

COMMERCIAL

GENERAL NOTES

- GN # 1 Driveway locations shall not interfere with the sidewalk handicap ramps, or curb inlet sumps
GN # 2 Sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved "American with Disabilities Act Accessibility Guidelines" (ADAAG) along with the required grades, construction materials, specifications and signage.
GN # 3 Truncated domes for curb ramps located in public right of way shall meet ADA requirements and shall be constructed using red pre cast truncated domes per pavement details.
GN # 4 Any proposed pavilions or playground areas will need a separate permit from the Building Division.
GN # 5 The Contractor is responsible to call Missouri One Call and The City of O'Fallon for the location of utilities.
GN # 6 All proposed utilities and/or utility relocations shall be located underground.
GN # 7 All proposed fencing requires a separate permit through the Planning and Development Division.
GN # 8 All construction operations and work zone traffic control within the right of way will follow MoDOT or M.U.T.C.D. standards whichever is more stringent.
GN # 9 All free standing signs shall be located a minimum of ten (10) feet away from any right of way line and/or property line and a minimum of three (3) feet from the back of curbing or sidewalk.
GN #10 All subdivision identification or directional sign(s) must have the locations and sizes approved and permitted separately through the Planning and Development Division.
GN #11 Materials such as trees, organic debris, rubble, foundations, and other deleterious material shall be removed from the site and disposed of in compliance with all applicable laws and regulations.
GN #12 Twenty-four (24) hours prior to starting any of the work covered by the above plans and after approval thereof, the developer shall make arrangements with the Construction Inspection Office to provide for inspection of the work, sufficient in the opinion of the City Engineer, to assure compliance with the plans and specifications as approved.
GN #13 The City Engineer or their duly authorized representative shall make all necessary inspections of City infrastructure, escrow items or infrastructure located on the approved plans.
GN #14 City approval of the construction site plans does not mean that any building can be constructed on the lots without meeting the building setbacks as required by the zoning code.
GN #15 All fill placed under proposed storm and sanitary sewers, proposed roads and/or paved areas shall be compacted to 90% of maximum density as determined by the Modified AASHTO T-180 Compaction Test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99.
GN #16 All installations and construction shall conform to the approved engineering drawings.
GN #17 Traffic Control is to be per MoDOT or MUTCD whichever is more stringent.
GN #18 All sanitary laterals and sanitary mains crossing under pavement must have proper rock backfill and required compaction.
GN #19 Lighting values will be reviewed on site prior to the final occupancy inspection.

Erosion Control Notes

- EN # 1 The Permittee shall assume complete responsibility for controlling all siltation and erosion of the project area.
EN # 2 All erosion control systems are to be inspected and corrected weekly, especially within 48 hours of any rain storm resulting in one-half inch of rain or more.
EN # 3 Erosion control devices (silt fence, sediment basin, etc.) shall be in accordance with St. Charles County Soil and Water Conservation District Erosion and Sediment Control guidelines.
EN # 4 This development is required to provide long term post construction BMP's such as; low impact design, source control and treatment controls that protects water quality and controls run off to maximum extent practical in compliance with Phase II Illicit Storm Water Discharge Guidelines.
EN #5 Graded areas shall be seeded and mulched (strawed) within 14 days of stopping land disturbance activities.
Ord. 5082, section 405.0245

Grading Notes

- GRN #1 Developer must supply City construction inspectors with soil reports prior to and during site grading.
GRN #2 All fill placed in areas other than proposed storm sewers, sanitary sewers, proposed roads, and paved areas shall be compacted from the bottom of the fill up in 8" lifts and compacted to 90% maximum density as determined by Modified AASHTO T-180 compaction test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99.
GRN # 3 The surface of the fill shall be finished so it will not impound water.
GRN # 4 All sediment and detention basins are to be constructed during the initial phase of the grading operation or in accordance with the approved SWPPP.
GRN # 5 When grading operations are complete or suspended for more than 14 days, permanent grass must be established at sufficient density to provide erosion control on site.
GRN # 6 No slopes shall exceed 3 (horizontal): 1 (vertical) or approved by a Geotechnical Engineer and specifically located on the plans and approved by the City Engineer.
GRN # 7 All low places whether on site or off shall be graded to provide drainage with temporary ditches.
GRN # 8 Any existing wells and/or springs which may exist on the property must be sealed in a manner acceptable to the City of O'Fallon Construction Inspection Department and following Missouri Department of Natural Resources standards and specifications.

