TOHO INSPECTOR RECORD DRAWING CHECKLIST

1: GENERAL NOTES:

- Accepted construction drawings simply stamped ‘Record Drawings’ and as-built surveys will not be accepted for review by TWA. The engineer of record shall be responsible for transferring the as-built survey information on to the accepted drawings and re-drawn as necessary to reflect changes
- Water, Reuse, & Sewer plans may be shown on the same sheet or on separate sheets

2: GENERAL REQUIREMENTS

- ☐ Toho Project Name
- ☐ Toho Project Number
- ☐ Scaled Vicinity Map w/ Marked Project Location
- ☐ North Arrow
- ☐ Sheet Index
- ☐ Overall Master Plan of project (including ALL phases)
- ☐ The following certification shall be provided on the Record Drawing Cover Sheet:
    - *‘ I CERTIFY THAT THESE RECORD DRAWINGS HAVE BEEN REVIEWED BY ME OR BY INDIVIDUAL(S) UNDER MY DIRECT SUPERVISION AND THAT THESE RECORD DRAWINGS INCORPORATE THE INFORMATION CONTAINED IN CHAPTER 61G17-6, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS. TO THE BEST OF MY KNOWLEDGE AND BELIEF THESE RECORD DRAWINGS SUBSTANTIALLY REFLECT ALL WATER, SANITARY SEWER, AND RECLAIM WATER UTILITIES THAT APPLIES, AS CONSTRUCTED. THE ACCURACY OF THESE RECORD DRAWINGS IS RELIANT ON THE ACCURACY APPLIED BY THE SURVEYOR THAT PREPARED THE CERTIFIED AS-BUILT SURVEY’*
- ☐ Statement designating drawings as "Record Drawing" on each sheet
- ☐ Drawing sheets numbered in sequence
- ☐ Match Lines with proper sheet match data
- ☐ Demolition sheets showing all removed or abandoned existing infrastructure must be included. Any removed or abandoned appurtenance must meet the requirements outlined and shall be treated as an Asset
- ☐ Line type, leaders, labels, etc. shall be legible and should not interfere with other required information. If a sheet is illegible due to the amount of information provided it should be cleaned up and separated as necessary
    - All underlying base data from the approved drawings should be thin weight or gray while the record drawing information for the water, reuse, & sewer should be bold and black.
- ☐ Plan sheets clearly delineate ‘Toho’ owned infrastructure and ‘Private’ infrastructure
- ☐ Existing utilities shown on the drawings clearly marked as ‘Existing’

3: POTABLE WATER:

- Provide surveyed shots with Northing, Easting, & Elevation for all appurtenances to include, but not limited to:
  - Tees, bends, crosses, reducers, sleeves, valves, hydrants, wet taps, service saddles, corporation stops, curb stops, water meters, backflows, flushing devices, blow-offs, etc.
- All appurtenances must include size, type, angle, etc. If a fitting comprises more than one size (tee, tap, reducer, etc.) it must include all sizes associated with that fitting
- Limits of pipe restraint must be indicated on the drawings
- If pipe runs exceed 100’ without additional fittings, an elevation shot shall be provided on the top of pipe at 100’ intervals
- Pipe size, material and class must be labeled for all mains and services
- Plan view is required for all TWA owned water mains
- Profile view is required for all conflicts between the water main and reuse, sewer, storm, and/or gas mains
- Provide surveyed elevation shots for top and bottom of pipe at all crossings between the water main and reuse, gravity sewer, force main, storm sewer, and/or gas mains
- All appurtenances on large meter assemblies must be provided with individual Asset IDs. A single Asset ID for the entire assembly is not acceptable
- Bore logs for any directional bore shall be provided with elevation shots, ensure the adapters on each end are provided individual Asset ID information

Comments:

4: RECLAIM WATER:

