

#### AS-BUILT LEGEND A.B. DENOTES AS-BUILT AS-BUILT STORM MANHOLE AS-BUILT CURB INLET AS-BUILT STORM FLARED END AS-BUILT SANITARY MANHOLE AS-BUILT FIRE HYDRANT AS-BUILT WATER VALVE AS-BUILT FIRE HOSE CONNECTION AS-BUILT LIGHT STANDARD

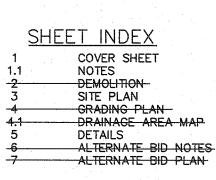
AS-BUILT CLEANOUT

■ AS-BUILT ELECTRIC BOX

■ AS-BUILT ELECTRIC TRANSFORMER

## A SET OF CONSTRUCTION PLANS FOR FORT ZUMWALT NORTH HIGH SCHOOL BUILDING AND PARKING ADDITIONS

A TRACT OF LAND BEING PART OF THE NORTH HALF OF THE SOUTHWEST QUARTER OF SECTION 24. TOWNSHIP 47 NORTH. RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN CITY OF O'FALLON ST. CHARLES COUNTY, MISSOURI



#### PRINCIPLES & STANDARDS:

1. All excavations, grading, or filling shall have a finished grade not to exceed a 3:1 slope (33 %). Steeper grades may be approved by the designated official if the excavation is through rock or the excavation or the fill is adequately protected (a designed head wall or toe wall may be required). Retaining walls that exceed a height of four (4) feet shall require the construction of safety guards as identified in the appropriate section(s) of the adopted BOCA Codes and must be approved by the Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.

2. Sediment and erosion control plans for sites that exceed 20,000 square feet of grading shall provide for sediment or debris basins, silt traps or filters, staked straw bales or other approved measures to remove sediment from run-off waters. The design to be approved by the City Engineer. Temporary siltation control measures (structural) shall be maintained until vegetative cover is estA.B.lished at a sufficient density to provide erosion control on the site.

3. Where natural vegetation is removed during grading, vegetation shall be reestA.B.lished in such a density as to prevent erosion. Permanent type grasses shall be estA.B.lished as soon as possible during the next seeding period after grading has been completed.

4. When grading operations are completed or suspended for more than 14 days permanent grass must be estA.B.lished at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided according to the City Engineer's recommendations. All finished grades (areas not to be disturbed by future improvement) in excess of 20% slopes (5:1) shall be mulched and tacked at the rate of 100 pounds per 1,000 square feet when seeded.

5. Provisions shall be made to accommodate the increased runoff caused by changed soils and surface conditions during and after grading. Unvegetated open channels shall be designed so that gradients result in velocities of 2 fps (feet per second) or less. Open channels with velocities more than 2 fps and less that 5 fps shall be estA.B.lished in permanent vegetation by use of commercial erosion control blankets or lined with rock rip rap or concrete or other suitA.B.le materials as approved by the City Engineer. Detention basins, diversions, or other appropriate structures shall be constructed to

6. The adjoining ground to development sites (lots) shall be provided with protection from accelerated and increased surface water, silt from erosion, and any other consequence of erosion. Run-off water from developed areas (parking lots, paved sites and buildings) A.B. ove the area to be developed shall be directed to diversions, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bales may be temporarily substituted with the approval of the City Engineer.

7. Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas or driveways set back a minimum of 25 feet from the top of the existing stream bank. The watercourse shall be maintained and made the requirements of the local governing authority. responsibility of the subdivision trustees or in the case of a site plan by the property owner. Permanent vegetation should be left intact. Variances will include designed stream bank erosion control measures and shall be approved by the City Engineer. FEMA and U.S. wise shown on the plans. Army Corps of Engineers guidelines shall be followed where applicA.B.le regarding site development areas designated as flood plains and wetlands.

8. All lots shall be seeded and mulched at the minimum rates defined in Appendix A or sodded before an occupancy permit shall be issued except that a temporary occupancy permit may be issued by the Building Department in cases of undue hardship because of unfavorA.B.le ground conditions.

> VEGETATIVE ESTA.B.LISHMENT For Urban Development Sites

Seeding Rates:

Permanent: Tall Fescue — 80 lbs./ac. Smooth Brome — 100 lbs./ac.

Combined Fescue @ 40 lbs./ac. and Brome @ 50 lbs./ac.