Grading Notes Continued

- GRN #10 All trench back fills under paved areas shall be granular back fill, and compacted mechanically.
GRN #11 Site grading.
a. Within City right-of-way. Material is to be placed in eight (8) inch to twelve (12) inch loose lifts and compacted per the approved compaction requirements.
b. Outside of City right-of-way. Material is to be placed in eight (8) inch to twelve (12) inch loose lifts and compacted per the approved compaction requirements.
c. Depth, Trench back fills less than 8 feet deep shall be probed to a depth extending half the depth of the trench back fill, but not less than 3 feet.
d. Equipment, The jetting probe shall be a metal pipe with an interior diameter of 1.5 to 2 inches.
e. Method, Jetting shall be performed from the lowest surface topographic point and proceed toward the highest point, and from the bottom of the trench back fill toward the surface.
f. Surface Bridging, The contractor shall identify the locations of the surface bridging (the tendency for the upper surface to crust and arch over the trench rather than collapse and consolidate during the jetting process).

Duckett Creek Sanitary District Construction Notes

- 1.) Underground utilities have been plotted from available information and therefore location shall be considered approximate only.
2.) Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
3.) All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
4.) All fill including places under proposed storm and sanitary sewer lines and paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the Modified AASHTO T-180 Compaction Test (ASTM D1557).
5.) The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
6.) All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
7.) It is the responsibility of the contractor to adjust all sanitary sewer manholes (that are affected by the development) to finish grade.
8.) Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
9.) All sanitary sewer construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
10.) The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination of inspection.
11.) All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2 1/2 feet.
12.) All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
13.) All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with 'clean' 1/2 inch to 1 inch granular stone bedding uniformly graded.
14.) All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
15.) All pipes shall have positive drainage through manholes. Flat invert structures not allowed.
16.) Epoxy Coating shall be used on all sanitary sewer manholes that receive pressurized mains.
17.) All creek crossings shall be lined with rip-rap as directed by District inspectors.
18.) Brick shall not be used on sanitary sewer manholes.
19.) Existing sanitary sewer service shall not be interrupted.
20.) Maintain access to existing residential driveways and streets.
21.) Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not be allowed.
22.) Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
23.) 'Type N' Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.
24.) All sanitary sewer system work shall be conducted under the inspection of a representative of the District.
* A mandrel test of all gravity sewers using a mandrel with a diameter that has a diameter 95% of the inside pipe diameter.
* An air pressure test of all gravity sewers to a pressure of 5 PSI with no observed drop in pressure during a test period of 5 minutes.
* A vacuum test of all manholes for a period of 1 minute and the vacuum shall be 10" of mercury and may not drop below 9" of mercury at the end of the 1 minute test.

Storm Sewer Notes

- STM # 1 All Storm Sewer installation is to be in accordance with M.S.D. 2007 standards and specifications except as modified by the City of O'Fallon ordinances.
STM # 2 Brick shall not be used in the construction of storm sewer structures.
STM # 3 A 5/8" trash bar shall be installed horizontally in the center of the opening(s) in all curb inlets and area inlets.
STM # 4 HDPE pipe is to be N-12WT or equal and to meet ASTM F1417 water tight field test.
STM # 5 Encase with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches above sanitary sewer.
STM # 6 The storm sewers should run diagonally through the side yards to minimize any additional utility easements required.
STM # 7 All concrete pipes will be installed with O-ring rubber type gaskets.
STM # 8 Connections at all storm structures are to be made with A-lock joint or equal.
STM # 9 Pre cast concrete inlet covers are not to be used.
STM #10 The swale in the detention basins shall have a minimum 1% longitudinal slope and be lined with a permanent erosion control blanket that will allow infiltration of storm water.
STM #11 All storm sewer shall be reinforced concrete pipe or H.D.P.E. pipe.
STM #12 The discharge point of all flared end sections shall be protected by rip rap or other approved means.
STM #13 Rip rap shown at flared end sections will be evaluated in the field by the Engineer, Contractor, and City Inspectors after installation for effectiveness and field modified, if necessary to reduce erosion on and off site.
STM #14 Add 1" minus rock back fill to all storm sewer that lie within the 1:1 shear plane of the road.

