









CONTRACT NO. 20210110.00-CH - WTP FLOC/SED BASIN NO. 2 FOR THE CITY OF GEORGETOWN. THIS DRAWING IS THE PROPERTY OF WKDICKSON AND SHOULD NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. ANY REPRODUCTION OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF WKDICKSON LLC IS PROHIBITED. ONE COPY OF THIS DRAWING IS TO BE MAINTAINED AT THE PROJECT SITE. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS DRAWING.

**TEMPORARY SEEDING**

The purpose of temporary seeding is to reduce erosion and sedimentation by stabilizing disturbed areas that would otherwise lay bare for long periods of time before they are worked or stabilized. Temporary seeding is also used where permanent vegetation growth is not necessary or appropriate.

**When and Where to Use It**

Temporary seeding is used on exposed soil surfaces such as denuded areas, soil stockpiles, dikes, dams, banks of sediment basins, banks of sediment traps, and temporary road banks. Temporary seeding prevents and limits costly maintenance operations on other sediment control structures. Sediment cleanout requirements for sediment basins, sediment traps, and silt fence is reduced if the drainage area is seeded when grading and construction operation are not taking place. Temporary stabilization is required within 14 days after construction activity is complete unless construction activity is going to resume within 21 days. Cover seeded areas with an appropriate mulch to provide protection from the weather. When the temporary vegetation does not grow quickly or thick enough to prevent erosion, re-seed as soon as possible. Keep seeded areas adequately moist. Irrigate the seeded area if normal rainfall is not adequate for the germination and growth of seedlings. Water seeded areas at controlled rates that are less than the rate at which the soil can absorb water to prevent runoff. Runoff of irrigation water wastes water and can cause erosion.

**Seed Selection**

Seed selection is based on geographical location, soil type, and the season of the year in which the planting is to be done. Use the Table 1 as a guide for conventional tillage methods (plowing, seedbed preparation, hydroseeding, etc). If a fast growing crop to nurse the permanent specie or species is required, then use the mix rate. Failure to carefully follow agronomic recommendations results in an inadequate stand of temporary vegetation that provides little or no erosion control.

**Installation**

**Tillage** - If the area has been recently plowed, no tillage is required other than raking or surface roughening to break any crust that has formed leaving a textured surface. Disk the soil for optimal germination when the soil is compacted less than 6-inches.

**Soil Testing** - Soil testing is available through Clemson University Cooperative Extension Service.

**Lime** - Lime is not required for temporary seeding unless a soil test shows that the soil pH is below 5.0. It may be desirable to apply lime during the temporary seeding operation to benefit the long-term permanent seeding. Apply a minimum of 1.5 tons of Lime/acre (70 pounds per 1000 square feet) if it is to be used.

**Fertilizer** - Apply a minimum of 500 pounds per acre of 10-10-10 fertilizer (11.5 pounds per 1000 square feet) or equivalent during temporary seeding unless a soil test indicates a different requirement. Incorporate fertilizer and lime (if used) into the top 4-6 inches of the soil by disking or other means where conditions allow.

**Seeding** - Loosen the soil surface before broadcasting the seed. Apply seed evenly by the most convenient method available for the type of seed used and the location of the temporary seeding. Typical application methods include but are not limited to cyclone seeders, rotary spreaders, drop spreaders, broadcast spreaders, hand spreaders, cultipacker seeder, and hydro-seeders. Cover applied seed by raking or dragging a chain, and then lightly firm the area with a roller or cultipacker.

**Mulching** - Use mulch with temporary seed applications to retain soil moisture and reduce erosion during the establishment of vegetation. Typical mulch applications include straw, wood fiber, hydromulches, BFM and FGM. Use hydromulches with a minimum blend of 70% wood fibers. The most commonly accepted mulch used in conjunction with temporary seeding is small grain straw. This straw should be dry and free from mold damage and noxious weeds. The straw may need to be anchored with netting or emulsions to prevent it from being blown or washed away. Apply the straw mulch by hand or machine at the rate 1.5-2 tons per acre (90 pounds per 1000 square feet). Frequent inspections are necessary to check that conditions for growth are good.

**Irrigation** - Seeded areas should be kept adequately moist. Irrigate the seeded area if normal rainfall is not adequate for the germination and growth of seedlings. Water seeded areas at controlled rates that are less than the rate at which the soil can absorb water to prevent runoff. Runoff of irrigation water wastes water and can cause erosion.

**Re-seeding** - Re-seed areas where seeding does not grow quickly, thick enough, or adequately to prevent erosion. Base seed selection on the requirements of local conditions.

**Inspection and Maintenance**

Inspect every 7 calendar days and within 24-hours after each rainfall event that produces 1/2-inches or more of precipitation. Cover seeded area with mulch to provide protection. Frequent inspections are necessary to check that conditions for growth are good. Supply temporary seeding with adequate moisture. Supply water as needed, especially in abnormally hot or dry weather or on adverse sites. Control water application rates to prevent runoff.

TABLE 1

Temporary Seeding – Coastal													
Species	Lbs/Ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Sandy, Droughty Sites</b>													
Browntop Millet	40 lbs./ac.												
Rye, Grain	56 lbs./ac.												
Ryegrass	50 lbs./ac.												
<b>Well drained, clayey/loamey Sites</b>													
Browntop Millet or Japanese Millet	40 lbs./ac.												
Rye, Grain or Oats	56 lbs./ac.												
Ryegrass	50 lbs./ac.												

TABLE 2

Permanent Seeding - Coastal													
Species	Lbs/Ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Sandy, Droughty Sites</b>													
Browntop Millet	10 lbs./ac.												
Bahiagrass	40 lbs./ac.												
Browntop Millet	10 lbs./ac.												
Bahiagrass	30 lbs./ac.												
Sericea Lespedeza	40 lbs./ac.												
Browntop Millet	10 lbs./ac.												
Atlantic Coastal Panicgrass	15 lbs./ac. PLS												
Browntop Millet	10 lbs./ac.												
Switchgrass (Alamo)	8 lbs./ac. PLS												
Little Bluestem	4 lbs./ac.												
Sericea Lespedeza	20 lbs./ac.												
Browntop Millet	10 lbs./ac.												
Weeping Lovegrass	8 lbs./ac.												
<b>Well drained, clayey/loamey Sites</b>													
Browntop Millet	10 lbs./ac.												
Bahiagrass	40 lbs./ac.												
Rye, Grain	10 lbs./ac.												
Bahiagrass	40 lbs./ac.												
Clover, Crimson (Annual)	5 lbs./ac.												
Browntop Millet	10 lbs./ac.												
Bahiagrass	30 lbs./ac.												
Sericea lespedeza	40 lbs./ac.												
Browntop Millet	10 lbs./ac.												
Bermuda, Common	10 lbs./ac.												
Sericea lespedeza	40 lbs./ac.												
Browntop Millet	10 lbs./ac.												
Bermuda, Common	12 lbs./ac.												
Kobe Lespedeza (Annual)	10 lbs./ac.												
Browntop Millet	10 lbs./ac.												
Bahiagrass	20 lbs./ac.												
Bermuda, Common	6 lbs./ac.												
Sericea lespedeza	40 lbs./ac.												
Browntop Millet	10 lbs./ac.												
Switchgrass	8 lbs./ac.												
Little Bluestem	3 lbs./ac. PLS												
Indiangrass	3 lbs./ac. PLS												

**PERMANENT SEEDING**

Controlling runoff and preventing erosion by establishing a perennial vegetative cover with seed.

**When and Where to Use It**

A major consideration in the selection of the type of permanent grass to establish is the intended use of the land. Land use is separated into two categories, high-maintenance and low-maintenance.

**High-maintenance** - High maintenance areas are mowed frequently, lime or fertilized on a regular basis, and require maintenance to an aesthetic standard. Land uses with high maintenance grasses include homes, industrial parks, schools, churches, and recreational areas such as parks, athletic fields, and golf courses.

**Low-maintenance** - Low maintenance areas are mowed infrequently, if at all, and lime and fertilizer may not be applied on a regular schedule. These areas are not subject to intense use and do not require a uniform appearance. The vegetation must be able to survive with little maintenance over long periods of time. Grass and legume mixtures are favored over long periods of time. Grass and legume mixtures are favored in these areas because legumes are capable of fixing nitrogen in the soil for their own use and the use of grasses around them. Land uses requiring low-maintenance grasses include steep slopes, stream and channel banks, road banks, and commercial and industrial areas with limited access.

**Seed Selection**

The use of native species is preferred when selecting vegetation. Base plant seed selection on geographical location, the type of soil, the season of the year in which the planting is to be done, and the needs and desires of the permanent land user. Failure to carefully follow agronomic recommendations results in an inadequate stand of permanent vegetation that provides little or no erosion control. Use the Table 2 as a guide for seed selection.

**Installation**

**Topsoil** - Apply topsoil if the surface soil of the seedbed is not adequate for plant growth.

**Tillage** - If the area has been recently plowed, no tillage is required other than raking the surface or surface roughening to break any crust that has formed leaving a textured surface. Disk the soil for optimal germination when the soil is compacted less than 6-inches. If the soil is compacted more than 6-inches, sub-soiled and disk the area.

**Soil Testing** - Soil testing is available through Clemson University Cooperative Extension Service.

**Lime** - Unless a specific soil test indicates otherwise, apply 1 1/2 tons of ground course textured agricultural limestone per acre (70 pounds per 1000 square feet).

**Fertilizer** - Apply a minimum of 1000 pounds per acre of a complete 10-10-10 fertilizer (23 pounds per 1000 square feet) or equivalent during permanent seeding of grasses unless a soil test indicates a different requirement. Incorporate fertilizer and lime (if used) into the top 4-6 inches of the soil by disking or other means where conditions allow. Do not mix the lime and the fertilizer prior to the field application.

**Seeding** - Loosen the surface of the soil just before broadcasting the seed. Evenly apply seed by the most convenient method available for the type of seed applied and the location of the seeding. Typical application methods include, but are not limited to, cyclone seeders, rotary spreaders, drop spreaders, broadcast spreaders, hand spreaders, cultipacker seeder, and hydro-seeders. Cover applied seed by raking or dragging a chain or brush mat, then lightly firm the area with a roller or cultipacker. Do not roll seed that is applied with a hydro-seeder and hydro-mulch.

**Mulching** - Cover all permanent seeded areas with mulch immediately upon completion of the seeding application to retain soil moisture and reduce erosion during establishment of vegetation. Apply the mulch evenly in such a manner that it provides a minimum of 75% coverage. Typical mulch applications include straw, wood fiber, hydromulches, BFM and FGM. Use hydromulches with a minimum blend of 70% wood fibers. The most commonly accepted mulch used in conjunction with permanent seeding is small grain straw. Select straw that is dry and free from mold damage and noxious weeds. The straw may need to be anchored with netting or asphalt emulsions to prevent it from being blown or washed away. Apply straw mulch by hand or machine at the rate of 2 tons per acre (90 pounds per 1000 square feet). Frequent inspections are necessary to check that conditions for growth are good.

**Irrigation** - Keep permanent seeded areas adequately moist, especially late in the specific growing season. Irrigate the seeded area if normal rainfall is not adequate for the germination and growth of seedlings. Water seeded areas at controlled rates that are less than the rate at which the soil can absorb water to prevent runoff. Runoff of irrigation water wastes water and can cause erosion.

**Re-Seeding** - Inspect permanently seeded areas for failure, make necessary repairs and re-seed or overseed within the same growing season if possible. If the grass cover is sparse or patch, re-evaluate the choice of grass and quantities of lime and fertilizer applied. Final stabilization by permanent seeding of the site requires that it be covered by 70% coverage rate.

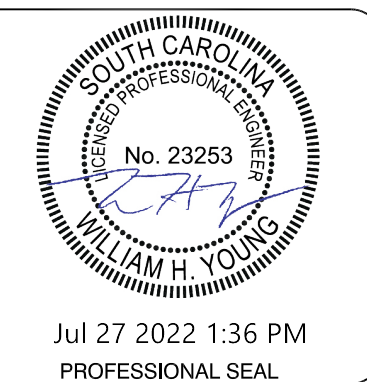
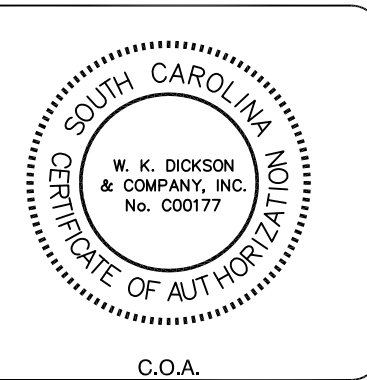
**Inspection and Maintenance**

Inspect seeded areas for failure and make necessary repairs and re-seed immediately. Conduct a follow-up survey after one year and replace failed plants where necessary. If vegetative cover is inadequate to prevent rill erosion, overseed and fertilize in accordance with soil test results.



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NO.	DATE	DESCRIPTION	BY
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PROJECT NAME:	WTP FLOC/SED BASIN NO. 2 FOR THE CITY OF GEORGETOWN
DRAWING TITLE:	SEDIMENT AND EROSION CONTROL

PROJ. MGR.: WHY  
DESIGN BY: RFH  
DRAWN BY: WJW  
PROJ. DATE: 06/02/2021  
DRAWING NUMBER:

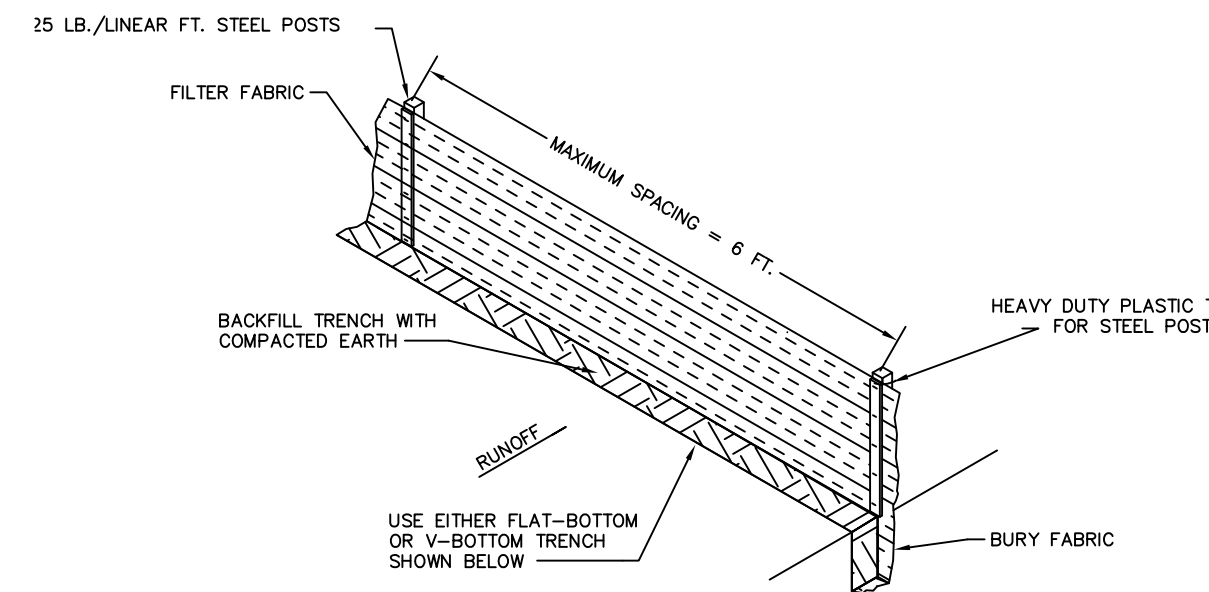
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20210110.00.CH

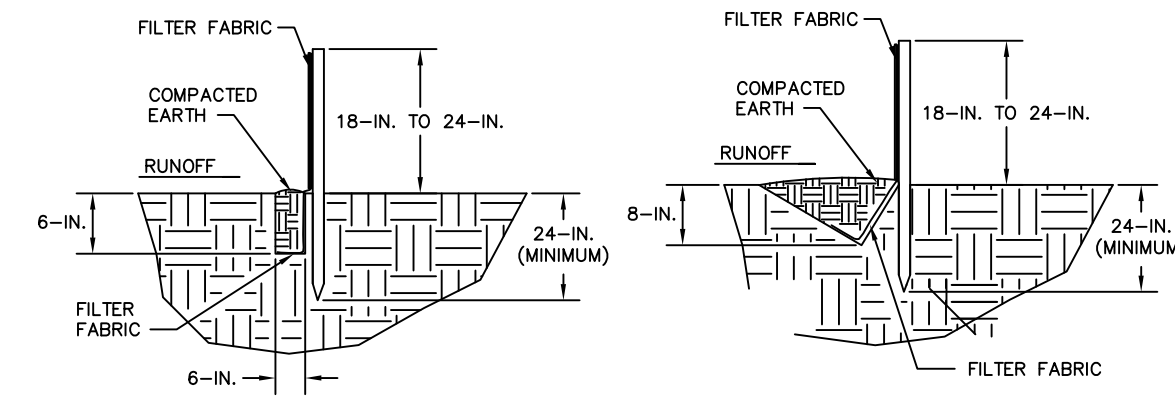
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CONSULT THE DESIGNER FOR ALL NECESSARY INFORMATION. THE DESIGNER'S RESPONSIBILITY IS LIMITED TO THE DESIGN OF THE STRUCTURE AND THE MATERIALS SPECIFICATIONS. THE DESIGNER DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED HEREIN. THE DESIGNER'S LIABILITY IS LIMITED TO THE DESIGN OF THE STRUCTURE AND THE MATERIALS SPECIFICATIONS. THE DESIGNER DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED HEREIN.



**SILT FENCE INSTALLATION**



**FLAT-BOTTOM TRENCH DETAIL      V-SHAPED TRENCH DETAIL**

**When and Where to Use It**  
 Silt fence is applicable in areas:  
 Where the maximum sheet or overland flow path length to the fence is 100-feet.  
 Where the maximum slope steepness (normal [perpendicular] to fence line) is 2H:1V.  
 That do not receive concentrated flows greater than 0.5 cfs.  
 Do not place silt fence across channels or use it as a velocity control BMP.

**Materials**  
**Steel Posts**  
 Use 48-inch long steel posts that meet the following minimum physical requirements:  
 Composed of high strength steel with minimum yield strength of 50,000 psi.  
 Have a standard "T" section with a nominal face width of 1.38-inches and nominal "T" length of 1.48-inches.  
 Weigh 1.25 pounds per foot (± 8%).  
 Have a soil stabilization plate with a minimum cross section area of 17-square inches attached to the steel posts.  
 Painted with a water based baked enamel paint.

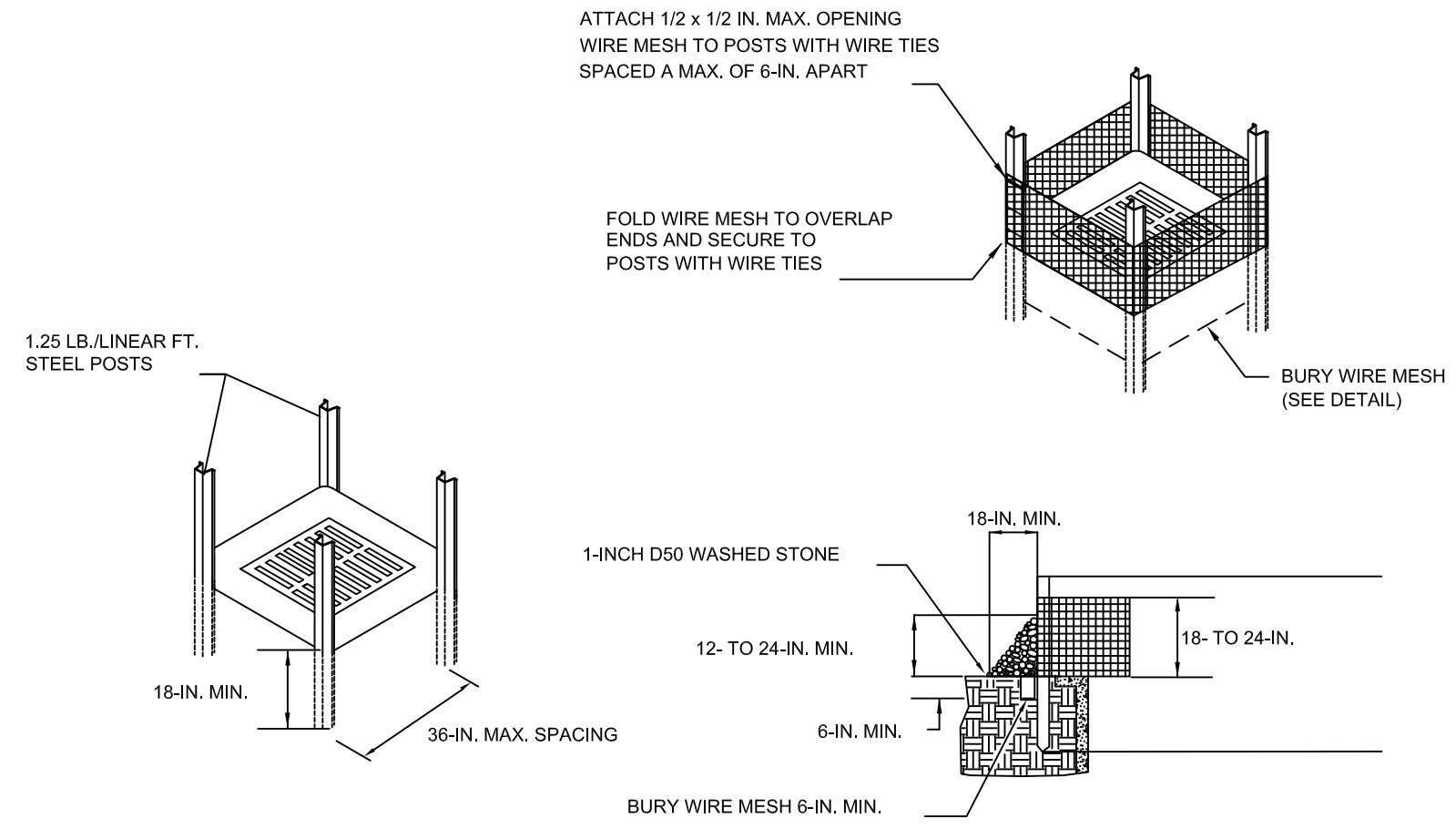
Use steel posts with a minimum length of 4-feet, weighing 1.25 pounds per linear foot (± 8%) with projections to aid in fastening the fabric. Except when heavy clay soils are present on site, steel posts will have a metal soil stabilization plate welded near the bottom such that when the post is driven to the proper depth, the plate will be below the ground level for added stability. The soil plates should have the following characteristics:  
 Be composed of minimum 15 gauge steel.  
 Have a minimum cross section area of 17-square inches.

**Geotextile Filter Fabric**  
 Filter fabric is:  
 Composed of fibers consisting of long chain synthetic polymers composed of at least 85% by weight of polyolefins, polyesters, or polyamides.  
 Formed into a network such that the filaments or yarns retain dimensional stability relative to each other.  
 Free of any treatment or coating which might adversely alter its physical properties after installation.  
 Free of defects or flaws that significantly affect its physical and/or filtering properties.  
 Cut to a minimum width of 36 inches.  
 Use only fabric appearing on SCDOT Approval Sheet #34 meeting the requirements of the most current edition of the SCDOT Standard Specifications for Highway Construction.

**Installation**  
 Excavate a trench approximately 6-inches wide and 6-inches deep when placing fabric by hand. Place 12-inches of geotextile fabric into the 6-inch deep trench, extending the remaining 6-inches towards the upslope side of the trench. Backfill the trench with soil or gravel and compact. Bury 12-inches of fabric into the ground when pneumatically installing silt fence with a slicing method. Purchase fabric in continuous rolls and cut to the length of the barrier to avoid joints. When joints are necessary, wrap the fabric together at a support post with both ends fastened to the post, with a 6-inch minimum overlap. Install posts to a minimum depth of 24-inches. Install posts a minimum of 1- to 2- inches above the fabric, with no more than 3-feet of the post above the ground. Space posts to maximum 6-foot centers. Attach fabric to wood posts using staples made of heavy-duty wire at least 1½-inch long, spaced a maximum of 6-inches apart. Staple a 2-inch wide lathe over the filter fabric to securely fasten it to the upslope side of wooden posts. Attach fabric to the steel posts using heavy-duty plastic ties that are evenly spaced and placed in a manner to prevent sagging or tearing of the fabric. In all cases, ties should be affixed in no less than 4 places. Install the fabric a minimum of 24-inches above the ground. When necessary, the height of the fence above ground may be greater than 24-inches. In tidal areas, extra silt fence height may be required. The post height will be twice the exposed post height. Post spacing will remain the same and extra height fabric will be 4-, 5-, or 6-foot tall. Locate silt fence checks every 100 feet maximum and at low points. Install the fence perpendicular to the direction of flow and place the fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanup.

**Inspection and Maintenance**  
 Inspect every seven calendar days and within 24-hours after each rainfall event that produces ½-inch or more of precipitation. Check for sediment buildup and fence integrity. Check where runoff has eroded a channel beneath the fence, or where the fence has sagged or collapsed by fence overtopping.  
 If the fence fabric tears, begins to decompose, or in any way becomes ineffective, replace the section of fence immediately. Remove sediment accumulated along the fence when it reaches 1/3 the height of the fence, especially if heavy rains are expected. Remove trapped sediment from the site or stabilize it on site. Remove silt fence within 30 days after final stabilization is achieved or after temporary best management practices (BMPs) are no longer needed. Permanently stabilize disturbed areas resulting from fence removal.

**1 SILT FENCE**  
 Scale: NONE

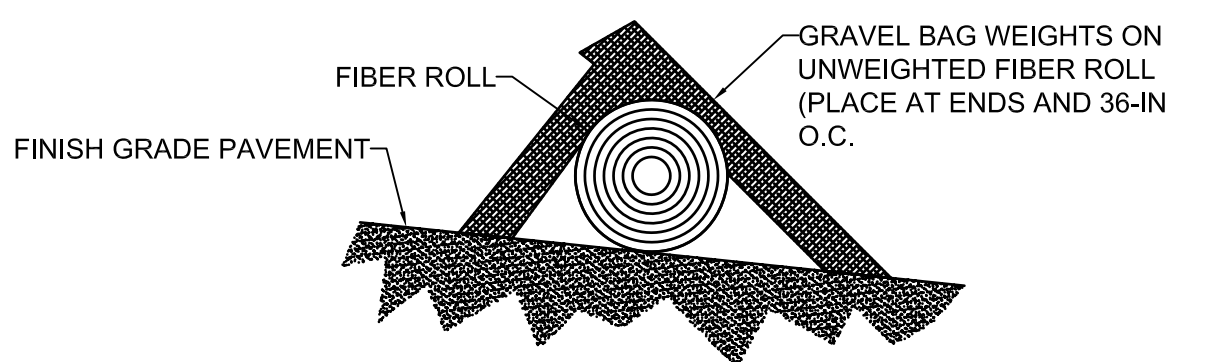


**TYPE B - WIRE MESH AND STONE INLET PROTECTION**

- MATERIALS**
- USE HARDWARE FABRIC OR COMPARABLE WIRE MESH WITH MAXIMUM OPENINGS OF 0.5-INCHES X 0.5-INCHES AS THE SUPPORTING MATERIAL.
  - USE STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:
    - BE COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
    - HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES.
    - WEIGH 1.25 POUNDS PER FOOT (± 8%).
    - BE PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.
  - USE HEAVY-DUTY WIRE TIES TO ATTACH THE WIRE MESH MATERIAL TO THE STEEL POSTS.
  - PLACE AGGREGATE NO. 5 WASHED STONE AGAINST THE HARDWARE FABRIC ON ALL SIDES.

- INSTALLATION:**
- EXCAVATE A TRENCH 6-INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE INLET.
  - USE HARDWARE FABRIC OR COMPARABLE WIRE MESH WITH MAXIMUM OPENINGS OF 0.5-INCHES BY 0.5-INCHES AS THE SUPPORTING MATERIAL.
  - EXTENDED THE FABRIC A MINIMUM OF 6-INCHES INTO THE GROUND. BACKFILL THE TRENCH WITH SOIL OR CRUSHED STONE AND COMPACT OVER THE FABRIC.
  - USE STEEL POSTS WITH A MINIMUM POST LENGTH OF 36-INCHES CONSISTING OF STANDARD "T" SECTIONS WITH A WEIGHT OF 1.25 POUNDS PER FOOT (±8%).
  - INSTALL THE WIRE MESH FABRIC ABOVE GRADE A MINIMUM OF 18-INCHES WITHOUT EXCEEDING 24-INCHES.
  - SPACE THE STEEL POSTS A MAXIMUM OF 3-FEET APART AROUND THE PERIMETER OF THE INLET AND DRIVE THEM INTO THE GROUND A MINIMUM OF 18-INCHES.
  - USE HEAVY-DUTY WIRE TIES SPACED A MAXIMUM OF 6-INCHES APART TO ATTACH THE WIRE MESH MATERIAL TO THE STEEL POSTS.
  - PLACE AGGREGATE NO. 5 WASHED STONE TO A MINIMUM HEIGHT OF 12-INCHES, AND A MAXIMUM HEIGHT OF 24-INCHES AGAINST THE HARDWARE FABRIC ON ALL SIDES.
  - INSPECTION AND MAINTENANCE:
    - IF THE STONE BECOMES CLOGGED WITH SEDIMENT, PULL THE STONES AWAY FROM THE INLET AND CLEAN OR REPLACE THEM.
    - SINCE CLEANING OF GRAVEL AT A CONSTRUCTION SITE MAY BE DIFFICULT, AN ALTERNATIVE APPROACH WOULD BE TO USE THE CLOGGED STONE AS FILL AND PUT FRESH STONE AROUND THE INLET.
  - REMOVE ACCUMULATED SEDIMENT FROM STONE WHEN SEDIMENT REACHES ½ OF THE HEIGHT OF THE STRUCTURE.

**2 INLET PROTECTION**  
 Scale: NONE



**FIBER ROLL INSTALLATION:**

- FIBER ROLLS SHALL BE CERTIFIED WEED FREE BY THE MANUFACTURER. DO NOT USE STRAW-FILL FIBER ROLLS.
- FIBER ROLL DIAMETER SHALL BE 9-INCHES.
- CONTROL SITE RUNOFF OVER PAVED SURFACES (EG. AROUND DRAIN INLETS) BY USING WEIGHTED FIBER ROLLS (FIBER ROLL WITH GRAVEL AND ORGANIC MULCH INSIDE) OR NON-WEIGHTED FIBER ROLLS WITH GRAVEL BAG WEIGHTS PLACED ON TOP. FIT THE FIBER ROLL TIGHTLY AGAINST THE PAVEMENT AND ANY CONCRETE WALL OR EDGE, TO PREVENT GAPS.
- ADJUST SPACING OF FIBER ROLLS ACCORDING TO PAVEMENT SLOPE. MAXIMUM SPACING SHALL BE 50-FOOT.
- INSTALL FIBER ROLLS PRIOR TO SITE DISTURBANCE.
- INSTALL FIBER ROLLS FROM THE BOTTOM OF SLOPE UPWARD, TO CAPTURE ANY SEDIMENT UNINTENTIONALLY RELEASED DURING INSTALLATION.
- INSTALL FIBER ROLLS ALONG THE CONTOUR, PERPENDICULAR TO THE SLOPE DIRECTION. TURN THE ENDS OF EACH FIBER ROLL UPSLOPE A MINIMUM OF 6-INCHES, TO PREVENT RUNOFF FROM FLOWING AROUND THE END OF THE ROLL.
- WHEN ROLLS ARE INSTALLED ABUTTING EACH OTHER, OVERLAP THE ENDS AT LEAST 6-INCHES TO CREATE A TIGHT JOIN, TO PREVENT SEDIMENT FROM ESCAPING.
- USE WEIGHTED FIBER ROLLS OR WEIGH DOWN WITH GRAVEL BAGS WHEN USED ON PAVED SURFACES.

**INSPECTION AND MAINTENANCE:**

- REMOVE SEDIMENT WHEN DEPOSITS REACH ONE-THIRD THE HEIGHT OF THE BARRIER. USE SEDIMENTS AS FILL MATERIAL OR REMOVE FROM THE SITE.
- INSPECT FIBER ROLLS PRIOR TO FORECASTED RAIN EVENTS AND AFTER RAIN EVENTS.
- INSPECT DAILY DURING CONSTRUCTION.
- REPAIR OR REPLACE SPLIT, TORN, UNRAVELING, SLUMPING, OR OTHERWISE INEFFECTIVE FIBER ROLLS.