APPENDIX A

Temporary: Wheat or Rye - 150 lbs./ac. (3.5 lbs. per 1,000 square foot) - 120 lbs./ac. (2.75 lbs. per 1,000 square foot)

March 15 to September 15

Seeding Periods: Fescue or Brome — March 1 to June 1 August 1 to October 1 March 15 to November 1

Mulch Rates:

30 lbs./ac.

100 lbs. per 1,000 sq. feet (4,356 lbs. per acre) Fertilizer Rates:

30 lbs./ac. Phosphate 30 lbs./ac.

600 lbs./ac. ENM\* \* ENM = effective neutralizing material as per State evaluation of quarried rock.

### REFERENCE BENCHMARK:

Potassium

THE OBSERVED VERTICAL CHECK STATION UTILIZED IS LISTED ON WWW.NGS.NOAA.GOV AS DESIGNATION "SC-06" WITH A PID OF AA8597 AND A PUBLISHED ELEVATION OF 559.02 (NAVD88).

### SITE BENCHMARK (NAVD 88)

CHISELED "L" ON CONCRETE BASE OF TRANSFORMER PAD ON SOUTH SIDE OF BUILDING (ELEVATION=489.87) AND IS LOCATED AS SHOWN HEREON.

CITY OF O'FALLON COMMUNITY DEVELOPMENT DEPARTMENT ACCEPTED FOR CONSTRUCTION 

PROFESSIONAL ENGINEER'S SEAL INDICATES RESPONSIBILITY FOR DESIGN

#### GENERAL NOTES:

1. Underground utilities have been plotted from availA.B.le information and there fore locations shall be considered approximate only. The verifications of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction improvements.

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

3. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre construction conditions. 4. The contractor shall prevent all storm, surface water, mud and construction

debris from entering the existing sanitary sewer system.

5. All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor. 6. Easements shall be provided for all public sanitary sewers, storm sewers and utilities on the record plat. See record plat (if required) for location and size of

7. All construction and materials shall conform to the current construction standards of the City of O'Fallon.

8. The City of O'Fallon shall be notified at least 48 hours prior to start of construction for coordination and inspection.

9. All sanitary sewer manholes shall be waterproofed on the exterior in accordance Missouri Dept. Of Natural Resources specifications 10 CSR-8.120(7)(E).

10. All PVC sanitary sewer pipe is to be SDR-35 or equal with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate back fill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 12 inches A.B. ove the top pipe. (Note: All P.V.C. Force Main shall be C-900, Class 200 P.V.C.) 11. All sanitary and storm sewer trench backfills shall be water jetted. Granular back

fill will be used under pavement areas. 12. All pipes shall have positive drainage through manholes. No flat base structures

13. Brick shall not be used on sanitary sewer manholes or storm sewer structures. 14. All PVC sanitary sewer pipe shall meet the following standards. A.S.T.M. D-3034 SDR-35 with wall thickness compression joint A.S.T.M. D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures. (Note: All P.V.C. Force Main shall be C-900, Class

15. All sanitary and storm sewers shall meet all specifications and installation 16. Storm sewers 18 inch diameter and smaller shall be A.S.T.M. C-14 unless other-

17. Storm sewers 21 inch diameter and larger shall be A.S.T.M. C-76. Class II minimum, unless otherwise shown on the plans.

18. All storm sewer pipe in the right-of-way shall be reinforced concrete pipe (A.S.T.M. C-76, Class III minimum). 19. All storm sewer pipe shall be "O-ring" pipe.

20. All water lines shall be laid at least 10 feet horizontally from any sanitary sewer, or manhole. Whenever water lines must cross sanitary sewers, laterals or storm drains the water line shall be laid at such an elevation that the bottom of the water line is 18 inches A.B. ove the top of the drain or sewer. A full length of water pipe shall be centered over the sewer line to be crossed so that the joints will be equally distant from the sewer and as remote therefrom as possible. This vertical separation shall be maintained for that portion of the water line located within 10 feet, horizontally, of any sewer or drain it crosses.

21. All water lines shall be C-900 Class 200 P.V.C..

22. The grading yardage shown on these drawings is an approximation only, and not for bidding purposes. The contractor shall verify quantities prior to construction. 23. All sanitary sewer laterals shall be a minimum of 6 inches in diameter.

24. All erosion control systems are inspected and corrected weekly, especially within 48 hours of any rainstorm resulting in one—half inch of rain or more. Any silt or debris leaving the site and affecting public rights—of—ways or storm water drainage facilities shall be cleaned up within 24 hours after the end of the storm.

