



RENAISSANCE
CONSTRUCTION

QA/QC

Checklist

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Acoustical Ceiling Tile

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Are ceiling tile types, suspension systems, and hangers submitted and approved?
- Are seismic and bracing details included, where applicable?
- Are reflected ceiling plans (RCP) and coordination drawings reviewed?
- Are access panel locations and lighting/diffuser coordination shown?
- Are color, texture, and tile edge profiles (e.g., square, tegular) confirmed?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Do ceiling tiles match the approved submittals in type, pattern, and fire rating?
 - Are grid components (main tees, cross tees, wall angles) the correct size and style?
 - Are wire hangers, seismic struts, clips, and fasteners all present?
 - Are tiles and grid components clean, dry, flat, and free from damage?
 - Are all materials stored per manufacturer requirements, away from moisture and dirt?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Are hanger wires installed per spacing and attachment requirements?
 - Are seismic braces installed where required by code?
 - Is the grid level and aligned with architectural reference points?
 - Are fixtures, diffusers, and devices supported independently of the ceiling grid?
 - Are tiles installed squarely, with no visible gaps, warping, or misalignment?
 - Are special conditions (e.g., clouds, floating tiles, integrated lights) addressed?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Has overhead MEP rough-in (ducts, conduit, sprinkler lines) been completed?
 - Has the layout been marked and verified against the RCP?
 - Are access panels coordinated with above-ceiling valves and devices?
 - Has a pre-install meeting been held with trades and superintendents?

- Are permits or inspections required for seismic grid systems?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Has the above-ceiling work been inspected and approved prior to concealment?
 - Are city or third-party inspections required for seismic bracing?
 - Is a field review of grid levelness and anchoring complete?
 - Are punch list and walk-through inspections scheduled prior to occupancy?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Has the above-ceiling work been inspected and approved prior to concealment?
- Are city or third-party inspections required for seismic bracing?
- Is a field review of grid levelness and anchoring complete?
- Are punch list and walk-through inspections scheduled prior to occupancy?

Concrete - General

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Do we have Steel Shop drawings approved for embedded items?
- Review rebar shop drawings.
- Review concrete mix designs.
 - Verify compressive strength, specified slump, unit weight, water cement ratio, volume.
 - Which, if any admixtures are approved?
 - i.e.: air-entraining (higher elevations), water-reducing, retarding, accelerating, and superplasticizers.
 - Concerns with fly-ash?
- Review concrete curing (consider finishes, i.e. epoxy, flooring or other items affected by moisture).
- Review concrete finishes. (Brushed, stamped, smooth, exposed, etc).
- Review color selections, if applicable.
- Concrete tilt panel drawings, if applicable.
 - Review opening locations, reveals, door locations
 - Review concrete tilt panel type – use architectural drawings
 - Is there any conduits that need to be in wall?
 - Do the plumbers or electricians have any sleeves that need to be put in for penetrations?
- Review concrete formwork shop drawings, if applicable.
- Review embed shop drawings, if applicable.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?
- Are there embedded items supplied by others?

- **Specifications**

- Review the specifications and/or drawings pertaining to the related scope.
- Discuss procedures for completing the work.
 - Review laydown/setup area.
 - Review saw cutting / relief joint requirements.
 - Review any slope or grade changes.
 - Superintendent and foreman to review tilt panel form work and rebar prior to pour, if applicable.

- Review block-outs, and openings with concrete sub and related subcontractors, if applicable.
 - Discuss preventative applications to prevent curling, cracking, and other concerns.
- **Preliminary work and permits.**
 - Pad preparation.
 - Has the pad been certified?
 - Has the pad received termite pretreatment?
 - Has compaction testing been performed on any post-certification work such as U/G plumbing and electrical?
- **Testing and Inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Are City or Special inspections required?
 - Who will be scheduling all tests and inspections?
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Concrete - Foundations

- **Submittals**

- Review all submittals and/or submittal log.
 - Have mix designs, reinforcement details, and vapor barriers been approved?
 - Are formwork systems (panel or job-built) reviewed?
 - Are anchor bolt templates, embeds, and dowels submitted?
 - Are shop drawings for rebar coordinated with structural plans?
 - Are pour sequencing and cold joint locations identified?
- Are any submittals outstanding or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Is rebar on-site, straight, rust-free, and matching size/spacing from approved drawings?
 - Are concrete trucks, vibrators, and form oil ready and functional?
 - Are form ties, chamfer strips, bulkheads, and keyways prepared?
 - Are anchor bolts, templates, and embedded plates correct and staged?
 - Is the correct mix design being delivered (psi, slump, air content, etc.)?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Verify materials on-site:
- Review workmanship standards:
 - Are forms plumb, braced, and with clean lines or correct shape for earth-formed work?
 - Is rebar installed with proper clearances, bar supports, and tied per drawings?
 - Are construction joints located per spec with keyways or waterstops as required?
 - Are embeds and anchor bolts positioned accurately and supported?
 - Are tremie or chute lengths, slump, and placing methods suitable for the foundation type?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Has a pre-pour inspection been scheduled with engineer or city inspector?
 - Is formwork inspected for stability and dimensions?

- Are dowels or lap splices to other elements located and exposed?
- Are hold-downs or anchoring systems verified against plans?
- Are inspections or permits required for below-grade waterproofing?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Confirm pre-construction readiness:
 - Has a pre-pour inspection been scheduled with engineer or city inspector?
 - Is formwork inspected for stability and dimensions?
 - Are dowels or lap splices to other elements located and exposed?
 - Are hold-downs or anchoring systems verified against plans?
 - Are inspections or permits required for below-grade waterproofing?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Confirm pre-construction readiness:
 - Has a pre-pour inspection been scheduled with engineer or city inspector?
 - Is formwork inspected for stability and dimensions?
 - Are dowels or lap splices to other elements located and exposed?
 - Are hold-downs or anchoring systems verified against plans?
 - Are inspections or permits required for below-grade waterproofing?

Concrete – Slab on Grade

- **Submittals**

- Review all submittals and/or submittal log.
 - Has the slab mix design been submitted and approved?
 - Are vapor barriers, curing compounds, rebar/WWF, and joint details included?
 - Are pour strips, edge forms, and elevation benchmarks identified?
 - Is the placement plan with breaks, pour order, and finishing method provided?
 - Are equipment (laser screeds, trowel machines) accounted for?
- Are any submittals outstanding or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Are vapor barriers intact, clean, and lapped per spec?
 - Is WWF or rebar in place with correct supports and spacing?
 - Are keyways, dowels, or pour stop forms in place?
 - Are mix trucks and finishing equipment on-site and operational?
- Is curing method available (cure compound, wet blankets, etc.)?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Is subgrade compacted and tested with proper elevation and moisture?
 - Are elevation benchmarks visible and verified with laser levels?
 - Is the concrete placed continuously with correct consolidation?
 - Are control joints and construction joints placed per plan?
 - Is finishing done per spec (e.g., trowel, broom, exposed)?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-pour readiness:
 - Has the base course (AB) or insulation layer been reviewed and compacted?
 - Are sleeves, blockouts, and penetrations located and secured?
 - Are temporary edge forms braced and oil applied?
 - Are all rebar inspections completed and signed off?
 - Are curing and protection plans coordinated with weather conditions?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Are field tests conducted (slump, air, temp, and cylinders)?
 - Are load points and embedments reviewed before pouring?
 - Are test results uploaded and recorded properly?
 - Is the slab protected post-pour until 100% cured?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are tools and equipment inspected before use?
- Are crews wearing PPE (gloves, rubber boots, eye protection)?
- Is the pour area cordoned off to prevent early access?
- Is washout and water runoff controlled to prevent site contamination?

Drywall and Framing

- **Submittals**

- Review all submittals and/or submittal log.
- Are all submittals received, reviewed, and approved?
- Are they available on-site or accessible digitally?
- Do shop drawings coordinate with MEP and other trades?
- Are there discrepancies between submittals, RFIs, and contract documents?
- Have product data sheets, UL assemblies, and fire ratings been submitted?
- Are there any outstanding RFIs related to drywall or framing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?
- Verify materials on-site:
 - Do they match the approved submittals and shop drawings?
 - Are framing members (studs, tracks, headers) the correct gauge and size?
 - Are fasteners (screws, anchors, clips) compliant with submittals?
 - Are drywall types appropriate (e.g., fire-rated, moisture-resistant)?
 - Are corner beads, joint compounds, and tape within shelf life and properly stored?
 - Are any materials damaged or defective?
 - Are materials stored flat, dry, and protected from the elements?
 - Are accessories such as fire sealants and backing materials accounted for?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review installation standards:
 - Is framing spacing, gauge, and layout per contract documents?
 - Do drywall attachments follow ASTM C840 or GA-216?
 - Are fire-rated and deflection details properly installed?
 - Are acoustical separations and control joints included as required?
 - Has trade coordination been confirmed for in-wall components?
 - Is the work sequenced appropriately with other scopes?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-installation readiness:
 - Has all in-wall rough-in work (electrical, plumbing, data) been completed?
 - Are wall/framing layouts verified against architectural drawings?

- Has a pre-install meeting occurred with relevant trades?
- Are walls located and marked per plans?
- Are walls anchored properly to slab or structure, with seismic/lateral bracing if required?
- Have firestop and smoke seal coordination items been reviewed?
- Are all necessary permits in place for framing and drywall inspection?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for code and quality verification:
 - Are fire-rated assemblies clearly identified and labeled?
 - Are any pull tests or fastening inspections scheduled?
 - Has the framing inspection been scheduled with the local building department?
 - Is visual inspection underway for plumb, alignment, and fastening?
 - Are acoustical requirements verified (e.g., insulation, sealants)?
 - Is photographic or field documentation required for QA records?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are materials stacked safely without blocking egress routes?
- Are fall protection measures in place for elevated work?
- Are SDS sheets on-site for joint compound, sealants, adhesives?
- Are overhead work zones flagged for awareness?
- Are emergency exit paths clearly marked and unobstructed?

Door Hardware

- **Submittals**

- Review all submittals and/or submittal log.
 - Review hardware sets, manufactures, and devices.
 - Is panic hardware used where required?
- Are any submittals outstandings or missing?
- Has the owner or architect made any changes?
- Are the doors prepped for the hardware?
- Who is installing the frames, the doors and then the hardware?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Who is handling the final keying?
- Review ADA and Life Safety codes.
- Discuss procedures for accomplishing the work.
 - Does the contractor's schedule align with Renaissance's?
- Is there any electrified hardware requiring in-wall conduit?