**3 FIBER ROLL**  
 Scale: NONE

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REGISTERED PROFESSIONAL ENGINEER  
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REGISTERED PROFESSIONAL ENGINEER  
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 WILLIAM H. YOUNG  
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 PROFESSIONAL SEAL

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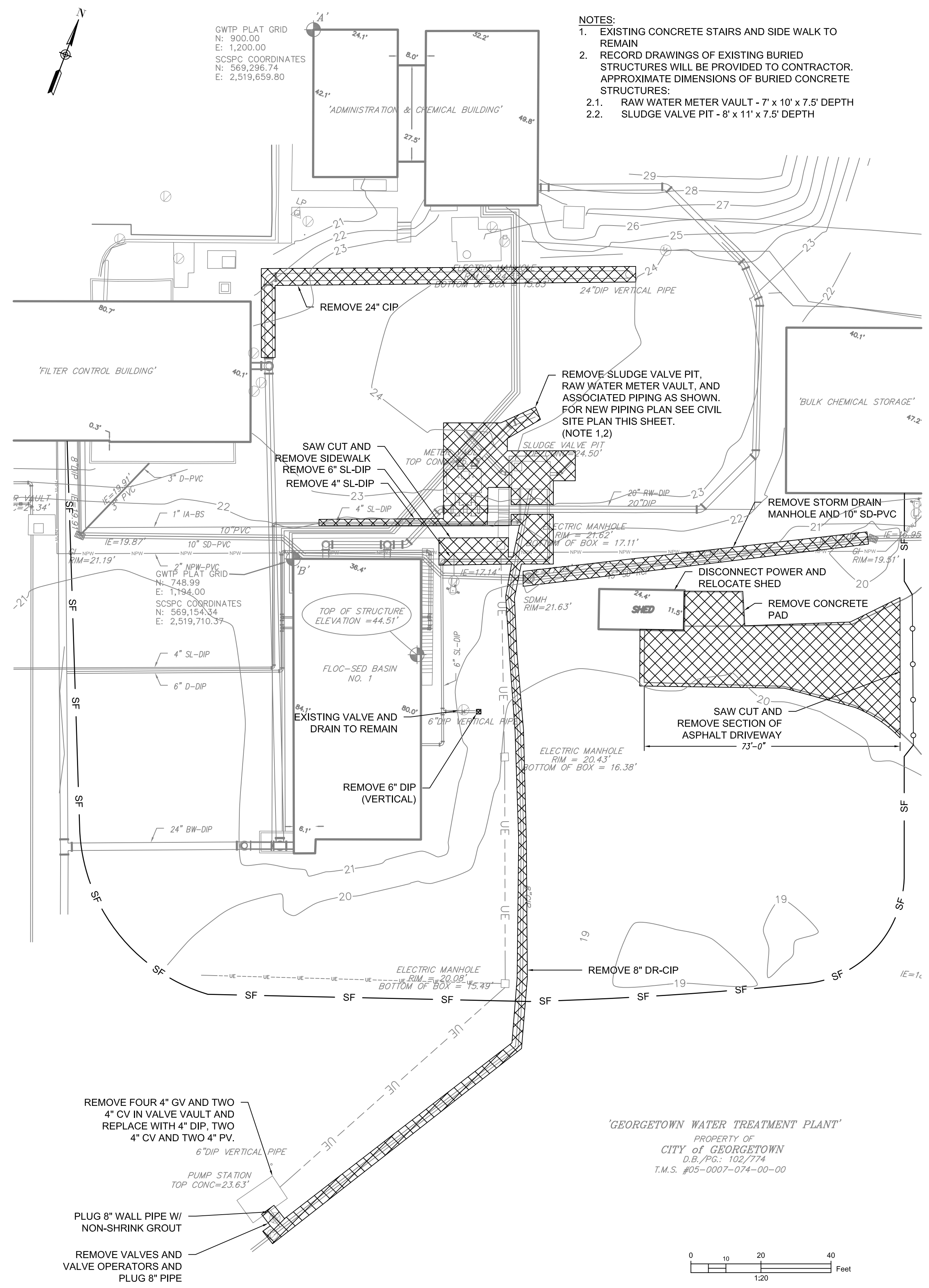
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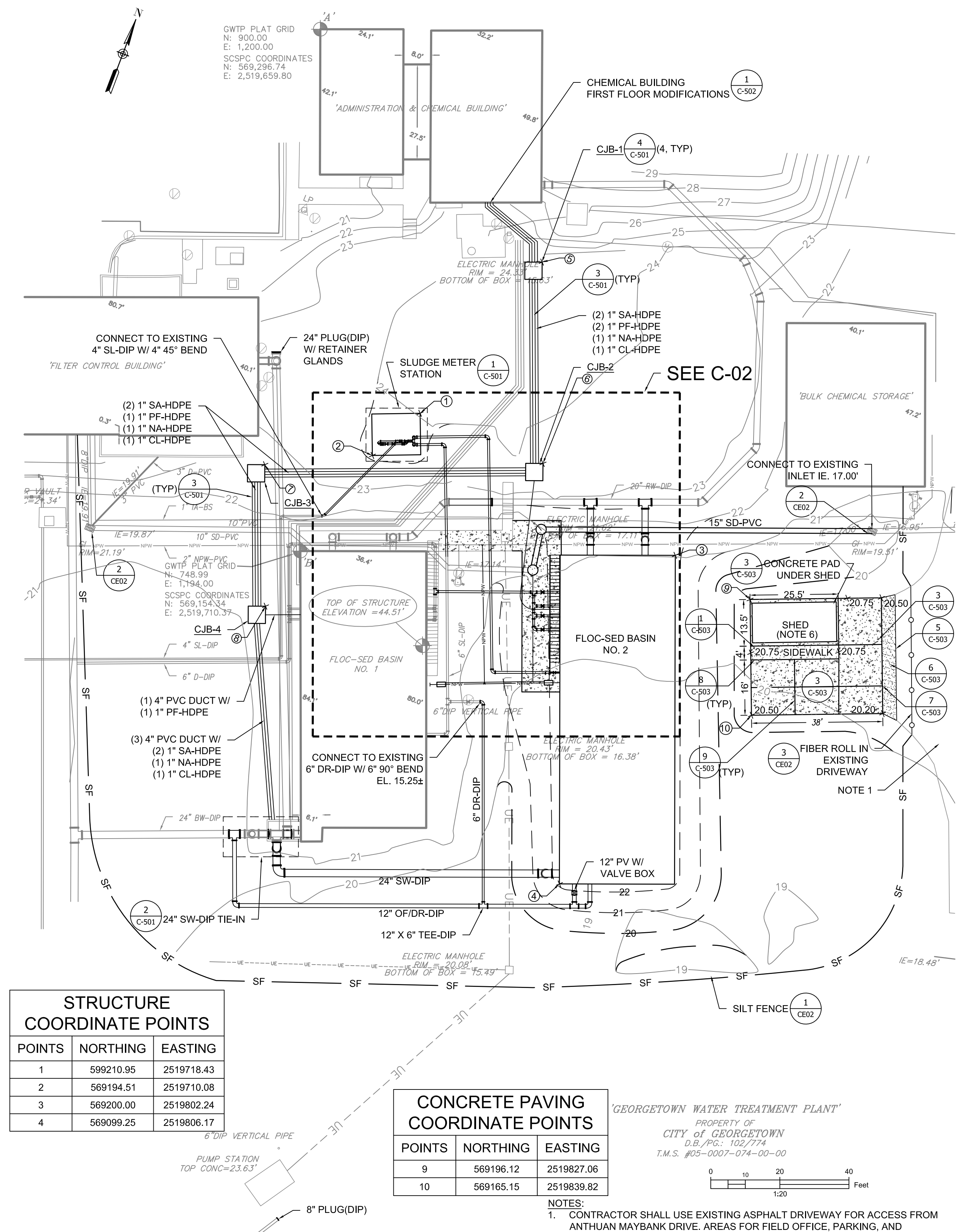
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CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND LOCATIONS OF ALL EXISTING UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF GEORGETOWN AND THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF GEORGETOWN AND THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF GEORGETOWN AND THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL.



**EXISTING/DEMO PLAN**

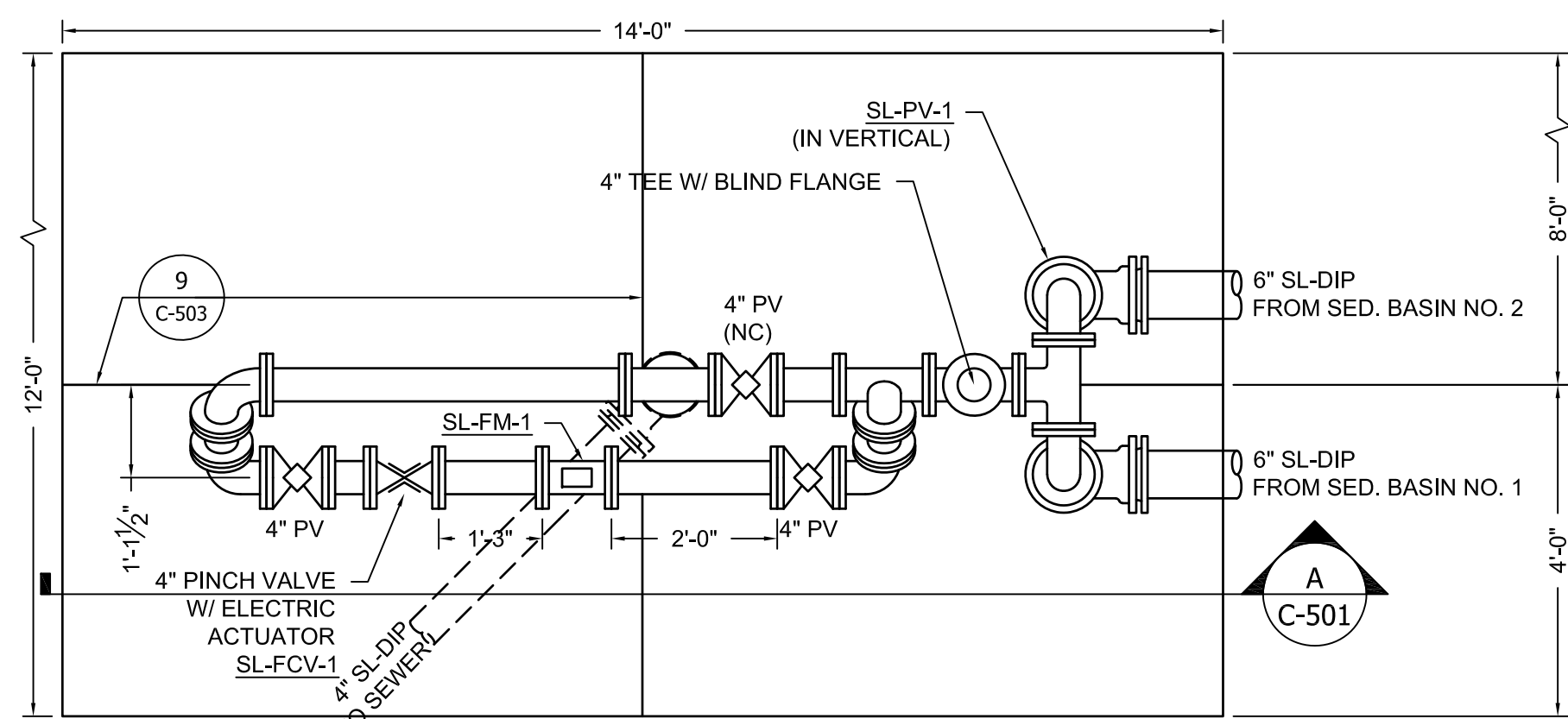




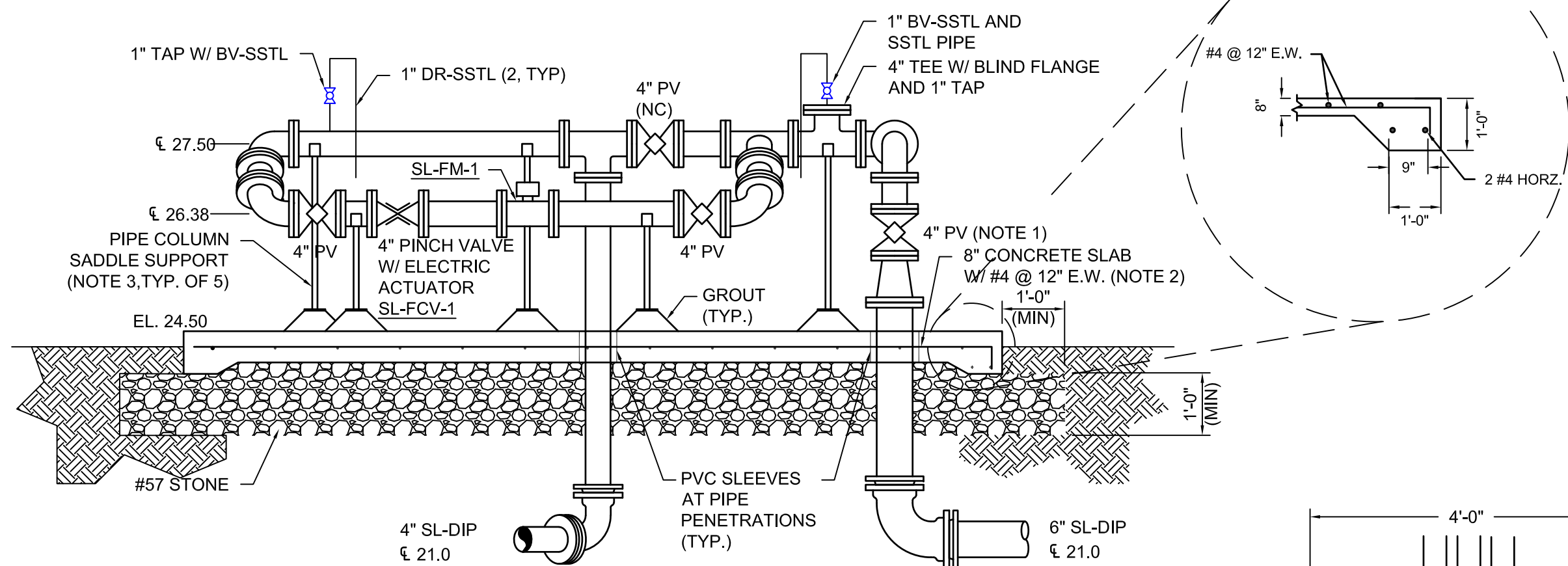




CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING WORK PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE REPORTED TO THE DESIGNER IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL UTILITIES AND STRUCTURES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.



**PLAN**

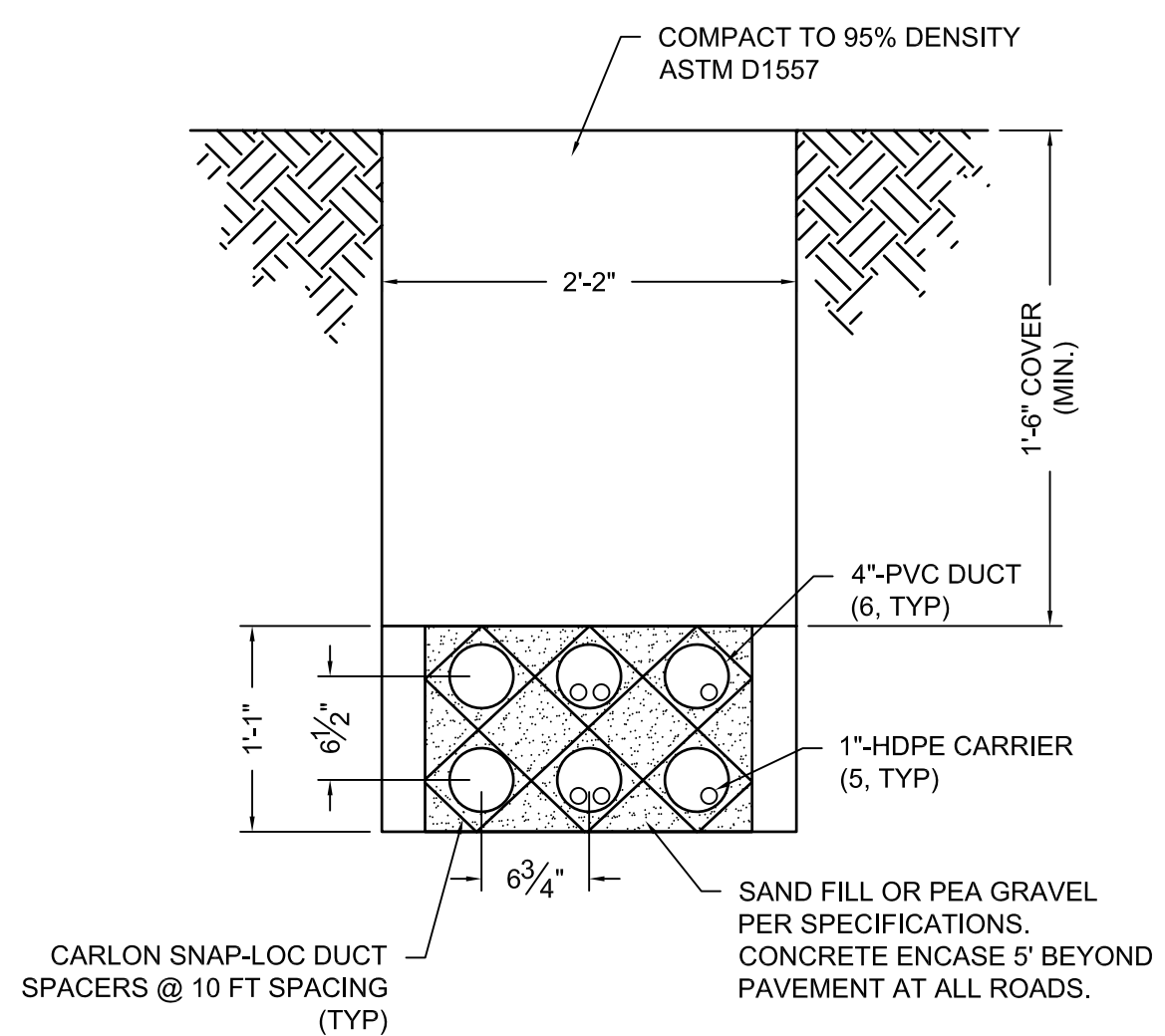


**A SECTION**

- NOTES:**
1. PV ACTUATOR: FROM SED. BASIN NO. 1 - MANUAL FROM SED. BASIN NO. 2 - ELECTRIC (SL-PV-1)
  2. PROVIDE 3/4" x 3/4" CHAMFER AT SLAB PERIMETER.
  3. PIPE SUPPORT EQUAL TO TOLCO FIGURES 317A AND 316T W/ (4) 3/8" TYPE 316 SSTL ANCHOR BOLTS TO SECURE BASE PLATE.

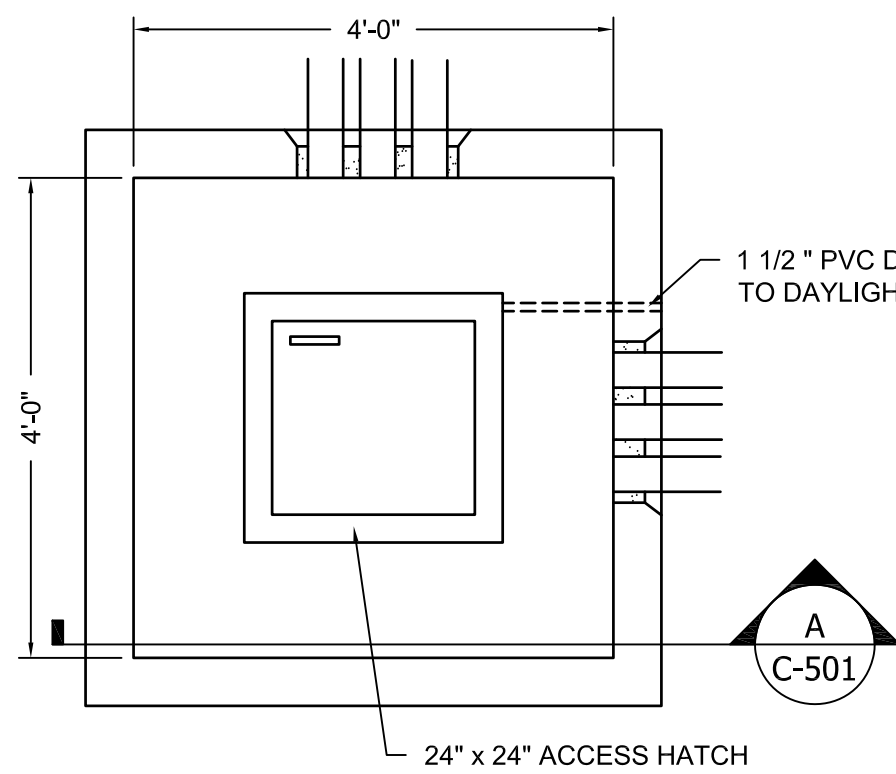
**1 SLUDGE METER STATION**

Scale: 1/2" = 1' - 0"

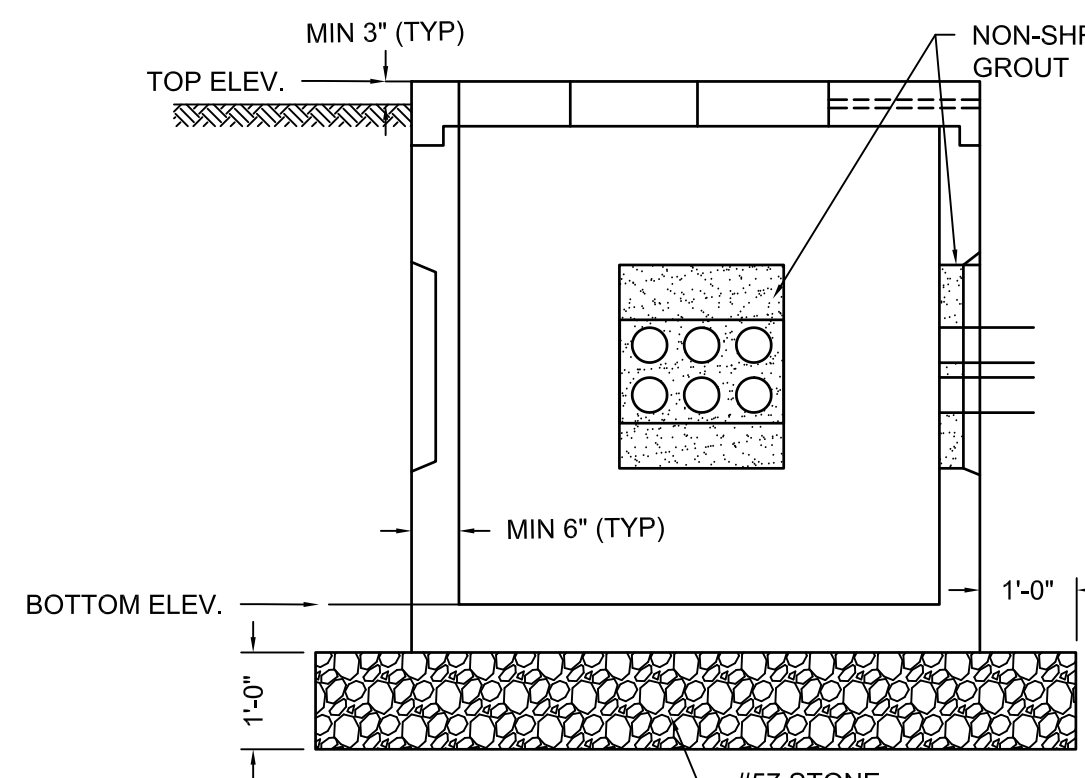


**3 TRENCH SECTION - SOLUTION PIPING**

Scale: N.T.S.



**PLAN**

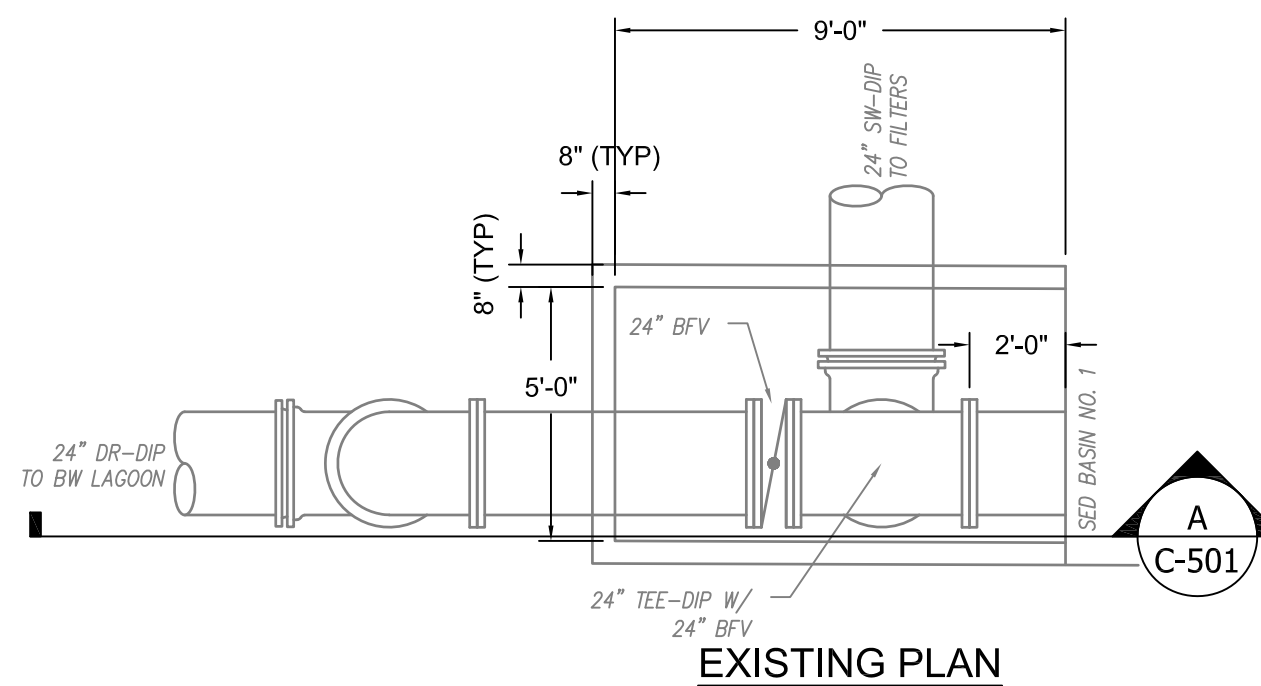


**A SECTION**

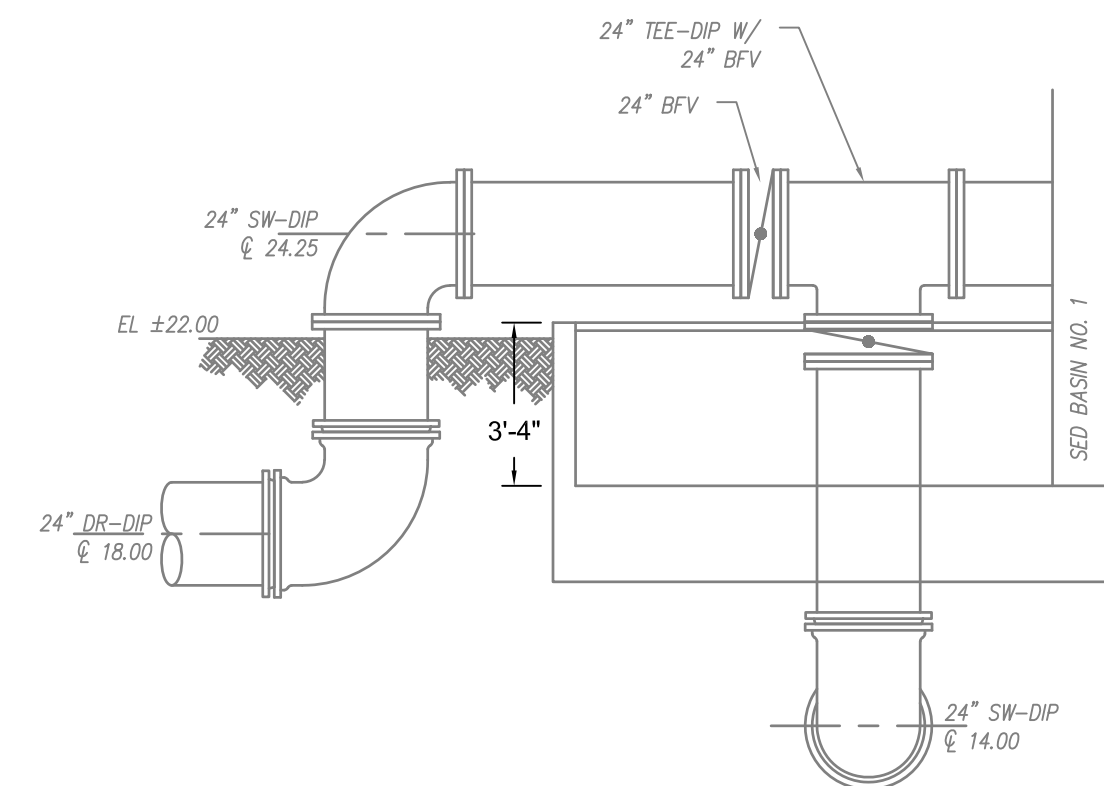
- NOTES:**
1. LABEL EACH 1"-HDPE INSIDE EACH JUNCTION BOX USING 1 1/2" DIA. BLACK FILLED STAINLESS STEEL TAGS AND JACK CHAIN SHOWING SED. BASIN NO. (SETON M4539 OR EQUAL).
  2. MAINTAIN BENDING RADIUS RECOMMENDED BY HDPE MANUFACTURER.
  3. ALIGN BOXES AND ACCESS HATCH LOCATION BASED UPON CASING ALIGNMENT SHOWN ON THE SITE PLAN.
  4. SLOPE 4" DUCTS TO DRAIN TO CJB.

**4 CHEMICAL JUNCTION BOX (CJB)**

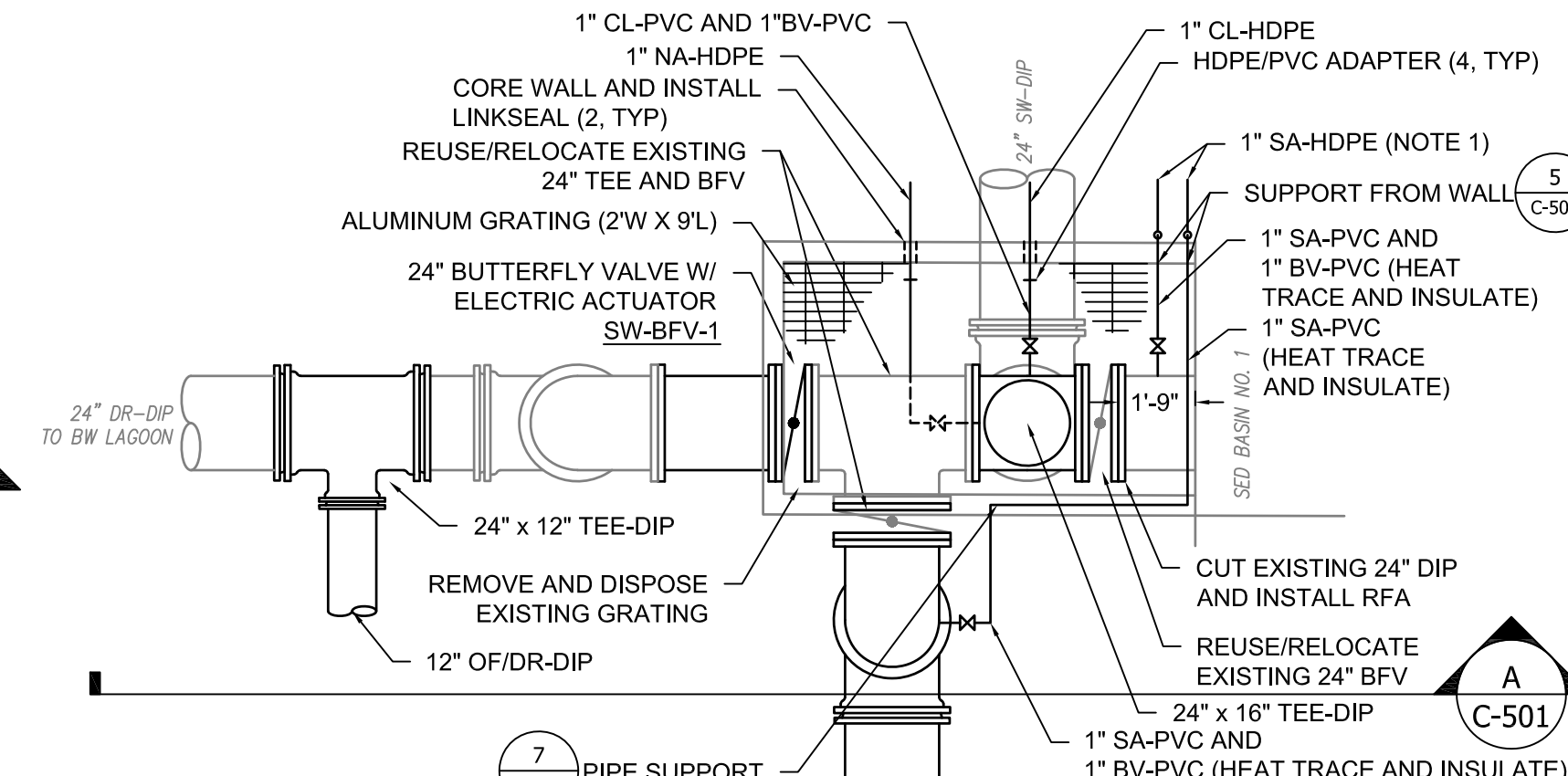
Scale: N.T.S.