Water Notes

- WN # 1 Fire hydrants shall be a maximum of 600' apart. Local fire district approval is required.
WN # 2 Coordinate with the water company on the location of water meters.
WN # 3 All water main must have a minimum of 42" of cover. (City water mains)
WN # 4 Provide water valves to isolate the system.
WN # 5 All water mains shall be class 200 SDR 21 or equal with locator/tracer wires
WN # 6 DISINFECTING.
Disinfecting shall be accomplished by placing sufficient hypo chlorite granule (HTH) in each section of pipe to achieve a chlorine residual in the pipeline, upon initial filling, of 50 mg/L (PPM). HT, tablets will not be allowed.
RW # 1 A permit is required for all retaining walls that are 48 inches or taller in height, measured from the top of the footing to the top of the wall or for walls that support a surcharge load or that alters the channelized drainage of any lot or drainage area.

Water Notes

- WN # 7 PRESSURE TESTING: Immediately following dewatering, the piping shall be pumped to a pressure (at the lowest point in the project) of 150 psi or higher where the working pressure is higher than 150 PSI as determined by the City.
WN # 8 All tops for valves, meters, and manholes are to be constructed to within 1 inch (0.08") of finish grade.
WN #10 BACTERIOLOGICAL TESTING: After satisfactory disinfection and pressure testing, a sample shall be taken by the contractor in the presence of a City representative and submitted to a laboratory approved by the Missouri Department of Natural Resources and the City for bacteriological analysis.

Roadway Notes

- RN # 1 All paving (public and private) to be in accordance with 2006 St. Charles County Standards and Specifications except as modified by the City of O'Fallon ordinances.
RN # 2 If the intersecting road does not have a curb, then the curb on the new entrance shall begin 10' from the edge of the existing road.
RN # 3 Provide 6" of concrete over 4" of MoDOT type 1 or type 5 aggregate rock or asphalt equivalent for minor residential streets per City Code 405.370.
RN # 4 Multi-use trail (when required) Shall have a minimum of 3" Type "C" Asphalt over 4" aggregate base per City requirements.
RN # 5 Type C (BP-1) Compaction requirements shall be 98% minimum density according to St. Charles Co. Standard Specifications.
RN # 6 Provide pavement striping at any point where the multi-use trail crosses existing or proposed pavement
RN # 7 All street stub-outs over 250' in length will require a temporary turnaround.
RN # 8 All sub grade in cut or fill will need to conform to the City of O'Fallon Compaction requirements
RN # 9 Material Testing And Frequency. Materials for construction shall be tested and inspected per the appropriate ASTM code or at the City Engineer's discretion.
1. Concrete.
a. Cylinders/compressive strength. One (1) set of four (4) cylinders within the first fifty (50) cubic yards and one (1) set per one hundred (100) cubic yards thereafter.
b. Percent air and temperature. First (1st) truck batch each day and two (2) thereafter until a consistency is encountered.
c. Slump. First (1st) truck batch each day and two (2) thereafter until a consistency is encountered.
d. If concrete is batched from more than one (1) plant, then the aforementioned guidelines will be applicable to each plant.
2. Sub grade and base.
a. Proof roll as described in Section 405.210(B).
b. One (1) compaction test per two hundred fifty (250) feet of mainline paving, three (3) tests per intersection, five (5) tests within cul-de-sacs and one (1) test per repair slab.
c. Gradation test for sub base material.
3. Asphalt.
a. One (1) set of compaction tests per two hundred fifty (250) feet of mainline. One (1) set includes three (3) tests across the paved lane at the same station.
b. One (1) bulk density test per paving operation.
RN #10 Approval Of Sub grade And Base (Sub base). The City Engineer or representative shall approve the sub grade before any base is placed thereon and shall approve the base before concrete or surface course is placed.
RN #11 In all fill areas in the roadways, soil tests shall be submitted and approved by the City Engineer for each foot of fill and at least one (1) test and an average of one (1) test within every two hundred fifty (250) feet.
RN #12 No traffic will be allowed on new concrete pavement until it has cured for seven (7) days and it reaches three thousand five hundred (3,500) psi within 28 days.
RN #13 Prior to placement of aggregate base material on sub grade and prior to placement of pavement on base material, the sub grade and base must be proof-rolled with a fully loaded (ten (10) ton load) tandem truck or equivalent tire vehicle with one (1) pass down each driving lane no faster than three (3) miles per hour.
RN #14 Sub grade and base beneath pavements shall be compacted to St. Charles County Highway Department specifications.
RN #15 The entire width and length will conform to line, grade and cross section shown on the plans or as established by the engineer.
RN #16 Utility Work Prior To Base Construction. No base course work may proceed on any street until all utility excavations (storm and sanitary sewers, water, gas, electric, etc.) have been properly back filled with granular material, crushed stone or gravel mechanically tamped in ten (10) inch lifts.
RN #17 Equipment calibration. The developer's contractors and subcontractors must have their equipment calibrated by the following minimum standards.
a. Air meter--weekly.
b. Cylinder compression--annually by Independent calibration service.
c. Batch scales--monthly.
d. Nuclear testing devices--every six (6) months.
e. Proctor equipment--every six (6) months.
f. Slump cone--monthly.
RN #18 All permanent traffic control will be per M.U.T.E.D. or MoDOT standards.
RN #19 All traffic signals, street signs, sign post, backs and bracket arms shall be painted black using Carboline Rust Band Penetrating Sealer SG and Carboline 133 HB paint (or equivalent as approved by City of O'Fallon and MoDOT). This requirement shall include all site signage.