- **Preliminary work and permits**

- Ensure preliminary work is correct.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Doors

- **Submittals**

- Review all submittals and/or submittal log.
 - Review door swing, handing and size.
 - Review door and frame types and finishes.
 - Metal – Primed
 - Wood – Strained
 - Do they need to match existing (TI)?
 - Review if frame type is correct. CMU, stud framed, KD, etc.
 - Are the correct clips provided?
 - Review if any blocking is required.
 - Review fire rating requirements if applicable.
 - Review undercuts if applicable.
 - Any special preparation for door hardware?
- Are any submittals outstandings or missing?
- Has the owner or architect made any changes?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Discuss procedures for accomplishing the work.
 - Does the contractor's schedule align with Renaissance's?
- Review miter joints and acceptable tolerances.
- If applicable, review Quiet Rock installation requirements with Western Integrated Frames.
- Coordinate with drywall/texture and paint subcontractor re touch up after frame installation.
- How do we protect the frames? Discuss protection methods.

- **Preliminary work and permits**

- Review rough openings prior to frame installation regarding potential issues or concerns.
Any issues that need to be addressed?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?

- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Earthwork and Grading

- **Submittals**

- Review all submittals and/or submittal log.
 - Has the grading and drainage plan, and compaction requirements been submitted?
 - Are soils reports and geotechnical recommendations included?
 - Are submittals for fill material, moisture control agents, or additives reviewed?
 - Is the sequencing of cut/fill activities clearly documented?
 - Are GPS grading model files coordinated with the surveyor?
- Are any submittals outstanding or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Is fill material stockpiled, clean, and compliant with project specs?
 - Is stabilization or moisture conditioning material on hand, if required?
 - Are compaction tools (sheepsfoot, roller, plate compactor) available and functional?
 - Is proof-rolling equipment coordinated and scheduled?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Is top surface scarified per Geotechnical report?
 - Are subgrade elevations and slopes established and verified?
 - Are fill lifts placed in uniform, compacted layers per geotechnical requirements?
 - Is over-excavation and recompaction performed where required?
 - Are slopes stable and within safety and erosion limits?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Has site clearing and grubbing been completed?
 - Are survey control points established for grading reference?
 - Have underground utilities been located and protected?
 - Are permits in place for hauling, dust control, or grading activity?
 - Has a pre-activity meeting covered sequencing, equipment, and safety?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- **Prepare for QA verification:**
 - Are field density (compaction) tests scheduled per testing plan?
 - Is moisture content monitored during compaction operations?
 - Is proof-rolling or visual subgrade inspection performed prior to next trade?
 - Are lift thickness and rolling patterns documented?
 - Are soils inspector's daily reports filed and reviewed?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are haul routes, access roads, and backing zones clearly defined and marked?
- Are workers protected from equipment blind spots with spotters and vests?
- Is dust suppression in place (watering, wind fencing)?
- Are spoil piles and slopes maintained at safe angles?

EFIS / Stucco

- **Submittals**

- Review all submittals and/or submittal log.
 - Has the full wall assembly (base coat, mesh, finish coat) been submitted?
 - Are waterproofing membranes and WRB layers included?
 - Are color and texture samples approved and documented?
 - Are manufacturer guidelines and warranty requirements provided?
 - Are joint details, termination edges, and sealant transitions clearly shown?
- Are any submittals outstanding or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Is lath, foam, mesh, and adhesive in good condition and protected from moisture?
 - Are base coat, finish coat, and additives stored per manufacturer guidelines?
 - Are expansion joints, reveal trims, and corner beads on-site and staged?
 - Are WRB layers intact, lapped, and free from damage?
 - Are fasteners and mechanical attachments available and per spec?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Is lath or EPS board securely fastened with proper spacing and attachment
 - Are WRB layers installed shingle-style and sealed at penetrations?
 - Is base coat applied in even thickness with reinforcing mesh embedded?
 - Are control joints and expansion joints installed at the correct locations?
 - Is finish coat applied uniformly with consistent texture and no shadowing?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-application readiness:
- Has the substrate been inspected for cleanliness, flatness, and attachment?
- Are all flashing, weep screeds, and sealant joints in place?
- Has masking been applied to adjacent surfaces and windows?
- Has scaffolding or lift equipment been staged safely and inspected?
- Are required inspections scheduled before finish coat is applied?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Are WRB and lath installations reviewed and approved by the inspector?
 - Is a pull test or adhesion test required for base coat bonding?
 - Are mock-ups reviewed and approved for color/texture match?
 - Are application temperatures and cure times tracked and documented?
 - Is a warranty inspection by manufacturer or third party required?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are respirators or masks in use when sanding or spraying finish coats?
- Is scaffolding tied off, inspected daily, and used per safety standards?
- Are workers protected from caustic materials or drying agents?
- Are adjacent areas protected from overspray or drips?

Electrical – Rough in and Trim

- **Submittals**

- Review all submittals and/or submittal log.
 - Are panelboards, breakers, conduit, wire, and devices approved?
 - Have fixture cutsheets, lighting layouts, and dimming systems been reviewed?
 - Are one-line diagrams and riser diagrams current and coordinated?
 - Are low-voltage systems (fire alarm, data, AV, access control) included?
 - Are any RFIs or coordination issues pending resolution?
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Do rough-in materials (conduit, boxes, MC cable) match approved submittals?
 - Are conductors, connectors, and fittings undamaged and appropriately stored?
 - Are light fixtures, devices, plates, and panels present and staged for trim?
 - Are low-voltage cables, j-hooks, and devices secured and organized?
 - Are all materials UL-listed and within shelf life (e.g., sealants, foam)?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Are conduit runs installed cleanly, supported properly, and within bend limits?
 - Are junction boxes, pull boxes, and homeruns labeled?
 - Are outlet boxes mounted at proper height and aligned with finish wall layout?
 - Are panel installations neat, labeled, and compliant with NEC clearances?
 - Are branch circuits terminated with correct color code and labeling?
 - Are ground wire terminations installed per project spec?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Has rough-in work passed preliminary inspection where applicable?
 - Has coordination been completed with other trades (e.g., duct, plumbing)?
 - Has access to electrical rooms and service points been confirmed?
 - Are approved permits posted on-site?
 - Has a rough-in inspection been scheduled and passed?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Are continuity and insulation resistance tests completed for rough-in?
 - Has panel torque testing or arc flash labeling been performed (if required)?
 - Are GFCI, AFCI, and low-voltage device function checks scheduled?
 - Are lighting controls and dimming systems tested and commissioned?
 - Is the final electrical inspection scheduled with the authority having jurisdiction (AHJ)?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are lockout/tagout procedures being followed during equipment access?
- Are wire management and temporary power areas safe and clean?
- Are panels secured and labeled for emergency responders?
- Are arc flash boundaries established and placarded?

Elevators

- **Submittals**

- Review all submittals and/or submittal log.
 - Review elevator shaft dimensions versus architectural plans.
 - Review elevator shaft height requirements with overall building height.
 - Does the overall building height coincide with elevator shaft height and required clearances.
 - Have cab finishes been selected? If so, review.
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Discuss procedures for accomplishing the work.
 - Scope Review per contract documents and other communication.
 - Review Ventilation requirements
 - Review procedures for installing cab inside the shaft
 - If using masonry, will you hold the opening and the key back?
 - If metal framing shaft, how will you hold the opening and then frame it back?
 - Confirm elevator room current size and location
 - Review access panels, keying, self-closing, and other requirements
 - Review elevator shunt switch requirements, if applicable
 - Does the contractor's schedule align with Renaissance's?
- Review applicable code requirements for the jurisdiction.
- Review pit depth and size.
- Coordinate sump pump location and size.
- Review any outlets and lighting as required in shaft.
- Smoke detector as required in shaft – typically located at the top
- Review tolerances of vertical shaft walls and surfaces
- Review clearance requirements above elevator shaft.
- Review waterproofing requirements on pit.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.

- City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Will we need an operator to use the elevator prior to Final of building?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Fire Alarm

- **Submittals**

- Review all submittals and/or submittal log.
- Review shop drawings. Typically a deferred submittal, may require an additional permit coordinated by subcontractor.
 - Have the drawings been approved by the governing jurisdiction?
- If a Tenant Improvement, has the subcontractor visited the site to verify the existing system?
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Discuss procedures for accomplishing the work.
 - Does the contractor's schedule align with Renaissance's?
- Review project fire alarm system – review governing jurisdiction requirements. Life safety is a major issue.
- Discuss and clarify scope as indicated in contract documents.
- Review FACP Labeling Requirements.
- Does the cable need to be plenum rated or will conduit be utilized?
- Is a visual and audible device required by the governing jurisdiction?

- **Preliminary work and permits**

- Deferred submittal approval and set of approved plans provided to TRC
- Ensure preliminary work is correct and permits are on file.

- **Testing and inspections**

- Has the owner/tenant established a monitoring service
- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Do we need to test building for the Emergency Responders Radio Frequency?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Fire Extinguishers / Cabinets

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Review the following:
 - Sizing – Verify depth of FEC against depth of wall.
 - Finish
 - Graphic Color
 - Sidelight?
 - Fire extinguisher and cabinet quantities.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Discuss procedures for accomplishing the work.
 - Does the contractor's schedule align with Renaissance's
- Coordination openings for FECs with framers.
- Verify touch-up paint available for post-installation.
- Verify all FEC locations.
- Will caulking around FECs be required?
- Review FE type and size.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.

- Review closest emergency facilities locations.

Fire Protection

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Ensure that the fire sprinkler heads that are selected meet or exceed the requirements/needs of the project.
 - Coordinate concealed heads at any millwork, doors or partitions that may strike a normal head.
 - Are there aesthetic concerns from the architect?
 - Are there specific temperature ratings that need to be met?
- Review tamper switches and all devices to coordinate with electrical if required
- Will spare heads be required?
- Shop drawings
 - Typically a deferred submittal, may require an additional permit coordinated by subcontractor
 - Have the drawings been approved by the governing jurisdiction?
 - If No, have they been submitted to the city?
 - Coordinate heads with soffit framing and can light locations, if applicable.
 - Verify and coordinate heads under stairs and under non-coiling rollup doors.
 - Verify heads are not located along future tenant demising wall locations.
 - Verify layout in riser room with electrical gear and roof access ladder if applicable.
- If a Tenant Improvement, has the subcontractor visited the site to verify the existing system?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Discuss procedures for accomplishing the work.
 - Does the contractor's schedule align with Renaissance's?
 - Designated area for pipe cutter and welding.
 - All hangers to top chord only on joists.
 - Coordination with fire alarm subcontractor.
 - When setting heads in ceiling subcontractor shall wear gloves to prevent any markings on the ceiling and/or system.
 - Reminder – all fire sprinkler heads cannot be painted.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Typically a deferred submittal. Has TRC received a copy of the municipality approved shop drawings on file?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Must have a required pressure test with the Fire Dept. that has jurisdiction, followed by a flush of system that is required to be witnessed by fire inspector BEFORE you are allowed to connect to the system created by your subcontractor.

