GENERAL NOTES:

1. All Construction shall be in accordance with the City of Round Rock (CORR) Design and Construction Standards (DACS) Specification Manual.
2. Any existing utilities, pavement, curbs, sidewalks, structures, trees, etc. (not planned for demolition or removal) that are damaged or removed, shall be repaired, or replaced, at the Contractor's expense.
3. The Contractor shall verify all depths and locations of existing utilities prior to any construction activities. Any discrepancies with the construction plans found in the field shall immediately be brought to the attention of the Engineer who shall be responsible for revising the plans as appropriate. Failure to complete this step prior to commencement of construction may result in significant delays and/or expenditures for which the City shall not be held liable.
4. Manhole frames, covers, valves, cleanouts, etc. shall be raised to finished grade prior to final paving construction.
5. The Contractor shall provide the City of Round Rock with a 72-hour notice before beginning each phase of construction. Assigned City inspector should be the representative notified if applicable – if not then notify at the following: Telephone: (512) 218-7044 (Transportation Department's Right-of-Way Management Office).
6. All areas disturbed or exposed during construction shall be revegetated in accordance with the plans and specifications. This includes any areas located outside of the defined limits of construction (LOC), in rights-of-way (ROW), or located on adjacent properties. Revegetation of all disrobed or exposed areas shall consist of sodding or seeding, at the Contractor's discrepancy, as outlined in the City's Design and Construction Standards. The type of revegetation provided must be equivalent to or exceed the type of vegetation present prior to construction.
7. Prior to any construction, a pre-construction meeting shall be held between the City of Round Rock, the Design Engineer, the Contractor, Subcontractors, other Utility Companies, and any affected parties or other entity the City or Design Engineer deem necessary.
8. The Contractor and Design Engineer shall keep accurate records of all construction that deviates from the plans. Changes to approved, construction-stamped plans will require a revision from the Design Engineer that is approved by the City prior to field use. The Design Engineer shall furnish the City of Round Rock accurate "As-Built" record drawings following completion of all construction. These "As- Built" record drawings shall meet with the satisfaction of the Transportation Department's Right-of-Way Management Office prior to final acceptance of the project.
9. The City of Round Rock shall not be petitioned for acceptance until all necessary easement documents have been signed and recorded.
10. Whenever construction activities are taking place within an existing easement, the Contractor shall confine their work to within the bounds of said easement. Prior to final acceptance, the Contractor shall be responsible for removing all trash and debris within any permanent or temporary easements. Clean-up shall be to the satisfaction of the City of Round Rock Civil Inspector and/or the City Engineer.
11. Prior to any construction, the Contractor shall apply for and secure all proper permits from the appropriate authorities.
12. Available permanent benchmarks (City of Round Rock Datum) with vertical datum information that may be utilized for the construction of this project and are described as follows:
[List any/all benchmarks to be used that include horizontal (ex: NAD 83) and vertical (ex: NAVD88) datums as well as GEOID (ex: 12B)]

TRENCH SAFETY NOTES:

1. In accordance with the Laws of the State of Texas and the U.S. Occupational Safety and Health Administration (OSHA) regulations, all trenches over 5 feet in depth, in either hard and compact or soft and unstable soil, shall be sloped, shored, sheeted, braced or otherwise supported. Furthermore, all trenches less than 5 feet in depth shall also be effectively protected when hazardous ground movement may be expected. Trench safety systems to be utilized for this project shall be provided as part of a package required prior to the pre-construction meeting and any construction activities.
2. In accordance with the U.S. Occupational Safety and Health Administration regulations, when persons are in trenches 4 feet deep or more, adequate means of exit, such as a ladder or steps, must be provided and located in such a manner as to require no more than 25 feet of lateral travel.
3. If trench safety system details were not provided in the plans because trenches were anticipated to be less than 5 feet in depth but, during construction, it is found that trenches are in fact 5 feet or more in depth (or) trenches less than 5 feet in depth are in an area where hazardous ground movement is expected, all construction shall cease, the trenched area shall be barricaded and the Design Engineer notified immediately. Construction shall not resume until appropriate trench safety system details, as designed by a professional engineer, are submitted to the City of Round Rock for review and approval.