Flood plain Information

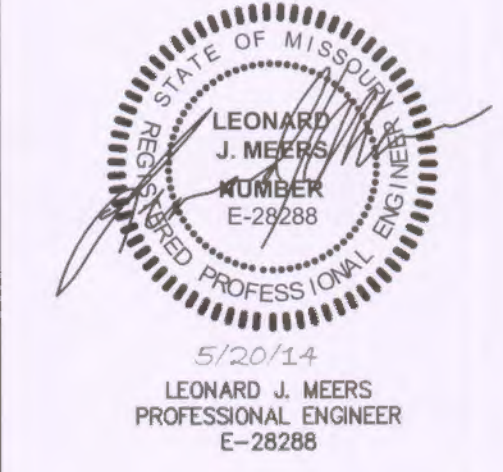
FP #1 A flood plain development application from the City is required for any work within the flood plain limits.

Retaining Walls- Terraced and Vertical

- RW #1 A permit is required for all retaining walls that are 48 inches or taller in height, measured from the top of the footing to the top of the wall or for walls that support a surcharge load or that alters the channelized drainage of any lot or drainage area.
RW #2 Retaining walls will not be allowed in public right-of-way without written approval from the City Engineer.
RW #3 Any retaining wall more than thirty (30) inches tall which supports a working surface that is within two (2) feet of the wall will require a guard on the retaining wall.
RW #4 Retaining walls that alter the channelized drainage of any lot or drainage area shall not be constructed without prior approval and permitting from the City of O'Fallon Engineering Department regardless of the height of the wall.
RW #5 See section 405.275 of the City code for additional design requirements.

PROJECT TITLE
PRIMROSE SCHOOL
OF O'FALLON AT
WINGHAVEN
7778 WINGHAVEN BLVD,
O'FALLON, MISSOURI

GRIMES CONSULTING, INC.
Civil Engineering & Surveying Services
12300 OLD TESSON ROAD
SUITE 200
ST. LOUIS, MO 63128
PH: (314) 849-6100
FAX: (314) 849-6100
www.grimesconsulting.com
CONTACT: LENNY MEERS
EMAIL: lenny@grimesconsulting.com



2390 E CAMELBACK RD, PHOENIX, ARIZONA
Primary Contact: ALEX GONZALEZ
24-Hr. Emergency Contact: ALEX GONZALEZ
Phone: (602) 967-7100
Fax: (602) 967-7100
Email: ogonzafe@evgr.com

Developer / Owner Information
EVERGREEN
2390 E CAMELBACK RD, PHOENIX, ARIZONA
Primary Contact: ALEX GONZALEZ
24-Hr. Emergency Contact: ALEX GONZALEZ
Phone: (602) 967-7100
Fax: (602) 967-7100
Email: ogonzafe@evgr.com

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