

ISSUE	REMARKS/DATE
1	INITIAL SUBMITTAL
2	9-23-20 Rev Duckett Creek Cmmnt
3	20201001 Rev per City/Duckett/PWSD#2
4	20201014 Rev per Duckett
5	20201020 Rev per City Comments
6	20201102 Rev per DCSD Comments
7	20211106 Rev per City Comments

**SECTION A: PURPOSE AND INTENT**

1. With the publication of these specifications which amends and supersedes previous specifications, Low Pressure Sewer Systems constructed as specified herein will be considered for approval for use in the Duckett Creek Sanitary District.

2. The type of Low Pressure Sewer System specified herein shall consist of individual private home/unit Grinder Pump Station with pressure discharge line connection to a pressurized Common Collector Main. Grinder pumps, valves, check valves, shutoff valves, valve boxes, clean-outs, air release valves and other appurtenances shall meet or exceed District specifications. Each lot, home residence or commercial unit shall have its own individual Grinder Pump Station and pressure discharge line to the Common Collector Main.

3. The District's intent is to provide an alternative method to sewer undeveloped property presently considered impractical for conventional gravity sewers, and/or existing septic tank subdivisions which may be too hazardous to disrupt or serve by conventional gravity sewers.

4. Conventional gravity sewers are still the preferred sewage collection method. Low Pressure Sewer Systems (LPSS) are not meant to replace gravity sewers. The District will continue to require the use of gravity sewers as the primary sewer method, but will consider LPSS systems when certain criteria apply.

5. In order for the District to consider approval of a LPSS system:

- For new subdivisions, Developers must demonstrate that:
  - Gravity sewers are impractical for reasons such as two (2) or more on site public lift stations serving less than ten (10) homes each will be required; or extraordinary excavation is required; or other reasons which would prevent gravity installations (Engineer must specify) and/or;
  - The site system will not be needed for future sewer access from adjacent properties; and/or;
  - Other specific site concerns must be addressed.
- For existing septic tank subdivisions, Developer must demonstrate that:
  - Gravity sewers are impractical or too hazardous i.e. too deep, too congested an area, confined working area, restoration to costly and/or;
  - The site system will not be needed for future sewer access from adjacent properties and/or;
  - Other specific site concerns must be addressed.

6. For reasons of system uniformity, for an unspecified probative time period, the District will approve the use of Environment-One Corporation semi-positive displacement pumps and appurtenances only.

7. The District reserves the right to approve or reject any or all submittals, additions, modifications or revisions of connections to the existing or future systems.

8. Construction Permit for LPSS Systems in the District, shall be applied for by the Subdivision Developer. Upon proper completion of construction, establishment of easements and District field approval, the District may accept the public dedication of the common collector mains to include the branch mains and valve vaults. Individual grinder pumps and related individual pressure discharge laterals will not be accepted for public dedication by the District. As such, the individual grinder pumps and pressure discharge laterals will be the responsibility of the respective homeowner or Homeowner's Association.

9. The District reserves the right to modify, revise, delete or add to the specifications and requirements stated herein.

**SECTION B: SYSTEM RESPONSIBILITIES**

1. All construction shall be in accordance with all applicable State, Federal or Local codes, restrictions and specifications.

2. Construction Plan approval is required from the District. All components of the pressurization/pressurized system require District review and approval.

3. Upon proper completion of installation of the system, ownership and responsibility for maintenance and operation of all parts of the L.P.S.S. system shall be as follows:

- Upon completion of construction, establishment of easements, final field approval by the District, and proper execution of all required Connection and Dedication Agreements, the District may accept the public dedication of the **Common Collector Mains**, to include collector main lines, appurtenances directly attached to the main, branch mains and valve vaults.
- The gravity lateral, grinder pump station, control panel, electric service, and pressure discharge lateral for each individual home/unit/connection, will belong to and be the responsibility of the owner of each respective home/unit/connection. Pressure lateral connections to the valve vault on the public main is the responsibility of the respective homeowner. Connections must be done in a proper manner and require inspection approval from the District.

4. District approval and inspection is required for the entire common collector main portion of the system.

5. District approval and inspection is required for the connections to the valve box, and any septic tank demolition(s) encountered in existing subdivisions. County Building Department Permits or Inspections are required for the electrical or plumbing work. The individual owners or builders are required to secure said Permits and/or Inspections.