STREET AND DRAINAGE NOTES:

1. All testing shall be done by an independent laboratory at the Owner's expense. Any retesting shall be paid for by the Contractor. A City Inspector shall be present during all tests. Testing shall be coordinated with the City Inspector, and they shall be given a minimum 24-hour notice prior to any testing.
2. Public roadways constructed as part of any development permit shall be free from defects, patches, or repairs prior to acceptance by the City of Round Rock. Roadways shall have a clear surface free from any gouges, marring, or cracking to be considered suitable to the City of Round Rock Transportation Dept. No new roadways shall be accepted
until all construction traffic related to this or any associated permit has ceased, and the roadway is open to and exclusively used by the general public.
3. Backfill behind the curb shall be compacted to obtain a minimum of 95% maximum density to within 3" of top of curb. Material used shall be primarily granular with no rocks larger than 6" in the greatest dimension. The remaining 3" shall be clean topsoil free from all clumps and suitable for sustaining plant life.
4. The depth of cover for all crossings under pavement including gas, electric, telephone, cable tv, water services, etc. shall be a minimum of 30" below subgrade.
5. Street rights-of-way shall be graded at a slope of 1/4" per foot toward the curb unless otherwise indicated. However, in no case shall the width of right-of-way at 1/4" per foot slope be less than 10 feet unless a specific request for an alternate grading scheme is submitted to and approved by the Transportation Department's Right-of-Way Management Office.
6. Barricades, built to City of Round Rock standards, shall be constructed on all dead-end streets and, as necessary, during construction to maintain job and public safety.
7. All reinforced concrete pipe (RCP) shall be minimum Class III. All public RCP shall be a minimum of 18-inches in diameter.
8. The subgrade material for the streets shown herein was tested by _____(firm) on this date: _____ (date) and the paving sections designed in accordance with the current City of Round Rock design criteria. The paving sections are to be constructed as follows:

Street Name	Stationing	Flex. Base Thickness	HMAC Thickness	Lime Stab. Thickness

The Geotechnical Engineer shall inspect the subgrade for compliance with the design assumptions made during preparation of the accepted geotechnical report. Any adjustments that are required shall be made through revision of the construction plans and addendum to any accepted geotechnical report.

9. Where plasticity index (PI) is over 20, subgrades must be stabilized utilizing a method acceptable to the Planning and Development Services Department. The Geotechnical Engineer shall recommend an appropriate subgrade stabilization if sulfates are determined to be present. When utilizing lime for soil stabilization, placement shall be in the form of lime slurry, not pellets.
10.

Field Density Control Requirements

Soil Description	Density, Percent Tex-115-E	Moisture Content
PI<15	≥ 98% D_a* and ≤ 105% D_a	N/A
15 ≤ PI ≤ 35	≥ 98% D_a and ≤ 102% D_a	≥ W_{opt} + 3%
PI > 35	≥ 95% D_a and ≤100% D_a	≥ W_{opt} +3%

WATER AND WASTEWATER NOTES:

1. Pipe material for water mains shall be PVC (AWWA C-900, min. class 200), or Ductile Iron (AWWA C-100, min. class 200). Water services (2" or less) shall be polyethylene tubing (black, 200 psi, DR 9).
2. Pipe material for pressure wastewater mains shall be PVC (AWWA C-900, min. class 150), SDR26 Higher Pressure Rated (160 PSI), or Ductile Iron (AWWA C-100, min. class 200). Pipe material for gravity wastewater mains shall be SDR26 PVC, PVC (ASTM D2241 or D3034, max. DR-26), Ductile Iron (AWWA C-100, min. class 200).
3. Unless otherwise accepted by the Transportation Department's Right-of-Way Management Office, minimum depth of cover for all lines outside of the paved areas shall be 42" below finished grade and 30" below subgrade for all lines located in paved areas.
4. All fire hydrant and sprinkler leads shall be ductile iron pipe (AWWA C-100, min. class 200).