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Flooring

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
 - Have product data, finish samples, and adhesives been submitted and approved?
 - Are color, pattern, and finish selections consistent with project documents?
 - Are transition details and underlayment systems included?
 - Are any RFIs related to substrate prep, adhesive type, or finishes outstanding?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Verify materials on-site:
 - Do flooring materials (carpet, VCT, LVT, wood, etc.) match the approved submittals?
 - Are all materials for installation on-site and in good condition?
 - Are adhesives, primers, and sealants properly stored and within shelf life?
 - Are materials acclimating per manufacturer's recommendation?
 - Are moisture/meter readings taken for slabs (for glue-down installations)?
 - Are protective coverings available to protect finished floors?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review installation requirements:
 - Are substrates clean, flat, dry, and properly prepared?
 - Are flooring installation methods in line with manufacturer specs?
 - Are transitions and thresholds clearly defined and detailed?
 - Is slab moisture mitigation required?
 - Are patterns/layouts confirmed with ownership or architect?
 - Are underlayment materials or floor prep required (e.g., leveling compound)?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-installation readiness:
 - Is all rough-in work completed (electrical, plumbing, MEP)?
 - Are temperature and humidity levels within manufacturer guidelines?
 - Has a moisture test been performed and documented?
 - Has the layout been marked and approved (directional arrows, seam locations)?
 - Are permits or inspections required for flooring adhesives or finishes?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Confirm pre-installation readiness:
 - Is all rough-in work completed (electrical, plumbing, MEP)?
 - Are temperature and humidity levels within manufacturer guidelines?
 - Has a moisture test been performed and documented?
 - Has the layout been marked and approved (directional arrows, seam locations)?
 - Are permits or inspections required for flooring adhesives or finishes?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are MSDS/SDS documents for adhesives and sealants on-site?
- Are volatile compounds and ventilation methods reviewed and discussed?
- Are protective gloves, kneepads, or respirators in use as required?
- Are walk-off zones or “cure times” protected and clearly marked?
- Is trip/slip protection in place where needed?

Glass and Glazing

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Check your scope for the correct type and size of system
 - Center glaze vs. offset glaze.
 - 4" or 6" (or even custom size).
 - Verify color of system, glass, and caulking.
- Verify opening sizes and all dimensions
- Verify glass type i.e. tempered, spandrel, vision
- Check for tempered glass 24" below and within 24" of doors
- Verify correct hardware
- Coordinate ownership of structural attachment to framing systems
- Who owns the clips and welding?
- Where does the edge of slab below the line up with relation to the overhead framing?
- Do not lose the sticker on the approved glass sample. This sticker shows the design makeup and may be needed for future reference
- On insulated systems, internal glass banding is designated to match the caulking color so you do not have any exposed silver banding which is visible from outside the glass systems
- On all butt glazed 1" insulated systems make sure to specify on the submittals the internal glass banding is designated to match the caulking color so you don't have an exposed silver banding which is visible from outside the glass systems.
- Eased edges are required.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Discuss procedures for accomplishing the work.
 - Does the contractor's schedule align with Renaissance's?
- Review contract scope and documents.
- Review scope to ensure interior partition walls align on mullions or have end caps.
- Who has interior caulking?
- Review procedures for field measurement prior to glass procurement
- Installation details to watch for:
 - Verify the sill is anchored into a bed of caulking to seal at all sill anchor points

- Verify end dams are used and sealed to prevent water from leaking beyond jambs at wall
 - Verify and confirm proper caulk joint size at perimeter of system to opening
 - Discuss location and type of weep holes. The system is designed to leak internally and drain out the sill through weep holes or weep slots.
 - Watch out for any precast or stone surface applied components being grouted back to the aluminum systems
- If using a butt glazing system:
 - On all butt glazed systems specify eased edges on glass and look to these edges as the actual finished surface they are. Other systems have these edges hidden by flashing. On butt glazed systems these are the finished edges
 - Check the color of the spacers used between the glass panes
- Glass doors
 - Typically install in finished openings with some backing in the opening for attachment
 - Opening must be framed squared and the jambs must be plumb and straight – coordinate well with framer
 - Coordinate “finished” opening dimension
- Protect glass from other trades such as welding and grinding which will burn or melt and smear the glass, even from a distance.
 - Protect from trade damage is complete
 - Who is responsible for protection?
- Cleaning: Be very wary of damage to glass from improper cleaning methods. We have seen a lot of scratches from poor cleaning
 - i.e. grout on aluminum frames = bad
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
 - Water leak testing
 - Use appropriate methods of testing
 - Use an approved 3rd party
 - The “hose” test is not an acceptable means of testing a window system for leaks.

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

HVAC

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
 - Review manufacturer – using equivalent or better?
 - Verify brand of thermostat and desired functions.
- Review sound requirements for isolation devices.
- Review HVAC controls submittal for product data and specifications.
 - Review controls against a sequence of operations, if applicable.
- Review disconnects for the units. Are disconnects unit mounted or provided by electrician?
- Does there need to be a service outlet installed for the unit?
- Review ceiling heights with elevations of ductwork. Any conflicts?
- Review type of ductwork. i.e. spiral vs. hard duct.
 - When is welded stainless steel ductwork required?
 - Hospitals, food prep.
- Review insulation R value and internal vs. external application.
- Review roof curbs.
 - Verify depth with roofer to provide enough depth.
 - Are the roof curbs adjustable?
 - Provide curb submittals to steel subcontractor with layout to get steel installed where required.
 - Review roof curb layout and roof layout coordination plan provided by mechanical subcontractor.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Discuss procedures for accomplishing the work.
 - Does the contractor's schedule align with Renaissance's?
 - Is it possible to have the ductwork prefabricated in runs prior to being delivered to site? This can save time in the field if appropriate preparations are made.
 - Who is providing roof curbs? Is there a detail in the plans provided.
 - Who insulates the roof curb?
 - Are burglar bars required?
 - Can your roof system handle the load from the rooftop mechanical equipment?

- Coordinate with electrician regarding.
 - Lighting and ductwork coordination – review for any conflicts.
 - Wiring disconnects, smoke dampers, etc.
 - Roof stub ups to units.
 - Duct smokes – who wires to unit for shutdown and who hangs LED?
- Coordinate power requirements for VAV or terminal units, if required.
- Coordinate roof curb layout.
 - Layout to be provided by mechanical along with a roof curb layout .coordination plan.
 - Includes coordination with electrical and plumbing stub ups.
 - Are units required to be screened?
- Discuss procedures for installing roof top units.
 - Crane vs. helicopter
 - Helicopters tend to be more costly, but depending upon the location of the units and maneuverability around the jobsite, a crane may be a better solution.
 - Review procedures for cutting holes and setting roof curbs
 - Who will be cutting the holes?
 - Coordinate roof patching with roofing subcontractor (if tenant improvement use shell roofing subcontractor to avoid voiding the warranty), as appropriate.
 - Remember to use appropriate hole protection.
 - Typically provided by mechanical sub.
- Coordinate condensate lines. Do they need to be insulated?
- Coordinate with fire alarm regarding .
 - Smoke dampers and detector locations.
 - Power requirements.
 - Interlock requirements.
- Review locations and heights for thermostats.
- Review architectural RCP and mechanical drawings for grill and return locations. Any conflicts?
- Review architectural RCP and mechanical drawings for conflicts between returns/grilles and lighting fixtures. Any conflicts noted?
- If equipment runs during construction, who maintains operations? Filter replacement at project turnover?
- Coordinate supply & location for all access hatches needed for devices behind drywall.
- Elevators, if applicable, require ventilation in the shaft and elevator equipment room.
- Review scope and contract documents.
- Review flashing requirements.

- Who is responsible for condensate lines?
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
 - Coordinate inspection of rough-in and operation (both municipality and architect, as applicable) before project progresses too far. Be sure to get an inspection sign-off.
 - Third party duct detector testing.
 - Who is responsible?
 - Start up and balancing.
 - Test and balance report
 - Outside air verification. Make sure outside air is calculated correctly. If outside air is calculated incorrectly, doors and openings could be forced to remain open due to the added pressure.
 - Training for owner – coordinate with sub.
 - How many copies of the manual are required?
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Insulation

- **Submittals**

- Review all submittals and/or submittal log.
 - Verify type of insulation and location – there are various types including: batt, rigid board, loose fill, reflective, blown in, and blanket.
 - Does the insulation make sense for the application?
 - Review required R-values, material, thickness
 - Review thickness against wall depth and/or location of installation
 - Review scrim product data and color, as applicable
 - Note that if not applied correctly, paint can destroy the flammability rating of the scrim material
 - Special insulation
 - Insulated concrete panels, if applicable
 - Sandwich panel with rigid board insulation and pins
 - Mechanical insulation, if applicable
 - Coordinate requirements for insulation with mechanical subcontractor. More information noted in HVAC preparatory meeting.
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Discuss procedures for accomplishing the work.
 - Does the contractor's schedule align with Renaissance's?
 - Review drawings regarding each type of insulation and the location.
 - Coordinate with framer regarding one side drywall and wall preparation
 - Coordinate any overhead/roof insulation first
 - Review process of insulating roof structure
 - Review materials and colors, as applicable
 - Coordinate any roof penetrations, HVAC hangers and other mechanical items attached to roof structure
 - Coordinate any hangers or penetrations with electrician, plumber
 - Contemplate the finished product and client. Will the scrim be easily seen from below?
 - If yes, instruct all contractors to keep the ceiling/roof area clean and crisp.