- Provide surveyed shots with Northing, Easting, & Elevation for all appurtenances to include, but not limited to:
    - Tees, bends, crosses, reducers, sleeves, valves, hydrants, wet taps, service saddles, corporation stops, curb stops, water meters, backflows, flushing devices, blow-offs, etc.
- All appurtenances must include size, type, angle, etc. If a fitting comprises more than one size (tee, tap, reducer, etc.) it must include all sizes associated with that fitting
- Limits of pipe restraint must be indicated on the drawings
- If pipe runs exceed 100’ without additional fittings, an elevation shot shall be provided on the top of pipe at 100’ intervals
- Pipe size, material and class must be labeled for all mains and services
- Plan view is required for all TWA owned reuse mains
- Profile view is required for all conflicts between the reuse main and water, sewer, storm, and/or gas mains
- Provide surveyed elevation shots for top and bottom of pipe at all crossings between the reuse main and water, gravity sewer, force main, storm sewer, and/or gas mains
- All appurtenances on large meter assemblies must be provided with individual Asset IDs. A single Asset ID for the entire assembly is not acceptable
- Bore logs for any directional bore shall be provided with elevation shots, ensure the adapters on each end are provided individual Asset ID information

Comments:

5: SANITARY SEWER FORCE MAIN:

- Provide surveyed shots with Northing, Easting, & Elevation for all appurtenances to include, but not limited to:
  - Tees, bends, crosses, reducers, sleeves, valves, wet taps, service saddles, corporation stops, curb stops, meters, etc.
- All appurtenances must include size, type, angle, etc. If a fitting comprises more than one size (tee, tap, reducer, etc.) it must include all sizes associated with that fitting
- Limits of pipe restraint must be indicated on the drawings
- If pipe runs exceed 100’ without additional fittings, an elevation shot shall be provided on the top of pipe at 100’ intervals
- Pipe size, material and class must be labeled for all mains and services
- Plan view is required for all TWA owned force mains
- Profile view is required for all conflicts between the force main and water, reuse, gravity sewer, storm, and/or gas mains
- Provide surveyed elevation shots for top and bottom of pipe at all crossings between the force main and water, reuse, gravity sewer, storm sewer, and/or gas mains
- All appurtenances on large meter assemblies must be provided with individual Asset IDs. A single Asset ID for the entire assembly is not acceptable
- Bore logs for any directional bore shall be provided with elevation shots, ensure the adapters on each end are provided individual Asset ID information

Comments:

6: GRAVITY SANITARY SEWER:

- Provide surveyed shots with Northing, Easting, & Elevation for all appurtenances to include, but not limited to:
  - Wyes, bends, sleeves, core-drill connections, manholes, cleanouts, etc.
- All appurtenances must include size, type, angle, etc. If a fitting comprises more than one size it must include all sizes associated with that fitting
- Pipe size, material and class must be labeled for all mains and services
- Pipe length and slope shall be provided between all manholes
- Plan and Profile view is required for all Toho owned gravity sewer mains
- Provide surveyed elevation shots for top and bottom of pipe at all crossings between the gravity sewer main and water, reuse, force main, storm sewer, and/or gas mains
- Provide linear footage from the downstream manhole to all sewer lateral connections to the main. Distances shall be measured for each connection from the manhole, not between connections
- Provide finished rim and invert elevations for all manholes installed with the project and existing manholes that were connected to as part of the project
  - Invert elevations shall include ALL connections into the manhole regardless of size
  - Drop connections shall require an elevation at the incoming invert as well as at the bottom of the drop piping
  - This information shall be provided on both the plan & profile sheets AND the Coordinate Asset Table(s)

Comments:

7: Lift Stations

- Separate lift station detail sheets shall be provided for each lift station
- Provide surveyed shots with Northing, Easting, & Elevation for all appurtenances to include, but not limited to:
    - Tees, bends, reducers, valves, check valves, backflows, meters, etc..
- All appurtenances must include size, type, angle, etc. If a fitting comprises more than one size it must include all sizes associated with that fitting
- All appurtenances on the above ground piping and inside the wet well must be provided with individual Asset IDs.
- Pipe size, material and class must be labeled for all piping with the lift station yard and the wet well
- Provide surveyed elevation shots for top and bottom of pipe for all utility crossings within the lift station yard
- Pipe casings under walls shall be provided with pipe size and material, length, and Asset ID information for both ends of the casing
- Provide finished rim and invert elevations for the wet well
    - Invert elevations shall include ALL connections into the wet well regardless of size
    - Drop connections shall require an elevation at the incoming invert as well as at the bottom of the drop piping
- Provide elevation shots:
    - All four corners of the yard
    - Wet well top slab
    - Finished grade of rock around wet well

Comments: