. ↳ challenging.

Cameron – Berkeley, Oakland area.

~~Onsite~~

*Reid → Excavation done by crews. 42 crews. Subcontractor ~~for~~ we are. Learn. Underground Utilities → Unknown Conditions

Brian Preplanning & organization somewhere. Don't need to know everything. Drive. Construction mgmt.

*Ken

Intern Standout — Built on culture & ppl we have.
Hungry, humble & smart.
Trust, listen & learn.

Brush upon comm. skills, talk on phone, excel→time spend, trigonometry.

Confidence & open-mindedness.

where & who gonna be with → longevity
"Get to job not got to" → chore.
no.

Each site 3-5 PM teams.
No micromanagement but stay involved
Average age 27 → Hangout → team
friendly competition.

Client satisfaction → Hire over & overeager.
Avoid mistake → preplanning.

Listen.
Meet to go over something — 30 min

Gradschool & Work — Jack

Managers supportive.
Organized time.