25. 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

26. Water Jetting specifications to conform to Section 405.210(D)(1). 27. No flat base structures are allowed. All structures shall maintain a 0.20' drop.

### CONSTRUCTION WORKING HOURS:

Construction work shall only be allowed during the following hours:

October 1 - May 31 7:00 A.M. to 7:00 P.M.

Monday — Sunday June 1 - September 30

Monday — Friday 6:00 A.M. to 8:00 P.M. 7:00 A.M. to 8:00 P.M. Saturday and Sunday

\* Construction work to be done outside of these hours requires prior written approval from the City Administrator or City Engineer.

#### ESTIMATED CONSTRUCTION & GRADING SCHEDULE

-INSTALL EROSION CONTROL 8/19 -UTILITY CONSTRUCTION 8/19 - 9/19 -BUILDING CONSTRUCTION 10/19 - 03/20 -PAVEMENT CONSTRUCTION 03/20 -FINISH GRADING, SEED AND MULCH 04/20

NOTE: DATES MAY VARY DUE TO INCLEMENT WEATHER. A PERIOD OF ONE (1) YEAR FROM THE DATE OF THE PLANNING DEPARTMENT'S APPROVAL OF THE SITE PLAN IS PERMITTED. ANY COMPLETION DATE LONGER THAN THE ONE (1) YEAR PERIOD, OR AN EXTENSION OF THE TIME THEREOF. MUST BE REQUESTED IN WRITING BY THE DESIGN CONSULTANT AND APPROVED BY BOTH THE DIRECTOR OF PLANNING AND THE CITY ENGINEER.

NOTE: TEMPORARY VEGETATION TO BE IN PLACE DURING THE WINTER UNTIL THE TIME PERMANENT SEEDING AND MULCH CAN BE COMPLETED. SEEDING AND MULCHING TO TAKE PLACE THROUGHOUT THE CONSTRUCTION SCHEDULE AS REQUIRED TO STA.B.ALIZE NEWLY GRADED AREAS.

#### O'FALLON NOTES:

1. Underground utilities have been plotted from availA.B.le information and therefore their locations shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans shall be the responsibility of the contractor, and shall be located prior to any grading or construction of the

2. All filled places under proposed storm and sanitary sewer, proposed roads, and/or paved areas shall be compacted to 90% of the 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. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. All filled places in proposed roads shall be compacted from the bottom up. All test shall be verified by a soil engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in the fill areas is to correspond to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for compaction. Proof rolling may be required to verify soil stA.B.ility at the descretion of The City of O'Fallon.

3. No area shall be cleared without the permission of the project engineer.

4. The City of O'Fallon Construction Division shall be notified at 636-379-7631 at least 48 hours prior to construction for coordination and 24 hours in advance of any required

5. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre-construction conditions.

6. All construction and materials shall conform to the current construction standards of

7. Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer. 8. No slopes shall exceed 3(Horizontal): 1(Verticle).

9. The Permittee shall assume complete responsibility for controlling all siltation and erosion of the project area. The Permittee shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fA.B.ric fences (possible methods of control are detailed in the plan). Control shall commence with grading and be maintained throughout the project until acceptance of the work by the City of O'Fallon and as necessary by MoDOT. The Permittee's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The City of O'Fallon and as required by MoDOT may at their option direct the Permittee in his methods as deemed fit to protect property and improvements. Any depositing of silts or mud in new or existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the City of O'Fallon and as required by MoDOT.

10. Erosion control systems shall not be limited to what is shown on the plan. Whatever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadways, properties and ditches.

11. All building mounted lights shall be pointed downward and fully screened to prevent light from spilling over onto adjacent properties.

12. All ground and roof hvac mechanical units to be screened from public view. 13. All paving to be in accordance with St. Charles County standards and specifications except as modified by the City of O'Fallon ordinances.

14. All sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved "Americans with DisA.B.ilities Act Accessibility Guidelines" (ADAAG) along with the required grades, signage, specifiations and construction materials, If any conflict occurs between the A.B.ove information and the plans, the ADAAG guidelines shall take precedence and the contractor, prior to any construction shall notify

15. Brick shall not be used in the construction of storm or sanitary sewer structures. 16. The Contractor shall ensure all concrete pipes will be installed with "O-Ring" rubber

17. Lighting values will be reviewed on the site prior to the final occupancy inspection. Corrections will need to be made if not in compliance with City standards. 18. All proposed fencing requires a separate permit from the Planning & Development

19. All identification or directional signs must have the locations and sizes approved and permitted separately through the Planning and Development Division. 20. All sign post and backs and bracket arms shall be painted black using Carboline

Rustbond Penetrating Sealer SG and Carboline 133 HB paint ( or equivalent as approved by the City of O'Fallon and MoDOT). Sign designating street names shall be on the opposite side of the street from traffic control signs.