6. District reserves the right to reject or disallow pressure lateral connection to Valve Box when non-specified equipment is used in the aforementioned "private individual portion" of the system. See sections A.6, A.7, and B.3.

7. Upon connection to the system, each individual homeowner will be responsible for payment of their own respective sewer user charges and applicable surcharges, as determined by the District and in accordance with its "Rules, Rates and Regulations". Non-payment of said sewer user charges and/or applicable surcharges by the homeowner to the District, may result in placement of lien on property, discontinuance of water supply or disconnection from the common public main system, or other measures necessary as determined by the District. All sewer users are subject to the "Rules, Rates and Regulations" of the District.

8. Homeowners are responsible for supply and maintenance of their own respective electrical power source.

9. Off-site connections to a LPSS system require approval from the District. The Design Engineer shall consider connections to the system from adjacent off-site properties when necessary. Engineer shall designate probable off-site connections on the plan, profile and hydraulic calculations. Engineer shall provide appropriate documentation in the event "on-site" LPSS system cannot accommodate off-site connections.

**SECTION C: CONSTRUCTION PLAN SUBMITTALS**

1. Construction Plan submittals should include the same site and profile design, construction details, etc., information typically required for conventional sewer plan submittals.

2. Site specific hydraulic design information regarding pumps and collection system sizing and layout should be included as an integral part of the construction plan.

3. Pressure Sewer Systems shall be designed and sized for a specific number of users. Extending and adding on to any portion of the original pressure system piping to accommodate additional flow will not be allowed, unless design, District approval is required.

4. Construction Escrow for the "common collector main" portion (see Section B.3.a) shall be required for new subdivision construction plan approval. District Escrow Agreement document shall be used.

5. Sanitary Sewer Connection Fees shall be paid in total prior to District approval of Subdivision Construction Plan.

6. Application for Construction Permit shall be completed by the Developer/Design Engineer. The District shall be specified as the Operating Authority, for the public collector mains only.

**SECTION D: COLLECTOR MAIN SPECIFICATIONS**

1. All Collector main construction requires plan approval and field inspection by the Duckett Creek Sanitary District. An Engineer's Report shall accompany all plan submittals and shall specify appropriate strength, sizing and type of all materials. Self-cleaning velocities and six (6) hour retention times are recommended.

2. All Collector Mains, main branches and Valve Boxes shall be placed in dedicated Recorded Public Right-of-way or easement.

3. The Collector Pressure Main shall discharge to a District gravity sewer 42" I.D. manhole at or within one foot of the gravity low flow line. Connections to a 48" I.D. manhole may be performed utilizing District approved "inside-drop pipe". All connections to gravity manholes should provide a smooth transition from pressure to gravity, minimizing "free-fall" or splashing conditions. Odor control devices may be required as determined by the District.

4. On all collector mains there shall be installed a tracer wire which shall be a single insulated No. 12 AWG copper wire. The insulated wire shall be furnished in rolls of not less than 500 feet. Where splices are required, splices shall be made with 3M splice kits or approved equal. The Contractor shall furnish all materials. The No. 12 insulated wire shall be placed along the top of the three main and taped in place with duct tape or electrical tape at a maximum of 6 feet intervals. Permanent access points shall be provided through manholes, access valves, valve boxes or other approved means at the ends of the tracer wire. The wire shall be extended into the access points a minimum of five (5) feet from each direction. The wire shall be neatly rolled and placed so that it does not interfere with normal operation. The two wires shall be spliced inside the access point with a standard plastic or netherized wire connector. After testing for continuity, the splices inside the access point shall be made with a 3M splice kit or approved equal. Where splices become inaccessible outside of access points, the splices shall be made with a 3m splice kit or approved equal. All tracer wire shall be tested for continuity as called for in Section E.6 below.

5. Unless special design parameters dictate otherwise (provide Engineering documentation), all **Common Collector Pressure Mains** shall:

- Collector Main shall be laid using "equal to or stronger" bell and gasketed SDR-21 PVC pressure pipe. Gasket Schedule 80 PVC fittings shall be allowed within the valve vault interiors and as shown on detail. Bury at a minimum 36" depth for frost protection.
- Collector Main shall maintain a minimum inside diameter of two (2) inches.
- All PVC fittings on the Collector Pressure Main shall be SDR 21 PVC.