- Any special project considerations? If so, please list below.
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Landscaping

- **Submittals**

- Review all submittals and/or submittal log.
 - Review planting requirements for materials.
 - Review sizes and planter requirements per plans and specifications.
 - Is there a certain time of the year the materials should not or should be planted?
 - Review trees, plants, and materials prior to planting for acceptance.
 - Invite landscape architect to review and approve.
 - Review decomposed granite sample, if applicable.
 - Screened?
 - Screened DG typically remove the very fine materials and will provide more substantial pieces.
 - Will a stabilizer be required?
 - If yes, review product data and MSDS.
 - Review irrigation system against plans and specifications
 - Review materials specified for system
 - Review control submittal, as applicable
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Beware of backfill at planter areas – possible handwork.
- Discuss procedure(s) for accomplishing the work.
 - Coordinate sleeves with grading and/or concrete contractors for irrigation system.
 - Confirm fine grade of landscaping to +/- a tenth prior to landscaping.
 - Confirm elevations at planter areas throughout sitework.
 - Check for certification of retention areas prior to landscaping.
 - Review locations of power, water and other underground piping locations with planting requirements.
 - Are there any conflicts?
 - If yes, describe how conflict(s) are to be addressed.
 - Coordinate responsibility for watering plants during construction.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Coordinate courtesy walk with municipality inspector
 - Will they count and inspect every single material?
 - Verify height, sizes, and counts?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Lighting

- **Submittals**

- Review all submittals and/or submittal log.
 - Review against plans and specifications
 - Confirm quantities of each fixture
 - Review mounting heights and locations
 - Review architectural versus electrical plans for locations
 - Typically, architectural overrides electrical
 - Review electrical trim color.
 - Review selected switch type.
 - Dimmer, toggle, sensors, etc.
 - Review egress plans and emergency lighting/signage.
 - Review type, size, and color.
 - Does what is provided look sufficient?
 - Review site lighting requirements.
 - Review photometric site plan and electrical site plan.
 - Confirm locations.
 - i.e. light pole that is to be located in an island has power provided to that location.
 - Review product data against plans and specifications.
 - If tenant improvement, review any demolition plans against photometric and site lighting plans to verify remaining fixtures, as applicable.
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Who is providing light pole bases, if applicable?
- Discuss procedure(s) for accomplishing the work.
 - Confirm electrical provisions for lighting.
 - Review switching sequence.
 - Review electrical trim color.
 - Ivory vs. white.
 - Review layout, architectural RCP, and electrical layout for conflicts.
 - Typically architectural RCP overrides electrical for layout.

- Review layout against mechanical, especially ductwork.
- Review electrical lighting layout against mechanical and architectural RCP. Review to ensure that grilles and returns are not directly adjacent to light fixtures.
- Coordinate any backing required for mounting the fixtures in walls or ceilings prior to drywall.
- Will any of the light fixtures require additional bracing?
- Coordinate with ACT and ceiling treatment contractor.
 - If using ACT, coordinate ceiling tiles for cutting in light fixtures.
 - Contractors shall use gloves to prevent damage and fingerprints on tile.
- Any special considerations.
 - Cold storage facilities.
 - Extreme temperatures may affect the effectiveness or brightness of the light fixture. Coordinate with electrical engineer, electrician, and/or architect.
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
 - Coordinate courtesy walk through with fire marshal and inspector regarding emergency lighting and signage requirements.
 - Coordinate site lighting courtesy walk with municipality.
 - Verify lights meet all of the site light codes, as applicable.
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Masonry

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Verify masonry unit sizes.
- Review masonry steel lintels.
- Review masonry type.
 - Integral color masonry units.
 - If specified these units can take several months to procure. These units should be pre-purchased and submittals and approvals completed during the preliminary phase of the project to save a place in the fabrication line.
 - Color variations. If possible, present the worst case scenario in color variations.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?
- Is the block special order? Does it need any additives (IWR or Color)?
- Does Mortar need IWR or Color?

- **Specifications**

- Review scope and contract documents.
- Who is providing concrete footings?
- Who is providing masonry steel lintels?
- Discuss procedure(s) for accomplishing the work.
 - Review contractor provided schedule.
 - Review concrete footing details.
 - This is typically a concrete item. The reinforcing steel that is provided for the mason must be installed to work modularly with the block so that it comes up in an open cell. This needs to be coordinated between concrete and masonry contractors.
 - Review shoring requirements, as applicable.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.

- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Metal Decking

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Coordinate with Shop drawings – Roof and floor framing.
- Review product data against plans and specifications.
- Verify Welding Certificates
- Steel Deck Attachments
 - Steel deck has traditionally attached by puddle welding to the members below. This process is slow and tedious. A more recent development that is becoming more prevalent is pinning the deck to the members below. If your subcontractor wants to pin the deck they will need to submit on their system or you will need to see what the engineer originally specified. Some systems may require specification.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Coordinate temporary bracing, as required.
 - Flash screens for welding operations and blankets, as required.
 - As-built throughout procedure.
 - Coordinate pinning requirements.
 - Coordinate overlay requirements.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Metal Fabrications

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Shop Drawings.
 - Review dimensions and verify drawings against structural and architectural.
 - Review sizes and type of each material.
 - Review areas clouded or questioned by the detailer.
- Verify Welding certificates.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Coordinate temporary bracing, as required.
 - Flash screens for welding operations and blankets, as required.
 - Review welding requirements.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Metal Joists

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Shop Drawings (roof and floor framing), as applicable.
 - Review dimensions and verify drawings against structural and architectural, as applicable.
 - Review sizes and type of each material.
 - i.e. open web, type K, square ended or under-slung ended.
 - Review areas clouded or questioned by the detailer, as applicable.
- Joist calculations – need to be reviewed by structural engineer.
- Verify Welding certificates.
- Product data as applicable.
- Photograph or make a copy of the joist tag. This will contain valuable information on the joist and will be useful in the close out manuals.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - DO NOT modify joists in the field.
 - Contact manufacturer and structural engineer regarding any issues.
- Coordinate temporary bracing, as required.
- Flash screens for welding operations and blankets, as required.
- Unload carefully, using appropriate and safe methods.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?

- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Millwork

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Shop drawings.
 - Verify location and type of all finishes.
 - Verify dimensions with floor plans and any framed walls/preliminary work.
 - Review material samples.
 - For example, you want to avoid putting p-lam in wet areas. Solid surface is recommended.
- Review hardware submittals (pulls, stand-offs, etc).
- Review dimensions against ADA standards.
- Review against any millwork details provided in the drawings.
 - Is there a backsplash or is the backsplash provided by others?
- Review the support details.
 - Is the support provided sufficient for the purpose?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Review contractor provided schedule against project schedule.
 - Review any backing requirements.
 - Who is providing and installing the backing?
 - If not millwork sub, coordinate a backing layout diagram.
 - Coordinate with plumber for sink and faucet templates for countertops, if any.
 - Coordinate caulking requirements.
 - Millwork or countertop/backsplash to wall?
 - Countertop to backsplash?
 - Coordinate with owner/architect regarding grommet and/or hole locations.
 - Review tolerances for gaps between materials.
- Plan and prepare for protection of surface after installation.
 - Some of the finishes can scratch or dent very easily. Be sure to coordinate the appropriate protection for the materials.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Support test
 - Physically test the strength of the millwork for the application

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Ornamental Metals

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Shop drawings.
 - Review dimensions and verify drawings against structural and architectural.
 - Review sizes and type of each material (including beams, joists, embeds, etc).
 - Review areas clouded or questioned by the detailer.
- Verify Welding certificates.
- Review material and finishes.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Coordinate temporary bracing, as required.
 - Flash screens for welding operations and blankets, as required.
 - Review layout and locations.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Review backing and support layout for acceptance or compliance, if applicable
- Review surfaces for acceptance.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.

- Review contractor provided safety plan, if applicable.

Overhead Doors

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Review selected type and size.
 - There are various types of overhead doors including sectional steel, rolling service, high performance, fire doors, security grilles.
 - There are also various types of operators.
 - Can be side, trolley or center mounted depending upon the door type.
- Review quantity of doors.
- Review system requirements.
 - Review electrical requirements.
 - Review clearance requirements.
 - Review control requirements.
- Review material and finish.
 - Doors can be painted. Do not paint after edge seals have been attached. The door will then be painted shut. Paint prior to the edge seal installation to prevent destroying the edge seal.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Review contractor provide schedule and review against project schedule.
 - Review clearances and rough opening dimensions.
 - Coordinate with framer and/or concrete sub.
 - Double check electrical requirements, if any and coordinate with electrician.
 - Coordinate operators with any dock levelers or dock equipment, if any.
 - Discuss appropriate adjustment at the end of the project.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.

- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Clarify municipality requirements regarding overhead doors.
 - If an interior fire rated door in a fire rated wall, there needs to be a thermal link. In the event of a fire, the link will break and close the door.

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Paving and Surfacing

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Review asphalt mix design.
 - Review against plans and specifications.
 - Density, voids in mineral aggregate, air voids, voids filled with asphalt, temperature, and oil content.
 - Review against soils report.
- Review ABC materials.
- Review import material with soils report requirements, if applicable.
 - Coordinate testing with special inspector.
- Review pavement design. Does it appear to be capable of handling the traffic estimated for the project?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
 - Review soils report
- Discuss procedure(s) for accomplishing the work.
 - Discuss procedure(s) for accomplishing the work.
 - Review MAG and/or city details regarding off-site work, if applicable
 - Review details for subgrade, ABC, and asphalt scopes
 - Coordinate testing for any import fill with special inspections
 - Coordinate compaction and testing for subgrade, ABC, and asphalt scopes
 - String line the ABC prior to paving to verify consistent and proper grading
 - Prior to laying asphalt
 - Ensure proper compaction
 - Verify area clean and prime
 - Review suitability of spreading and paving equipment
 - Review temperature of material
 - Ensure proper thickness is obtained
 - Review mixture against approved submittal during the lay down process
 - Temperature: review mix temperature as asphalt can only increase in compaction if the oil is fluid enough

- Review any weather considerations
 - Rolling pattern will vary with temperature throughout the day
 - Wind accelerates the cooling of the asphalt, may form a crust on asphalt pavement that leads to heat checking
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
 - Verify grades and preliminary work is acceptable.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
 - ABC density testing.
 - Courtesy walk with municipality regarding requirements for paving and surfacing.
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.
- **Extra Information**
 - Fundamentals of pavement design.
 - Observe and sample subgrade soils, perform lab testing, and calculate anticipated loads the pavement will encounter during its design life using traffic count information. Estimate traffic loading by using the average annual daily traffic, traffic growth rate, percent of trucks, and the vehicle classification percentage.
 - Problems & Solutions.
 - Subgrade problems and reasons.
 - Subgrade does not meet compaction.
 - Improper equipment.
 - Rolling with a tractor or other non-compaction equipment.
 - Roller too small.
 - Disks or teeth do not penetrate deep enough.
 - Improper construction.
 - Material was not processed deep enough.
 - No enough water added.
 - Material needs to be ripped and redone.

