Design Phase Checklist

1. Site Planning
   □ Are contour lines clearly shown on the construction drawings and do contour lines close?
   □ Water management
     □ Have potential surface water sources been identified?
     □ Is site drainage adjacent to the walls accounted for?
     □ Does surface water drain away from wall face (except for water applications)?
     □ For water applications, is toe erosion protection provided?
     □ For water applications, are normal and high water levels identified?
   □ Have the location of utilities (storm sewer, irrigation, water lines, etc.) been identified and accounted for?
   □ Are catch basins, utilities and similar structures in the vicinity of the retaining walls clearly shown?
   □ Are the locations where handrails or fences required shown on the plans?
   □ Does the SRW, including the reinforced zone, necessary cuts, and non-disturb buffers fit within the project boundaries?
   □ Have access routes and storage areas been identified?

2. Geotechnical Report
   □ Does the geotechnical evaluation include the area where the retaining walls are located?
   □ Have effective stress soil parameters been determined for:
     □ The foundation soils
     □ The reinforced zone soils
     □ The retained soil zone (general fill)
   □ Have the foundation soils been evaluated for bearing and settlement for the expected loads from the retaining walls?
   □ Have locations of expected high groundwater been identified?
   □ Have seismic accelerations been provided, as applicable?
   □ Has global stability been evaluated?

3. SRW Design Plans
   □ Have Quality Assurance provisions been defined?
   □ Have required soil parameters been determined and accounted for?
     □ Retained soil friction angle
     □ Reinforced soil friction angle
- Foundation soil friction angle and cohesion, if any
- Are the retaining wall plan layout, elevations, and station points clearly shown on the plans?
- Is the required information conveyed in typical cross-sections?
  - Geogrid strength, length, and elevation shown by station
  - Embedment shown by station
  - Applied bearing pressure provided by station
  - Utilities, if any, shown
  - Drainage details, including toe drain and possible heel drain
  - Top of wall detailing, including swales, fences, guiderails, etc. as applicable
- Have construction notes and specifications been provided and reviewed?
- Have all design variables been accounted for?
  - Compliance with design requirements (NCMA or other) as well as any governing regulations or local ordinances.
  - Design loads, including:
    - Surcharge loads, including magnitudes and locations
    - Loads from handrails, fences, barriers, etc.
    - Temporary or construction loads
    - Snow or storage loads
    - Seismic loads, if applicable
  - Internal Compound Stability
  - Verify global stability has been evaluated
  - Design strengths including sliding, overturning (including top-of-wall), bearing, geogrid overstress, and geogrid pullout (block and soil)
- Water management:
  - Location and venting of toe and heel drains
  - Details for low permeability soils
  - Surface and subsurface water sources accounted for
- Do material submittals comply with project specifications?
- Does the project require any special considerations or construction details?