6. Force main flushing clean-outs shall be provided appropriately to facilitate complete flushing of the Collector Pressure Main. One and one-half inch (1-1/2") I.D. bronze Cam-Lock Female Disconnect fittings are recommended. In general, clean-outs should be installed at the terminus end of each main, every 1,000 feet on straight runs of pipe, and whenever two or more mains come together and feed into another main.

7. Air-release valves shall be provided at all high points on the Collector Pressure Main. Cleanout flushing fixtures may be placed within the Air-Release valve vault. Odor control devices may be required as determined by the District.

8. Isolation valves shall be provided at junctions of two or more mains.

9. Concrete thrust blocks shall be provided for all elbows and tee fittings on the Collector Pressure Main.

10. All appurtenances on the collector main requiring surface access, such as flushing clean-outs, air-release valves, isolation valves, etc., shall be housed within a 48" minimum I.D. concrete type vault, with cast-iron frame and cover. Materials shall be of strength similar to standard gravity sewer manhole construction. It is anticipated that some vaults may fall in paved driveway or roadway areas, wherein lock type lid will be required.

- Any permits, licenses, easements or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- Individual pressure main branches from the Collector Pressure Main to the valve box shall be SDR 21 PVC and sized appropriately. Bury at minimum 36" depth for frost protection.
- Pressure main stub branches shall terminate within a valve box located within either dedicated recorded public right-of-way or easement adjacent to ROW. District must access valve boxes from public roadway. A lockable ball valve shall be provided for each individual pressure lateral connection within the valve box. Direct burial of valves not allowed.

11. Vertical Check Valve and Ball Valve sets shall be placed in valve vault for each individual pressure lateral connection.

**SECTION E: COLLECTOR MAIN TESTING**

1. Successful Field Pressure Testing of the Common Collector Main system shall be required prior to initial 50% Escrow Release. Contractor shall perform test in presence of DISTRICT Inspector.

2. Pressure tests shall be made only after the completion of backfilling operations and after the concrete thrust blocks have set for at least thirty-six (36) hours.

3. The pipe line shall be slowly filled with water. During filling of the pipe and before applying the specified pressure, all air shall be expelled from the pipeline via exercise of the Air Release Valves, Valve Vault Valve Sets and/or Clean-outs. Contractor to verify said Air Release Valve operation.

4. The specified pressure measured at the lowest point of elevation shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Design Engineer and/or District Inspector. (Typically, via a Clean-Out fixture on the main).

5. Test pressure (sewer) 70) PSI (sanitary) 90) PSI shall be maintained for a duration of one (1) hour unless otherwise directed by the Engineer and/or District Inspector. Minimum allowable pressure shall be fifty (50) PSI.

6. The tracer wire on all collector mains shall be tested by the Contractor for continuity in the presence of a District Inspector. If the test is satisfactory, all splices shall be made permanent by means of 3M splice kits or approved equal. If the test fails in a section, the Contractor shall find and repair any failure in the locator wires.

7. The Owner/Developer shall make provisions for odor control (such as adding fresh water to the system, chemical addition, etc.) in those LPSS systems that are in the early stages before ultimate development. An Odor Control Plan, for any project that is being constructed in phases, shall be submitted to the District for approval. It is strictly in the discretion of the District to waive this requirement.

**SECTION F: INDIVIDUAL PUMP STATION/PRESSURE LATERAL SPECS**

**A. GENERAL:**

- Developer shall furnish and install Package Grinder Pump Stations completely factory built and tested, each consisting of a grinder pump suitably mounted in a fiberglass basin. All parts and accessories indicated, specified or required for proper installation, operation and maintenance shall also be provided.
- All package grinder sewage pump stations in a Low Pressure Sewer System shall be one manufacturer.
- Developer shall furnish a computer printout showing system pipe sizing and branch analysis for the system as shown on the drawings. Information to demonstrate total head losses and velocities at peak flows.
- Submittals for District review shall include, but not limited to, the following data (Hydraulic Institute Standards, ANSI Standards and ASTM Standards apply):
  - Pump: Name of manufacturer, Type and model, Rotation speed, Net weight of pump, Complete performance curves showing capacity versus head
  - UL Certification
  - Show drawings specifically prepared for the project.
  - Product data such as standard printed information on manufactured products that has not been specifically prepared for the project.
  - Miscellaneous submittals such as specifically prepared and standard printed warranties, testing and certification reports, operating and maintenance manuals.