- Import material.
 - Contamination (hazardous materials).
 - Does not meet specifications.
- Subgrade is too soft and pumping.
 - Too much water.
 - Solution.
 - Scarify and air dry (time).
 - Scarify and treat chemical (cost).
- ABC Problems, Causes, and Solutions.
 - Failing compaction tests.
 - Improper compaction.
 - Not enough moisture.
 - Too thick of lift.
 - Improper equipment.
 - Lime/cement treated base.
 - Gradation is not within specifications.
 - Contact manufacturer.
 - ABC has low areas.
 - This can cause asphalt overruns, puddles, and thin asphalt.
 - String line the ABC prior to paving to verify consistent and proper grading.
- Asphalt problems and solutions.
 - Asphalt is alligator cracking and failing.
 - Subgrade has failed.
 - Over-saturated.
 - Improper AC depth.
 - Poor construction on pavement section.
 - Solution.
 - Remove asphalt and ABC and rework the subgrade and rebuild the pavement section.
 - Puddles on new asphalt.
 - Caused by roller marks, poor grading or thin asphalt.
 - Understand tolerances laid out in the specification for the project.
 - Puddles out of specification.
 - String line and patch.
 - R&R in critical areas.
 - Segregated areas.
 - Caused by workmanship and large aggregate mixes.
 - Skin patch.
 - Seal coat.
 - Type II slurry seal.

- Reheat and compact (infrared).
 - R&R in severe areas.
- In some cases the manufacturer should be involved.
- Over-rolling.
 - Caused by excessive rolling while mix is still hot.
 - Reduces the overall strength of the asphalt pavement.
 - Mirror over rolling is mostly aesthetic and will need to be monitored during the life of the pavement.
 - R&R is necessary in extreme cases.
- Edge cracking and crescent cracking.
 - Occurs mostly along islands, curbs, and unconfined edges.
 - Severe cases occur in the drive away from the joint.
 - Indicates base failure or loss of support.
 - Minor cases will require crack sealing and have to be watched over time.
 - Extreme cases will require R&R.
- Shear and equipment marks.
 - Caused by vehicles and equipment turning wheels on new asphalt.
 - Displaces asphalt from the top of the pavement.
 - In extreme cases can penetrate to the base.
 - Minor cases requires heating and rolling or skin patching.
 - Major cases require R&R.
 - Prevention.
 - Sanding.
 - Barriers.
- Debris in asphalt.
 - Caused by trash, cans, and bottles left under paving.
 - Over time they will emerge through the asphalt.
 - Require R&R.
- Bumps with crack in paving.
 - Caused by expansion under the pavement in the base or subgrade.
 - Mostly caused by weeds but can be caused by metal in some recycled concrete bases oxidizing.
 - Heating and rolling (leaving the cause).
 - Remove and replace.
 - Prevention – use a pre-emergent prior to paving for vegetation and certified clean recycled PCC.
- Chipped and cracked concrete.
 - Caused by equipment and heavy loads on concrete.
 - Prevalent on edges.
 - Minor cases can be patched or left.

- Remove and replace in cases where there is displacement or heavy cracking.
- Asphalt on concrete and buildings.
 - Caused by overspray of asphalt or tracking on shoes and equipment.
 - Must be power washed immediately.
 - Major cases on buildings should be painted over.
- Poor cold joints.
 - Caused by not properly preparing older asphalt (heating or sawcutting) prior to paving.
 - Poor cold joints will pull apart and have a poor appearance.
 - Heating and skin patching will remedy the problem in most cases.
 - R&R severe cases.
- Asphalt is raveling.
 - Caused by poor compaction, low asphalt content, or cold asphalt mix.
 - Aggregate will roll away diminishing the life of the pavement.
 - Minor cases.
 - Seal coat.
 - Roller.
 - Major cases need to be removed and replaced.
- Bleeding
 - Caused by too much liquid binder.
 - Asphalt binder flows to the surface and will pool on the surface pavement and may result in shoving, rutting, and tracking.
 - Minor cases can be left to cure.
 - Major cases need to be R&R.
 - This is a manufacturer deft and the producer must be involved.
- Other problems.
 - Water stains.
 - Paver and roller marks.
 - Stripes turn yellow or brown.
 - Roller pick up.
 - Asphalt and debris in planters, garden areas and landscaping.
 - Footprints in paving.
 - Wavy finish.
 - Building damage.
 - Dirty pavement.

Plumbing

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Review plans and drawings.
 - Verify that each fixture, appliance, or item that requires plumbing has been supplied on the drawings.
 - Minimum slope sanitary sewer may be required by code to be certified by the design engineer.
- Refer to plumbing specifications regarding pipe product specifications.
 - i.e. Architect may specify that pipe materials be “American made”
- Have plumbing fixtures been submitted?
 - Review contract documents for special requirements or sizing.
 - Review product names and information for compliance.
 - Ensure that alternates are equal or better – be very careful with review.
 - i.e. Garbage disposal power requirements versus what is provided in electrical.
 - i.e. Low flow fixtures – does what is spec’d match what is submitted?
 - Some items may require power such as hot water heaters, pumps, and auto flushers. Do any of the items require power? Coordinate these items with electrical subcontractor.
 - Review approved finishes.
 - Does the architect have a preference in regards to cover plate finish or drain finishes.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Coordinate location of sanitary cleanouts. Protect cover if in concrete.
 - Verify shading requirements, if applicable.
 - Review pipe hanger requirements as applicable.
 - Bracket requirements.
 - Dissimilar metals.
 - Spacing requirements.

- Hanger attachment on joist is on the top chord only.
 - Review locations and mounting heights for each fixture.
 - Will the fixtures as indicated on the plans be ADA compliant?
 - Prior to installation, be sure all material is dry and has been stored properly
 - Who is providing condensate lines?
 - Verify condensate sizing, material, and type.
 - Condensate must have proper fall away from unit.
 - Insulate condensate lines?
 - Insulation of “hot” and re-circulating lines.
 - Proper type of copper used- type “ L ” ,”K”.
 - Confirm final elevation and location to municipality’s utilities.
 - Coordinate with site utility contractor for location, elevation, final connection of tie-in. Most requirements are to meet 5’-0” outside building and the last one makes the final connection.
 - Proper flushing of underground PRIOR to building connection.
 - Proper backfill has been tested if required- proper material used (screened, pea gravel, etc.), as applicable.
 - Compaction must be achieved through the recommendations of the soils report, as applicable.
 - Roof drain top out, as applicable.
 - Confirm cathodic protection is in place.
 - Confirm protection plates are in place before drywall begins.
 - Remove all test plugs before closing the job.
 - Are drip valves required?
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
 - **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
 - **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

- **Special Considerations**

- LEED Qualifications.
- Indoor plumbing fixture and fitting efficiency.
- Water conserving fixtures and products.
- Must supply product information showing water conservation.
- Water performance measurement.
- Report showing 20-30% water conserving improvement.

Roofing Systems

- **Submittals**

- Review all submittals and/or submittal log.
 - Have TPO membrane, insulation, adhesive, and termination details been submitted?
 - For spray foam, are product data sheets and application guidelines included?
 - Are perimeter edge, curb flashing, and penetration details included?
 - Is the manufacturer's warranty system outlined and pre-approved?
 - Are any alternate or VE materials documented and accepted?
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Do TPO rolls or foam kits match approved submittals in type and thickness?
 - Are adhesives, fasteners, insulation, and sealants stored properly?
 - Are mechanical fasteners, plates, and edge metals all present and organized?
 - Are protective cover boards, walk pads, and pipe boots available?
 - Are materials dry, protected from UV, and within acceptable temperature range?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Are insulation boards staggered and installed per pattern?
 - Are TPO laps heat-welded with full seams and end laps staggered?
 - Are penetrations flashed properly with boots or welded curb flashings?
 - Are perimeter terminations mechanically attached and sealed?
 - Is spray foam applied evenly with proper slope to drain?
 - Are cover board and final membrane applications performed under acceptable weather conditions?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-installation readiness:
 - Is the substrate dry, clean, and ready for membrane/foam application?
 - Have any tie-ins to adjacent structures or roof systems been coordinated?
 - Are safety tie-off points installed and certified?

- Are roofing permits active and available on-site
- Has a pre-roof meeting been held with superintendent, trade partner, and inspector?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Are pull tests or adhesion tests completed for warranty qualification?
 - Has a manufacturer's rep inspection been scheduled?
 - Are seams tested using probe tools or electronic methods?
 - Has a flood test or leak test been scheduled (if required)?
 - Is the punch list or final walk coordinated with GC and owner?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are guardrails, warning lines, and personal tie-off systems installed?
- Are hot work permits in use if using torch-down flashings?
- Is spray foam application compliant with PPE, ventilation, and fire watch requirements?
- Is weather (wind, heat, precipitation) monitored and work paused during unsafe conditions?

Rough Carpentry

- **Submittals**

- Review all submittals and/or submittal log.
 - Have framing plans, lumber species/grades, and fastener schedules been submitted and approved?
 - Are shear wall details, hardware schedules, and hold-downs included?
 - Have truss shop drawings and calculations been reviewed and coordinated with MEP?
 - Are anchor bolt and embedded connector locations approved?
 - Are framing and sheathing connection schedules (nails, screws, straps) per plans and code?
- Are any submittals outstanding or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
 - Is dimensional lumber the correct size, species, and grade as specified?
 - Are glulam beams, LVLs, PSLs, or other engineered members staged and stored properly?
 - Are structural connectors (hangers, straps, plates) undamaged and per approved schedule?
 - Are nails, screws, bolts, and anchors present in the correct quantity and type?
 - Are trusses labeled, protected, and stored flat to avoid warping?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Review workmanship standards:
 - Are bottom plates properly anchored to slab with correct fasteners and spacing?
 - Is framing straight, plumb, square, and per plan layout?
 - Are all studs, joists, and rafters spaced and oriented correctly (crown up, grade stamp out)?
 - Are shear walls built with correct nailing patterns and boundary elements?
 - Are connectors, hold-downs, and blocking installed per structural plans?
 - Are openings framed with headers and jacks appropriate to their span and load?
- Discuss procedure(s) for accomplishing the work.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:

- Has the slab or subfloor layout been verified and chalked for framing lines?
- Are anchor bolts installed per plan with correct spacing and projection
- Are embedded items for trusses, beams, or hardware coordinated?
- Has the MEP coordination been completed for in-wall blocking and chase framing?
- Are all truss bearing points and uplift hardware verified?
- Have framing and shear wall inspections been scheduled with the building department?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Are framing and shear wall inspections scheduled before cover-up?
 - Are uplift hardware and shear transfer details reviewed by structural inspector?
 - Are truss bracing and field modifications documented and approved by the truss engineer?
 - Is an as-built record or field framing report required?
 - Is an inspection or sign-off required prior to sheathing or fire blocking?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are fall protection systems in place (scaffolds, harnesses, railings)?
- Are elevated platforms and ladders inspected and secured?
- Are hardhats, gloves, and eye protection used at all times?
- Are trusses or long-span members properly lifted and temporarily braced to prevent collapse?