21. All proposed utilities and/or utility relocations shall be located underground. 22. All erosion control systems are inspected and corrected weekly, especially within 48 hours of any rainstorm resulting in one—half inch of rain or more. Any silt or debris

leaving the site and affecting public rights—of—ways or storm water drainage facilities shall be cleaned up withing 24 hours after the end of the storm. 23. No graded areas are to remain bare for over 14 days without being seeded and

24. Rip—rap shown at flared ends will be evaluated in the field by the Engineer, Contractor and City Inspector after installation for effectiveness and field modified if necessary to reduce erosion on and off-site.

25. Marking to be provided on storm sewer inlets. The City will allow the following markers and adhesive procedures only as shown in the tA.B.le below. "Peel and Stick" adhesive pads will not be allowed.

Manufacturer Size Adhesive Style Message (Part #) ACP International | 3 7/8" | Epoxy | Crystal Cap | No Dumping Drains To | www.acpinternational.com Waterways (SD-W-CC) Epoxy | Standard | No Dumping Drains To | www.dasmanufacturing.com Stream (#SDS)

26. Developer must supply City Construction inspectors with an Engineer's soil reports prior to and during site soil testing. The soil report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City:

1. Maximum dry density 2. Optimum moisture content 3. Maximum and minimum allowA.B.le moisture content

4. Curve must be plotted to show density from a minimum of 90% Compaction and A.B.ove as determined by the "Modified AASHTO T—180 Compaction Test" (A.S.T.M.-D-1157) or from a minimum of 95% as determined by the "Standard Proctor Test ASSHTO T-99, Method C'

(A.S.T.M.-D-698). Proctor type must be designated on document. 5. Curve must have at least 5 density points with moisture content and sample locations listed on document. 6. Specific gravity.

7. Natural moisture content. 8. Liquid limit. Plastic limit.

Be advised that if this information is not provided to the City's Construction Inspector the City will not allow grading or construction activities to proceed on any project site.

City approval of any 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 codes. All installations and construction shall conform to the approved engineering

drawings. However, if the developer chooses to make minor modifications in design and/or specifications during construction, they shall make such changes at their own risk, without any assurance that the City Engineer will approve the completed installation or construction. It shall be the responsibility of the developer to notify the City Engineer of any changes from the approved drawings. The developer may be required to correct the installed improvement so as to conform to the approved engineering drawings. The developer may request a letter from the Construction Inspection Division regarding any field

changes approved by the City Inspector. Lighting values will be reviewed on site prior to the final occupancy inspection

### O'FALLON NOTES CONTINUED:

27. Trees, organic debris, rubble, foundations and other deletrious material shall be removed for the site and disposed in compliance with all applicA.B.le laws and regulations. Landfill tickets for such disposal shall be maintained on file by the developer. Burning on site shall be allowed only be permit from the local fire district. If a burn pit is proposed the location and mitifation shall be shown on the grading plan and documented by the soils engineer.

28. HDPE pipe is to be N-12WT or equal and to meet ASTM F1417 water tight field

30. All sanitary laterals and sanitary mains crossing under pavement must have the proper rock backfill and to required compaction.

29. Connections at all sanitary or storm structure to be made with A-lock joint or

31. A 5/8" trash bar shall be centered within the openings of all curb inlets and

32. Granular materials and earth materials associated with new construction beyond the pavement may be jetted, taking care to avoid damage to newly laid sewers. The jetting shall be performed with a probe route on not greater than seven and one—half (7.5) foot centers with the jetting probe centered over and parallel with the direction of the pipe. Trench widths greater than ten (10) feet will require multiple probes every seven and one—half (7.5) foot centers.