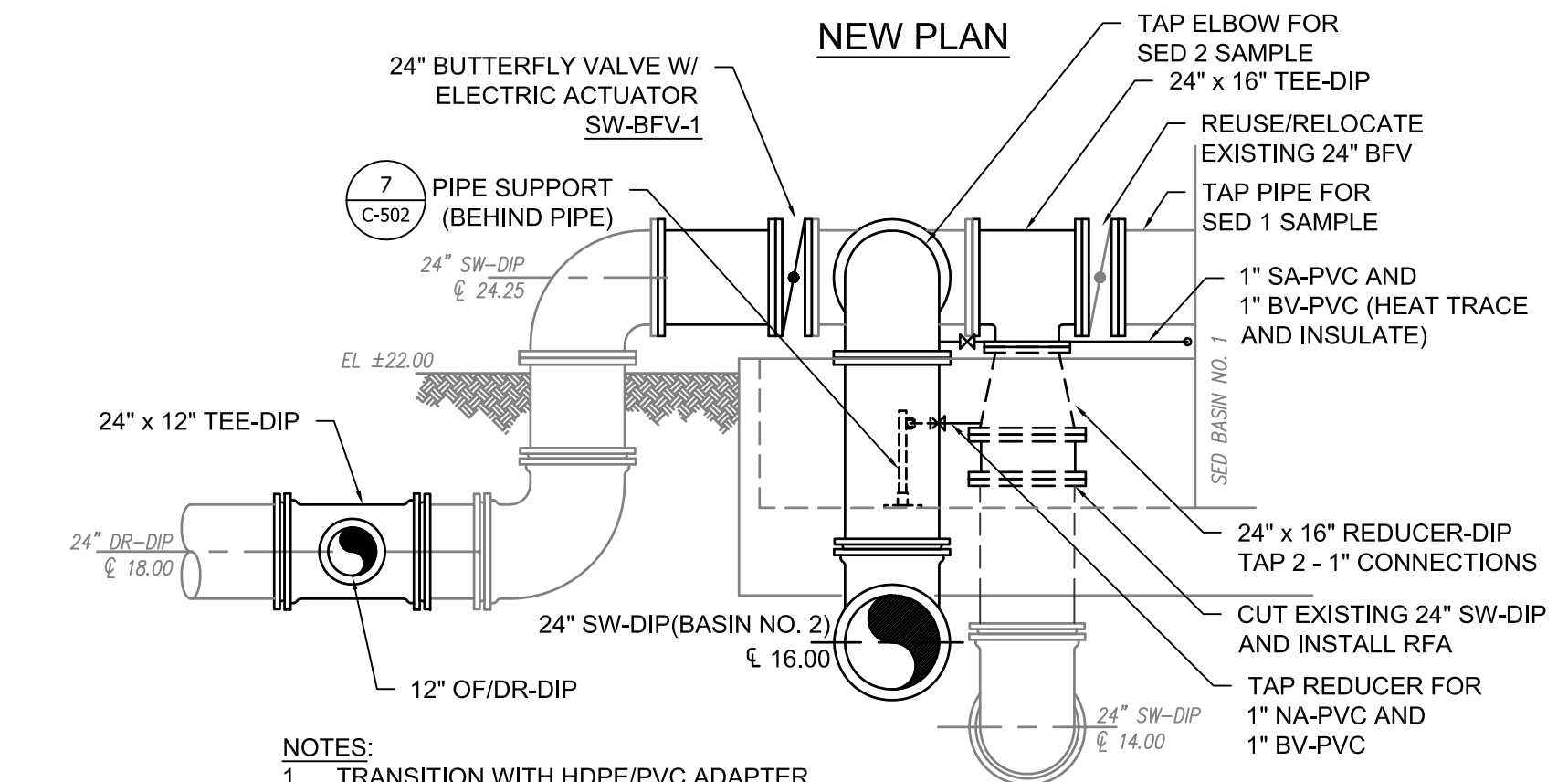
**EXISTING PLAN**



**A EXISTING SECTION**



**NEW PLAN**

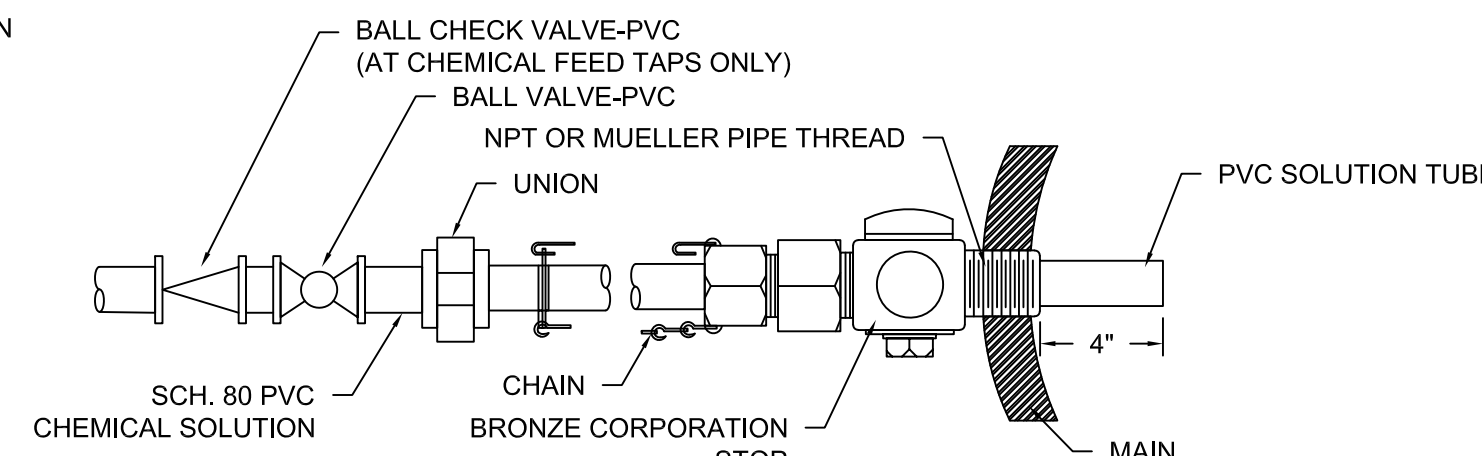


**A NEW SECTION**

- NOTES:**
1. TRANSITION WITH HDPE/PVC ADAPTER
  2. SEE DETAIL 5/C-501 FOR ALL CHEMICAL FEED AND SAMPLE TAPS.

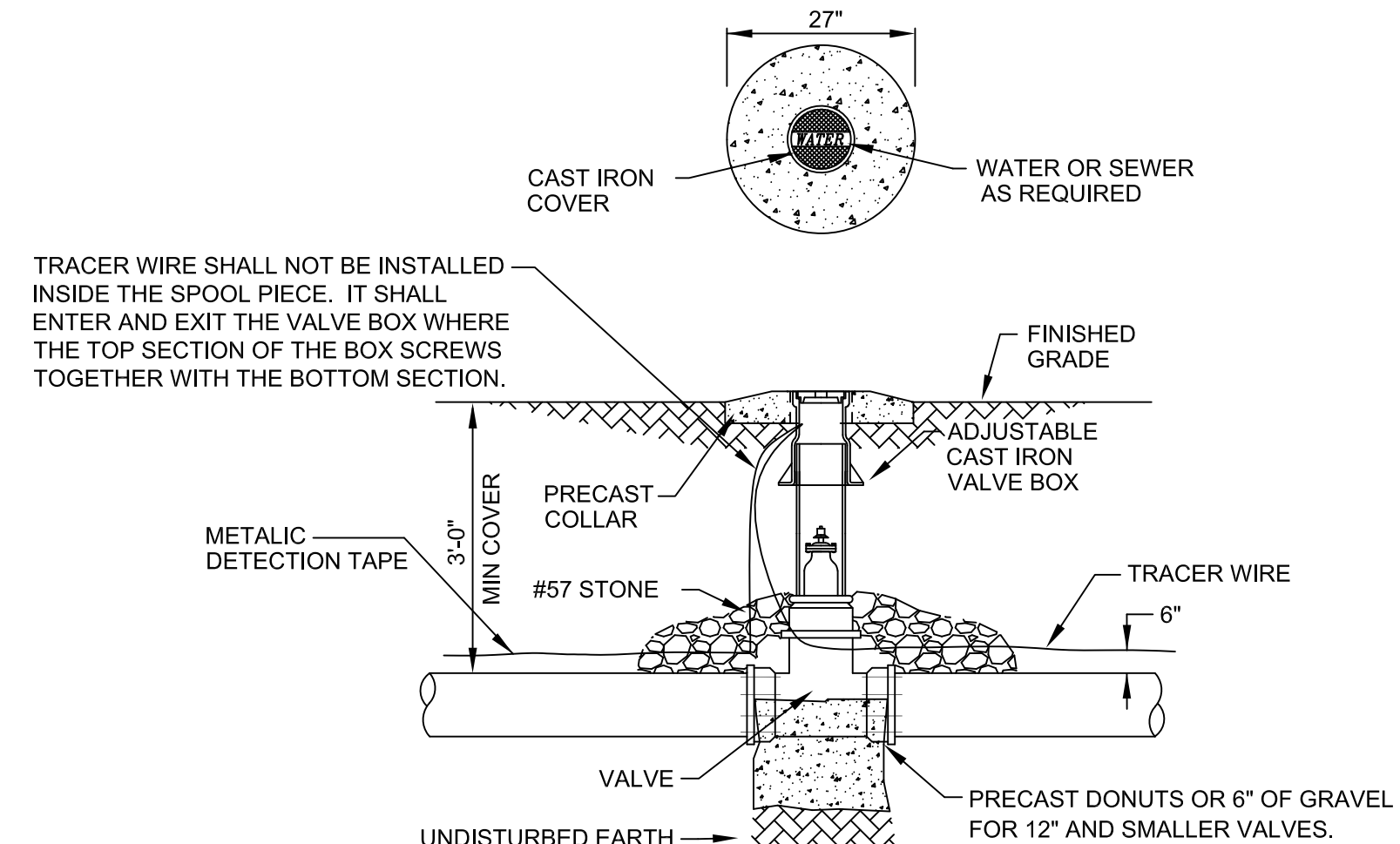
**2 SED. BASIN NO. 2 TIE-IN**

Scale: 1/4" = 1' - 0"



**5 SOLUTION DIFFUSER DETAIL**

Scale: N.T.S.

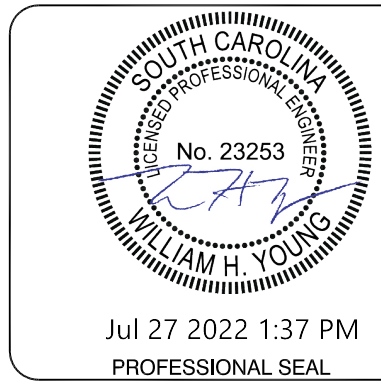
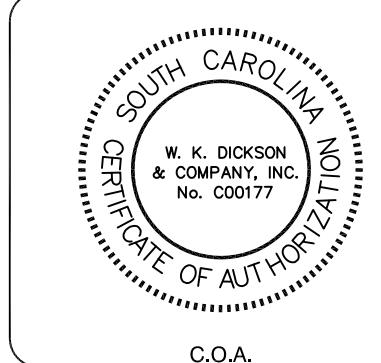


**6 VALVE BOX DETAIL**

Scale: N.T.S.



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NO.	DATE	DESCRIPTION	BY	WJW
0	07/29/2022	BID SET - NOT FOR CONSTRUCTION		

PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN

DRAWING TITLE: DETAILS

PROJ. MGR.: WHY  
DESIGN BY: RFH  
DRAWN BY: WJW  
PROJ. DATE: 06/02/2021  
DRAWING NUMBER:

**C-501**

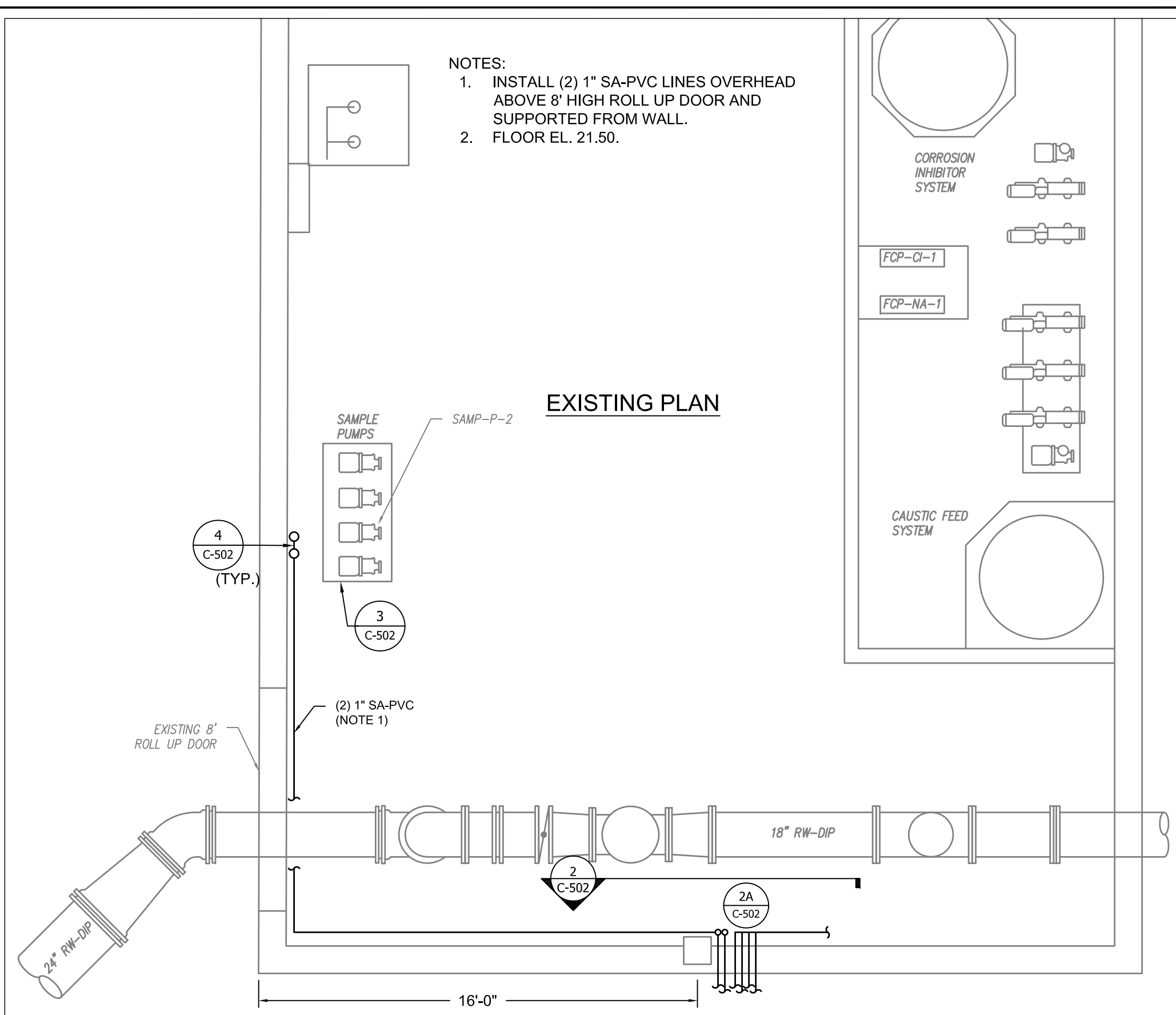
WKD PROJ. NO.: 20210110.00.CH

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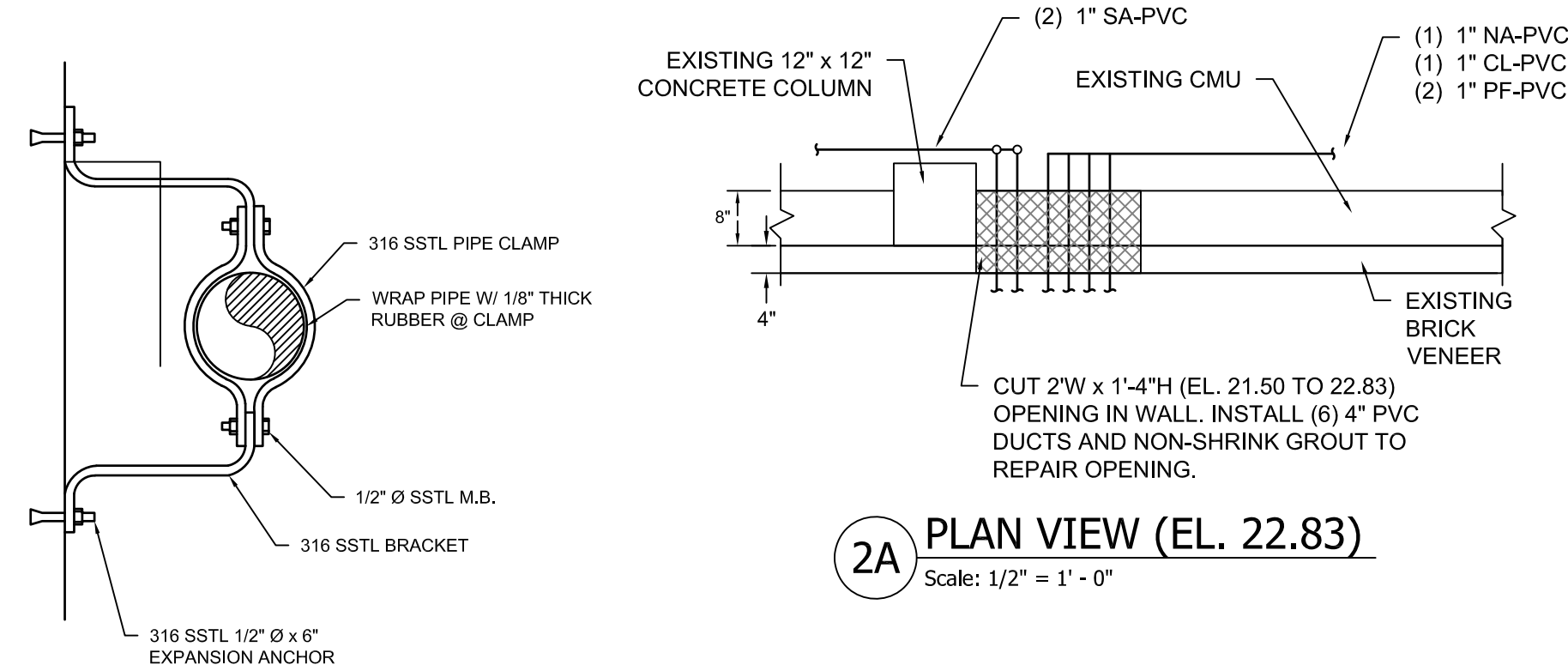


CONTRACTOR SHALL VERIFY ALL DIMENSIONS, MATERIALS, AND METHODS OF CONSTRUCTION AGAINST THE PERMITS AND ALL APPLICABLE REGULATIONS AND STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

- NOTES:
- INSTALL (2) 1" SA-PVC LINES OVERHEAD ABOVE 8' HIGH ROLL UP DOOR AND SUPPORTED FROM WALL.
  - FLOOR EL. 21.50.

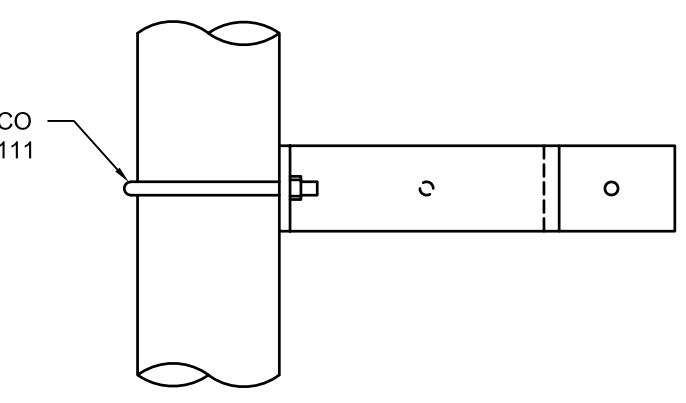
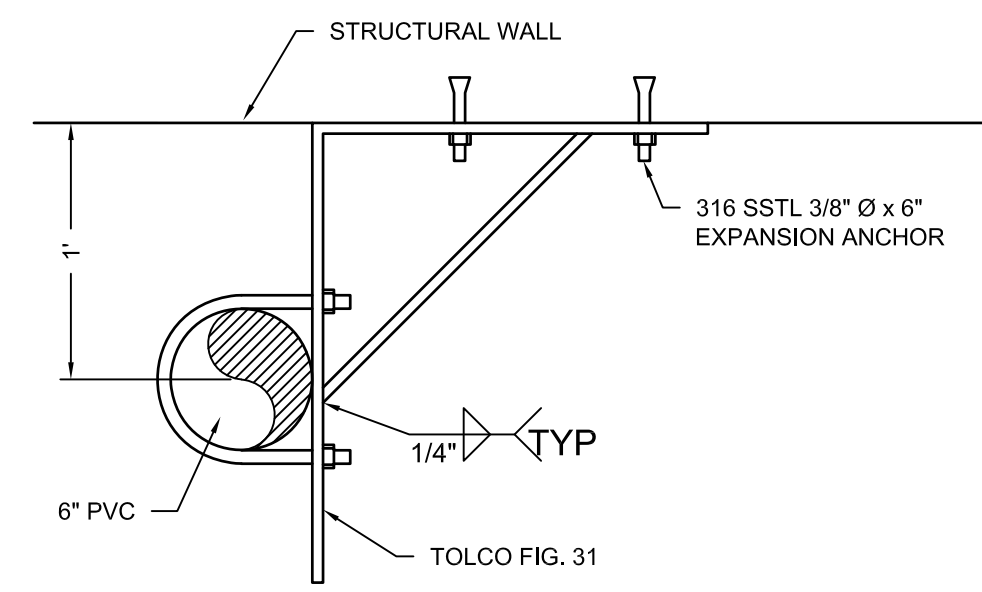


**1 CHEMICAL BUILDING-FIRST FLOOR MODIFICATIONS**  
Scale: 1/4" = 1' - 0"

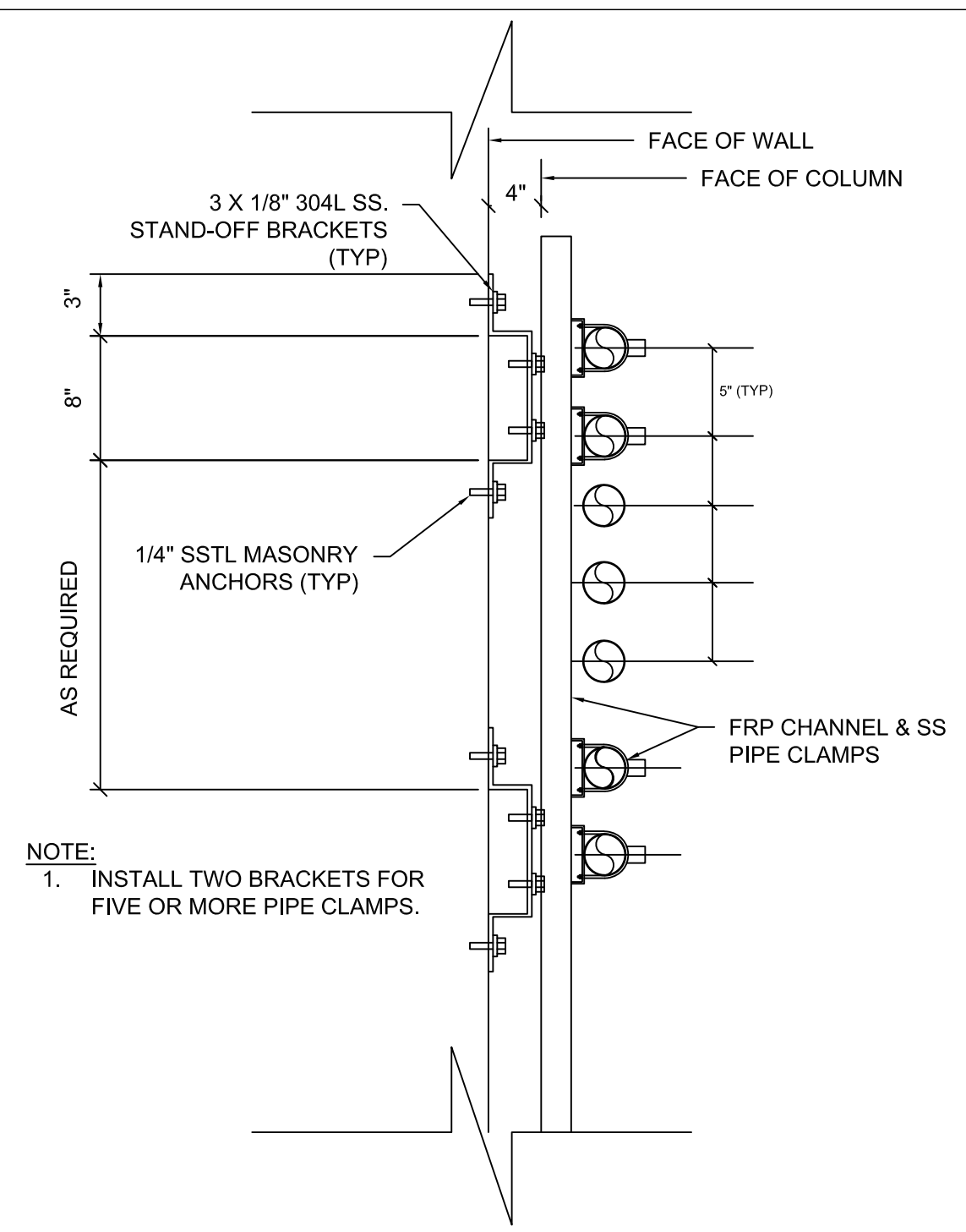


**2A PLAN VIEW (EL. 22.83)**  
Scale: 1/2" = 1' - 0"

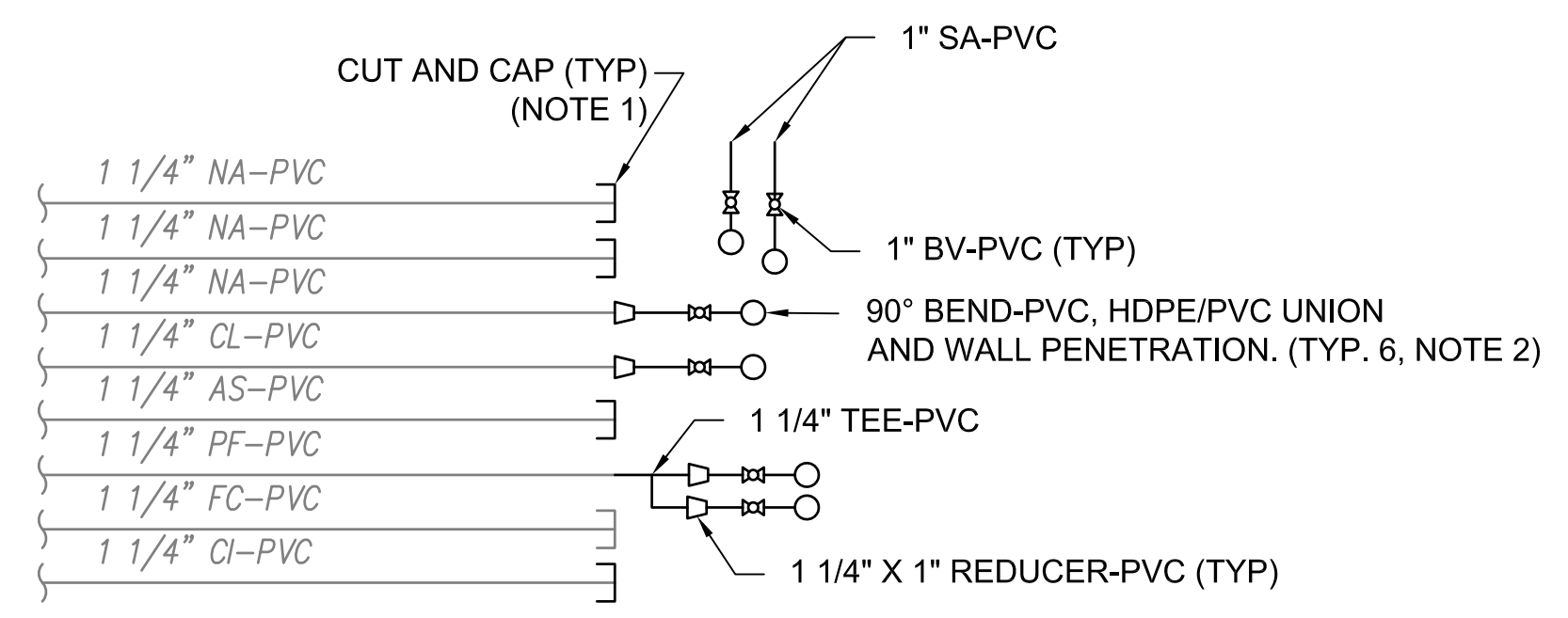
**6 STAND-OFF PIPE SUPPORT**  
Scale: N.T.S.