**B. OPERATING CONDITIONS:**

- The pumps shall be capable of delivering 11 gpm against a total dynamic head of 92 feet (40 psig) and 8 gpm at 138 feet (60 psig). The pumps must also be able to operate at negative heads without overloading the motors.
- The grinder pump stations shall be simplex or duplex design as indicated on the drawings. All pumps shall be of the same horsepower throughout the project area.
- Characteristics of the liquid to be pumped: domestic wastewater.

**C. GENERAL CONSTRUCTION:**

- PUMP** - The pump shall be custom designed, integral, vertical rotor, motor driven, solids handling pump of the progressing cavity type with mechanical seal. The rotor shall be through-hardened, highly polished, precipitation hardened stainless steel. The stator shall be of a specifically compounded ethylene propylene synthetic elastomer. The material shall be suitable for domestic wastewater service. Its physical properties shall include high tear and abrasion resistance, grease resistance, water and detergent resistance, temperature, stability, good aging and properties, and outstanding wear resistance.
- GRINDER** - The grinder shall be positioned immediately below the pumping elements and shall be direct-driven by a single, one-piece motor shaft. The grinder impeller assembly shall be securely fastened to the pump motor shaft. The grinder will be of the rotating type with a stationary hardened and ground chrome steel shredding rings spaces close annular alignment to the driven impeller assembly, which shall carry two hardened type 400 stainless steel cutter bars. The operator shall operate without objectionable noise or vibration over the entire range of recommended operating pressures.

The grinder shall be constructed as to eliminate clogging and jamming under all normal operating conditions including starting. Sufficient vortex action shall be created to scour the tank free of deposits and sludge banks which would impair the operation of the pump. These requirements shall be accomplished by the following items in conjunction with the grinder tank pump:

- The grinder shall be positioned in such a way that solids are fed in an up-flow direction.
- At maximum flow, the average inlet velocity should not exceed 2 feet per second.
- The impeller disc shall rotate at a nominal speed of 1725 RPM or less.

3. **TANK** - The tank shall be custom molded of fiberglass reinforced polyester resin or thermoplastic or thermo-set material and shall be furnished with one PVC closed end flange to accept a 4-inch ASTM M304-ADR 35 pipe. Tank capacities and dimensions shall be as shown on the contract drawings. The access way shall be an integral extension of the FRP tank and shall be custom molded of fiberglass reinforced polyester resin and have a minimum burial of depth as shown on the contract drawings. It shall have an access opening at the top to accept a lockable fiberglass cover with skirt.

**SECTION G: EASEMENTATION**

1. The Common Collector Main and pressure main branch stub and valve box shall be located within dedicated recorded easement or public right-of-way easily accessible by the District. Recordation of the easements shall be completed prior to final release of construction escrow for the collector mains by the District, via Record Easement Plats for parcels of land serviced by LPSS System(s) should include the following general information:

- All pertinent geographical information locating the length and width of easements and specifies information (metes & bounds) locating the easements on the parcel(s) or tract(s) of land.
- Information specifying the Owner's Name and Deed Book & Page numbers for parcel(s) or tract(s) of land.
- Other plat or property information as required by the County Recorder of Deeds Office.

2. Easement exhibits for individual parcels to may be required for installations in existing septic tank subdivision retrofit projects must include information for easement centerline description, temporary construction easementation, specific property metes & bounds description(s) and survey information regarding reference to established boundary monumentation.

3. Record Easement Plats for parcels of land serviced by the LPSS System(s) shall include the following specific information:

- This Subdivision is subject to the Indenture of Covenants and Restrictions for \_\_\_\_\_, as said Indenture is filed in Book \_\_\_\_\_, Page \_\_\_\_\_ of the St. Charles County Recorder of Deeds Office. (The District recommends inclusion of verbatim specifying homeowner's responsibility of individual grinder pump stations and pressure discharge laterals).
- The undersigned declares that all roadway Rights-of-Way, Easements and easements delineated in Common Ground shown herein, are hereby dedicated and conveyed to Duckett Creek Sanitary District, their heirs, successors and/or assigns as their interests may appear, for sanitary sewers, with the right of temporary use of adjacent ground not occupied by improvements for the excavation of and storage of materials during installation, repair or replacement of said sewers.
- Cots \_\_\_\_\_ are served by Low Pressure Sewer System. Notification is hereby given declaring the owner of lot(s), which is/ is served by a pressure sewer system upon which is located or will be located, an individual pressurization unit such as a grinder pump, shall maintain and repair or replace the individual pressurization unit and appurtenances in accordance with the Manufacturer's and Duckett Creek Sanitary District specifications at the lot owner's sole cost and expense. Failure of the lot owner to maintain and repair or replace any part of the individual pressurization unit and individual discharge system in accordance with municipal, county, state or Duckett Creek Sanitary District specifications may result in placement of lien on property and/or discontinuance of water service and/or disconnection from the sanitary sewer system.
- Individual lot owners utilizing said individual pressurization units shall be responsible for their respective individual pressurization unit's compliance with applicable City/County/State Health and Sanitation Codes and Ordinances.