Site Concrete

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Mix design.
 - Is fly-ash acceptable?
- Integrally colored or stained concrete?
 - Has a mock-up been approved?
 - If no, will a mock-up be provided?
- Review approved finishes.
 - Has a mock-up been approved?
 - If not, will a mock-up be provided?
- Review pavers and detectable warning systems.
 - Review requirements with municipality.
- Site walls and footings, if applicable.
 - Coordinate rebar as required.
- Coordinate scuppers, and other miscellaneous concrete items.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Has superintendent reviewed and verified grades per the civil plan and related changes?
 - If yes, are any conflicts noted?
 - Review on-site and off-site requirements and tolerances.
 - Review ramps and detectable warning systems.
 - Will a traffic plan be required?
 - If yes, who will be coordinating plan?
 - Review curb and sidewalk locations and dimensions.
 - Review curb process.
 - Is a curb machine required?
 - If using forms to create curb, is there a preferred form material?
 - Is there any existing curb or sidewalk that needs to be replaced?
 - Review preferred method of patching curb and finishing.

- Review MAG and applicable municipality details.
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
 - Courtesy walk with municipality to review off-site and on-site requirements for site concrete including ADA ramps, detectable warning systems, and pavers.
 - Review any color and/or contrast requirements.
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Site Mobilization

- **Submittals**

- Review all submittals and/or submittal log.
 - Has the mobilization plan or logistics plan been submitted and approved?
 - Are trailer layout, utility connections, fencing, and access points shown?
 - Are temporary power and generator specifications submitted (if applicable)?
 - Are site signage and stormwater controls identified and approved?
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
 - Are trailers, temporary fencing, signage, and barricades staged and undamaged?
 - Is the appropriate Renaissance signage on-site and in good condition?
 - Are Fire Department Access signs on-site with the correct information?
 - Are KNOX padlocks on-site for each emergency entrance?
 - Are electrical panels, generators, and cable connections in good working order?
 - Are temporary water, sewer, and telecom connections on-site or scheduled?
 - Is fencing (panel or driven post) properly anchored and secured?
 - Are required site signs (e.g., OSHA, project team, directional) present and legible?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Are trailers placed on level, compacted ground or properly supported?
 - Are temp power poles, panels, or generators installed per code?
 - Is site access maintained and protected with stabilized construction entrance?
 - Is fencing continuous, secured, and free of gaps or lean?
 - Are signs installed at the correct height and clearly visible from public access areas?
 - Area trailer stairs, ramps, and/or ADA access installed?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Has the trailer permit been issued (if required)?
 - Have inspections been scheduled for temporary power hookups?
 - Are utility locate services completed prior to anchoring or trenching?

- Has a kick-off meeting reviewed site logistics and safety procedures?
- Are security and overnight lighting considerations addressed?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Has temporary power been inspected and passed by the AHJ?
 - Is fencing and signage layout approved during the preconstruction walk?
 - Are Fire Marshal or public safety inspections required for egress and access?
 - Are all site access and egress paths compliant and posted?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are fire extinguishers, first aid kits, and emergency signage installed in trailers?
- Are temporary power cords elevated, protected, and labeled?
- Is the fencing stable and tall enough to secure the site?
- Are emergency contacts posted visibly at the site entrance?

Stone Veneer

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Review manufacturers installation details vs. architectural details.
 - Are there any differences?
 - If yes, do you need to write an RFI?
- Review material product data.
 - i.e. mortar components, water-resistant barrier, flashing, metal lath, fasteners, masonry sealer.
 - What are the specified/approved substrates?
- Review stone samples for type, size, color/color group, etc.
- Review colors of grout.
- Coordinate mock-up for owner/architect review and approval.
 - Has mock-up been approved?
- Review layout preference.
 - Is there are “random” pattern?
 - If yes, layout the pieces on the ground for owner and/or architect approval.
- Review corner preference.
 - i.e. mitered, manufactured, or butted.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Who is providing the substrate? (i.e. rigid insulation board).
- Who has the caulk for the flashing?, if applicable.
- Check product date with form release agents.
- Discuss procedure(s) for accomplishing the work.
 - Review contractor provided schedule against project schedule.
 - Review procedure for surface preparation.
 - Layout prior to adhering to the wall.
 - Review flashing requirements.
 - Review manufacturer’s and architect’s details.
 - Does it look like it will work?

- Review wainscot, openings and window conditions with framer, glazing, and stone veneer contractors.
 - Typically stone manufacturers will provide additional details for recommended installation including flashing, caulking, galvanized metal, construction adhesive, etc.
 - Failure to properly caulk flashing may result in water damage to the structure.
- Review manufacturer's installation details and architect's details.
 - Review specific product. Many are directly applied to the substrate. Sandblasting and power-washing is recommended. Below are the basic installation sequences as described in many of the manufacturer's installation guides.
 - Masonry/concrete.
 - (1) Mortar applied directly to untreated/unpainted masonry, concrete or stucco, (2) Stone veneer, (3) Mortar joint.
 - Treated masonry – if extremely dirt, this may need to be sandblasted.
 - (1) Metal Lath, (2) Concrete Fasteners, (3) Mortar Bed, (4) Stone veneer, (5) Mortar Joint.
 - Wood Frame.
 - (1) Sheathing, (2) Two layers of weather-resistant barrier, (3) Galvanized metal lath, (4) Mortar, (5) Stone Veneer, (6) Mortar Joint.
 - Rigid Foam Insulation Board.
 - (1) Rigid Foam Insulation, (2) Two layers of weather resistant barrier, (3) Metal lath, (4) Scratch coat, (5) Mortar setting bed, (6) Stone veneer, (7) Mortar joint.
 - Review accepted tolerances (miter and/or sealant joints, levelness, etc.).
 - Review procedures for hot weather installation, if applicable (see information provided at end of preparatory meeting).
 - Retention walls.
 - Must be waterproofed on the fill side of the wall prior to installation.
 - Review proper protection procedures for during and after installation.
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
 - Review substrate for acceptance.
 -
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?

- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Pull test.
 - This test to test the strength of the system and is to be performed 3 days after installation (add 1-2 days during extreme weather conditions).
 - Recommended to use mock-up or designated sample section for this test.

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

- **Extreme weather conditions:**

- If stone is being applied in hot or dry weather, the back of each piece should be moistened with a fine spray of water or wet brush to adequately prevent excessive absorption of moisture from the mortar. If being installed over concrete, masonry or scratch coat substrate, the substrate surface area should also be dampened before applying mortar. Surfaces should appear damp, but free of surface water.
- Applications should be protected from temperatures below 40 degrees F as mortar will not cure properly under such conditions. Do not use antifreeze compounds to lower the freezing point of mortar. See IBC Section 2104.3 for cold weather construction requirements.

Striping and Site Signage

- **Submittals**

- Review all submittals and/or submittal log.
 - Are paint types, thermoplastic materials, and reflective beads approved?
 - Are striping layouts, widths, and colors per plan and ADA standards?
 - Are sign types, dimensions, and mounting details submitted?
 - Are MUTCD and local DOT standards addressed?
 - Are stencils, logos, or specialty markings included in the scope?
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Are paints or thermoplastic materials fresh, sealed, and stored properly?
 - Are reflective elements (glass beads) present for night visibility?
 - Are sign posts, anchors, brackets, and mounting hardware available?
 - Are stencils and layout tools ready for field use?
 - Are cleaning agents or surface prep materials stocked as needed?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Are line widths, spacing, and colors per contract documents and code?
 - Are ADA-compliant spaces, access aisles, and signage installed correctly?
 - Are fire lanes, no parking zones, directional arrows, and stop bars clearly marked?
 - Are signs mounted at the proper height and angle, and embedded at the correct depth?
 - Are surfaces clean, dry, and ready before striping?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Is paving or sealcoat complete and cured before layout?
 - Is layout confirmed on-site with chalk or snap lines?
 - Are permits required for striping in public ROW or drive lanes?
 - Is traffic control in place if painting near active roadways or parking lots?
 - Has weather (temperature, moisture) been confirmed suitable for application?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Confirm pre-construction readiness:
 - Is paving or sealcoat complete and cured before layout?
 - Is layout confirmed on-site with chalk or snap lines?
 - Are permits required for striping in public ROW or drive lanes?
 - Is traffic control in place if painting near active roadways or parking lots?
 - Has weather (temperature, moisture) been confirmed suitable for application?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Is an AHA completed for striping and signage installation tasks?
- Are work zones barricaded and marked with cones and flaggers?
- Are personnel in high-visibility gear while working in or near traffic?
- Are SDS sheets available for paints, thinners, or adhesives?
- Are equipment (sprayers, torches, rollers) used per safety guidelines?

Structural Steel

- **Submittals.**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Review all shop drawings.
 - Review dimensions and verify drawings against structural and architectural sheets.
 - Review sizes and type of each material (including beams, joists, embeds, etc.).
 - Review areas clouded or questioned by the detailer.
 - Shop drawings to review, as applicable. Be sure to review the details and connections carefully.
 - Anchor bolt and template placement drawings
 - Embed fabrication
 - Embed placement drawings (concrete or masonry)
 - Steel fabrication drawings
 - Joist Drawings
 - Deck Drawings
 - Miscellaneous Metals
 - Stairs and handrail
 - Review welding certificates.
 - Review steel deck attachments.

- **Materials.**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications.**

- Discuss procedure(s) for accomplishing the work.
 - Coordinate footing elevation.
 - Use the general structural notes and civil drawings to review the required depths for all your interior and perimeter footings. Document this depth checking coverage over the anchor bolts to top of finished floor concrete and document for the steel shop drawings as well as the concrete subcontractor. Keeping in mind if you must over excavate and re-compact this could cause your earthwork sub to dig deeper to clear the bottom of footing elevation on the re-compacted dirt.
 - Tilt panel embed elevations, if applicable.
 - Coordinate the steel shop drawings with the panel book detailer to ensure proper elevation.