**5 WALL BRACKET**  
Scale: N.T.S.

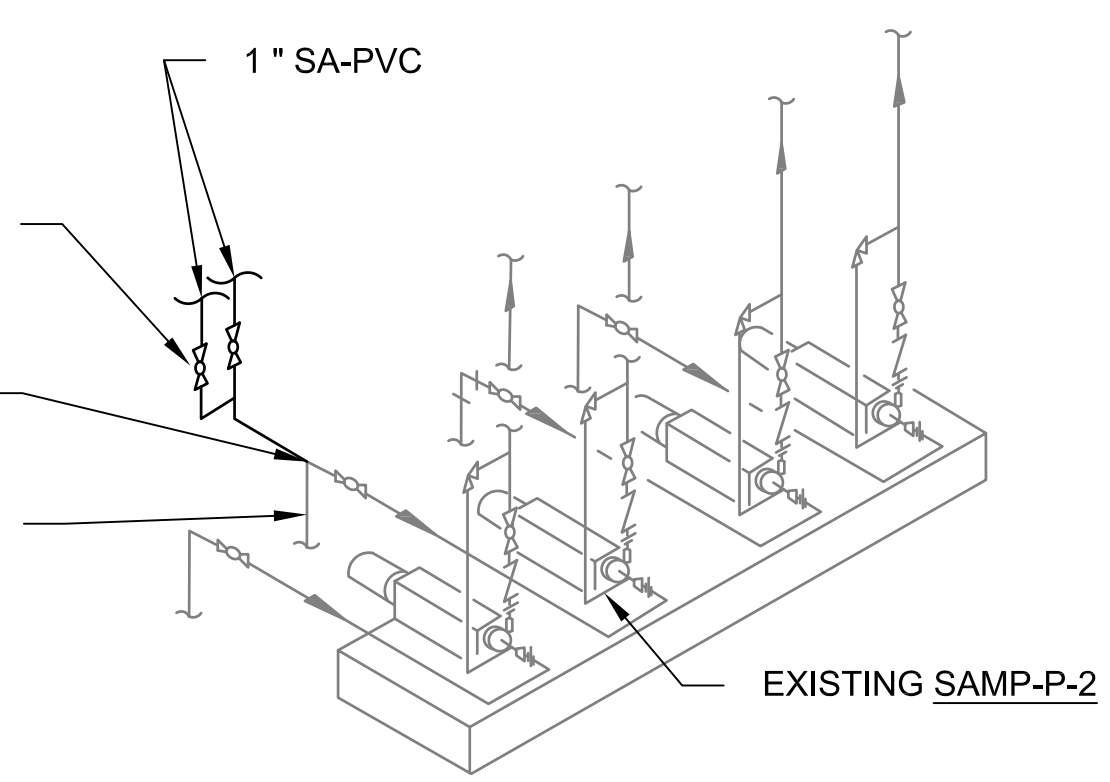


**4 STACKED PIPE SUPPORT**  
Scale: N.T.S.

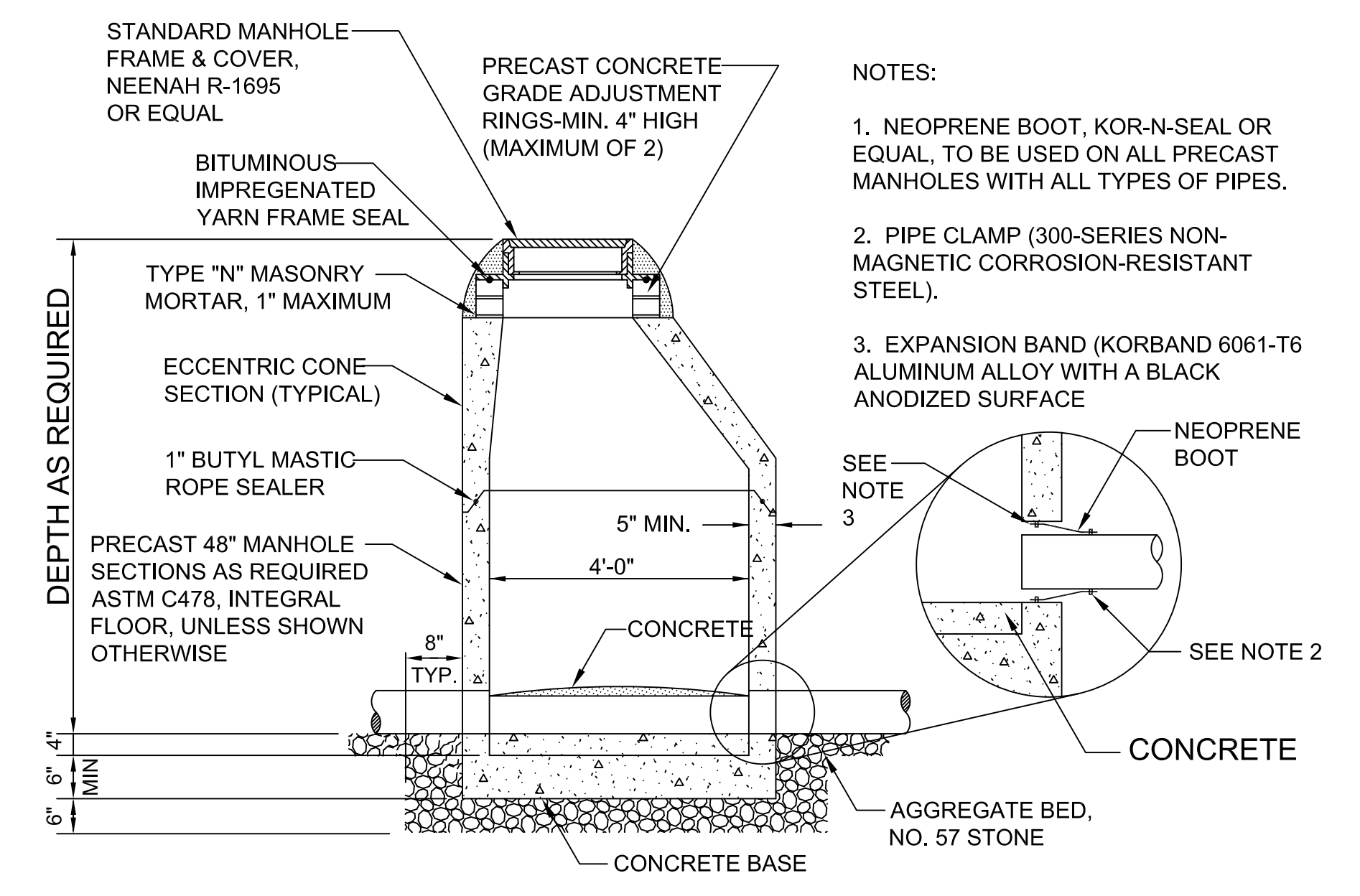


- NOTES:
- CONTRACTOR SHALL REMOVE EXISTING PVC CHEMICAL LINES TO BE CUT AND CAPPED AT WALL PENETRATION TO 2 FT BEYOND OUTSIDE WALL. CAP ABANDONED LINES PRIOR TO BACKFILL.
  - INSTALL (6) 4" PVC DUCTS W/ (6) 1" HDPE LINES THROUGH WALL OPENING.
  - EXISTING CHEMICAL FEED LINES ARE LOCATED AND SUPPORTED FROM WALL W/ FRP CHANNEL AND PIPE CLAMPS BETWEEN EL. 21.50 AND 22.83.

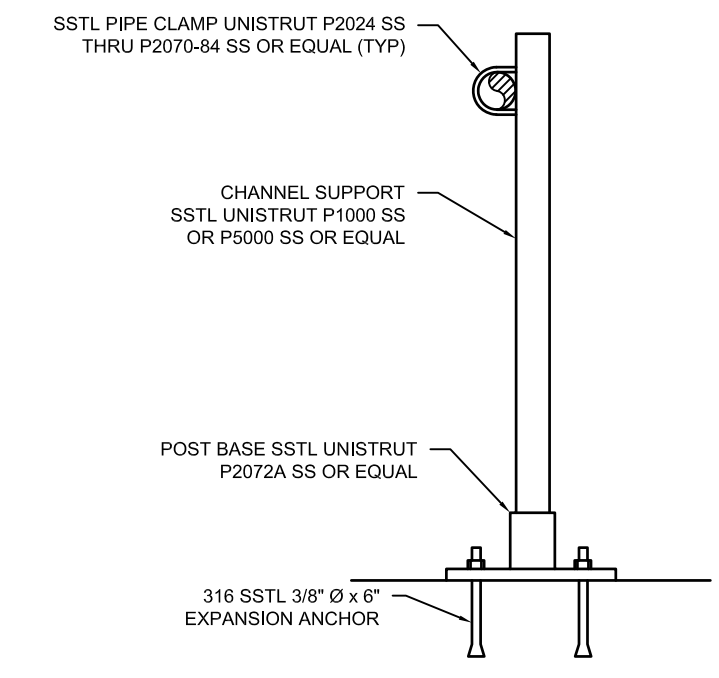
**2 WALL PENETRATION**  
Scale: N.T.S.



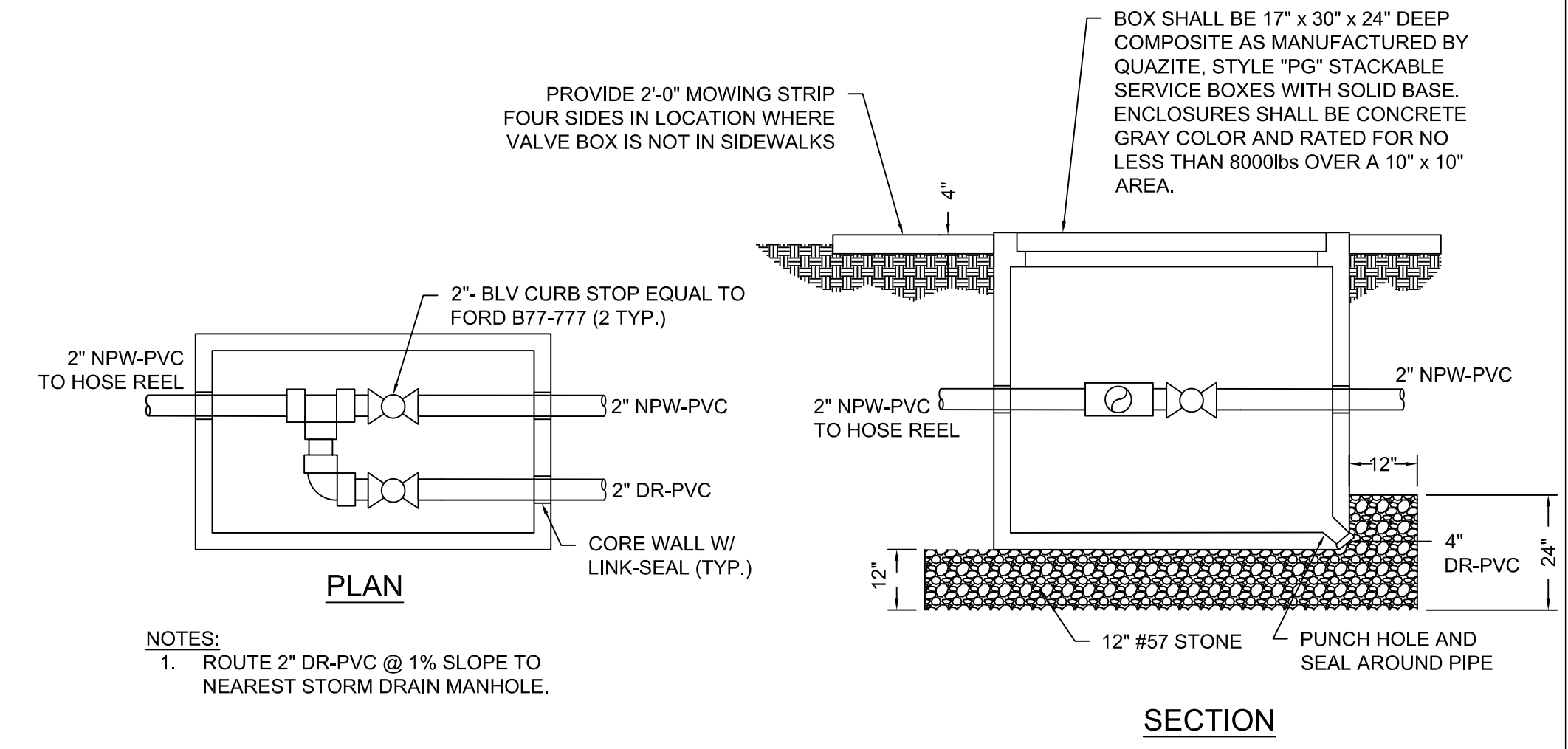
**3 SAMPLE PUMP PIPING SCHEMATIC**  
Scale: N.T.S.



**8 STANDARD PRECAST CONCRETE MANHOLE**  
Scale: N.T.S.



**7 POST UNISTRUT SUPPORT**  
Scale: N.T.S.



**9 PIPE DRAIN VALVE BOX**  
Scale: N.T.S.

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No. 00177  
STATE OF SOUTH CAROLINA  
C.O.A.

SOUTH CAROLINA  
WILLIAM H. YOUNG  
No. 23253  
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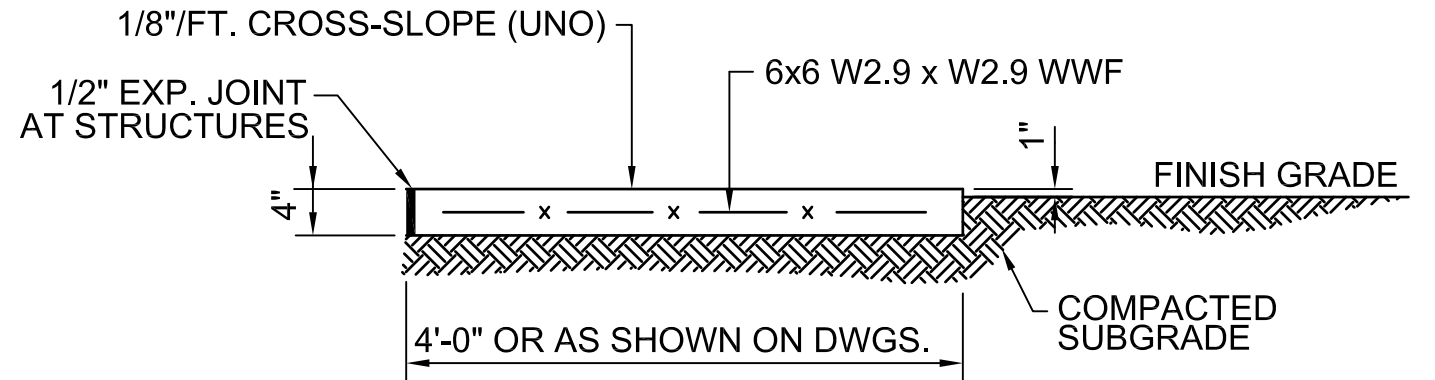
PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
DRAWING TITLE: DETAILS

PROJ. MGR.: WHY  
DESIGN BY: RFH  
DRAWN BY: WJW  
PROJ. DATE: 06/02/2021  
DRAWING NUMBER: C-502  
WKD PROJ. NO.: 20210110.00.CH

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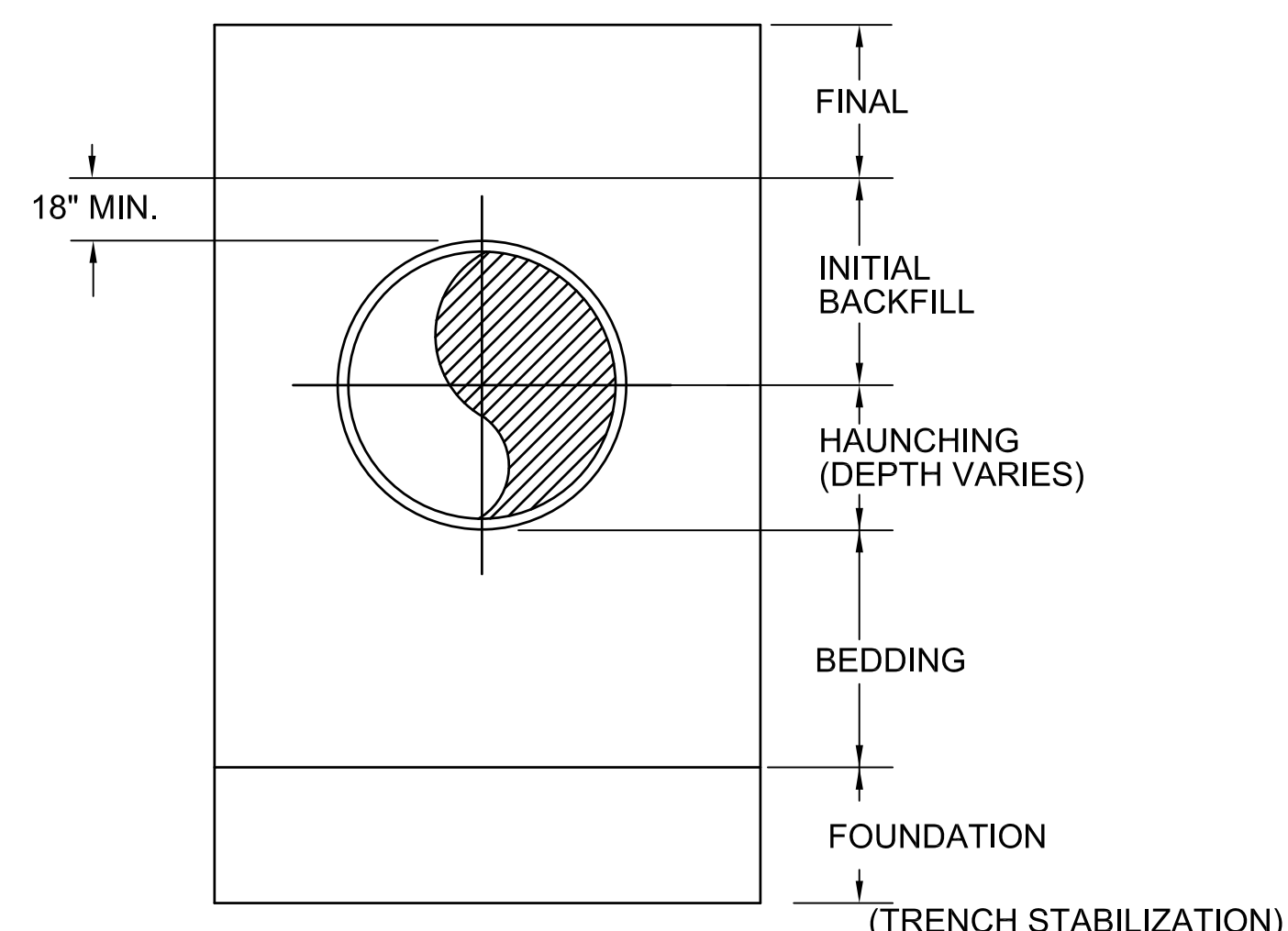


CONTRACTOR SHALL VERIFY ALL DIMENSIONS, MATERIALS, AND METHODS OF CONSTRUCTION AGAINST THE DRAWINGS AND SPECIFICATIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL UTILITIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.



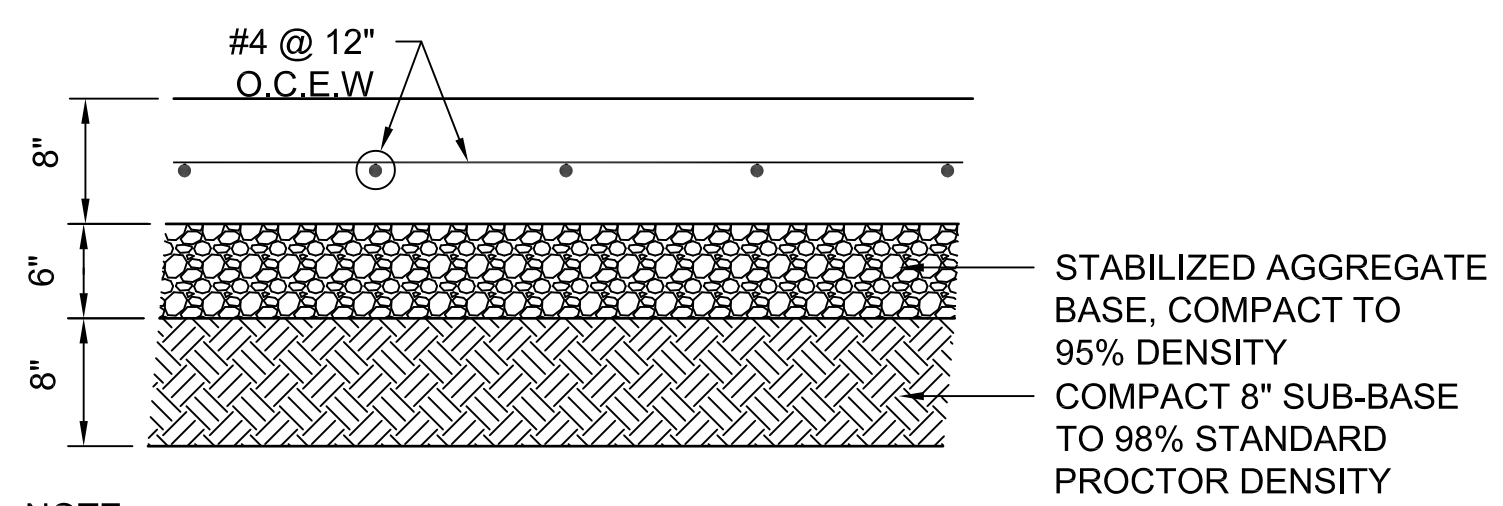
NOTE: EXPANSION JOINTS IN CONCRETE SIDEWALKS SHALL BE SPACED AT THIRTY (30) FEET ON CENTER (MAXIMUM) AND AT ALL WALKWAY INTERSECTIONS. DUMMY GROOVE JOINTS SHALL BE PLACED AT SIX (6) FEET ON CENTER OR AS OTHERWISE SHOWN ON THE DRAWINGS.

**1 CONCRETE SIDEWALK**  
Scale: N.T.S.



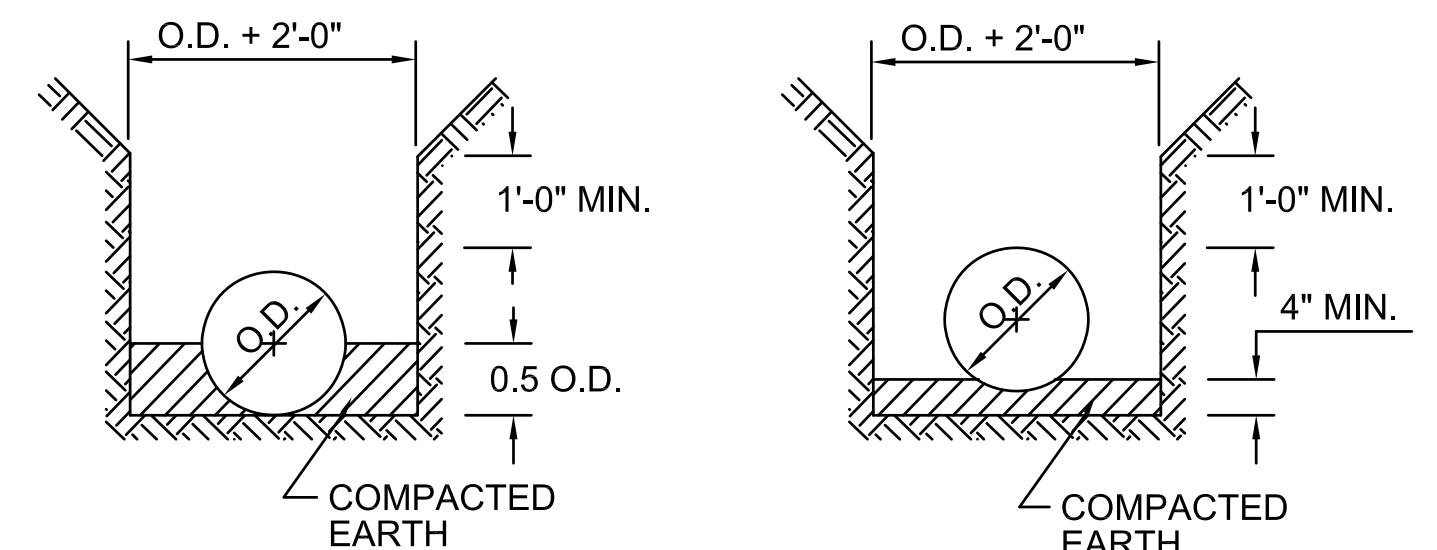
NOTE: SEE SPECIFICATIONS AND PIPE BEDDING AND HAUNCHING DETAILS FOR DIMENSIONS AND MATERIALS

**2 TRENCH TERMINOLOGY DETAIL**  
Scale: N.T.S.

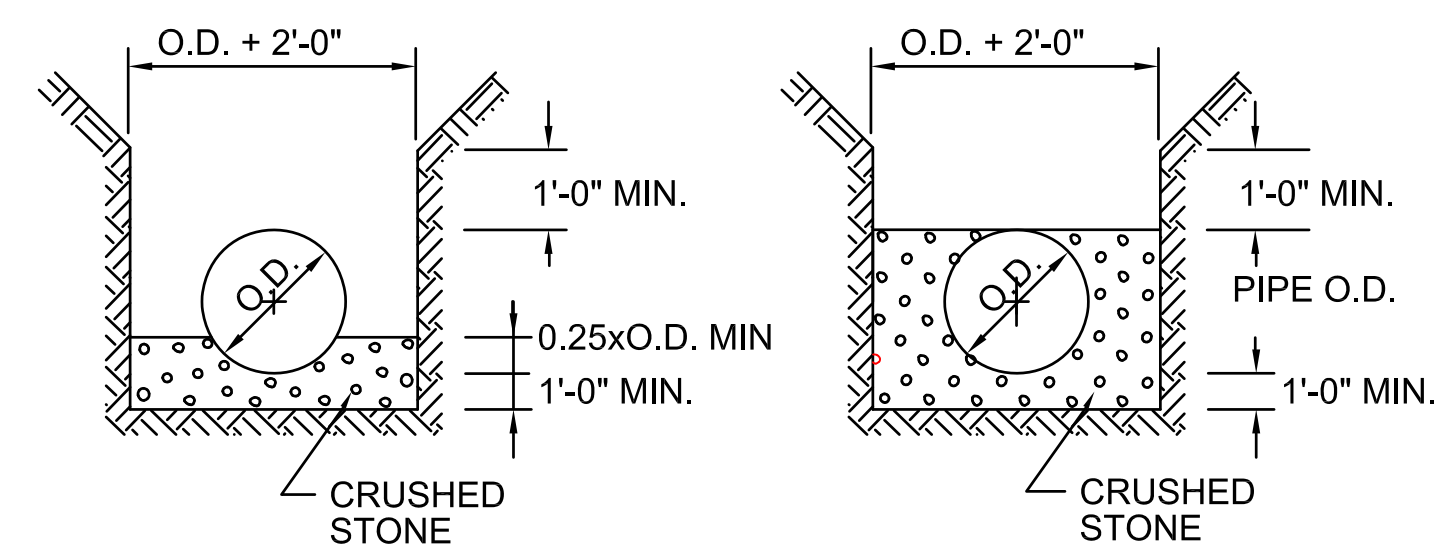


NOTE: TRANSITION JOINTS IN CONCRETE PAVING SHALL BE SPACED AT ALL TRANSITIONS BETWEEN HEAVY CONCRETE PAVING, SIDEWALKS AND PADS. CONTRACTION JOINTS SHALL BE PLACED AT LOCATIONS SHOWN ON THE DRAWINGS.

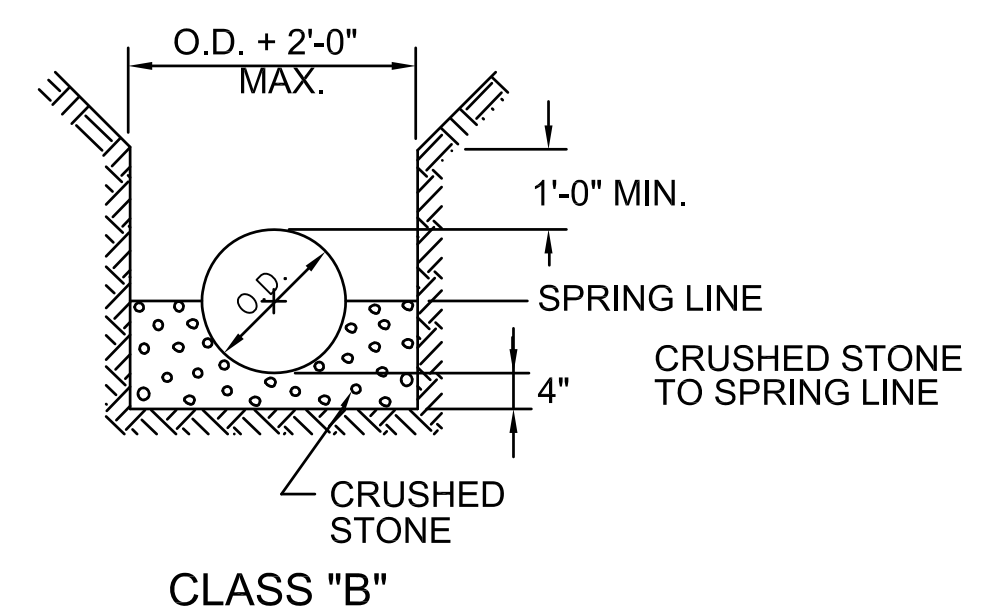
**3 HEAVY CONCRETE PAVING**  
Scale: N.T.S.



TYPE 2 TYPE 3

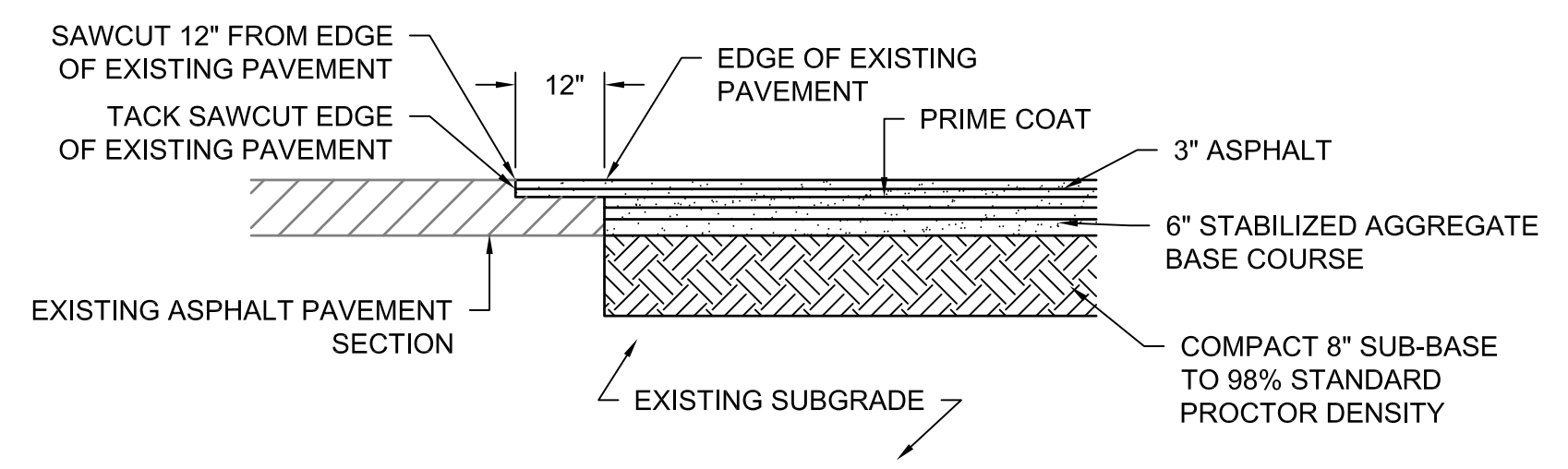


TYPE 4 TYPE 5

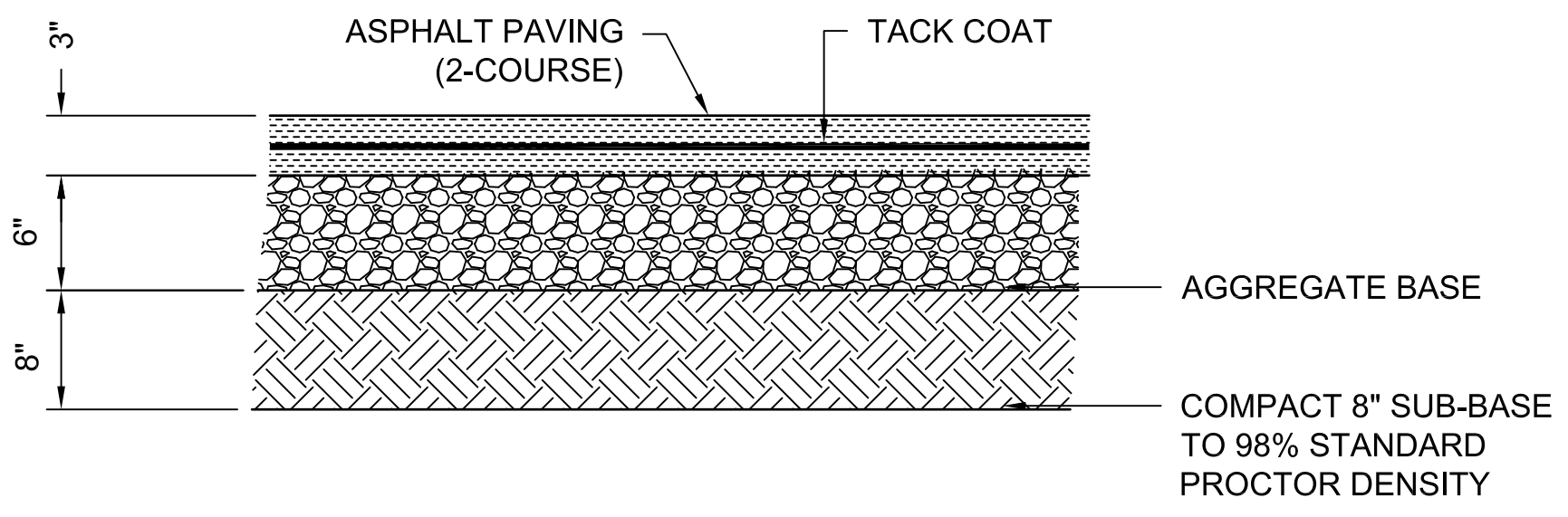


CLASS "B"

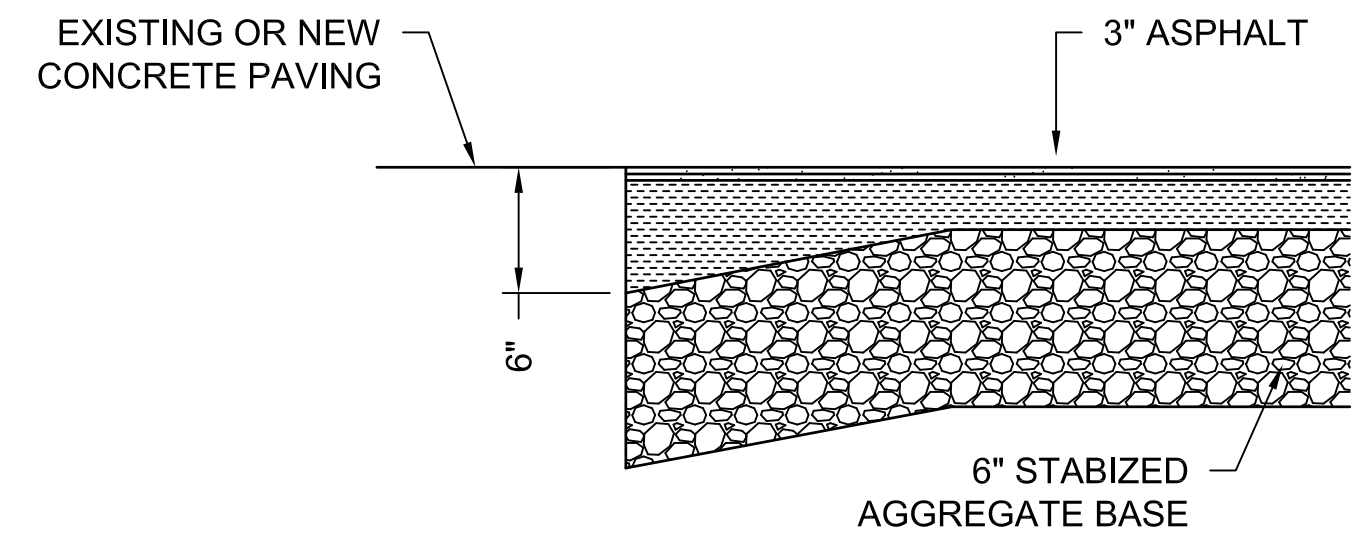
**4 PIPE BEDDING AND HAUNCHING**  
Scale: N.T.S.