**SECTION H: CONDITIONS AND NOTES**

1. Due to the nature of Low Pressure Sewer Systems and operational policies of the District herein established, the District shall not be responsible for the operation or maintenance of individual gravity sewer lateral, individual pump station and appurtenances or individual pressure discharge line to the connection in the valve vault.

2. For LPSS systems in new subdivision construction the following notification shall be included on the Construction Plans, Record Easement Plat and also as a provision in the subdivision's Standard Covenants and Restrictions.

- Lots \_\_\_\_\_ are served by Low Pressure Sewer System. Notification is hereby given declaring the owner of lot(s), which is/ is served by a pressure sewer system upon which is located or will be located, an individual pressurization unit such as a grinder pump, shall maintain and repair or replace the individual pressurization unit and appurtenances in accordance with the Manufacturer's and Duckett Creek Sanitary District specifications at the owner's sole cost and expense. Failure of the owner to maintain and repair or replace the individual pressurization unit and individual discharge system may result in placement of lien on property and/or discontinuance of water service and/or disconnection from the sanitary sewer system.
- Failure of the owner to repair a malfunctioning pump station or pressure discharge line may result in violation of City/County/State Health Code Ordinances. Owner will be subject to and responsible for compliance with applicable BOCA and/or Health Code Ordinances.
- Easements shall be granted to the Duckett Creek Sanitary District for the common collector main and valve vaults.
- The Duckett Creek Sanitary District has no liability or responsibility regarding individual pressurization unit system failures or damages derived from said failures).

3. For LPSS systems in existing subdivision rehab construction, such as in the elimination septic systems, the aforementioned paragraph 2a, 2b and 2c shall be included on the Construction Plan and included as a provision in the amended subdivision Standard Covenants and Restrictions. Special verbiage of similar form and function shall be included in each individual Sanitary Sewer Connection Agreement.

4. District Operation and Maintenance responsibilities shall be expressly limited to operation and continued operation of the Common Collector Main portion of the Low Pressure Sewer System.

**SECTION I: CONSTRUCTION ESCROW REQUIREMENTS**

1. For LPSS systems in new subdivision construction approval, Developers shall be required by this District to establish sanitary sewer construction escrow for the common Collector Pressure Main and appurtenances thereon, including individual branch stubs from the main to the valve box, and valve box units.

2. Escrow release and disbursements by the escrow holder to be made only upon written notification by the Sewer District, shall be typically of 50% of the Escrow Sum upon initial completion of installation of the Common Collector Main improvements and successful pressure testing of same. (See Section F) Final 50% release of the Escrow Sum shall typically be authorized upon submission of as-built drawings, formal recordation of easementation and field inspection approval by the District.

**SECTION J: CONNECTION AGREEMENTS**

1. Execution of Site Specific Low Pressure Sewer System Connection Agreements are required prior to construction plan approval or prior to actual connection to the system in existing subdivision septic tank elimination situations.

2. The District reserves the right to modify or revise its requirements to compensate for special situations.

**SECTION K: WARRANTY AND GUARANTEE**

The Manufacturer shall warrant and guarantee to the Owner that all equipment will be in accordance with the foregoing specifications and will not be defective. All defective equipment, whether or not in place, may be rejected.

The Manufacturer shall provide the following warranty from the date of final acceptance of the project as established by the Owner. The warranty shall be a full parts and labor warranty covering every component of the station tank, pump housing, controls, wiring, direct burial cable, pump assembly, (including pump start and controls), alarm disconnect panel, and any on site diagnostic time or travel time to pump station site.