5. All ductile iron pipe and fittings shall be wrapped with a minimum of 8-mil polyethylene and sealed with duct tape or equal accepted by the City of Round Rock Civil Inspector.
6. The Contractor shall contact the City of Round Rock Inspector to coordinate utility tie-ins and notify them at least 72 hours prior to connecting to any existing lines.
7. All manholes shall be concrete with cast iron ring and cover. All manholes located outside of the pavement shall have bolted covers. Core connections to fiberglass manholes are prohibited.
8. The Contractor must obtain a bulk water permit or purchase and install a water meter for all water used during construction. A copy of this permit must always be possessed by any parties who utilize water. Contact Water Distribution at (512) 801-4435 for additional information.
9. Line flushing, or any activity using a large quantity of water, must be scheduled a minimum (10) days in advance with the City of Round Rock Civil Inspector.
10. The Contractor, at his expense, shall perform sterilization of all potable water lines constructed and shall provide all equipment (including test gauges), supplies (including concentrated chlorine disinfecting material), and necessary labor required for the sterilization procedure. The sterilization procedure shall be monitored by the City of Round Rock Civil Inspector. Water samples will be collected by the City of Round Rock to verify each treated line has attained an initial chlorine concentration of 50 ppm. Where means of flushing is necessary, the Contractor, at his expense, shall provide flushing devices and remove said devices prior to final acceptance by the City of Round Rock.
11. Sampling taps shall be brought up to 3 feet above grade and shall be easily accessible for City personnel. At the Contractor's request, and in their presence, samples for bacteriological testing will be collected by the City of Round Rock not less than (24) hours after the treated line has been flushed of the concentrated chlorine solution and charged with water approved by the City. The Contractor shall supply a check or money order, payable to the City of Round Rock, to cover the fee charged for testing each water sample. Fee amounts may be obtained by contacting the City of Round Rock Environmental Services Laboratory at (512) 218-5561 or waterlab@roundrocktexas.gov.
12. The Contractor, at their expense, shall perform quality testing for all wastewater pipe installed and pressure pipe hydrostatic testing of all waterlines constructed. The Contractor shall provide all equipment (including pumps and gauges), supplies, and labor necessary to perform these tests. Quality and pressure testing shall be monitored by the City of Round Rock Civil Inspector.
13. The Contractor shall coordinate testing with the City of Round Rock Civil Inspector and provide no less than (72) hours of notice prior to performing sterilization, quality testing, or pressure testing.
14. The Contractor (or Subcontractors) shall not open or close any valves unless directed to do so by City of Round Rock personnel.
15. All valve boxes and covers shall be cast iron.
16. All water service, wastewater service and valve locations shall be appropriately marked as follows:
    - **Water service – "W" on top of curb (blue color)**
    - **Wastewater Service – "S" on top of the curb**
    - **Valve – "V" on face of curb**
17. Tools for marking the curb shall be provided by the Contractor. Other appropriate means of marking service and valve locations shall be provided in areas without curbs. Such means of marking shall be as specified by the Design Engineer and approved by the City of Round Rock.
18. Contact the City of Round Rock Utilities and Environmental Services (UES) Department for assistance in determining existing water and wastewater locations.
19. The City of Round Rock Fire Department shall be notified (48) hours prior to the testing of any building sprinkler piping so that they may be present to monitor such testing.
20. Sand, as described in Specification item 510 pipe, shall not be used as bedding for water and wastewater lines. Acceptable bedding materials are pipe bedding stone, pea gravel and, in lieu of sand, a naturally occurring or manufactured stone material conforming to ASTM C33 for stone quality and meeting the following gradation specification:

Sieve Size	Percent Retained By Weight
1/2"	0
3/8"	0-2
#4	40-85
#10	95-100

21. The Contractor is hereby notified that connecting to, shutting down, or terminating existing utility lines may have to occur at off-peak hours. Such hours are usually outside normal working hours (7AM – 4PM) and possibly between 12 AM and 6 AM.
22. All wastewater construction shall be in accordance with the Texas Commission on Environmental Quality (TCEQ) Regulations, 30 TAC Chapter 213 and 217, as applicable. All water construction shall be in accordance with TCEQ regulations, 30 TAC Chapter 290. Whenever TCEQ and City of Round Rock specifications conflict, the more stringent shall apply.