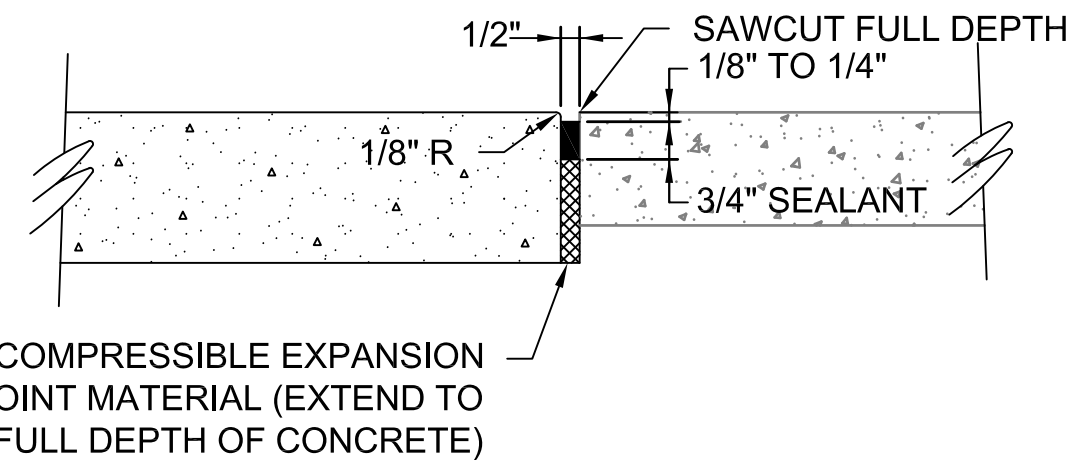
**5 TRANSITION JOINT**  
Scale: N.T.S.



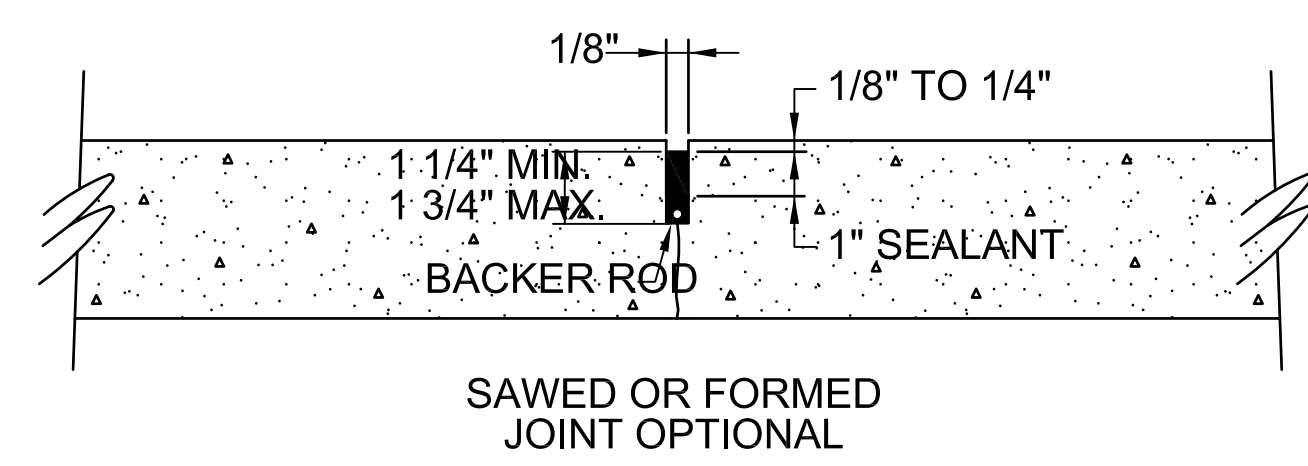
**6 ASPHALT PAVING**  
Scale: N.T.S.



**7 THICKENED ASPHALT EDGE**  
Scale: N.T.S.



**8 TRANSITION JOINT**  
Scale: N.T.S.



**9 CONTRACTION JOINT**  
Scale: N.T.S.

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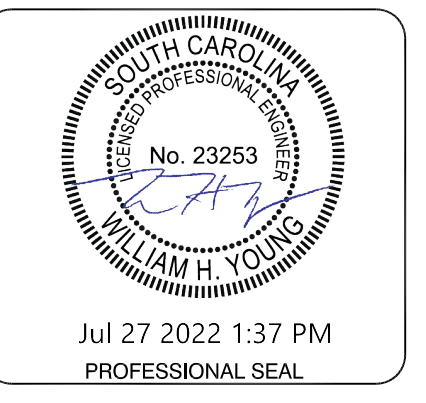
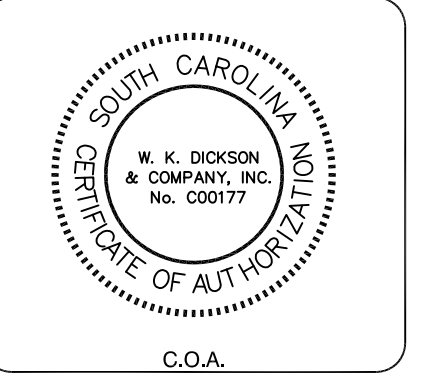
PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
DRAWING TITLE: DETAILS  
REVISION RECORD

PROJ. MGR.: WHY  
DESIGN BY: RFH  
DRAWN BY: WJW  
PROJ. DATE: 06/02/2021  
DRAWING NUMBER: C-503  
WKD PROJ. NO.: 20210110.00.CH

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PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: P&ID LEGENDS

PROJ. MGR.: WHY  
 DESIGN BY: RFH  
 DRAWN BY: WJW  
 PROJ. DATE: 06/02/2021  
 DRAWING NUMBER: I-01  
 WKD PROJ. NO.: 20210110.00.CH

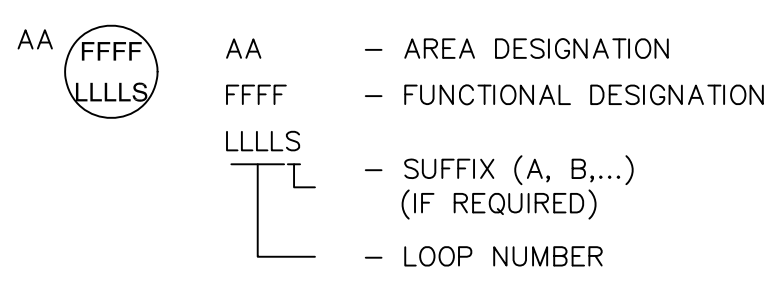
BID SET - NOT FOR CONSTRUCTION

CONTROL SYMBOLS	ELECTRICAL SWITCH SYMBOLS	INSTRUMENT SYMBOLS AND DESIGNATIONS
- INDIVIDUAL STARTER OR CONTROLLER - STARTER OR CONTROLLER IN MOTOR CONTROL CENTER - STARTER OR CONTROLLER (FURNISHED WITH EQUIPMENT) - GENERAL CONTROL PANEL OR EQUIPMENT, AS NOTED - GENERAL CONTROL PANEL OR EQUIPMENT, AS NOTED (FURNISHED WITH EQUIPMENT) - GENERAL INTERLOCK OR CONTROL FUNCTION (HARDWIRED) - GENERAL INTERLOCK OR CONTROL FUNCTION (PLC OR SOFTWARE) - TELEMETERED (T=TELEPHONE, R=RADIO, S=SATELLITE) - MOTORIZED ACTUATOR (MOD=MODULATING, OC=OPEN/CLOSE) - VARIABLE FREQUENCY DRIVE (AC)	- FIELD MOUNTED - FRONT MCC MOUNTED - REAR MCC MOUNTED AB - FUNCTION SELECTOR ES - EMERGENCY STOP FOR - FORWARD/OFF/REVERSE (MAINTAINED) FSR - FORWARD/STOP/REVERSE (MAINTAINED) HOA - HAND/OFF/AUTO LOR - LOCAL/OFF/REMOTE LR - LOCAL/REMOTE MA - MANUAL/AUTO OC - OPEN/CLOSE OCA - OPEN/CLOSE/AUTO OCR - OPEN/CLOSE/REMOTE OO - ON/OFF	- FIELD MOUNTED - FRONT OF MAIN PANEL MOUNTED - REAR OF MAIN PANEL MOUNTED - FRONT OF LOCAL PANEL MOUNTED - REAR OF LOCAL PANEL MOUNTED - FIELD MOUNTED (FURNISHED WITH EQUIPMENT) - FRONT PANEL MOUNTED (FURNISHED WITH EQUIPMENT) - REAR PANEL MOUNTED (FURNISHED WITH EQUIPMENT) - SOFTWARE DEVICE DISPLAYED (CRT) - SOFTWARE DEVICE NOT DISPLAYED
LINE SYMBOLS	SIGNAL LINE SYMBOLS	FLOW ELEMENT SYMBOLS
- PRIMARY PROCESS LINE - SECONDARY PROCESS LINE - EXISTING - EXISTING TO BE REMOVED - EXISTING TO BE ABANDONED - FUTURE - PIPE SPEC CHANGE - SHEET CONTINUATION	- ELECTRICAL SIGNAL - SOFTWARE SIGNAL - ELECTRO MAGNETIC - ELECTRIC SUPPLY, VOLTAGE/PHASE	- PROPELLER FLOW METER - PARSHALL FLUME - MAGNETIC FLOW METER - FLOW TUBE (VENTURI) - LEVEL ELEMENT (ULTRASONIC) - LEVEL ELEMENT (PRESSURE)
PIPE LINE IDENTIFICATION	EQUIPMENT SYMBOLS	
- PIPE MATERIAL - PIPE SERVICE - NOMINAL PIPE DIAMETER	NEW EQUIPMENT EXIST EQUIPMENT FUTURE EQUIPMENT	
EQUIPMENT/UNIT IDENTIFICATION		
- SYSTEM IDENTIFICATION - UNIT DESIGNATION (EQUIP. TYPE)		

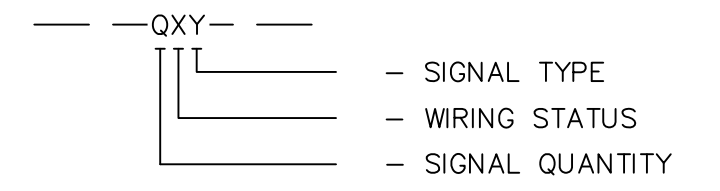
LETTERS FOR FUNCTIONAL DESIGNATION				
FIRST LETTER		SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM	
B	BURNER FLAME			
C	USER'S CHOICE		CONTROL	CLOSED
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL	DELAY	
E	VOLTAGE (EMF)		PRIMARY ELEMENT	
F	FLOW RATE	RATIO (FRACTION)	FAULT	
G	USER'S CHOICE		GLASS, GAUGE	
H	HAND (MANUALLY INITIATED)			HIGH
I	CURRENT		INDICATE	
J	POWER	SCAN		
K	TIME OR SCHEDULE	TIME, RATE OF CHANGE		CONTROL STATION
L	LEVEL		LIGHT (PILOT)	LOW
M	MOISTURE			MIDDLE OR INTERMEDIATE
N	UNCLASSIFIED			
O	UNCLASSIFIED		ORIFICE (RESTRICTION)	OPEN
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)	
Q	QUANTITY	INTEGRATE OR TOTALIZE		
R	RADIOACTIVITY		RECORD OR PRINT	
S	SPEED OR FREQUENCY	SAFETY		SWITCH
T	TEMPERATURE		TRANSMIT OR TRANSMIT TRANSMITTER	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS		VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL	
X	UNCLASSIFIED			UNCLASSIFIED (2)
Y	EVENT			RELAY, COMPUTE OR CONVERT
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT

- NOTES:
- ALL DETAIL WIRING AND ELECTRICAL COMPONENTS ARE NOT SHOWN ON THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS. THE ELECTRICAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS. THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS ARE PRESENTED AS A COORDINATING TOOL THAT INDICATES THE MAIN CONTROL LOGIC FOR THE PROJECT PROCESS SYSTEMS AND COMPONENTS. ACTUAL DETAIL LOGIC AND CONTROL COMPONENTS MAY DIFFER DEPENDING ON THE MANUFACTURER THAT IS AWARDED THE CONTRACT.
  - WHEN USED SYMBOL OR SIGNAL LINE IS ANNOTATED.
  - THIS IS A STANDARD LEGEND SHEET, ALL INFORMATION ON THIS LEGEND MAY NOT BE USED.

**INSTRUMENT IDENTIFICATION**



**ELECTRICAL LINE FUNCTIONS**



**WIRING STATUS**

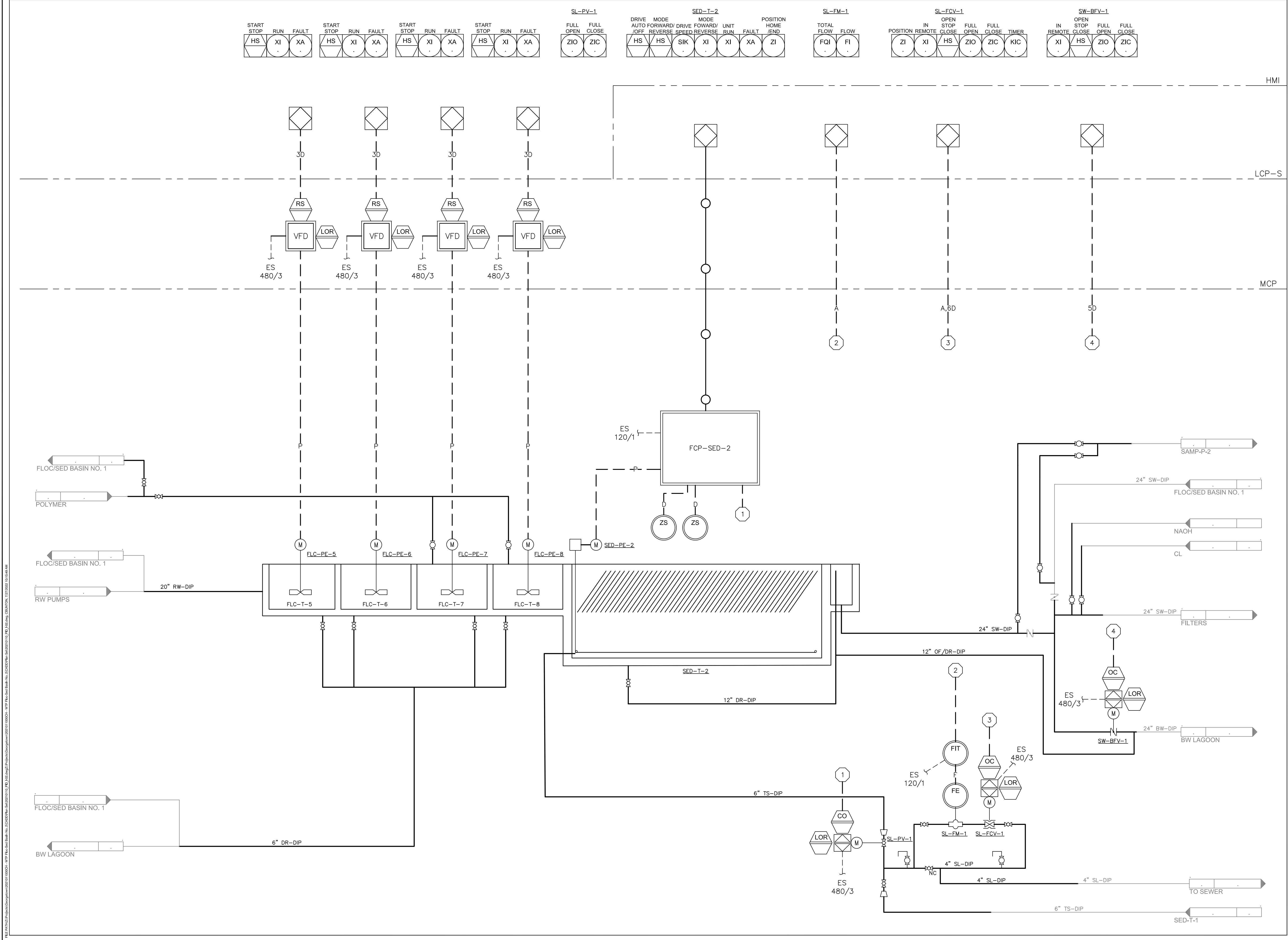
- CONDUIT AND CONDUCTORS BY ELECTRICAL CONTRACTOR
- E - EXISTING CONDUCTORS IN EXISTING CONDUIT
- F - CONDUIT BY ELECT CONTRACTOR, CONDUCTORS FURNISHED WITH EQUIP
- S - CONDUIT AND CONDUCTORS FURNISHED WITH EQUIPMENT

**SIGNAL TYPE**

- A - ANALOG - #16 TWISTED SHIELDED PAIR
- A1 - ANALOG - #16 3 CONDUCTOR TWISTED SHIELDED
- AS - ANALOG - SPECIAL (EIA-432, EIA-485...)
- D - #14 2 CONDUCTOR
- DS - DISCRETE - SPECIAL (24 VOLT ...)
- P - POWER - NUMBER OF CONDUCTORS AND SIZE BY ELECTRICAL



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0	07/29/2022	BID SET - NOT FOR CONSTRUCTION	

PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: PROCESS AND INSTRUMENTATION DIAGRAM P&ID FLOC-SED BASIN NO 2  
 PROJECT NO.: 20210110.00.CH

PROJ. MGR.: WHY  
 DESIGN BY: RFH  
 DRAWN BY: WJW  
 PROJ. DATE: 06/02/2021  
 DRAWING NUMBER:  
**I-02**  
 WKD PROJ. NO.:  
 20210110.00.CH

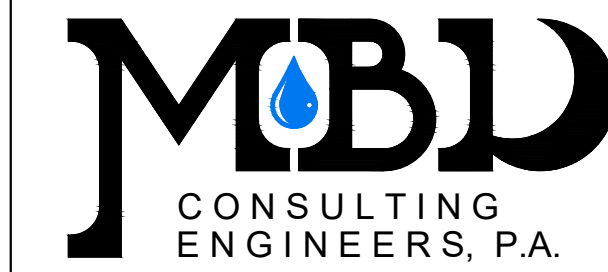
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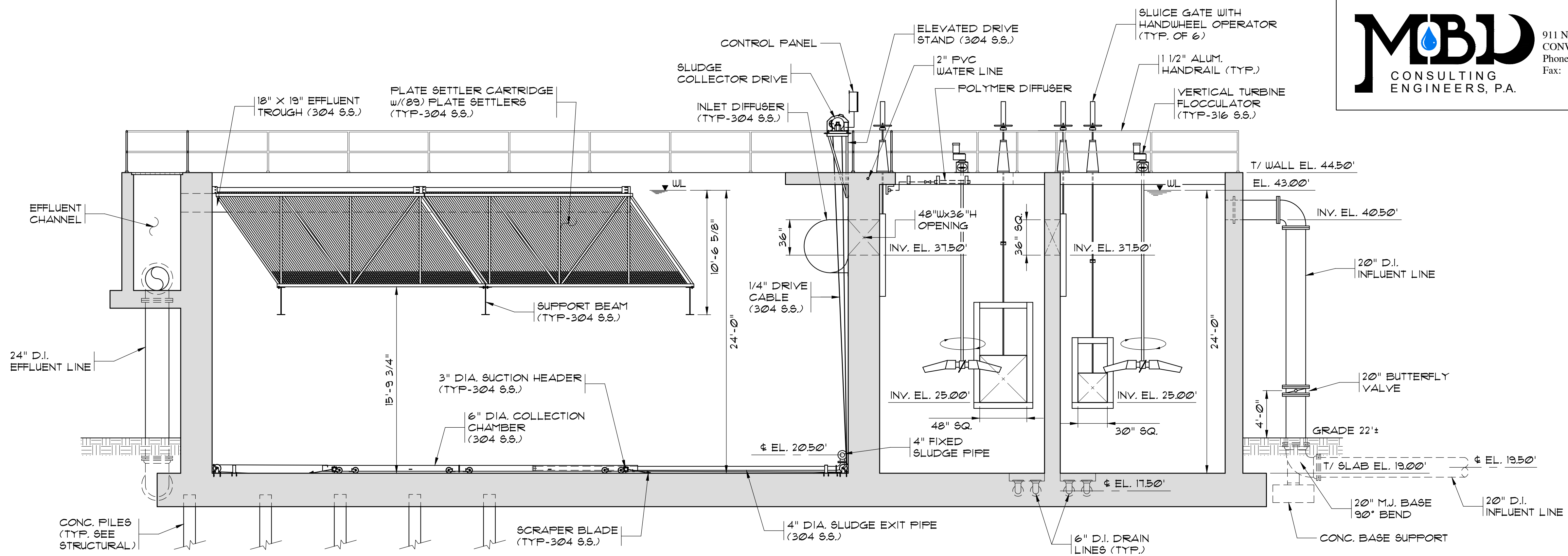
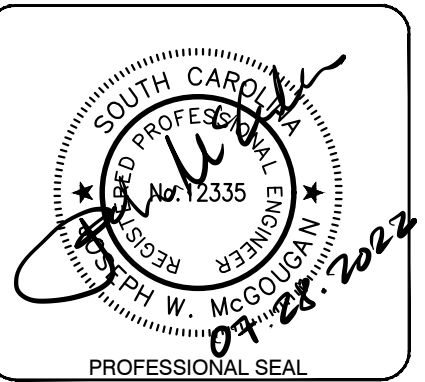
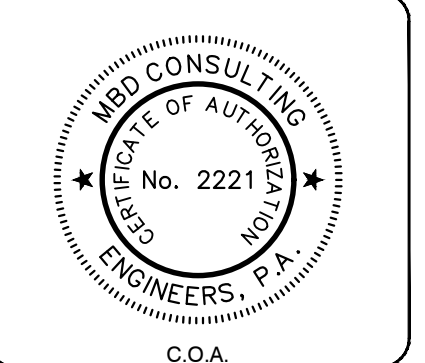


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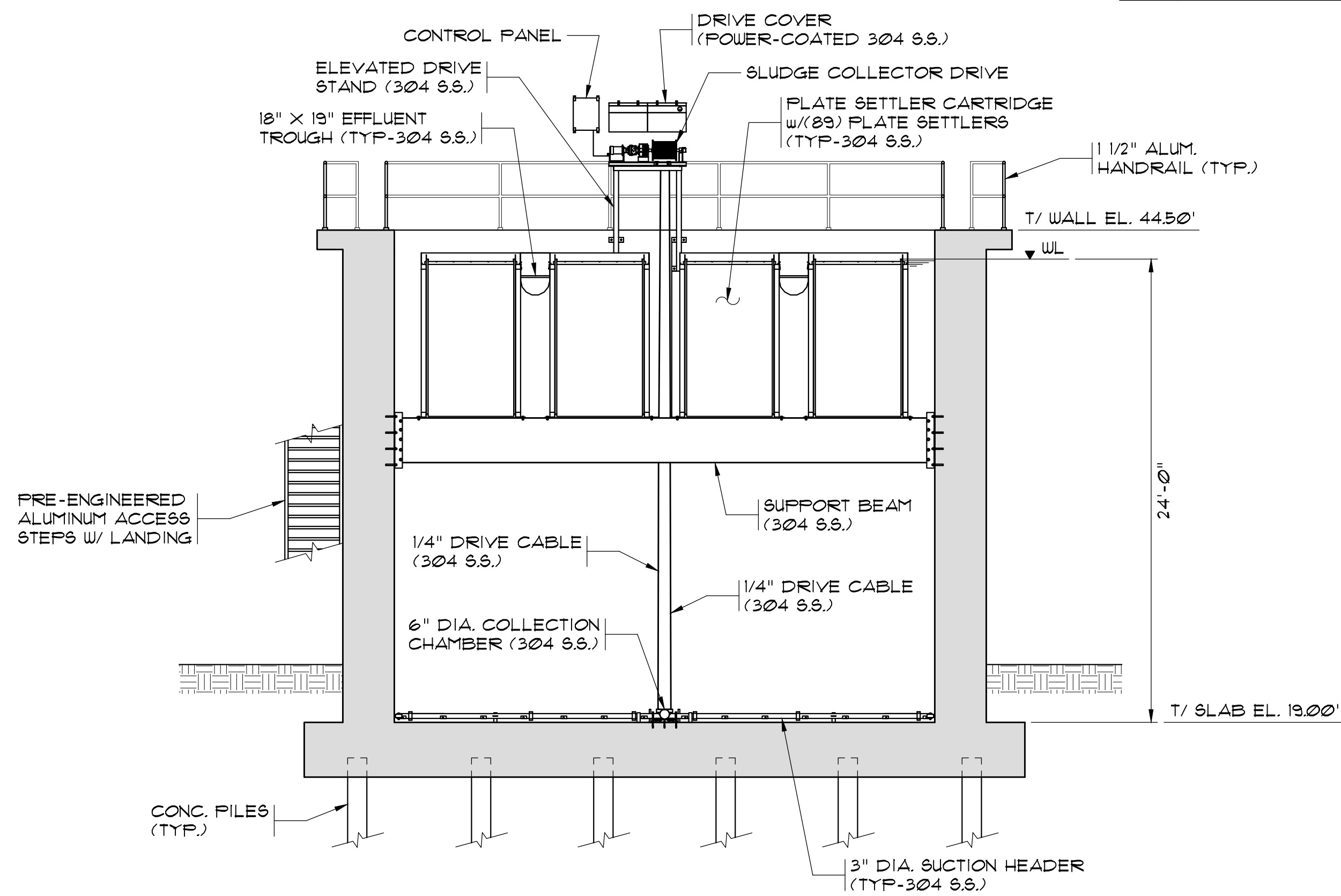


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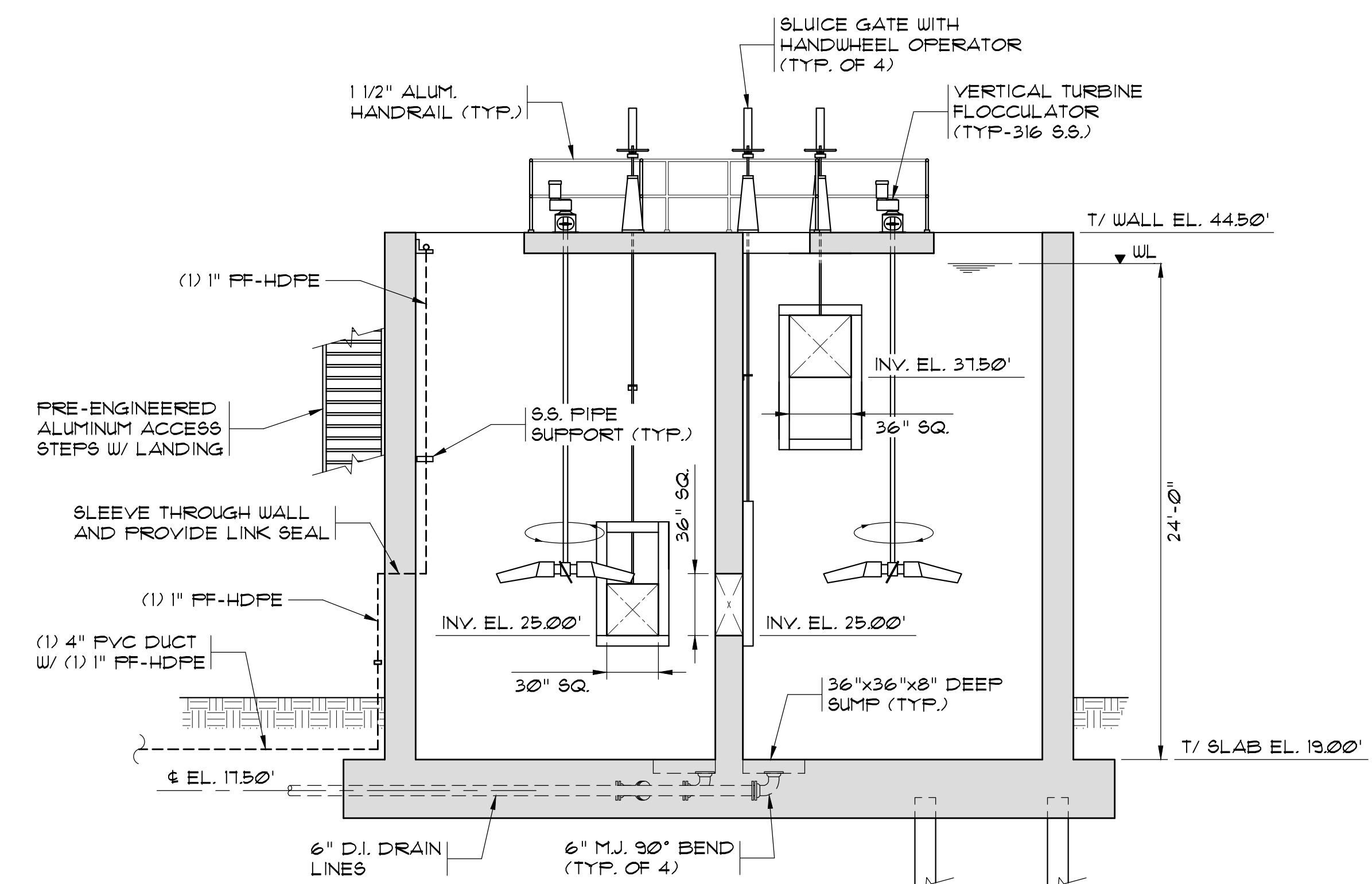
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**1 CROSS SECTION VIEW**  
 SCALE: 3/16"=1'-0"  
 4' 2' 0 4' 8'



**2 SECTION VIEW**  
 SCALE: 3/16"=1'-0"  
 4' 2' 0 4' 8'



**3 SECTION VIEW**  
 SCALE: 3/16"=1'-0"  
 4' 2' 0 4' 8'

NO.	DATE	DESCRIPTION	BY
1	07/29/2022	BID SET - NOT FOR CONSTRUCTION	JWM

PROJECT NAME: WTP FLOCISED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: FLOCISED BASIN NO. 2 SECTION VIEWS

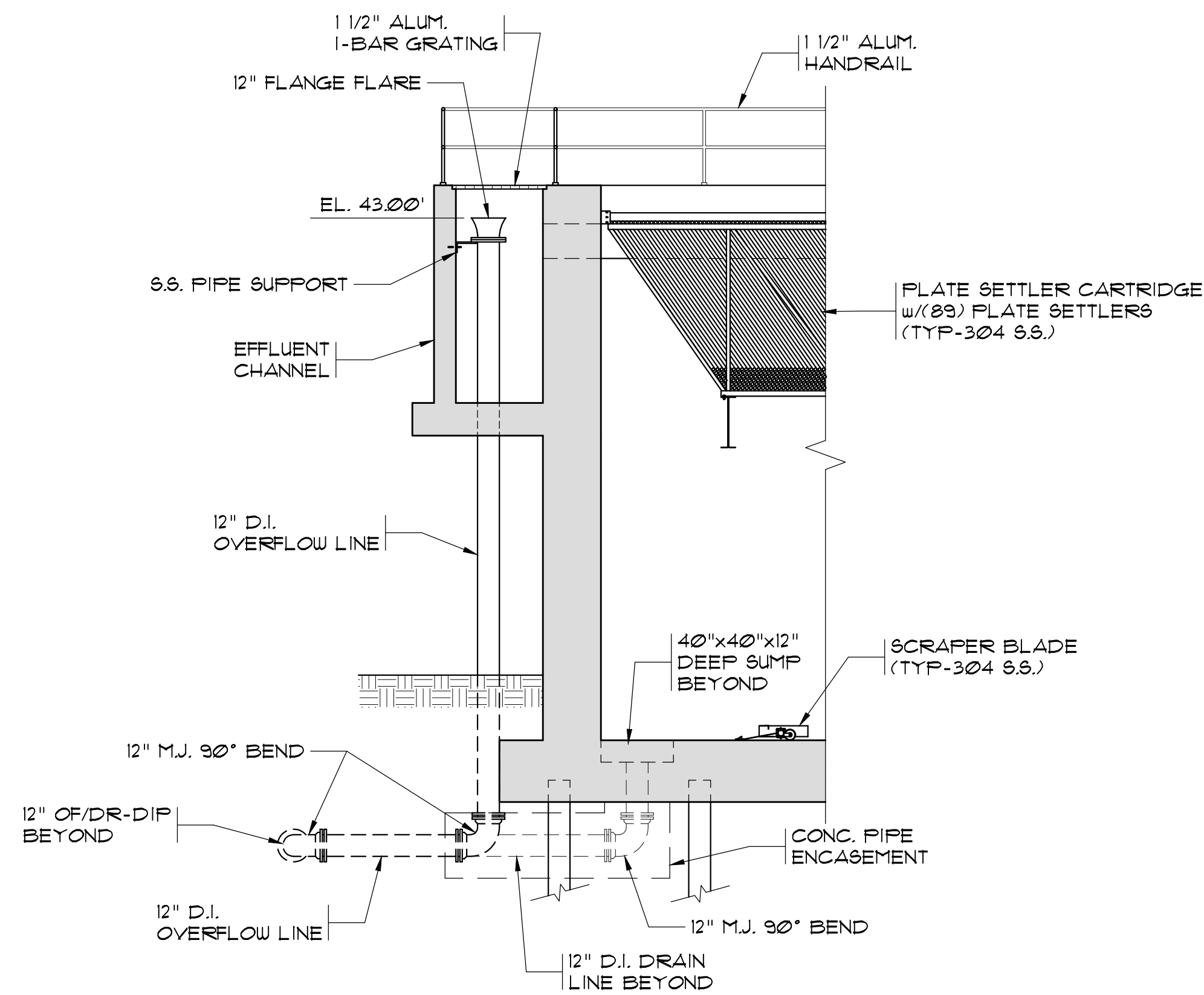
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 DESIGN BY: JWM  
 DRAWN BY: DC  
 PROJ. DATE: 07/29/2022  
 DRAWING NUMBER:

**EN-2**  
 WKD PROJ. NO.: 20210110.00.CH

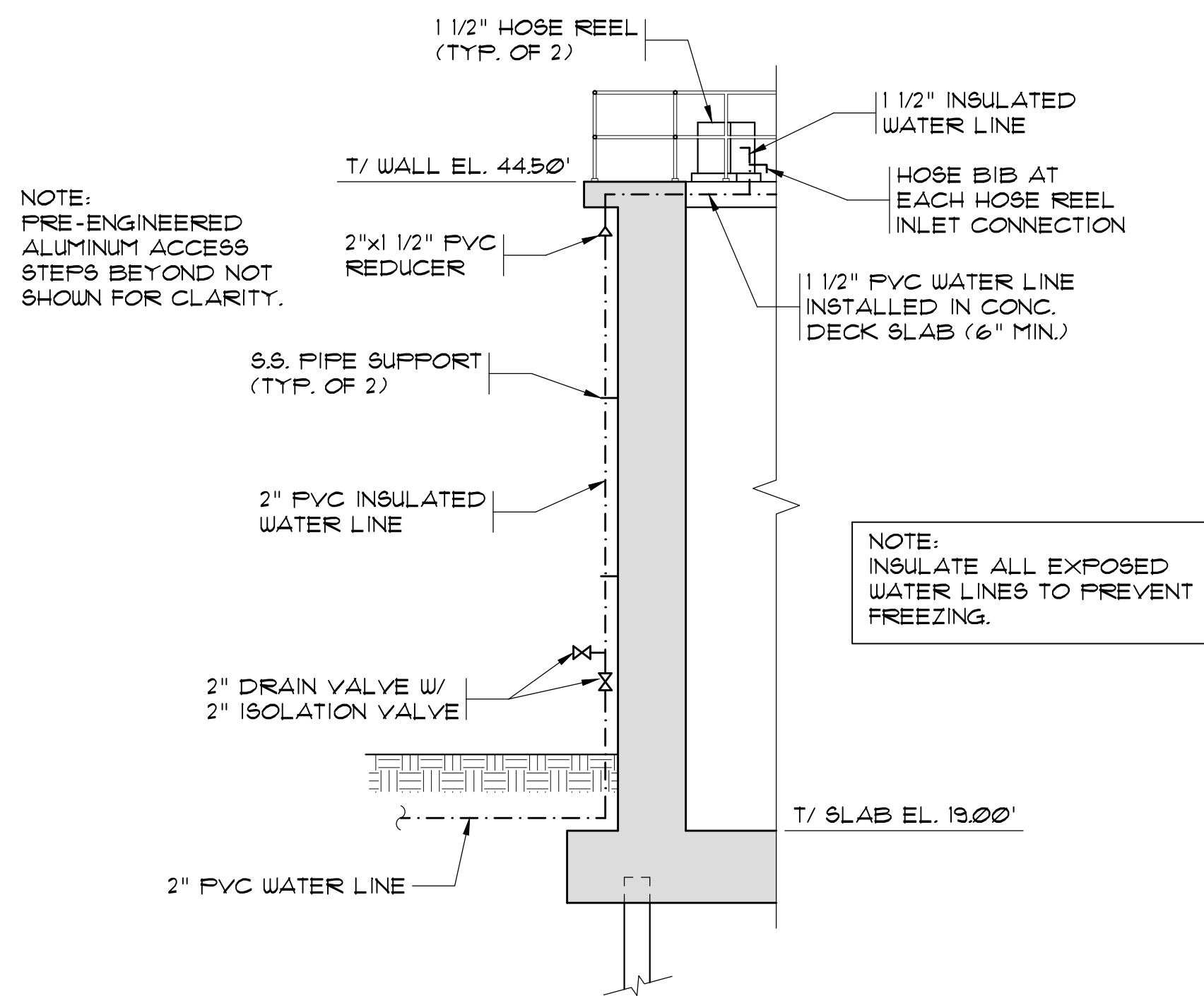
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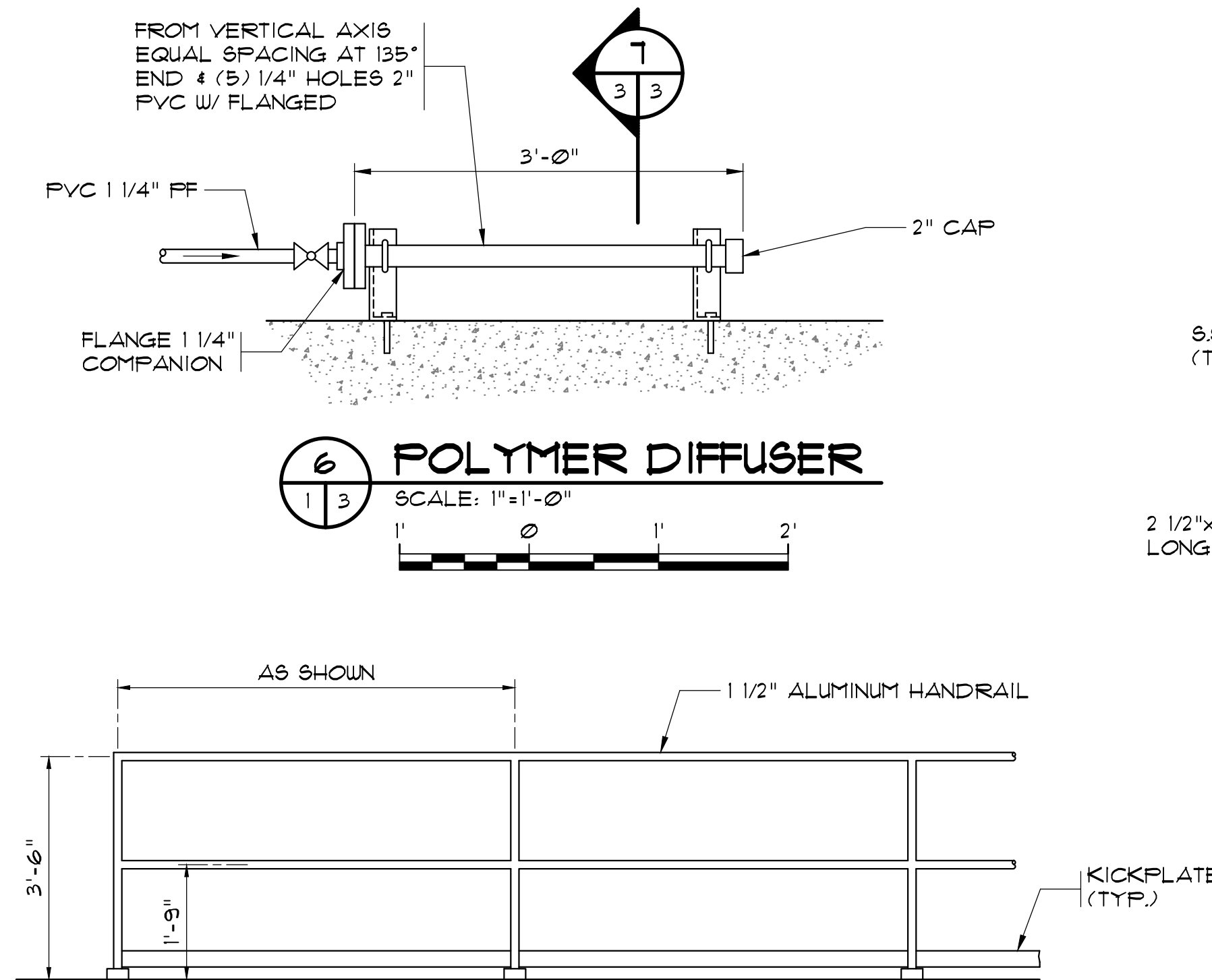
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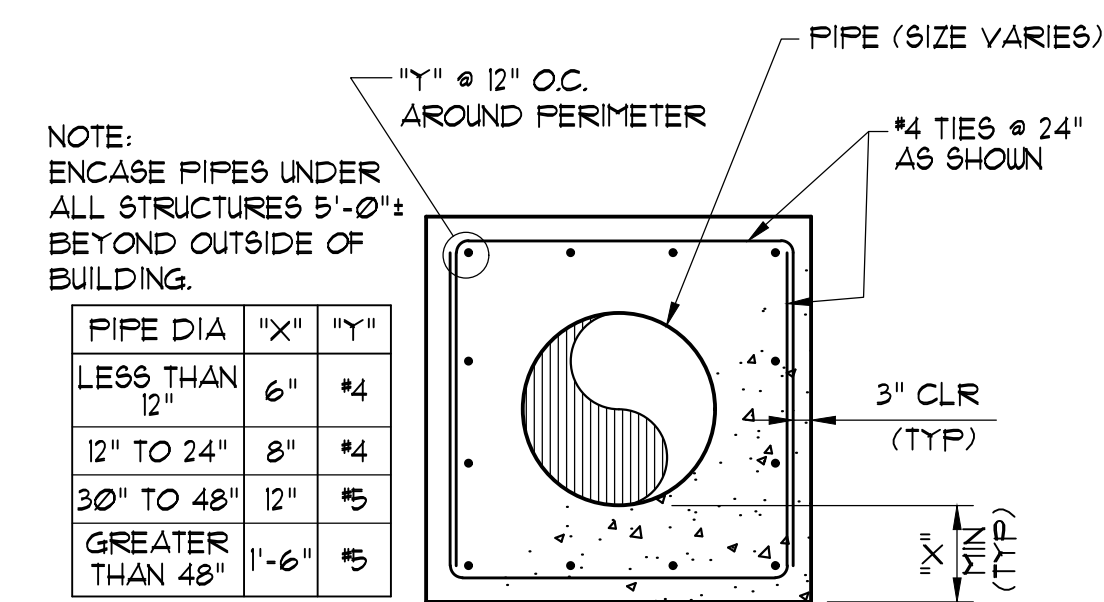
**4 SECTION VIEW**  
 SCALE: 3/16"=1'-0"  
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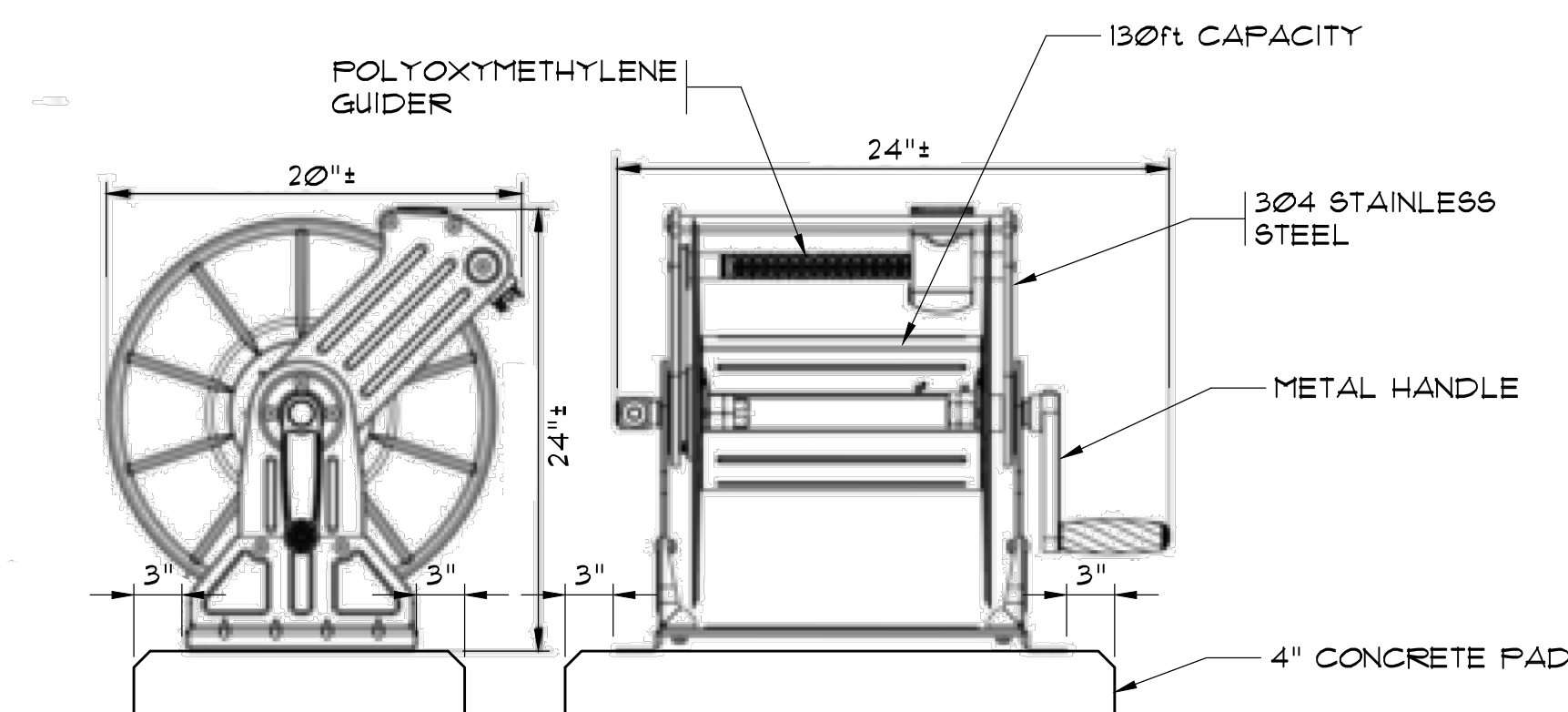
**5 SECTION VIEW**  
 SCALE: 3/16"=1'-0"  
 4' 2' 0' 4' 8'



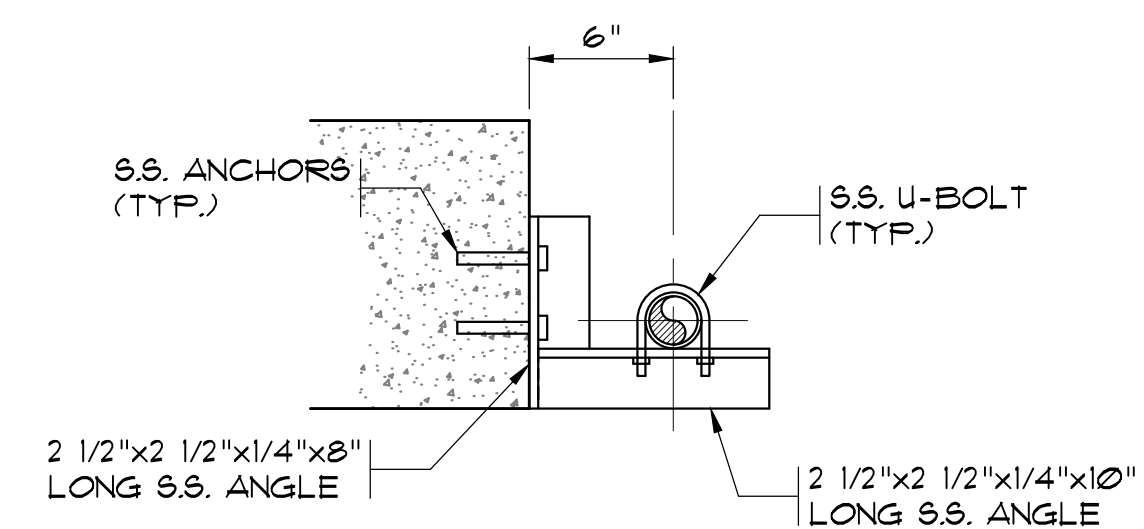
**TYPICAL HANDRAIL DETAIL**  
 N.T.S.



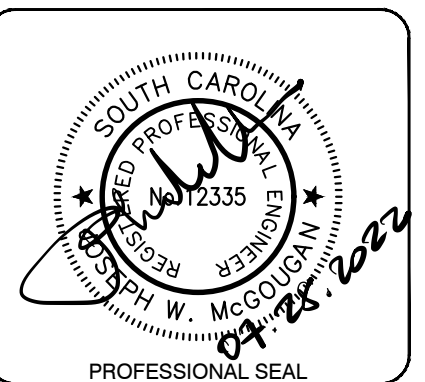
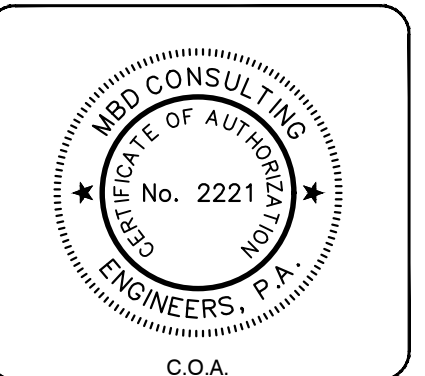
**TYPICAL PIPE ENCASEMENT DETAIL**  
 N.T.S.



**S.S. HOSE REEL DETAIL**  
 N.T.S.



**POLYMER HANGER**  
 SCALE: 1 1/2"=1'-0"  
 6" 0' 6" 1'



NO.	DATE	DESCRIPTION	BY
1	07/29/2022	BID SET - NOT FOR CONSTRUCTION	JWM

PROJECT NAME: WTP FLOCISED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: FLOCISED BASIN NO. 2 SECTION VIEWS & MISCELLANEOUS DETAILS  
 PROJECT NO.: 20210110.00.CH

PROJ. MGR.: WHY  
 DESIGN BY: JWM  
 DRAWN BY: DC  
 PROJ. DATE: 07/29/2022  
 DRAWING NUMBER:

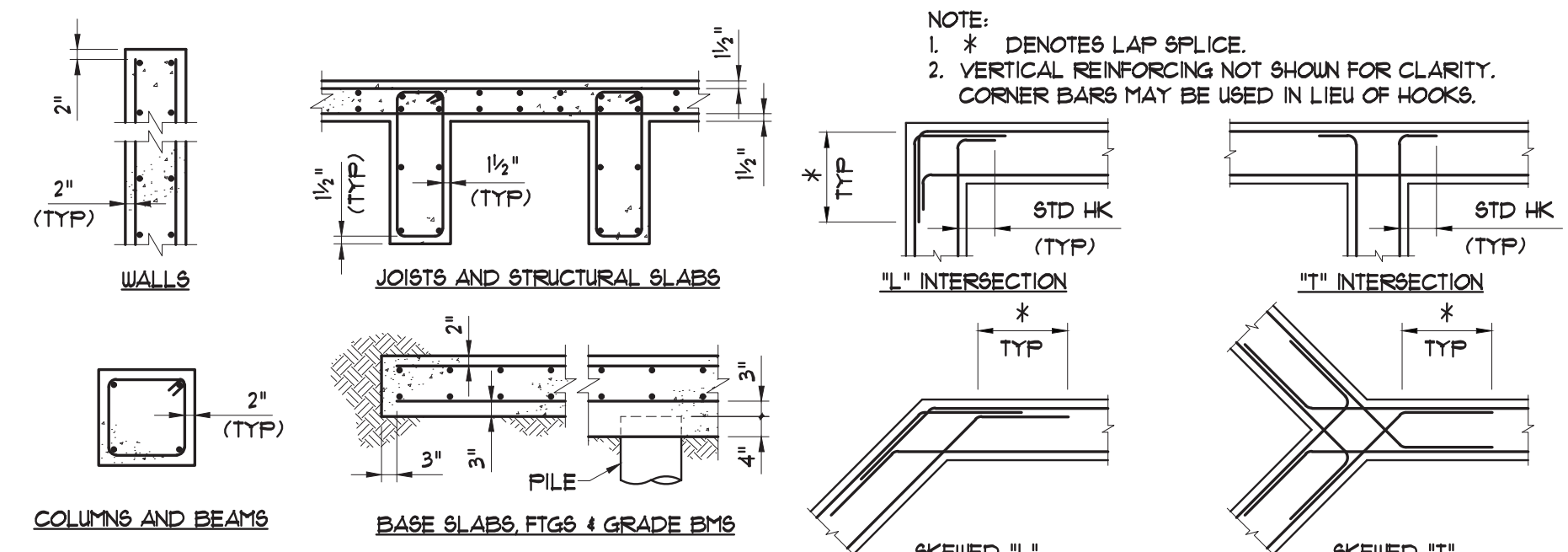
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WKD PROJ. NO.:  
 20210110.00.CH

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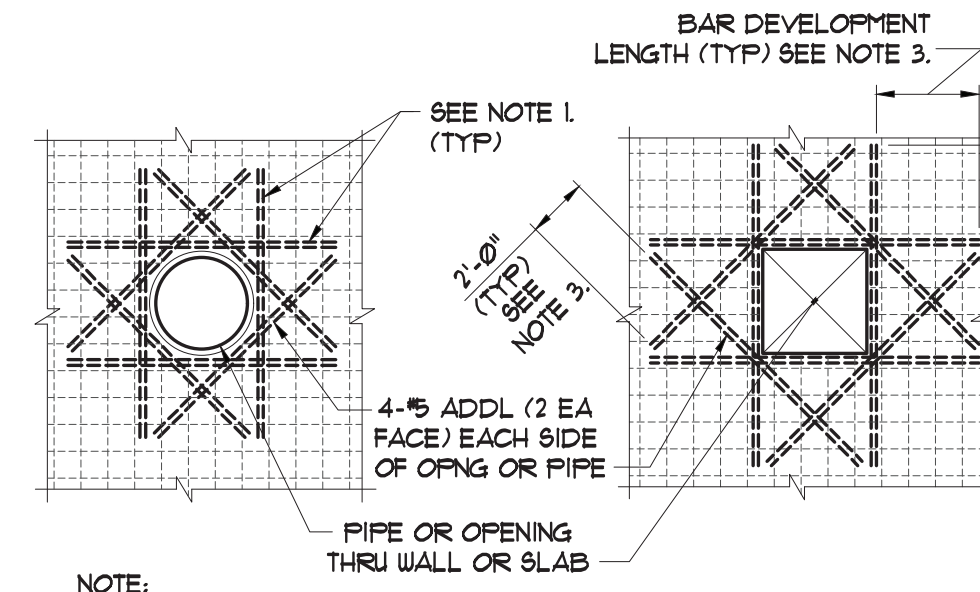
JULY 27, 2022 3:39PM I:\Projects\2118 Georgetown WTP\S-01.dwg - CUTSET, DAL0202, WPDSC, COASC, GNOTES, COWATER, CO3, CO4, CO6, CO8, LAPSCH, CO9, C18  
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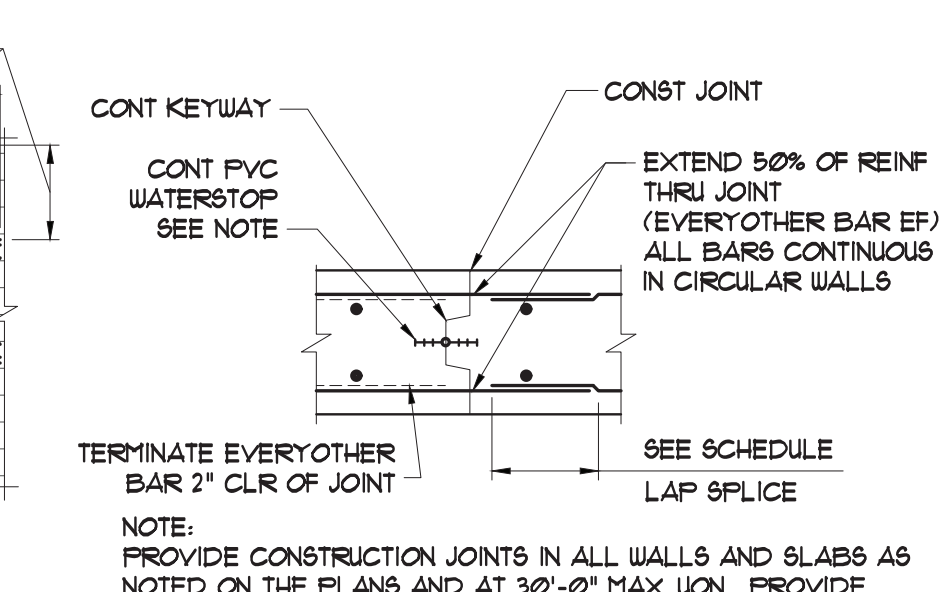
**A TYP REIN BAR CLEARANCES**  
S-1 (UNLESS OTHERWISE NOTED) NO SCALE

**B TYP WALL INTERSECTION REINFORCING**  
S-1 NO SCALE

**C STANDARD CONSTRUCTION JOINT DETAILS**  
S-1 NO SCALE



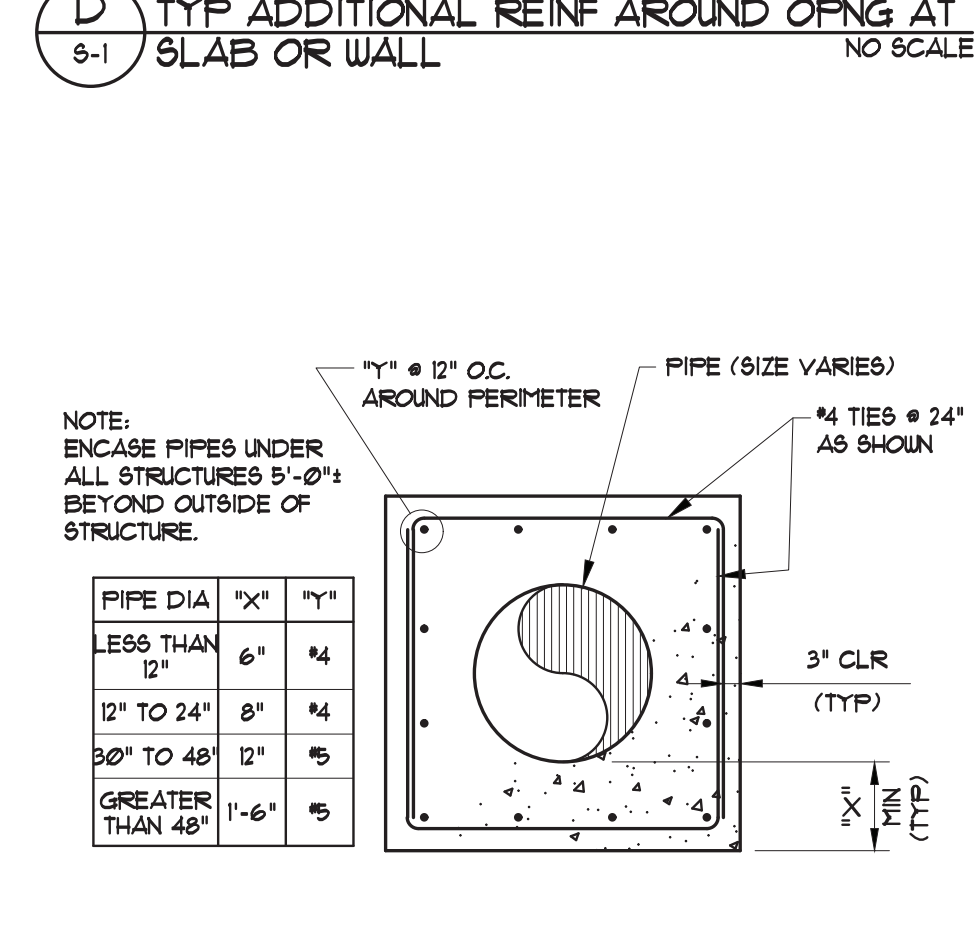
**D TYP ADDITIONAL REINFORCING AROUND OPENING AT SLAB OR WALL**  
S-1 NO SCALE



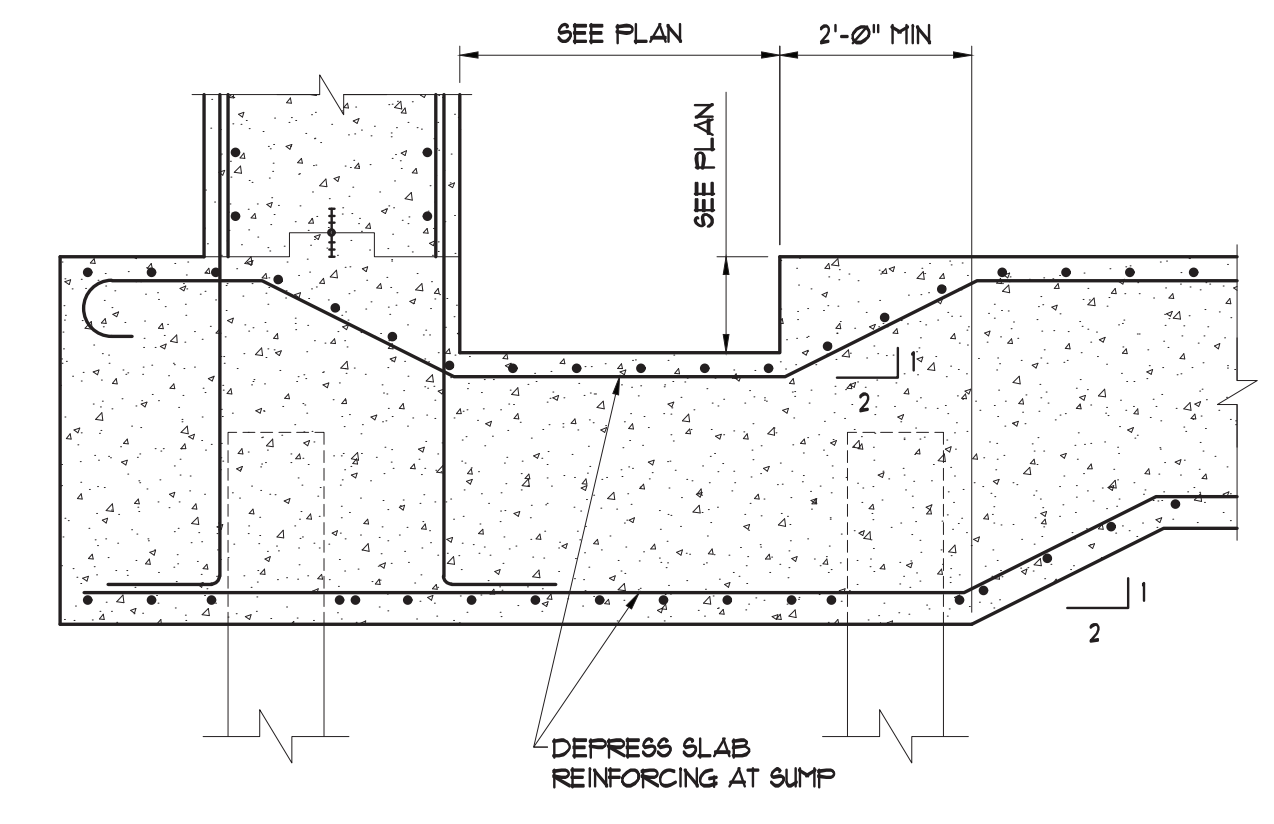
**E TYP CONSTRUCTION JOINT**  
S-1 NO SCALE

BAR SIZE	LAP SPLICE LENGTH			
	3,000 PSI CONCRETE		4,000/4,500 PSI CONCRETE	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	2'-4"	1'-10"	2'-0"	1'-7"
#4	3'-1"	2'-5"	2'-8"	2'-1"
#5	3'-11"	3'-0"	3'-4"	2'-7"
#6	4'-8"	3'-7"	4'-0"	3'-1"
#7	6'-9"	5'-3"	5'-10"	4'-6"
#8	7'-9"	6'-0"	6'-8"	5'-2"
#9	8'-9"	6'-9"	7'-7"	5'-10"
#10	9'-10"	7'-7"	8'-6"	6'-7"
#11	10'-11"	8'-5"	9'-5"	7'-3"

**REINFORCING LAP SPLICE SCHEDULE**  
NOTE: TOP BARS ARE HORIZONTAL SLAB BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.