a.) Depth. Trench backfill less than eight (8) feet in depth shall be probed to a depth extending to half the depth of the trench backfill, but not less than three (3) feet. Trench backfill greater than eight (8) feet in depth shall be probed to half the depth of the trench backfill but not greater than eight (8) feet. b.) Equipment. The jetting probe shall be metal pipe with an exterior diameter of

one and one—half (1.5) to two (2) inches. c.) Method. Jetting shall be performed from the low surface topographic point and proceed toward the high point, and from the bottom of the trench backfill towards the surface. The flooding of each jetting probe shall be started slowly allowing slow saturation of the soil. Water is not allowed to flow away from the ditch without first saturating the trench.

d.) Surface Bridging. The contractor shall identify the locations of the surface bridging (the tendency for the upper backfill crust to arch over the trench rather than collapse and consolidate during the jetting process). The contractor shall breakdown the bridged areas using an appropriate method such as wheels or bucket of a backhoe. When the surface crust is collapsed, the void shall be backfilled with the same material used as trench backfill and rejetted. Compaction of the materials within the sunken/jetted area shall compacted such that no further surface subsidence occurs.

#### **GRADING NOTES:**

1. A Geotechnical Engineer shall be employed by Boyis Lend Lease and be on site during grading operations. All soils tests shall be verified by the Geotechnical Engineer concurrent with the grading and back filling operations.

2. The grading contractor shall perform a complete grading and compaction operation as shown on the plans, stated in these notes, or reason A.B.ly implied there from, all in accordance with the plans and notes as interpreted by the Geotechnical Engineer.

3. The Contractor shall notify the Soils Engineer at least two days in advance of the start of the grading operation.

4. All areas shall be allowed to drain. All low points shall be provided with temporary 5. A sediment control plan that includes monitored and maintained sediment control basins and/or straw bales should be implemented as soon as possible. No graded area is to be allowed to remain bare over the winter without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property

and silting up existing downstream storm drainage system. 6. Any existing trash and debris currently on this property must be removed and

7. Soft soil in the bottom and banks of any existing or former pond sites or tributaries should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed right—of—way locations or on storm sewer locations.

weeds; the grubbing and removal of roots and other surface obstructions from the site; and the demolition and removal of any man—made structures. The unsuitA.B.le material shall be properly disposed of off—site. Topsoil and grass in the fill areas shall be thoroughly disced prior to the placement of any fill. The Soils Engineer shall approve the discing operation.

8. Site preparation includes the clearance of all stumps, trees, bushes, shrubs, and

9. Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory roller, or high speed impact type drum rollers acceptA.B.le to the Soils Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.

10. The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of fill density tests will be determined on each lift of fill. Interim reports showing fill quality will be made to Bovis Lend Lease at regular 11. The Soils Engineer shall notify the Contractor of rejection of a lift of fill or

portion thereof. The Contractor shall rework the rejected portion of fill and obtain

notification from the Soils Engineer of its acceptance prior to the placement of

12. All areas to receive fill shall be scarified to a depth of not less than 8 inches and then compacted in accordance with the specifications given below. Natural slopes steeper than 1 vertical to 5 horizontal to receive fill shall have horizontal benches, cut into the slopes before the placement of any fill. The width and height to be determined by the Soils Engineer. The fill shall be loosely placed in horizontal layers not exceeding 8 inches in thickness and compacted in accordance with the specifications given below. The Soils Engineer shall be responsible for determining the acceptA.B.ility of soils placed. Any unacceptA.B.le soils placed shall be removed at

the Contractor's expense. 13. The surface of the fill shall be finished so that it will not impound water. If at the end of a days work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under

placement to freeze. 14. Any contaminated soil encountered during excavation shall be hauled and placed as directed by Bovis Lend Lease.

15. The location of and details for all siltation control devices (silt fences and sediment basins) must follow the "St. Charles County Soil and Water Conservation District Erosion and Sediment Control" guidelines. 16. Any discrepancy between these plans or notes with the Geotechnical Report, the Geotechnical report shall take precedence.

CONDITIONS FOR SITE PLAN APPROVAL (03-07-19) All mechanical units shall be screened according to Code Section 400.278

2. A photometric lighting plan shall be provided before constructon plan approval.

Metal siding is not permitted in "R-1" zoning per Section 400.523

17. Contractors shall adhere to and follow all recommendations contained within the

SITE PLAN VARIANCE REQUEST APPROVAL (04-10-19)

Applicant shall provide the proposed percentage of metal for each facade.