Inclusive of this warranty, service provider will be responsible for providing and replacing any defective pump or component with a longer pump or component during the time frame required to repair to the original pump and replacing original pump and retrieving longer pump after repair is complete. The time and travel for this will also be covered by this warranty. Manufacturer shall be responsible for shipment costs and shipment scheduling of any pumps, parts, and/or any combination of the aforementioned items that make up the entire grinder pump station as an assembled unit.

The warranty shall include service with a maximum two (2) hour response time to the pump station site, twenty-four (24) hours a day, seven (7) days a week utilizing a toll free 1-800 number to a staffed answering service.

This warranty will begin at the date of final acceptance of the project by the Owner and according to the following schedule. This schedule represents the manufacturer's responsibility for parts, labor and other expenses on warranty items with the balance due by the Owner.

Year	100%	Year	100%
1	100%	6	100%
2	100%	7	100%
3	100%	8	50%
4	100%	9	33.5%
5	100%	10	25%

**SECTION L: DISCONNECT PANEL**

The NEMA 3R enclosure shall be manufactured of thermoplastic or fiberglass as required in a residential environment. The enclosure shall include a hinged, pad lockable cover, secured dead front and component knockouts.

For each pump, the panel shall contain one (1) - double pole circuit breaker for the power circuit and one (1) - single pole circuit breaker for the alarm circuit. The panel shall contain terminal blocks, integral power bus, and a complete alarm circuit.

The Alarm Disconnect Panel shall include an audio-visual alarm device with alarm sequence as follows:

- When liquid level in sewage wet-well rises above alarm level, visual and audio alarms will be activated.
- Audio alarm may be silenced by means of the externally mounted, push-to-silence button.
- Visual alarm remains illuminated until sewage in low-well returns to normal operating level.

The visual alarm shall be a red fluted lens at least 2.58" in diameter and 1 1/16" in height. Visual alarms shall be mounted to the top of the enclosure in such a manner as to maintain min. roof integrity. For duplex units, in addition to the above, two high level indicator lights shall be mounted behind the access cover. During a high level alarm condition the appropriate light will illuminate to indicate which pump requires service.

The audio alarm shall be a minimum 86 db horn or buzzer. The audio alarm shall be capable of being de-activated by depressing a push-type silence switch which is encapsulated in a weatherproof silicone box and mounted on the bottom of the enclosure.

The entire Alarm Disconnect Panel as manufactured, shall be listed by Underwriters Laboratories, Inc.

**SECTION M: WIRING**

Contractor shall be responsible to furnish and install service entrance equipment and/or branch circuit protection and all wiring to the grinder pump leads, in compliance with national and local electric codes. Contractor shall be responsible for providing power to the pumping stations and pressure discharge laterals.

11. **CORROSION PROTECTION** - All materials exposed to wastewater shall have inherent corrosion protection i.e., cast iron, fiberglass, stainless steel, PVC. Any exterior steel surfaces are to be suitably protected against corrosion. Galvanized steel is prohibited.

12. **SERVICEABILITY** - The grinder pump shall have lifting eyes with nylon/polypropylene rope used to facilitate easy removal of the pump from the tank when necessary.

13. **SAFETY** - The grinder pump shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled and wired grinder pump in its tank shall be listed by Underwriters Laboratories, Inc.

14. **SPARE PUMPS** - Furnish three (3) complete spare grinder pump units. Each unit shall include motor, grinder, pump, check valve, anti-siphon valve and pressure switch assemblies of the same type as furnished for the grinder pump stations to assure replacement or repair within a reasonable period of time.

15. **MANUALS** - Each grinder pump unit shall be furnished to the Owner with three (3) copies of detail wiring diagrams, operation and maintenance manual and detailed installation instructions for each type of unit.

16. Developer shall provide one complete 300-lb. capacity tripod lifting hoist for use in grinder pump removal including wiring, tripod, pulleys, cables, and necessary accessories.

**TYPICAL LPSS VAULT CONFIGURATIONS**



**SECTION N: PROJECT TITLE**

**Duckett Creek Sanitary District**  
LPSS Specifications

Own By: **MSM** App By: **KLA** Detail No.: **LP-SPEC**  
Issued By: **MSM** Date: **Dec. 2019**

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City No. 20-003192  
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Job No. 14-04-136

P+Z No. 20-000028

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Date: May 18, 2021

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FINAL PLAN Approval Date: March 27, 2020

Project Title: **Duckett Creek Sanitary Sewer Details**

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Date: 5-18-2021

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