- Coordinate all embeds in concrete and masonry.
- Mud sill and pour stops, if applicable.
 - Coordinate the limits of the pour concrete floors. This is more of an issue on multistory or elevation concrete over metal deck platforms and mezzanines. The pour stops are generally bent plate which is installed off a beam and used to close a concrete pour like wood formwork on a slab on deck.
- Verify camber requirements on structural members.
- Review the roof slope as per the architectural roof plan and confirm versus the structural framing. Make sure that there are no beams, joists, or girders crossing a ridge line or valley.
- Verify bottom of deck elevation and check versus roof slope.
- Check crickets on architectural drawings and confirm versus framing plan to see if a slope ledger can be used instead to achieve the same results.
- Coordinate temporary bracing, as required.
- Flash screens for welding operations and blankets, as required.
- Coordinate process of erection of steel.
 - See safety section.
 - Coordinate survey of structures throughout procedure.
 - Anchor bolts.
 - Each floor height, as applicable.
- **Preliminary work and permits.**
 - Anchor bolts set to proper elevation and cleaned ready for start of work.
 - Laydown area
 - If you have embeds you will need a place to stage these for other trades to set and for your superintendent to monitor and track the inventory. If you have steel beams, columns, and joists you will need a larger area for staging these materials. Work with the contractors to determine how much area is required.
 - Embed count and inventory
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections.**
 - Coordinate special inspections.
 - Typically defined in the general structural notes and by the structural engineer. Typically the firm that prepared the structural drawings will perform the inspections. Coordinate wisely as most special inspection contracts are written open ended with a not to exceed price based on the engineer's inspection rates and trip charges.
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?

- What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
- Safety.
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.
 - Review fall protection or safety cable use, if applicable.
 - Verify a fire extinguisher to be on-site and within reach.
 - Crane safety, as applicable. Verify lift plan and operator credentials.

SWPPP – Storm Water Pollution Prevention

- **Submittals**

- Review all submittals and/or submittal log.
 - Is the SWPPP plan approved and available on-site?
 - Has the Notice of Intent (NOI) been filed with the appropriate agency?
 - Are site-specific BMP (Best Management Practices) details submitted and approved?
 - Are SWPPP inspection logs, rain event logs, and amendment forms included?
 - Are dust control and dewatering measures addressed?
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Are silt fence, straw wattles, inlet protection, and gravel bags available and deployed?
 - Are spill kits, brooms, absorbents, and berms stocked and accessible?
 - Are stabilized construction entrance materials present (rock, geotextile fabric)?
 - Are dust control supplies (e.g., hoses, tackifiers) staged and functional?
 - Is equipment for BMP maintenance (stakes, fencing, zip ties) available?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Are perimeter BMPs (silt fence, wattles) installed per plan and maintained?
 - Are storm drain inlets protected with filters or gravel bags?
 - Are concrete washouts, fueling areas, and waste storage properly contained?
 - Is dust control applied regularly and tracked?
 - Are materials and soil stockpiles covered and protected from runoff?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Is the approved SWPPP binder posted and accessible at the site entrance?
 - Are required permits and erosion control drawings available on-site?
 - Are emergency contact numbers and inspector details posted?
 - Has a pre-construction meeting been held to review SWPPP responsibilities?

- Are all site personnel trained in SWPPP awareness and BMP usage?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Are weekly SWPPP inspections being conducted and logged?
 - Are post-rain event inspections completed within the required timeframe?
 - Are BMPs repaired or replaced immediately when deficiencies are found?
 - Are inspection logs and corrective actions documented?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are spill kits clearly labeled and available at fueling and chemical areas?
- Are personnel trained in emergency spill response?
- Are site exits free from sediment tracking onto public roads?
- Is access to storm drains and water bodies protected and monitored?

Survey and Staking

- **Submittals**

- Review all submittals and/or submittal log.
 - Are survey control points, benchmarks, and base files submitted?
 - Has a staking plan been submitted and coordinated with civil and structural drawings?
 - Are CAD files and control reports reviewed and approved?
 - Are subcontractor or third-party surveyor qualifications verified?
 - Are cut sheets or layout files shared with the project team?
- Are any submittals outstandings or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Is survey equipment (GPS rover, total station) calibrated and operational?
 - Are reference control and benchmarks protected from site disturbance?
 - Is caution tape or signage available to protect finished stakes?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Specifications
- Review workmanship standards:
 - Are staking tolerances within project specifications and industry standards?
 - Are offsets used appropriately when primary points are not feasible?
 - Are structures, utilities, and site elements calculated per plans?
 - Are layout marks protected during active work?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Is the site accessible and graded sufficiently for layout?
 - Have control points been established and verified?
 - Are previous layout discrepancies resolved via RFI or updated CAD files?
 - Has a survey coordination meeting occurred with field staff?
 - Are layout zones prioritized based on schedule?

- **Testing and inspections**

- Identify inspections to be performed, frequency, and by whom.

- Prepare for QA verification:
 - Are layout points verified and signed off before use?
 - Are elevation checks performed using a benchmark or known elevation?
 - Is layout documented with as-staked reports or point files?
 - Are re-staking procedures in place for disturbed areas?
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Tile

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Are tile types, sizes, and finishes approved?
- Are grout, mortar, waterproofing, and backer boards submitted and approved?
- Are tile pattern/layout drawings included?
- Are sealants and setting compounds part of the package?
- Have any required mock-ups or samples been approved?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Are tiles consistent in size, color, and batch?
 - Are setting materials (mortar, adhesive) and grout correct per spec and fresh?
 - Is waterproofing membrane on-site and approved?
 - Are trims, transitions, and edge profiles present and undamaged?
 - Are all materials protected from moisture and contamination?
 - Are materials stored per manufacturer guidelines (flat, dry, ventilated)?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Are installation methods per ANSI standards and TCNA guidelines?
 - Is substrate preparation per spec (e.g., flatness, cleanliness)?
 - Are waterproofing and crack isolation membranes installed correctly?
 - Are control joints, expansion joints, and movement joints detailed and accounted for?
 - Are grout joints consistent in width and alignment?
 - Is tile layout reviewed and approved (centered, balanced, etc.)?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-installation readiness:
 - Are substrate inspections and approvals completed?
 - Is backer board installed per code and secured properly?
 - Has waterproofing passed flood or moisture test (if applicable)?

- Are drain locations, slopes, and transitions confirmed?
- Are permits or inspection tags required for waterproofing systems?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Is waterproofing tested and documented (e.g., flood test)?
 - Are bond tests, coverage, or cure times documented?
 - Are city or special inspections required?
 - Will installed tile require final punch review before grouting?
 - Are mock-ups reviewed for quality and finish?
 - Are slope-to-drain and shower pan performance validated?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are workers using PPE such as gloves, knee pads, and eye protection?
- Are wet saws and tile cutting tools used with appropriate guards and water supply?
- Are bags of grout/mortar stored safely and lifted with proper technique?
- Are SDS sheets on-site for all adhesives and setting materials?
- Are walkways and wet areas clearly marked for slip prevention?

Toilet and Bath Accessories

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Check the plan view and elevation drawings of the restrooms to verify accessories.
 - Consider what might be missing that will be required by code.
 - Showers: Shower seats may be required for ADA.
- Review quantity.
- Review against specifications and drawings for preferred manufacturer or an equivalent equal.
- Review finish and material.
 - Typically the finish will be consistent throughout.
- Review rough openings and blocking diagrams.
 - Provide this information to the framer.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Review ADA requirements.
- Discuss procedure(s) for accomplishing the work.
 - Coordinate with framers regarding backing locations, finish heights, and rough opening dimensions.
 - Coordinate rough openings with finishes on wall.
 - May need to cut back tile for installation, however be careful as it is difficult to correct cutting back too far.
 - Coordinate with millwork subcontractor re countertop applications such as soap dispensers.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Review blocking and support for acceptance.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?

- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Toilet Compartments

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Review shop drawing dimensions and layout.
- Review material.
 - Aluminum.
 - Typically a few standard colors are provided, with custom colors available upon request which typically add weeks to delivery time.
 - Laminate.
 - Solid Surface.
 - Custom.
 - Selected partition color.
- Review hardware and finishes.
 - ADA compliance.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Coordinate with framer regarding blocking requirements for partitions.
 - Coordinate with plumber regarding floor drains and partition supports
 - Is there a conflict?
 - Coordinate with finish on the walls.
 - Will the tile crack during partition installation?
 - Most installers will stipulate that they are not responsible for any cracked or damaged tile.

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?

- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.

Trenching

- **Submittals**

- Review all submittals and/or submittal log.
 - Has the trench safety plan or excavation plan been submitted and approved?
 - Are utility piping, bedding material, and backfill submittals reviewed?
 - Are trench boxes, hydraulic shores, or other protective systems documented?
 - Are traffic control plans submitted for trenching in public areas?
 - Are permits for encroachment or utility tie-in included?
- Are any submittals outstanding or missing?

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- Verify materials on-site:
 - Are trench shields, ladders, or hydraulic shoring systems available and properly sized?
 - Are utility pipes and fittings on-site, matching submittals and spec?
 - Is bedding material (AB, sand, gravel) stockpiled, clean, and properly stored?
 - Is marking tape or tracer wire present where required?
 - Are spoil piles maintained safely and not obstructing trench access?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
- Review workmanship standards:
 - Are trench widths and depths correct and per engineered drawings?
 - Is bedding compacted evenly before pipe placement?
 - Are pipes aligned and sloped per design (e.g., sanitary, storm, water)?
 - Is backfill placed in lifts and compacted per spec and testing plan?
 - Are utility separations maintained (electrical, water, sewer)?

- **Preliminary work and permits**

- Ensure preliminary work is correct and permits (if applicable) are on file.
- Confirm pre-construction readiness:
 - Have utility locates been performed and marked (811)?
 - Is a dig permit posted if required by the jurisdiction?
 - Are nearby structures, roadways, or underground systems protected?
 - Are access/egress points provided at appropriate intervals (every 25 ft)?
 - Has a pre-dig safety meeting been held?