**F TYP PIPE ENCASEMENT DETAIL**  
S-1 NO SCALE



**G TYP SUMP SECTION**  
S-1 NO SCALE

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 7/27/2022

**GENERAL NOTES**

- A. FOUNDATIONS**
- FOUNDATION DESIGN PER RECOMMENDATIONS FROM SOILS REPORT AND SUBSEQUENT EMAILS FROM JOEL E. WOOD & ASSOCIATES DATED SEPTEMBER 17, 2021, JULIA FILE NO. 210505.
  - FOUNDATION EXCAVATIONS AND FORMS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO PLACING CONCRETE.
  - PLACE CONCRETE FOR FOUNDATION SLAB IN ALTERNATE SECTIONS AND PROVIDE CONSTRUCTION JOINTS AS SHOWN.
  - PRECAST-PRESTRESSED CONCRETE PILES SHALL BE 12"x12" SQUARE AND SHALL BE DRIVEN TO DEVELOP 60 TONS ALLOWABLE VERTICAL CAPACITY. PILE REINFORCING SHALL BE DESIGNED FOR A 10 KIP LATERAL LOADING AND 500 IN-KIP BENDING MOMENT.
  - EXCAVATE TO PLAN DEPTH OF FOUNDATION SLAB PRIOR TO COMMENCING PILE DRIVING.
  - PRE-DRILL IF REQUIRED TO MINIMIZE VIBRATIONS TO EXISTING STRUCTURES.
- B. CONCRETE**
- CONCRETE SHALL DEVELOP 4,500 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.
  - CONCRETE WORK SHALL CONFORM TO ACI 318-14 AND ACI 301-10.
  - CONCRETE SHALL BE CURED A MINIMUM OF 7 DAYS BY ONE OR MORE METHODS SPECIFIED IN ACI 301.
  - CHAMFER EXPOSED EDGES OF CONCRETE (AND ALL CORNERS OF ALL COLUMNS) 3/4 INCH, UNLESS OTHERWISE NOTED.
  - PLACE 1/2 INCH EXPANSION JOINT MATERIAL BETWEEN EDGES OF SLABS AND VERTICAL SURFACES, UNLESS OTHERWISE NOTED.
  - PROVIDE CONSTRUCTION OR CONTROL JOINTS IN SLABS AND WALLS AT LOCATIONS SHOWN ON DRAWINGS.
- C. REINFORCING STEEL**
- BARS SHALL BE ROLLED FROM NEW BILLET-STEEL CONFORMING TO ASTM A615, GRADE 60.
  - REINFORCING STEEL IN PLACE SHALL BE REVIEWED BY THE ENGINEER PRIOR TO PLACING CONCRETE.
- D. GROUT**
- NON-SHRINK GROUT SHALL CONFORM TO CORP OF ENGINEERS SPECIFICATION CRD-C 621.
  - GROUT SHALL BE NON-STAINING AND NON-SHRINKING.
- E. WATERSTOPS**
- PROVIDE CONTINUOUS PVC WATERSTOPS WHERE SHOWN ON DRAWINGS. AT EXTERIOR WALL CONSTRUCTION JOINTS AND WHERE DIFFERENTIAL HEIGHTS OF FLUIDS EXIST ON EITHER SIDE OF WALL.
  - WATERSTOPS SHALL BE MANUFACTURED OF VIRGIN MATERIAL COMPOSED OF AN ELASTOMERIC POLYVINYL CHLORIDE COMPOUND MEETING THE REQUIREMENTS OF CORPS OF ENGINEERS CRD-C512. SUBMIT MANUFACTURER'S LITERATURE SHOWING COMPLIANCE WITH THE ABOVE SPECIFICATION AND SHOWING WATERSTOP SHAPES FOR USE.
  - WATERSTOPS AT CONSTRUCTION JOINTS SHALL BE 6 INCH MINIMUM LENGTH "RIBBED" TYPE, WITH CENTER BULB, UNLESS OTHERWISE INDICATED ON DRAWINGS. WATERSTOPS AT EXPANSION JOINTS SHALL BE 9 INCH MINIMUM LENGTH "RIBBED" TYPE WITH 3/8 INCH MINIMUM INSIDE DIAMETER CENTER BULB, UNLESS OTHERWISE INDICATED ON DRAWINGS.
  - ALL SPLICING OF WATERSTOPS SHALL BE SHOP FABRICATED EXCEPT THAT BUTT SPLICES MAY BE FIELD FABRICATED.
  - HYDROPHILIC WATERSTOPS SHALL BE A NON-BENTONITE, COEXTRUDED, STRIP APPLIED HYDROPHILIC RUBBER CONSISTING OF CHLOROPRENE RUBBER AND CHLOROPRENE RUBBER MODIFIED TO IMPART HYDROPHILIC PROPERTIES.
  - HYDROPHILIC WATERSTOP SHALL HAVE AN EXPANSION DELAY COATING TO INHIBIT INITIAL EXPANSION DUE TO MOISTURE PRESENT IN FRESH CONCRETE.
  - HYDROPHILIC WATERSTOP VOLUMETRIC EXPANSION RATIO MUST BE A MINIMUM OF 3:1.
- F. DESIGN LOADS**
- STRUCTURAL MEMBERS SHALL BE DESIGNED FOR FULL DEAD LOADS AND THE FOLLOWING LIVE LOADS.  
 STRUCTURAL DESIGN LOADS BASED ON SCBC AND IBC 2018.
- IMPORTANCE FACTORS: WIND (iw) = 1.0  
 SNOW (Is) = 1.0  
 SEISMIC (Is) = 1.25
  - LIVE LOADS: Fg = 5 PSF GROUND SNOW LOAD  
 LATERAL PRESSURE = 62 PCF  
 Cs = 1.0, Ct = 1.2
  - SNOW LOAD: Cs = 1.0, Ct = 1.2
  - WIND LOAD: ULTIMATE WIND SPEED 116 (ASCE 7-16), EXPOSURE CATEGORY C
- G. SEISMIC DESIGN CATEGORY D**
- PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
- RISK CATEGORY III  
 SPECTRAL RESPONSE ACCELERATION Sa = 0.42 %g Sds = 0.455 %g  
 S1 = 0.33 %g Sd1 = 0.242 %g  
 Cg = 0.14 R = 5
- SITE CLASSIFICATION D  
 BASIC STRUCTURAL SYSTEM  
 BEARING WALL  DUAL w/SPECIAL MOMENT FRAME  
 BUILDING FRAME  DUAL w/INTERMEDIATE R/C OR SPECIAL STEEL  
 MOMENT FRAME  INVERTED PENDULUM  
 ANALYSIS PROCEDURE  SIMPLIFIED  EQUIVALENT LATERAL FORCE
- H. LATERAL DESIGN CONTROL:** SEISMIC
- G. DIMENSIONS**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE DIMENSIONS OF THE STRUCTURAL DRAWINGS AND ADVISING THE ENGINEER OF ANY DIFFERENCES IN DIMENSIONS BETWEEN THE ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.
- H. ABBREVIATIONS**
- THE FOLLOWING LIST OF ABBREVIATIONS IS NOT INTENDED TO REPRESENT ALL THOSE USED ON THESE DRAWINGS, BUT TO SUPPLEMENT THE MORE COMMON ABBREVIATIONS USED:
- TYP - TYPICAL
  - UN - UNLESS OTHERWISE NOTED
  - CLR - CLEAR, CLEARANCE
  - TCJ - TYPICAL CONTROL JOINT, TYPICAL CONSTRUCTION JOINT
  - NTS - NOT TO SCALE
  - CJ - CONSTRUCTION JOINT
  - CONSTRUCTION SAFETY
1. THESE STRUCTURAL DRAWINGS DO NOT CONTAIN NECESSARY COMPONENTS FOR SAFETY DURING CONSTRUCTION.  
 2. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING, SHORING AND GUYING OF FRAMING AGAINST WIND, CONSTRUCTION LOADS AND OTHER TEMPORARY FORCES UNTIL SUCH PROTECTION IS NO LONGER REQUIRED FOR THE SAFE SUPPORT OF THE FRAMING.

NO.	DATE	DESCRIPTION	BY
1	7/29/2022	BID SET - NOT FOR CONSTRUCTION	WPD

PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: GENERAL NOTES AND DETAILS

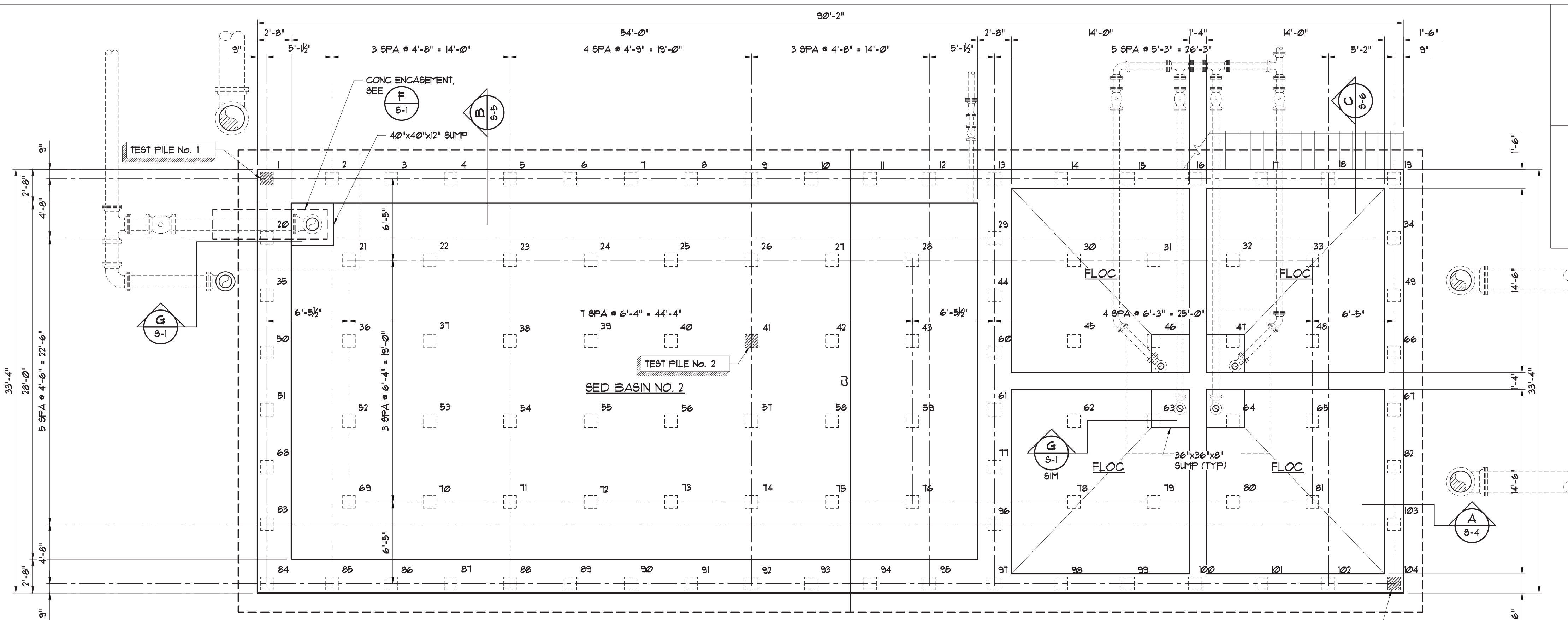
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 DESIGN BY: WPD  
 DRAWN BY: DAS  
 PROJ. DATE: 7/29/2022  
 DRAWING NUMBER: S-1  
 WKD PROJ. NO.: 20210110.00.CH

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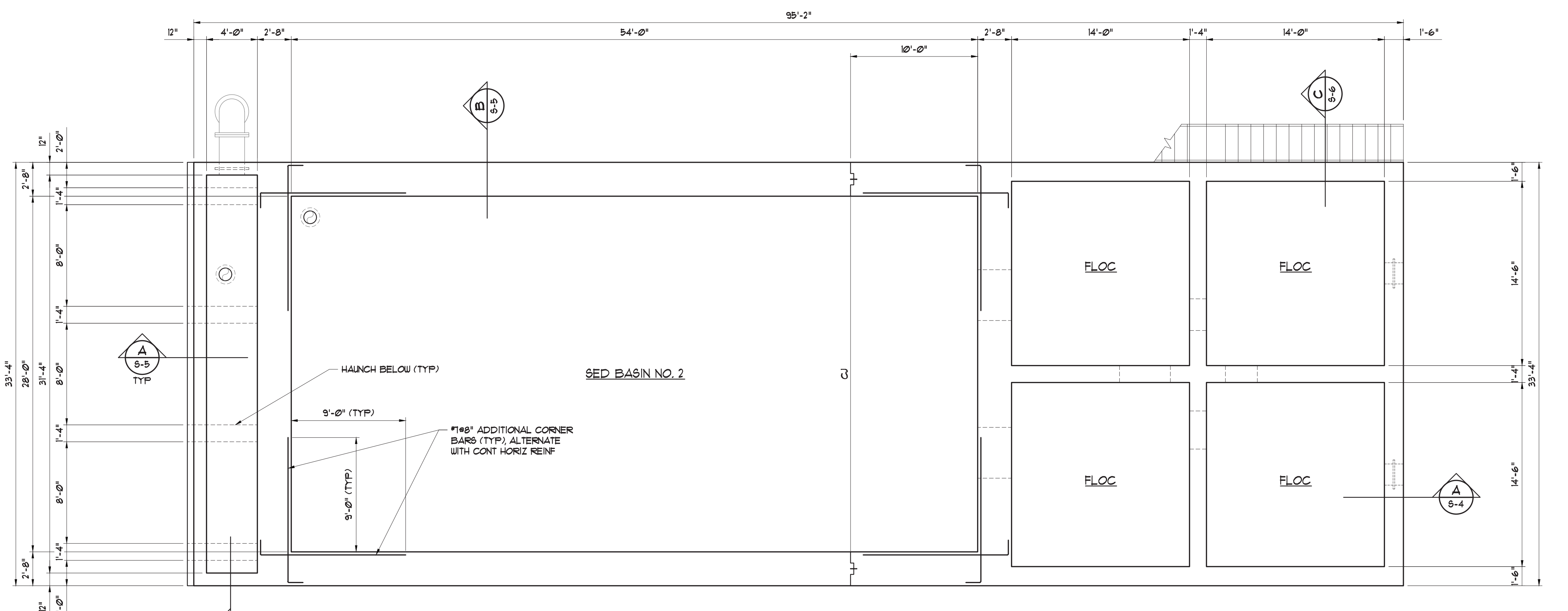


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**FLOC/SED BASIN NO. 2 FOUNDATION/PILE PLAN** 3/16" = 1'-0"  
 NOTE:  
 1. 104 - 60 TON FILES.



**FLOC/SED BASIN NO. 2 SECTION PLAN** 3/16" = 1'-0"

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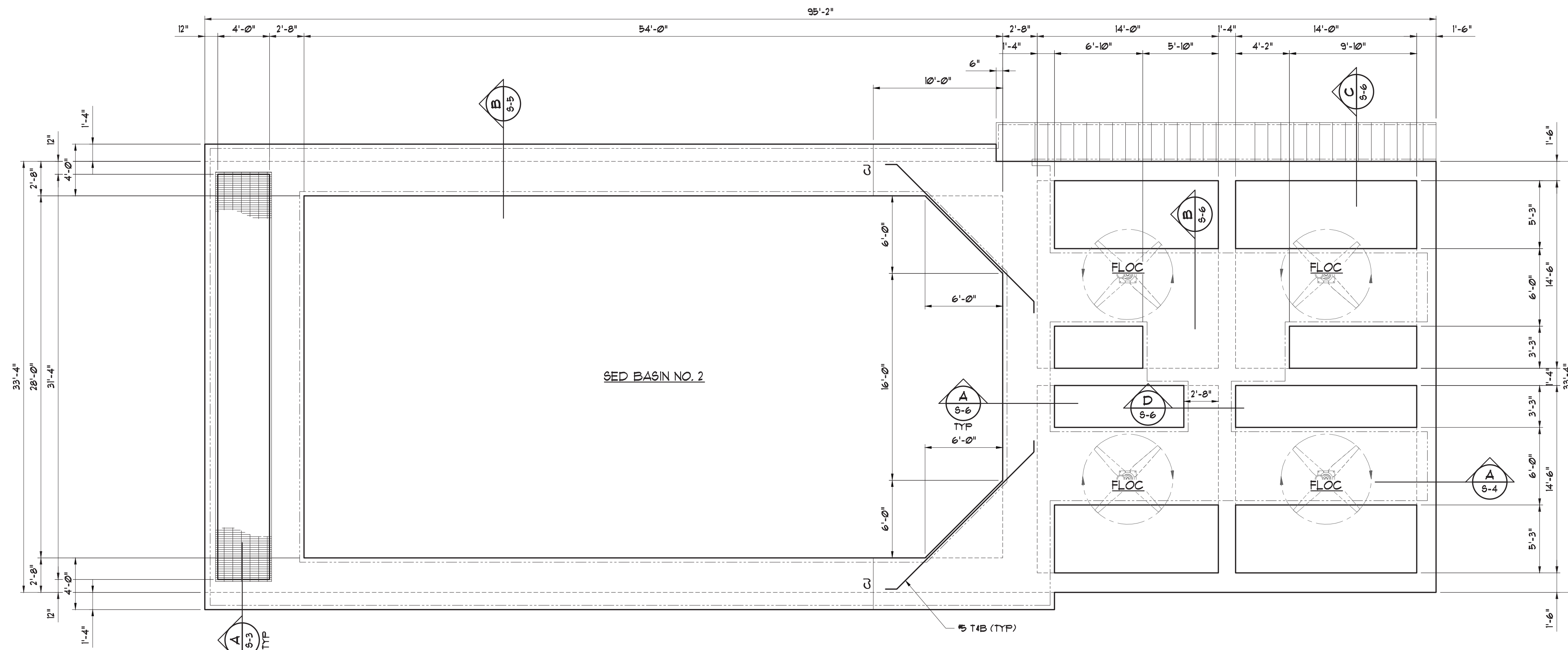
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 WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE:  
 FLOC/SED BASIN NO. 2 FOUNDATION/PILE PLAN AND SECTION PLAN

PROJ. MGR.: WHY  
 DESIGN BY: WPD  
 DRAWN BY: DAS  
 PROJ. DATE: 7/29/2022  
 DRAWING NUMBER:  
**S-2**  
 WKD PROJ. NO.:  
 20210110.00.CH

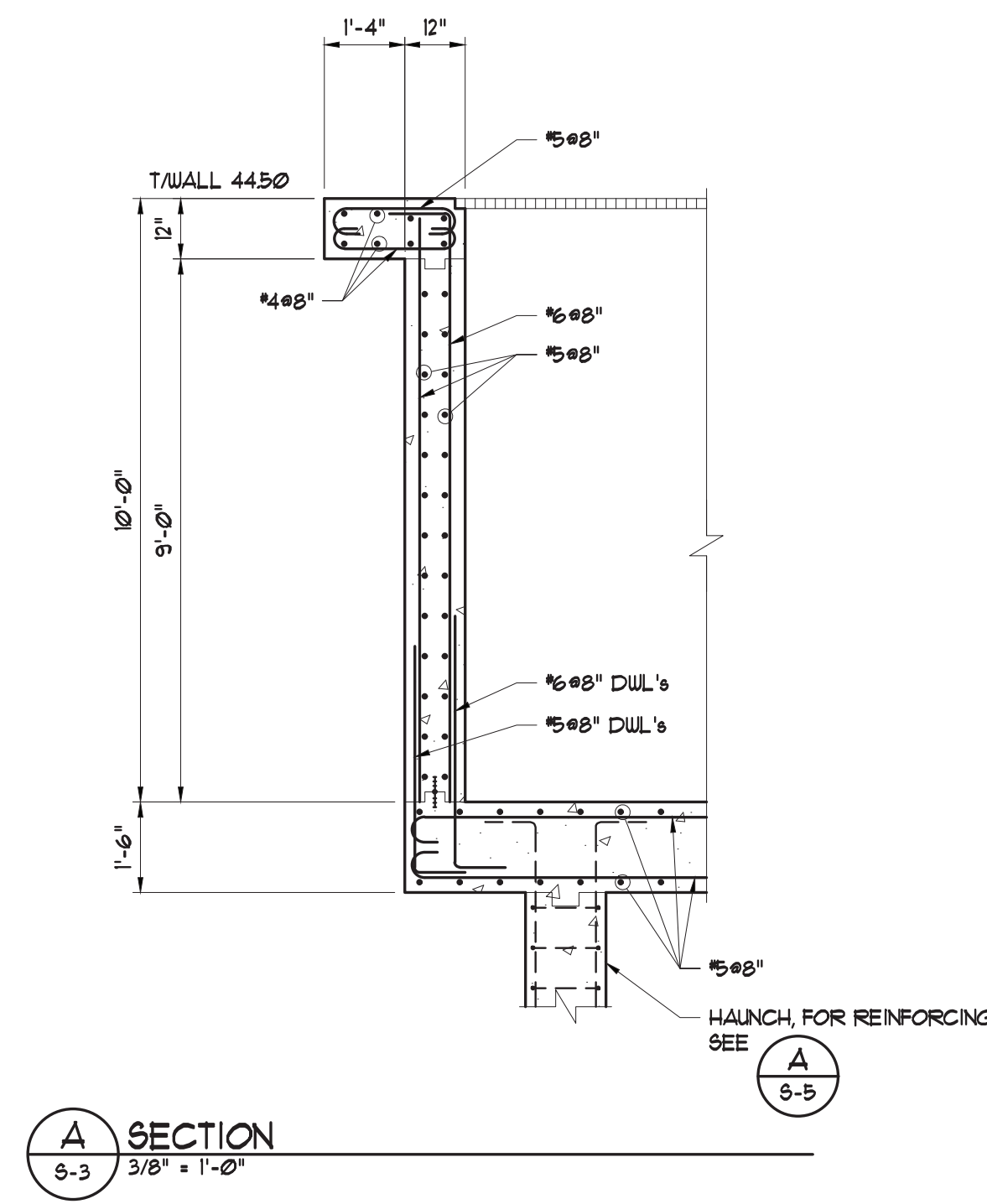
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N
**FLOC/SED BASIN NO. 2 UPPER PLAN**
3/16" = 1'-0"



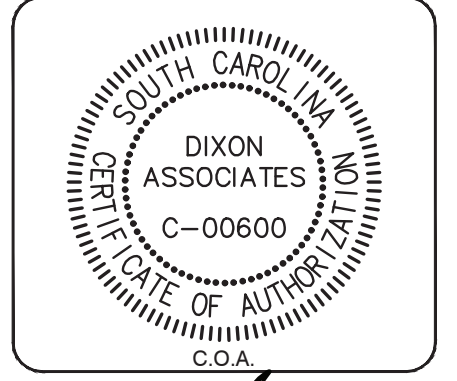
A
**SECTION**
3/8" = 1'-0"

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PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: FLOC/SED BASIN NO. 2 UPPER PLAN AND DETAILS

PROJ. MGR.: WHY  
 DESIGN BY: WPD  
 DRAWN BY: DAS  
 PROJ. DATE: 7/29/2022  
 DRAWING NUMBER:

**S-3**  
 WKD PROJ. NO.: 20210110.00.CH

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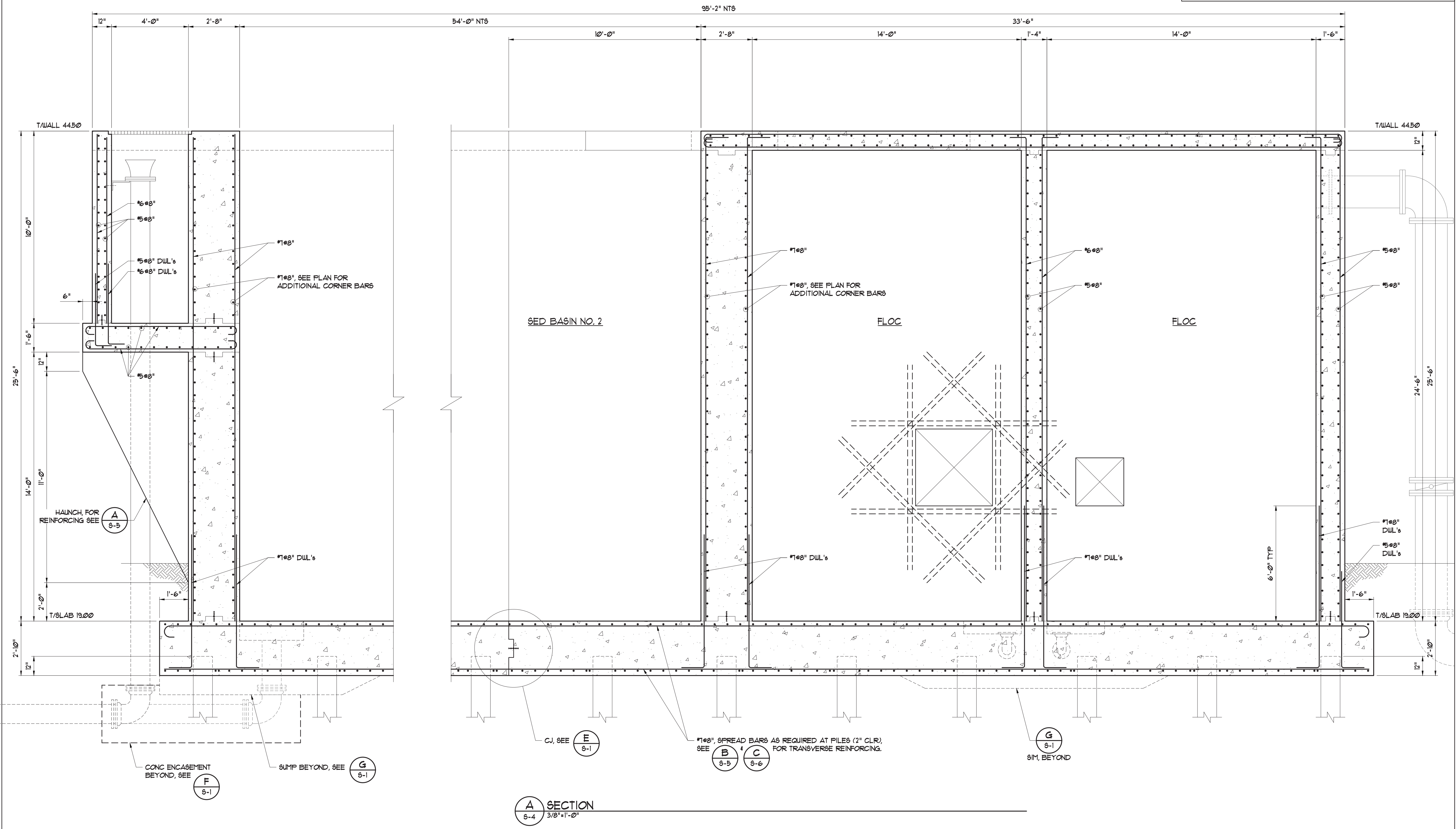
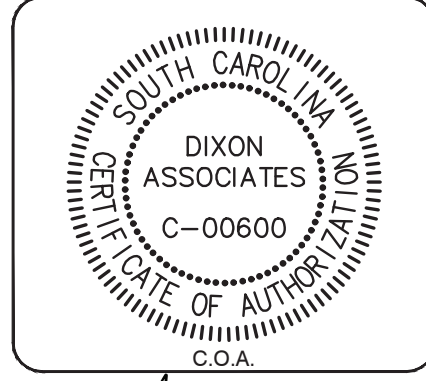
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PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: FLOC/SED BASIN NO. 2 SECTIONS

PROJ. MGR.: WHY  
 DESIGN BY: WPD  
 DRAWN BY: DAS  
 PROJ. DATE: 7/29/2022  
 DRAWING NUMBER: S-4  
 WKD PROJ. NO.: 20210110.00.CH

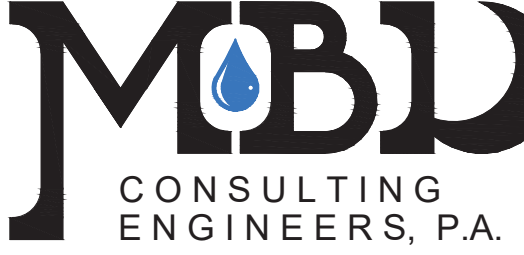
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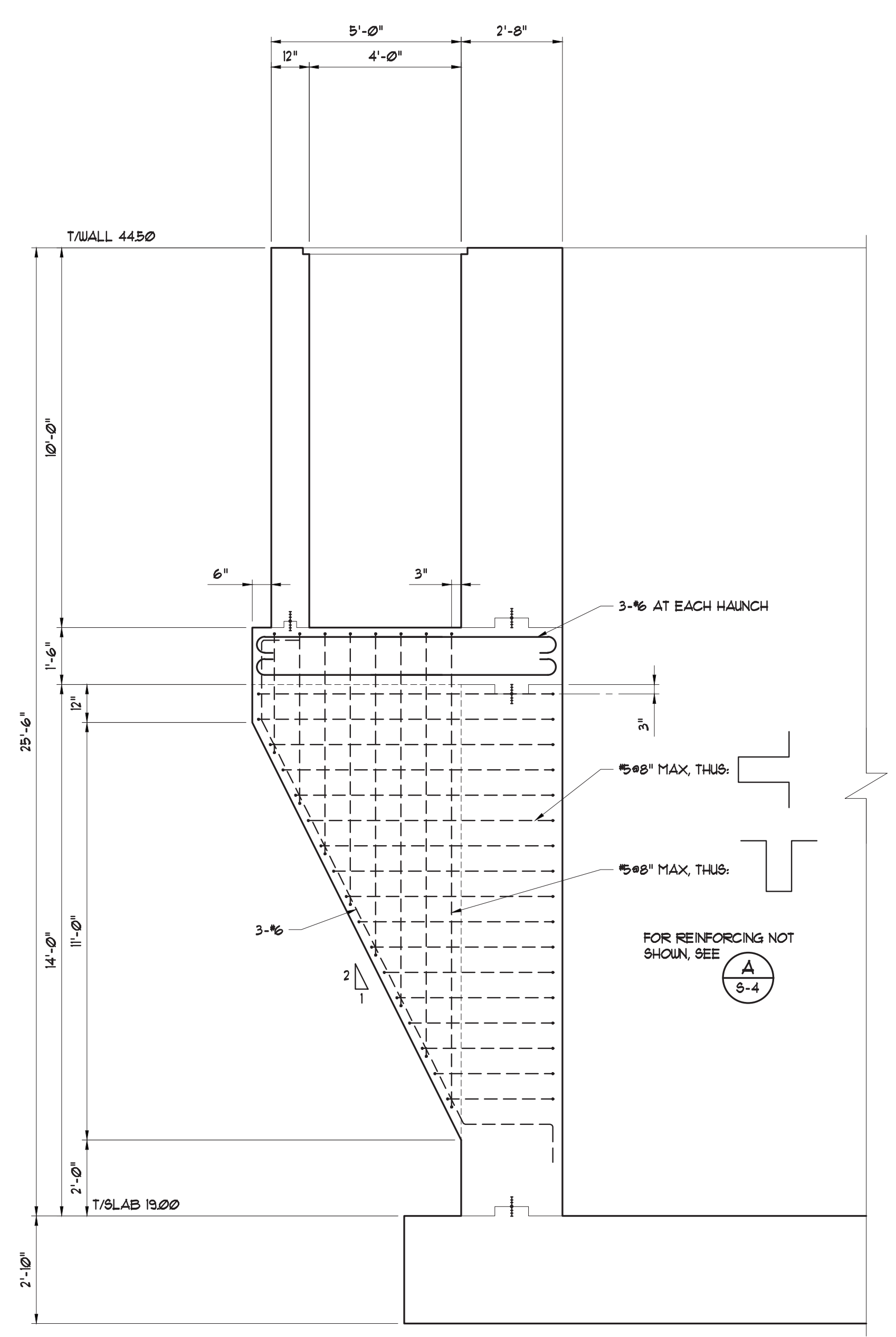
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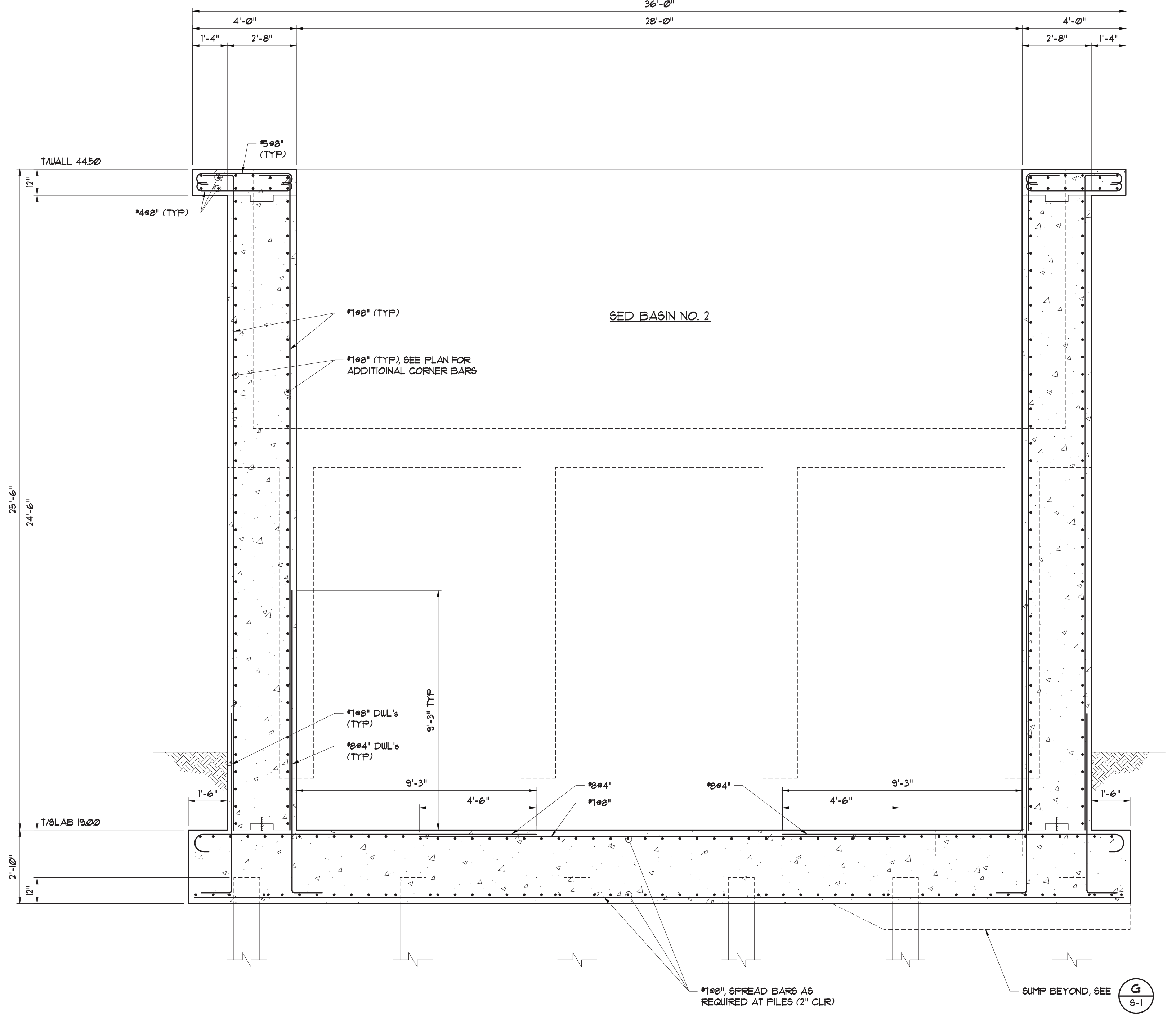