1. To allow metal facade on building on property in R-1 district.

### DEVELOPMENT NOTES

1. Area of Tract: 75.026 Acres 2. Existing Zoning: R-1 Single Family High School (City of O'Fallon) 3. Proposed Use:

18,430 sq.ft. 4. Area of Proposed Buildings: Area of Proposed Pavement: 64,200 sq.ft. Total Disturbed Area: 3.14 Acres

5. The required height and building setbacks are as follows: Minimum Front Yard: Minimum Side Yard: Minimum Rear Yard: Maximum Height of Building: 50 feet

6. Site is served by:

City of O'Fallon Sewer 636-281-2858 AmerenUE Company 636-639-8312 Laclede Gas Company 636-946-8937 City of O'Fallon Water 636-281-2858 Century Tel 636-332-3011 O'Fallon Fire Protection District 636-272-3493 Fort Zumwalt School District 636-272-6620 7. According to the Flood Insurance Rate Map of St. Charles County

(Community Panel number 29183C0235G dated January 20, 2016)

this property lies within zone X and zone AE. Zone X is defined as an area

outside the 500 year Flood Plain Limits. Zone AE is defined as area subject to inundation by the 1% annual chance flood. High School: 1 space per 3 students, plus one space per each faculty

and staff member. 1505 students/3 = 502 plus 215 faculty = 717 spacesTotal Existing Parking:

spaces lost w/building additions -46 = 532Total Parking Provided: 532 existing 170 new spaces 15 ADA spaces w/3 van accessible 717 Total

9. Landscape Requirements:

Not less than 6% of interior parking lot shall be landscaped. 182 new spaces x 270 sf =  $6,210 \times 6\% = 2,949$  sq.ft. landscaping required Total 3,000 sq.ft landscaping provided

1 tree for every 4,000 s.f. landscaped area. 3,000 s.f. / 4,000 s.f. = 1 Trees Required4 Trees Provided Total trees provided = 4

12. Property Owner: Fort Zumwalt School District

11. Estimated sanitary flow contributed by this site is 25,800 g.p.d.

555 East Terra Lane

O'Fallon, MO 63366 13. All HVAC and mechanical units on site shall be properly screened as required by City Code. Rooftop units shall be screened by a parapet wall that extends around the entire perimeter of the building; the parapet shall have a minimum height ti is at least as tall as the tallest unit mounted on the roof; ground mounted HVAC and mechanical units shall be screened by fencing, vegetation or some other means

(approved by the Planning and Zoning Commission) that has a minimum height

that is at least as tall as the tallest unit being screened. 14. Maximum slopes allowed are 3:1.

15. All utilities will be located underground. 16. All proposed fencing requires a separate permit through the Planning Department.

17. All sign locations and sizes must be approved separately through the Planning

18. All paving to be in accordance with St. Charles County standards and specifications except as modified by the City of O'Fallon ordinances. 19. All sidewalks, curb ramps, ramp and accessible parking spaces shall be constructed

Accessibility Guidelines" (ADAAG) along with the required grades, construction materials, specifications and signage.

in accordance with the current approved "American with DisA.B.ilities Act

20. Water Quality measures will be provided for new building addition and parking lot. 21. This site will be in compliance with Phase 2 Illicit Stormwater Discharge Guidelines

22. Prior to Construction Plan approval, a photometric lighting plan in accordance with the City's Exterior Lighting Standards shall be submitted for review and approval for all proposed exterior lighting.

## AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

THE FOLLOWING UTILITIES HAVE BEEN LOCATED AND MEASURED AND THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS:

 STORM SEWERS, STORM SEWER LENGTHS, STORM SEWER PIPE SIZES, STORM SEWER FLOWLINES AND DEPTHS OF STORM SEWER STRUCTURES. SANITARY SEWERS, SANITARY SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES. FIRE HYDRANTS WATER VALVES

 LIGHT STANDARDS • CURBS AND PAVEMENT FOR NEW PARKING AREAS

ALL PUBLIC UTILITIES SHOWN HEREON AS BEING AS-BUILT ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS

MARKE. P.E/L.S. COLLINS PLS-2006000173/ **€~**⊕~**© VEGETATION ESTA.B.LISHMENT** 

SEEDING RATES: Tall Fescue - 150 lbs./ac. Smooth Brome - 100 lbs./ac. Brome @ 50 lbs./ac.

TEMPORARY: 120 lbs./ac. (2.75 lbs. per 1,000 s.f) SEEDING PERIODS:

August 1 to October 1 Wheat or Rye - March 15 to November 1 March 15 to September 15 100 lbs. per 1000 sq. ft. (4,356 lbs. per ac.)