TRAFFIC MARKING NOTES:

1. Any methods, street markings and signage necessary for warning motorists, warning pedestrians, or diverting traffic during construction shall conform to the Texas Manual of Uniform Traffic Control Devices for Streets and Highways (TMUTCD), latest edition.
2. All pavement markings, markers, paint, traffic buttons, traffic controls, and signs shall be installed in accordance with the Texas Department of Transportation Standard Specifications for Construction of Highways, Streets and Bridges and, the Texas Manual of Uniform Traffic Control Devices for Streets and Highways, latest editions.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. Erosion control measures, site work, and restoration work shall be in accordance with the City of Round Rock Design and Construction Standards (DACS) and Code of Ordinances.
2. All Slopes Shall be sodded or seeded with approved grass, grass mixtures, or ground cover that is suitable to the area and the season in which they are applied.
3. Silt fences, rock berms, sedimentation basins, and similarly recognized techniques and materials shall be employed during construction to prevent point source sedimentation loading of downstream facilities. Installation and condition shall be regularly inspected by the City of Round Rock for effectiveness. Additional measures may be required if, in the opinion of the City Engineer, they are warranted.
4. All temporary erosion control measures shall not be removed until revegetation has been established and approval received from the Civil Inspector. It shall be the responsibility of Contractor to maintain all temporary erosion control structures and to remove all once approved to do so by the Civil Inspector.
5. All mud, dirt, rocks, debris, etc. spilled, tracked, or otherwise deposited on existing paved streets, drives and areas used by the public shall be cleaned up immediately.

ROUND ROCK FIRE DEPARTMENT NOTES:

1. **GENERAL:** All developments shall comply with the current Fire Code, appendices, and any local amendments as adopted by the City of Round Rock.
2. **COMBUSTIBLE MATERIALS ON-SITE:** All-weather access roads/drives (asphalt/concrete capable of supporting 80,000 lb. apparatus loading) shall be constructed, and all water lines shall be tested and fire hydrants in-service, prior to bringing combustible materials (wood, packaging, plastics, etc.) on any job site. Base material is not acceptable for fire access roads/drives.
3. **FIRE LANES:** Fire apparatus access roads/drives shall have a minimum unobstructed width of (20) feet. Where traffic is two-way directional, buildings exceed (30) feet or three stories in height, total building area exceeds 62,000 square feet, or where hydrants are located along the fire access roads, the minimum width shall be (26) feet. If raised curbing or medians compromise minimum width, curbing shall be mountable and raised area shall contain no obstructions such as landscaping, signage, ground-mounted equipment, etc.
4. **ALL-WEATHER SURFACE:** The pavement structure for fire access roads/drives must be all-weather surface (asphalt/concrete) designed to support an 80,000 lb. apparatus loading.
5. **GRADE:** The grade through the fire lane access shall not exceed 7% and no grade breaks shall exceed 3%.
6. **TURNING RADII:** Turning radii shall be a minimum of 25-ft inside and 50-ft outside as measured from face-of-curb (when present) or on drivable, paved surface.
7. **VERTICAL CLEARANCE:** The vertical clearance over a designated fire lane shall not be less than 13'-6".
8. **EMERGENCY RESPONDER RADIO COVERAGE:** Adequate emergency responder radio coverage shall be required for all new buildings. A pre-enhancement radio survey shall be required at the 80% construction phase for certain building types based on the size of the building. Pre-enhancement radio survey requirements include the following building types:
    - **Greater than (5) stories**
    - **Below grade plane**
    - **Wood framed construction greater than 50,000 SF**
    - **Concrete or metal framed construction greater than 25,000 SF**
9. **REQUIRED FIRE FLOWS:** A project's minimum fire flow for the largest building shall be measured at (20) PSI residual pressure that is available for firefighting per the flows on tables B105.1 or B105.2 of the International Fire Code (IFC), Appendix B. DISCLAIMER: It is the responsibility of the developer and engineer to ensure these minimum fire flow requirements for the site are met via flow testing and water modeling.
10. **SPRINKLER SYSTEMS:** Buildings equipped with any fire department connections (FDC) shall have fire hydrant located within 100' of FDC (remote FDC is permissible). FDC shall be identified on the site via signage.
11. **GATES:** If gates are provided along any fire access road/drive, minimum passable width shall not be less than (20) feet and shall comply with IFC Appendix D and Round Rock Code of Ordinances regarding emergency access systems. Gates will require a Knox-Box® key box that shall contain keys to gain necessary access as required by the fire code official.

ROUND ROCK TEXAS