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**A** TYPICAL HAUNCH REINFORCING  
S-5 3/8" x 1'-0"



**B** SECTION  
S-5 3/8" x 1'-0"

NO.	DATE	DESCRIPTION	BY
0	7/29/2022	BID SET - NOT FOR CONSTRUCTION	WPD

PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: FLOC/SED BASIN NO. 2 SECTIONS

PROJ. MGR.: WHY  
 DESIGN BY: WPD  
 DRAWN BY: DAS  
 PROJ. DATE: 7/29/2022  
 DRAWING NUMBER: S-5  
 WKD PROJ. NO.: 20210110.00.CH

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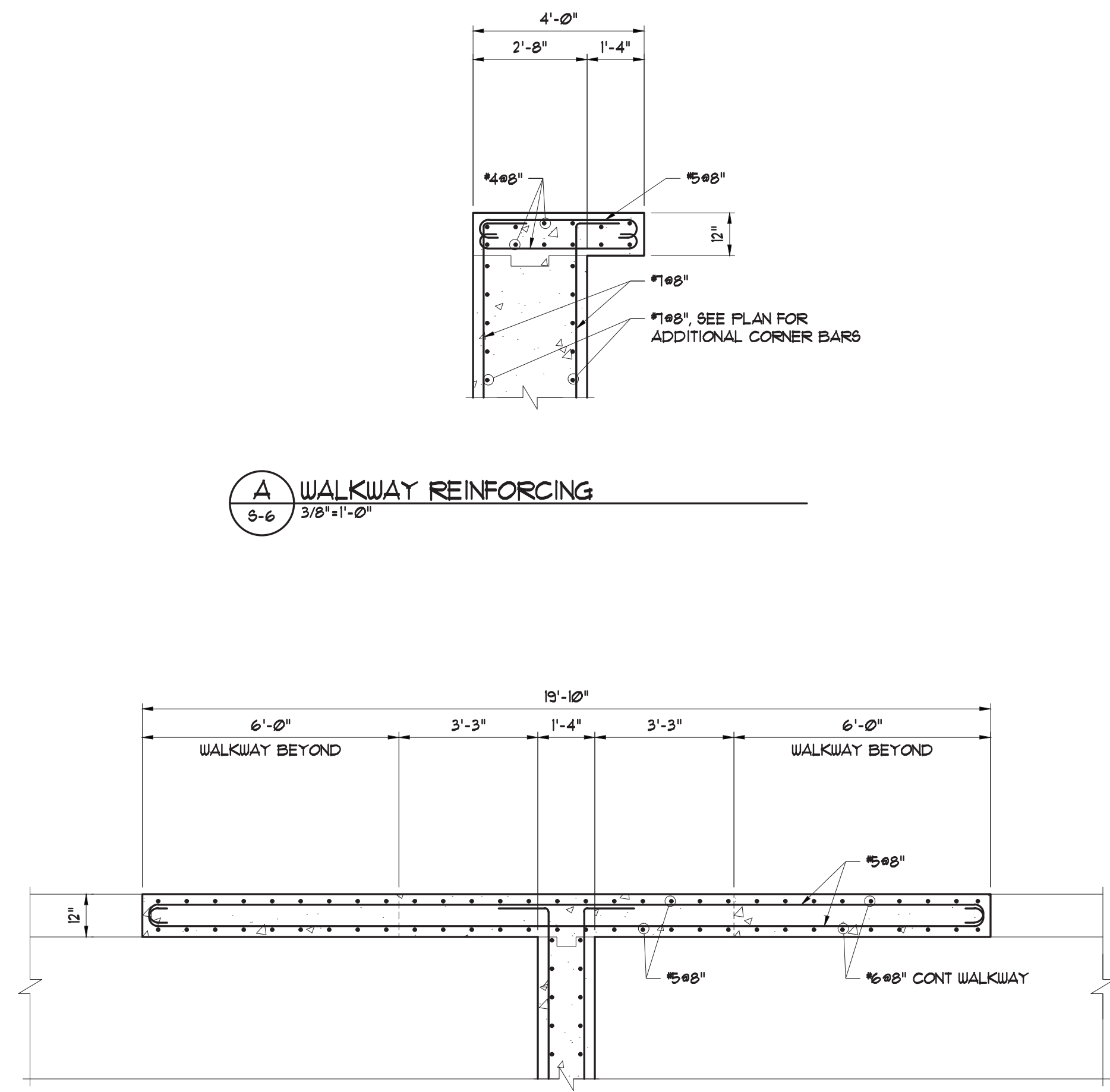
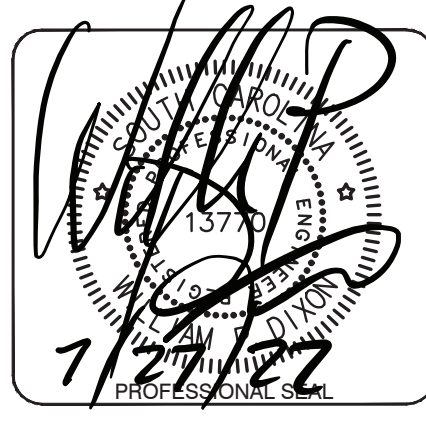
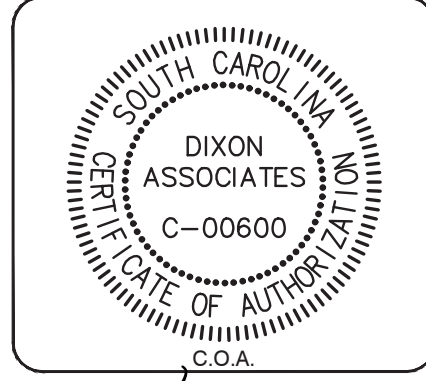
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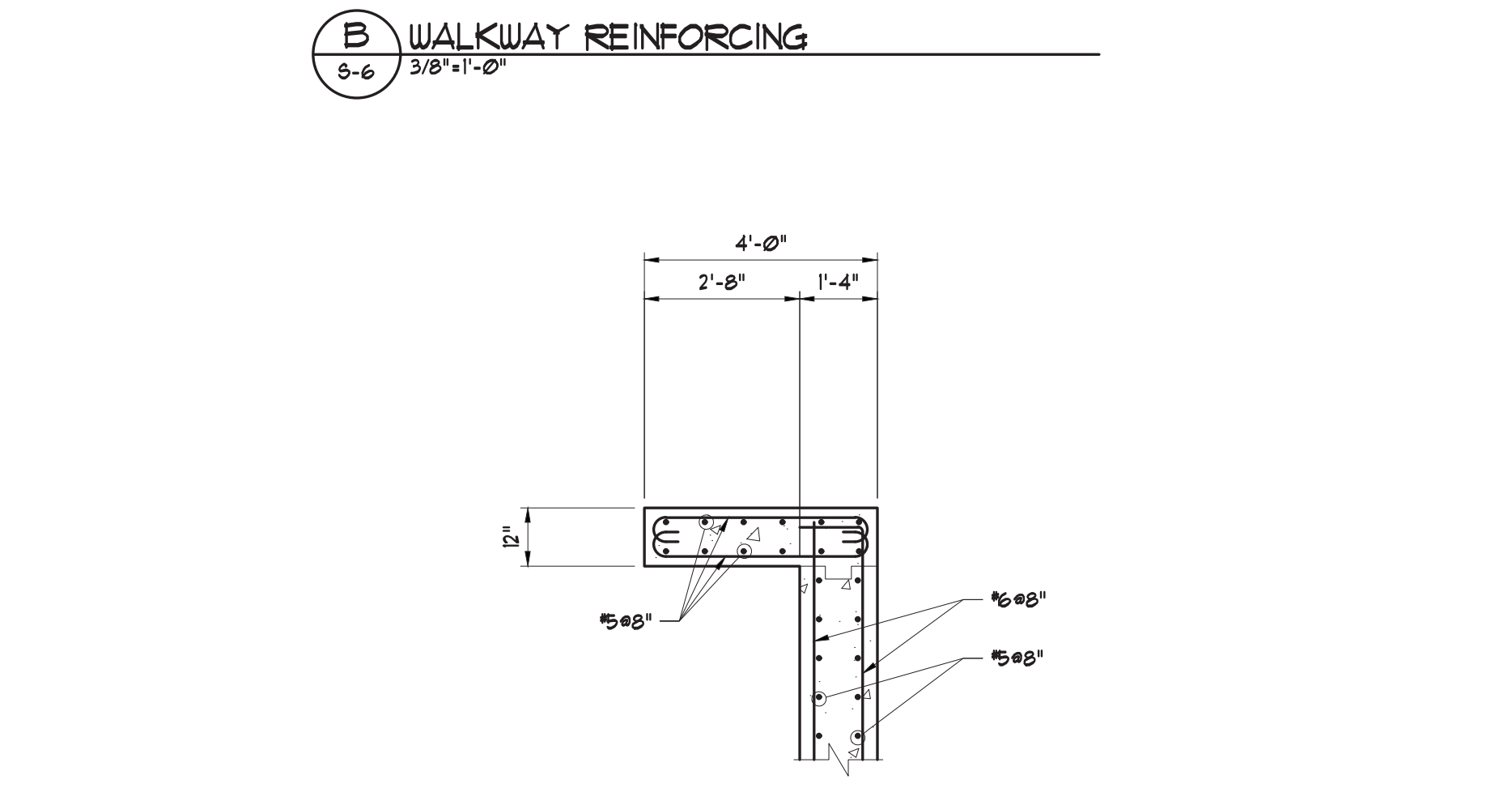
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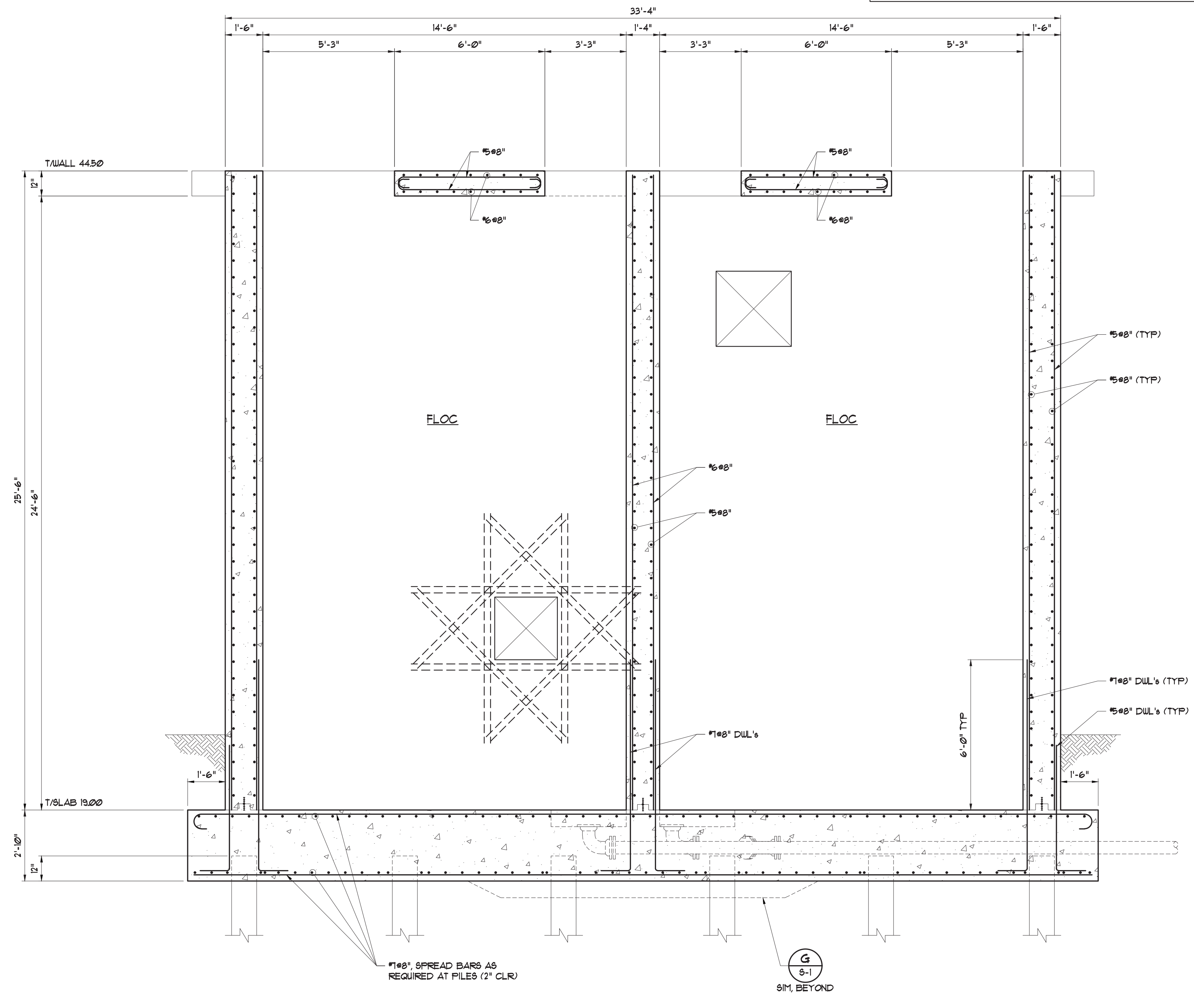


**A WALKWAY REINFORCING**  
3/8" x 1'-0"

**B WALKWAY REINFORCING**  
3/8" x 1'-0"



**D WALKWAY REINFORCING**  
3/8" x 1'-0"



**C SECTION**  
3/8" x 1'-0"

**G**  
S-1  
91M, BEYOND

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NO.	DATE	DESCRIPTION	BY
0	7/29/2022	BID SET - NOT FOR CONSTRUCTION	WPD

PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN  
 DRAWING TITLE: FLOC/SED BASIN NO. 2 SECTION  
 PROJECT MANAGER: WHY  
 DESIGN BY: WPD  
 DRAWN BY: DAS  
 PROJ. DATE: 7/29/2022  
 DRAWING NUMBER: S-6  
 WKD PROJ. NO.: 20210110.00.CH

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THESE DRAWINGS ARE DIAGRAMMATIC - FIELD VERIFY ALL DIMENSIONS. BRANCH CIRCUITING CONVENTION - #12 AWG PER PHASE AND NEUTRAL (WHERE REQUIRED) AND 20 AMPERE CIRCUIT BREAKER, UNLESS OTHERWISE NOTED. PROVIDE QUANTITY AND SIZE SWITCH CONDUCTORS AS REQUIRED TO MAKE SYSTEM OPERATIONAL.

**GENERAL NOTES (FOR ALL ELECTRICAL SHEETS)**

- CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITY LINES OF ALL TRADES PRIOR TO ANY SITE WORK.
- COORDINATE EXACT EQUIPMENT LOCATIONS WITH OWNER PRIOR TO ROUGH-INS.
- COORDINATE LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- ANY ITEMS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR.
- ALL 120V BRANCH CIRCUITS SHALL BE 3-WIRE (PHASE, NEUTRAL, GROUND).
- INFORMATION ON THE DRAWINGS HAS BEEN ASCERTAINED FROM EXISTING DRAWINGS AND CASUAL FIELD OBSERVATIONS. THIS INFORMATION IS AS ACCURATE AS CONDITIONS WOULD ALLOW. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE PRIOR TO BID, AND FAMILIARIZE HIMSELF WITH THE EXTENT OF WORK REQUIRED. NO EXTRAS WILL BE ALLOWED FOR ALTERATIONS OF A FORESEEABLE NATURE REQUIRED TO ACHIEVE THE END RESULT AS INDICATED BY CONTRACT DOCUMENTS.
- ALL ITEMS SHOWN LIGHT LINE WEIGHT ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE. ALL ITEMS SHOWN HEAVY LINE WEIGHT ARE NEW OR RELOCATED AS NOTED.
- MAINTAIN CIRCUIT CONTINUITY FOR ALL EXISTING ITEMS THAT ARE REMAINING OR BEING RELOCATED.
- ALL ITEMS SHOWN TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ALL ASSOCIATED CONDUIT AND WIRE BACK TO POINT OF ORIGIN OR NEAREST EXISTING ITEM THAT IS REMAINING, UNLESS OTHERWISE NOTED.

**ABBREVIATIONS**

NOTE: ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED.

- AC - ABOVE COUNTER
- AFC - ABOVE FINISHED CEILING
- AFF - ABOVE FINISHED FLOOR
- AFG - ABOVE FINISHED GRADE
- AIC - AMPS INTERRUPTING CURRENT
- AL - ALUMINUM
- BFG - BELOW FINISHED GRADE
- CB - CIRCUIT BREAKER
- CR - CORROSION RESISTANT
- OPT - CONTROL POWER TRANSFORMER
- CT - CURRENT TRANSFORMER
- CTTR - CONTACTOR
- CU - COPPER
- DPM - DIGITAL POWER METER
- EC - EMPTY CONDUIT
- ELR - END OF LINE RESISTOR
- EM - EMERGENCY
- ES - EMERGENCY STOP
- ETM - ELAPSED TIME METER
- EWC - ELECTRIC WATER COOLER
- EX - EXISTING
- FCP - FACTORY-SUPPLIED CONTROL PANEL (FWE)
- FLA - FULL LOAD AMPS
- FWNR - FULL VOLTAGE, NON-REVERSING
- FVR - FULL VOLTAGE, REVERSING
- FWE - FURNISHED WITH EQUIPMENT
- GFI - GROUND FAULT INTERRUPTER
- GRC - GALVANIZED RIGID CONDUIT
- HOA - HAND-OFF-AUTOMATIC
- HP - HORSEPOWER
- IG - ISOLATED GROUND
- LC - LIGHTING CONTACTOR
- LOR - LOCAL-OFF-REMOTE
- LS - LEVEL SWITCH
- LT - LET THROUGH
- MCA - MINIMUM CIRCUIT AMPS
- MCB - MAIN CIRCUIT BREAKER
- MCC - MOTOR CONTROL CENTER
- MCCB - MOLDED CASE CIRCUIT BREAKER
- MCP - MOTOR CIRCUIT PROTECTION
- MLO - MAIN LUGS ONLY
- NC - NORMALLY CLOSED
- NI - NOT IN CONTRACT
- NL - NIGHT LIGHT
- NO - NORMALLY OPEN
- NTS - NOT TO SCALE
- OC - OVER CURRENT
- OL - OVERLOAD
- PT - POTENTIAL TRANSFORMER
- RVNR - REDUCED VOLTAGE, NON-REVERSING
- SC - SHORT CIRCUIT
- SHLD - SHIELDED
- SR - SAFE OR STOP/RUN
- TSP - TWISTED SHIELDED PAIR
- TTB - TELEPHONE TERMINAL BOARD
- UG - UNDERGROUND
- VFD - VARIABLE FREQUENCY DRIVE
- WG - WIREGUARD
- WP - WEATHERPROOF
- XFMR - TRANSFORMER
- XP - EXPLOSION PROOF
- ZS - LIMIT OR POSITION SWITCH

**ELECTRICAL LEGEND**

- LIGHTING**
- DOWNLIGHT
  - WALL MOUNTED LUMINAIRE
  - CEILING OR WALL MOUNTED LUMINAIRE
  - PORCELAIN KEYLESS
  - SURFACE MOUNTED LUMINAIRE
  - RECESS MOUNTED LUMINAIRE
  - RECESS MOUNTED LUMINAIRE WITH MODULAR WIRING CONNECTOR
  - STRIP LUMINAIRE
  - TRACK LIGHT, AS NOTED OR SCHEDULED
  - DIRECTIONAL ACCENT OR WALL-WASH LUMINAIRE
  - EXTERIOR POLE MOUNTED LUMINAIRE, AS SCHEDULED
  - BOLLARD
  - CEILING OR WALL MOUNTED EXIT SIGN, INSTALL FACES AS INDICATED BY SHADING
  - EMERGENCY LIGHT AS NOTED
- POWER**
- STRAIGHT BLADE DUPLEX RECEPTACLE
  - SUBSCRIPTS:
    - HG = HOSPITAL GRADE
    - HGT = HOSPITAL GRADE TAMPER RESISTANT
    - GFI = GROUND FAULT INTERRUPTER
    - SS = SURGE SUPPRESSION
    - AC = 6" ABOVE COUNTER
  - STRAIGHT BLADE DOUBLE DUPLEX RECEPT. (FOURPLEX)
  - STRAIGHT BLADE SINGLE RECEPTACLE
  - STRAIGHT BLADE DUPLEX RECEPT. HALF-SWITCHED
  - STRAIGHT BLADE DUPLEX RECEPT. ON EMERGENCY CIRCUIT
  - OUTLET WITH SPECIAL DEVICE, AS NOTED
  - WALL MOUNTED OUTLET WITH SPECIAL DEVICE, AS NOTED
  - FLOOR MOUNTED POWER BOX, AS NOTED
  - FLOOR MOUNTED COMBINATION OUTLET BOX, AS NOTED
  - POKE THROUGH, AS NOTED
  - PEDESTAL OUTLET, AS NOTED
  - JUNCTION BOX AS NOTED
  - OUTLET BOX
  - WALL MOUNTED OUTLET BOX
  - ABOVE CEILING POWER DISTRIBUTION BOX
  - SURFACE RACEWAY, AS NOTED
  - CLOCK HANGER OUTLET
  - TELE-POWER POLE
  - PULL BOX
  - CONNECTION TO MOTOR
  - MAGNETIC MOTOR STARTER
  - SUBSCRIPTS:
    - MS = MULTISPEED
    - SSRV = SOLID-STATE, REDUCED VOLTAGE
    - VF = VARIABLE FREQUENCY
  - SAFETY DISCONNECT SWITCH
  - FUSED DISCONNECT SWITCH
  - COMBINATION DISCONNECT AND STARTER
  - ENCLOSED CIRCUIT BREAKER, MOLDED-CASE, THERMAL-MAGNETIC
  - SUBSCRIPTS:
    - AT = ADJUSTABLE TRIP
    - EAT = ELECTRONIC ADJUSTABLE TRIP
    - CL = CURRENT LIMITING
    - IF = INTEGRALLY FUSED
    - GFCI = GROUND FAULT CIRCUIT INTERRUPTER
    - ST = SHUNT TRIP
    - KI = KEY INTERLOCK
    - ZSI = ZONE-SELECTIVE INTERLOCKING
  - CONNECTION TO PRE-WIRED EQUIPMENT BREAKER PANEL
  - MOTOR CONTROL CENTER
  - TRANSIENT VOLTAGE SURGE SUPPRESSOR
  - TRANSFORMER
  - ENGINE GENERATOR
- CIRCUITING**
- CONDUIT RUN
  - UNDERGROUND CONCRETE-ENCASED CONDUIT OR CONDUIT ROUTED IN WALL OR UNDER FLOOR
  - CIRCUIT HOMERUN TO PANEL OR CABINET, NO. OF ARROWS INDICATE NO. OF CIRCUITS
  - CIRCUIT TURNED UP
  - CIRCUIT TURNED DOWN
  - CONDUIT STUB-OUT - CAP & MARK
  - CIRCUIT IN FLEXIBLE CONDUIT
  - SEALOFF
  - #12 CONDUCTORS IN 3/4" CONDUIT. SLASHES INDICATE PHASE AND NEUTRAL. TAB INDICATES GROUND WIRE.
  - #18TSP CABLE IN 3/4" CONDUIT
  - FLEXIBLE CONDUIT CONNECTION

NOTE: ALL SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY USED.

**SCHEMATIC WIRING GRAPHICS**

- METER
  - GROUND CONNECTION AS NOTED
  - FUSED DISCONNECT SWITCH
  - FUSES
  - MAGNETIC MOTOR STARTER
  - SUBSCRIPTS:
    - MS = MULTISPEED
    - SSRV = SOLID-STATE, REDUCED VOLTAGE
    - VF = VARIABLE FREQUENCY
  - CIRCUIT BREAKER, MOLDED-CASE OR ANSI, THERMAL-MAGNETIC
  - SUBSCRIPTS:
    - AT = ADJUSTABLE TRIP
    - EAT = ELECTRONIC ADJUSTABLE TRIP
    - CL = CURRENT LIMITING
    - IF = INTEGRALLY FUSED
    - GFCI = GROUND FAULT CIRCUIT INTERRUPTER
    - ST = SHUNT TRIP
    - KI = KEY INTERLOCK
    - ZSI = ZONE-SELECTIVE INTERLOCKING
  - POWER TRANSFORMER
  - CURRENT TRANSFORMER
  - AMMETER
  - VOLT METER
  - TRANSFER SWITCH
  - GROUND FAULT PROTECTION
  - GENERATOR
  - MOTOR, NUMBER INDICATES HORSEPOWER
- FIRE ALARM SYSTEM**
- FACP FIRE ALARM CONTROL PANEL
  - FAGP FIRE ALARM GRAPHIC PANEL
  - FAAP FIRE ALARM ANNUNCIATOR PANEL
  - MANUAL PULL STATION
  - FIRE ALARM STROBE
  - GENERAL ALARM COMBINATION HORN/STROBE
  - FIRE ALARM HORN
  - CEILING OR WALL MOUNTED DETECTOR
  - SUBSCRIPTS:
    - I = IONIZATION
    - T = THERMAL, FIXED AND RATE-OF-RISE
    - TF = THERMAL, FIXED
    - TF165' = 165' THERMAL, FIXED AND RATE-OF-RISE
    - TF165" = 165" THERMAL, FIXED
    - P = PHOTOELECTRIC
    - PT = COMBINATION PHOTOELECTRIC AND THERMAL
  - SMOKE DETECTOR IN VENTILATING DUCT
  - FAN SHUT-DOWN CONNECTION
  - MAG. DOOR HOLDER
  - SPRINKLER SYSTEM FLOW SWITCH
  - SPRINKLER SYSTEM TAMPER SWITCH
  - FIREFIGHTERS TELEPHONE JACK
  - LIFE SAFETY SPEAKER
  - LIFE SAFETY SPEAKER WITH STROBE
  - REMOTE PILOT LIGHT
  - REMOTE PILOT LIGHT WITH TEST SWITCH
  - MONITOR MODULE
  - CONTROL MODULE
  - DAMPER CONNECTION
- COMMUNICATION SYSTEM**
- FLOOR MOUNTED TELEPHONE AND/OR DATA OUTLET BOX, AS NOTED
  - WALL MOUNTED TELEPHONE OUTLET
  - WALL MOUNTED DATA OUTLET
  - WALL MOUNTED COMBINATION TELEPHONE/DATA OUTLET BOX
  - PAY PHONE
  - TELEPHONE TERMINAL BOARD - TTB
  - CEILING OR WALL MOUNTED SPEAKER
  - VOLUME CONTROL
  - FLOOR OR WALL MOUNTED MICROPHONE OUTLET
  - CALL-IN SWITCH
  - TIME-TONE UNIT
  - CEILING OR WALL MOUNTED CLOCK
  - PROGRAM BELL
  - BUZZER
  - HOUSE PHONE/INTERCOM
  - MASTER INTERCOM STATION
  - TELEVISION OUTLET
  - CLOSED CIRCUIT TV OUTLET
  - AMPLIFIER

**CONDUCTORS/DUCTBANKS**

- INDICATES CONDUCTORS IN 3/4" CONDUIT UNLESS OTHERWISE INDICATED. SEE CONDUCTOR SCHEDULE FOR CONTENTS.
- INDICATES UNDERGROUND ELECTRICAL DUCTBANK. SEE DUCTBANK SCHEDULE FOR CONTENTS.

**GROUNDING**

- BARE COPPER GROUND WIRE
- COPPERCLAD GROUND ROD
- COPPERCLAD GROUND ROD AND TEST WELL
- EXOTHERMIC GROUND CONNECTION

**EQUIPMENT**

- FABRICATED SINGLE SUPPORT STAND. SEE DETAIL
- FABRICATED DUAL SUPPORT STAND. SEE DETAIL

**SWITCHING**

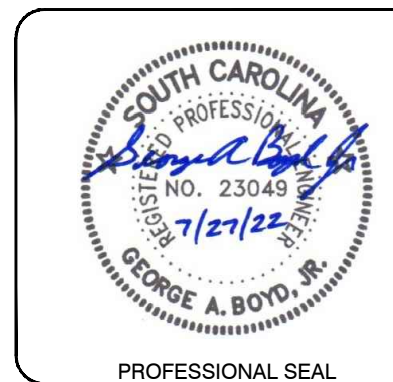
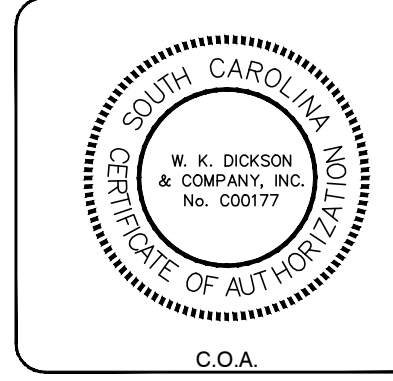
- S WALL MOUNTED SWITCH
- SUBSCRIPTS:
  - 2 = DOUBLE POLE
  - 3 = 3-WAY
  - 4 = 4-WAY
  - D = DIMMER
  - K = KEY-OPERATED
  - O = SWITCH MOUNTED OCCUPANCY SENSOR
  - P = PILOT LIGHT
  - T = THERMAL OVERLOAD
  - LV = LOW VOLTAGE
  - DS = DOOR SWITCH

**NOTATIONS**

- UPPER CASE LETTER AT LUMINAIRES (F1, I1, ETC.) INDICATES LUMINAIRE TYPE. (F1) = TYPE F1 LUMINAIRES IN AREA INDICATED.
- LOWER CASE LETTER AT LUMINAIRES AND SWITCHES (a, b, ETC.) INDICATE ASSOCIATED UNITS FOR SWITCHING.
- SHADING WITHIN LUMINAIRE DENOTES UNIT ON EMERGENCY (EM) CIRCUIT.
- "NL" WITHIN LUMINAIRES DENOTES UNIT ON NIGHT LIGHT CIRCUIT.
- PLUS (+) SIGN WITH DIMENSION AT OUTLET INDICATES HEIGHT ABOVE FINISHED FLOOR OR GRADE TO CENTERLINE OF OUTLET.



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NO.	DATE	DESCRIPTION	BY
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PROJECT NAME: WTP FLOC/SED BASIN NO. 2 FOR CITY OF GEORGETOWN

DRAWING TITLE: LEGEND AND GENERAL NOTES

PROJ. MGR.: WHY  
DESIGN BY: GAB  
DRAWN BY: GAB  
PROJ. DATE: 06/02/2021  
DRAWING NUMBER:

**GE01**  
WKD PROJ. NO.: 20210110.00.CH

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