- **Testing and inspections**

- Identify test(s) to be performed, frequency, and by whom.
- Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
- Is there a testing plan?
- Has the testing facility been approved to conduct the test?
- Does the work need to be inspected? If so, by who?
- What are the frequency of inspections?
- Who will be scheduling all tests and inspections?
- Prepare for QA verification:
 - Are bedding and pipe placement inspected before backfill?
 - Is compaction testing scheduled and documented per lift?
 - Are any pressure, infiltration, or mandrel tests required?
 - Are trench inspections logged by city, utility purveyor, or engineer?
 - Are as-built elevations or survey points collected during install?

- **Safety**

- Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
- Review and fill out an Activity Hazard Analysis.
- Review closest emergency facilities locations.
- Review contractor provided safety plan, if applicable.
- Are trenches over 5 feet protected by shielding, shoring, or sloping?
- Are atmospheric hazards tested if trench depth or soil conditions require it?
- Are spoil piles stored at least 2 feet back from trench edge?
- Are trench access ladders provided and clearly visible?

Underground Retention

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Review shop drawings.
 - Check against soils report for recommended tank gage (wall thickness) which is a function of the soil corrosiveness.
 - Check for minimum coverage comments if applicable.
 - Review for inlet and outlet locations as well as man hole locations.
 - Review with plumbing drawings: check for building interface to site on roof drain leaders.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Review soils report.
- Discuss procedure(s) for accomplishing the work.
 - Review survey staking prior to excavation.
 - Ensure proper offset to avoid restaking.
 - Review procedures for Blue Stake.
 - Check inverts for retention tanks.
 - Has superintendent reviewed inverts?
 - Coordinate drywell concerns.
 - Review drywell inverts versus tank inverts.
 - Any concerns?
 - Coordinate with UG utilities, especially electrical primaries.
 - Verify installation depths.
 - Coordinate spoils from tanks.
 - Can you use the spoils on site?
 - Do you need to contact a dirt broker?
 - Coordinate/review access plan during tank installation.
 - Plan lay down of: tanks, backfill, and equipment access.
 - Coordinate with survey to shoot as built invert during process.
 - Coordinate paving around the man hole covers which are typically left 2 feet above finished grade to be set when the subgrade is finally prepared prior to placing AB.

- If using pea gravel, be wary of how you excavate for tank ties after tanks are installed. This is a safety concern.
- Review acceptable backfill and compaction.
 - Review municipality and engineer requirements for acceptable backfill materials.
 - Some cities do not allow chips or pea gravel, may be allowed with the use of filter fabric to control fines migration.
 - Be aware of the City requirements for backfill.
 - Per MAG, only suitable material is ABC.
 - Backfill
 - Tanks cannot be compacted below the spring line under the tank edge due to clearance issues.
 - Discuss this with the engineer and soil testing firms prior to start of construction to insure proper methods are used.
 - Discuss lifts and water content allowable for backfill operation.
 - Discuss proctor requirements for the imported fill.
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.
 - Review rigging safety.
 - Trench and benching safety – review soils report for recommendations.
 - Never allow anyone in a tank while it is being backfilled.
 - Hole protection, Flagging.
 - Burm over top of tank to help identify them and limit traffic over the top during construction
 - Tank risers are typically left high (two feet) above finished grade and pose an open fall hazard – protect and flag.

- Need to be concerned with large loads crossing over tank that have not been paved over and even afterwards with large cranes.

Underground Utilities

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstanding or missing?
- Review piping and materials specifications with contract documents, specifically civil drawings and jurisdiction requirements.
- Review MAG and city standards.

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Review soils report.
 - Review compaction and backfill requirements.
- Discuss procedure(s) for accomplishing the work.
 - Review contractor provided schedule.
 - Ensure that their dates reflect enough time for appropriate trench safety.
 - Review dates in compliance with project schedule.
 - Review areas where underground lines and coordinate depth, as applicable.
 - Has superintendent reviewed site grades?
 - Verify all grade stakes and reference points before the start of work. Any discrepancies shall be immediately reported in writing to the project superintendent.
 - Are there any areas that require adjusting to ensure that the piping is buried?
 - Verify all crossing elevations for u/g utilities to confirm there is enough clearance prior to start of work.
 - On all taps to existing city mains (water, Sewer, fire etc....), contractor is to locate the city main to verify inverts prior to start of site work to verify all inverts elevation are accurate and meet the as designed conditions.
 - On domestic water and sewer line the final connection at the building is performed on a “last-in” basis.
 - On all fire line services to the inside of the building at riser location, install blind flange at riser termination 6” above finished floor.
 - Storm Drain and U/G Retention Tanks:
 - What is the specification for backfill, bedding, and compaction? If per MAG standards, then be advised no exceptions to the MAG standards are

acceptable. Bedding and backfill materials to be testing to meet MAG standards prior to being placed with retention tanks. Per MAG standards the only acceptable granular fill is ABC. Verify MAG standards and review with subcontractor.

- See additional preparatory meeting for UG Retention tanks.
- Bedding/shading material and backfill as required by code & plans and specifications.
- Water compaction is not acceptable. All utility routes must be mechanically compacted and tested to meet job site standard compaction requirements. Any pavement failures resulting from poor utility compaction will be passed onto the subcontractor. Get test results to verify compaction results were achieved.
- Furnish and install reducer pressure backflow assembly per the plans and specifications and/or MAG standard details.
- Verify scope of certification of reduced pressure backflow assemblies.
- Thrust blocks, if required, including concrete material and rebar.
- Review flushing and pressure testing procedures acceptable to the governing authority. Does the City require onsite camera and vactoring of the site sewer lines? If so this needs to belong to the performing subcontractor.
- Review disinfecting, testing, and certification procedures of water lines required by governing authority. Be advised you will not be able to use water trucks as a water source for testing these lines since the City does not know the quality of the cleanliness of the water truck. Plan to use a potable water source for testing.
- Verify all concrete for this work such as concrete collars at area drains, catch basins, headwalls, concrete plugs and manhole bases etc. are included as indicated on drawings and specifications. Review methods of construction for headwalls. Some subs want to use CMU with skim coats of mud as headwalls. Make them cast these to avoid quality issues. Review any handrail requirements that are included as part of this scope for the headwalls including trash grates.
- Reiterate the subcontractor is required to locate and mark all existing utilities by calling in Blue Stake prior to all excavations.
- Review excavation and benching requirements for all trenching. All excavations and shoring to meet with current OSHA standards.
- Temporary traffic bearing plates/covers at all open trenches. Provide barriers around all open excavations as required and per current OSHA requirements.
- Weather protection for Subcontractor's Work including dewatering and rainwater.
- Coordinate all as-built drawings to show all locations, elevations, devices, and change in direction or u/g lines for this scope of Work.
- Provide traffic control and barricades (vehicle and pedestrian) as required for each portion of this scope of work.
- Adjust manholes, valve boxes, etc., to grade that are not in pavement areas.

- Adjust manholes at retention tanks to final grade. Provide traffic rated cover where required.
- Review where all spoils generated by this work will be placed and stock piled onsite by the subcontractor.
- Review daily clean up requirements for this scope of work.
- Review dust control requirements for this scope of work.
- Review asphalt specification for any patch back required in work in the right of way. Review the City specification to insure a complete understanding of the pavement requirements.
- Provide pads and cages for all backflow devices on plans and specifications.
- Review fire signage requirements on all PIV, Saimese connections, and hydrants. These are to be provided by u/g utility contractor.
- As built the hydrants for line and grade prior to paving.
- Review code requirements regarding minimum and maximum distances between other underground piping, crossing lines, and other requirements.
 - Phone line requirements.
 - Power company requirements.
 - Electrical requirements.
 - Sewer requirements.
 - Water requirements.
 - Fireline requirements.
 - Other requirements.
- Be sure to as-built items throughout the process.
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
- **Safety**
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 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Voice and Data

- **Submittals**

- Review all submittals and/or submittal log.
- Are any submittals outstandings or missing?
- Review wiring product data.
 - Will the wire be placed in a plenum?
 - If yes, the wire needs to be plenum rated.
- Review electrical drawings and any other owner provided plans.
 - Review with owner to ensure that all needs are met and that the plans have been agreed upon. Use these approved plans to help electrician know what is expected.
- Review data tray requirements, if any.
 - If required, review data tray layout plan.
 - Does it conflict with the duct layout or other items?
 - If yes, discuss route alternate.
- Review finish/color of covers and trim. Coordinate to match electrical and if possible, mechanical trim.
- If owner is coordinating phone, encourage them to set up their account and requirements early on. Request the owner provide a copy of Qwest's requirements. List the requirements below:

- **Materials**

- Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
- Are all the materials on hand?
- If any materials are missing, what is their status and ETA?
- Have all the materials been properly transported and stored?
- Are the materials free from defects and damage?

- **Specifications**

- Review scope and contract documents.
- Discuss procedure(s) for accomplishing the work.
 - Review contractor provided schedule against project schedule.
 - Coordinate with electrician regarding box locations, wire runs, and conduit provisions for data sub. Track the information and document any adds or changes to this scope.
 - Watch adds or changes carefully as typically it will require a drywall patch and touch-up due to their usual time of arrival on the project.
 - Prevent other unnecessary damage and fingerprints on the ceiling system.
 - Coordinate with electrician and other subcontractors to have data room scope of work complete before data arrives on site, if applicable.
 - Review appropriate trim installation.
 - Trim to be installed level and flush.

- If applicable, coordinate door schedule.
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
 - Review Qwest requirements. Has everything requested been provided?
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
 - Identify inspection(s) to be performed, frequency, and by whom.
 - City, special, etc.
 - Is there a testing plan?
 - Has the testing facility been approved to conduct the test?
 - Does the work need to be inspected? If so, by who?
 - What are the frequency of inspections?
 - Who will be scheduling all tests and inspections?
- **Safety**
 - Review Renaissance Safety Manual, MSDS, QC Plan, and Trench Safety Plans as applicable.
 - Review and fill out an Activity Hazard Analysis.
 - Review closest emergency facilities locations.
 - Review contractor provided safety plan, if applicable.

Blank Template

- **Submittals**
 - Review all submittals and/or submittal log.
 - Are any submittals outstandings or missing?
- **Materials**
 - Do the materials on hand match the materials in the approved/reviewed submittal and shop drawings?
 - Are all the materials on hand?
 - If any materials are missing, what is their status and ETA?
 - Have all the materials been properly transported and stored?
 - Are the materials free from defects and damage?
- **Specifications**
 - Review scope and contract documents.
 - Discuss procedure(s) for accomplishing the work.
- **Preliminary work and permits**
 - Ensure preliminary work is correct and permits (if applicable) are on file.
- **Testing and inspections**
 - Identify test(s) to be performed, frequency, and by whom.
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