> \* ENM = effective neutralizing material as per State evaluation of quarried rock.



FERTILIZER RATES:

Phosphate 30 lbs./ac

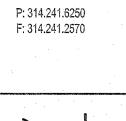
Potassium 30 lbs./ac.

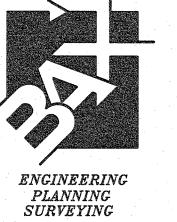
PLANNING & ZONING FILE # 19-000685 APPROVAL DATE: 03-07-19

FORT ZUMWALT SCHOOL DISTRICT

NORTH HIGH SCHOOL **ADDITIONS &** RENOVATIONS

St. Louis, MO 63102





221 Point West Blvd. St. Charles, MO 63301 636-928-5552 FAX 928-1718

Rev. Description

Project No.: 005772.00 Checked by: CHK

Drawing Title:

- 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 DisA.B.ilities Act Accessibility Guidelines" (ADAAG) along with the required grades, construction materials, specifications and signage. If any conflict occurs between the A.B.ove information and the plans, the ADAAG guidelines shall take precedence and the contractor prior to any construction shall notify the Project Engineer.
- 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. Contact the City of O'Fallon (636) 379—3814 for the location of City maintained cA.B.le for street lights and traffic signals, all other utilities call Missouri One Call 1-800-DIG-RITE. 1-800-344-7483
- 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. All signs shall A.B.ide by the regulations for visibility at corners, including corners from driveways and the street it intersects per Section 400.260 of the O'Fallon Zoning Code.
- 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 applicA.B.le laws and regulations. If the material listed previously are reused, a letter from a soil Engineer must clarify amount, location, depth. ect. and be approved with the construction plans. Landfill tickets for such disposal shall be maintained on file by the developer. Burning on site shall be allowed only by permit from the local fire district. If a burn pit is proposed the location and mitigation shall be shown on the grading plan and documented by the soils engineer.
- GN #12 Twenty—four (24) hours prior to starting any of the work covered by the A.B.ove 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.

#### Erosion Control Notes

- EN # 1 The Permittee shall assume complete responsibility for controlling all siltation and erosion of the project area. The Permittee shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fA.B.ric fences (possible methods SAN # 6 All sanitary sewer line with a slope greater than 50% of control are detailed in the plan). Control shall commence with the clearing operations and be maintained throughout the project until acceptance of the work by City of O'Fallon and as needed by MoDOT. The Permittee's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The City of O'Fallon and as required by MoDOT may at their option direct the Permittee in his methods as deemed fit to protect property and improvements. Any depositing of silt or mud on new or existing pavement shall be removed. SAN # 9 When sanitary mains cross over storm line the sanitary main must be ductile iron pipe for 10 feet on each side of the crossing. cleaned immediately. Any depositing of silts or mud in new or existing storm sewer and/or swales shall be removed after each rain and affected SAN #10 Encase with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches A.B.ove sanitary sewer. Add concrete cradle
- areas to the satisfaction of the City of O'Fallon and as required by MoDOT." EN # 2 All erosion control systems are to be inspected and corrected weekly, especially within 48 hours of any rain storm resulting in one—quarter inch of rain or more. Any silt or debris leaving the site and affecting public right of way or storm water drainage facilities shall be cleaned up within 24 hours after the end of the storm.
- 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. (Ord. 5082, section 405.245)
- EN #5 Graded areas shall be seeded and mulched (strawed) within 14 days of stopping land disturbance activities. Unless it can be shown to the City Engineer that weather conditions are not favor A.B.le, vegetative growth is to be est A.B.lished within 6 weeks of stopping grading work on the project. square foot) Ord. 5242, Section 405.070

### Grading Notes

- GRN #1 Developer must supply City construction inspectors with soil reports prior to and during site grading. The soil report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City:
  - 1. Maximum dry density
  - 2. Optimum moisture content
  - 3. Maximum and minimum allowA.B.le moisture content
  - 4. Curve must be plotted to show density from a minimum of 90% Compaction and A.B.ove as determined by the "Modified AASHTO T—180 Compaction Test" (A.S.T.M.-D-1157) or from a minimum of 95% as determined by the "Standard Proctor Test ASSHTO T-99, Method C" (A.S.T.M.-D-698). Proctor type must be designated on document.
  - 5. Curve must have at least 5 density points with moisture content and sample locations listed on document 6. Specific gravity
  - 7. Natural moisture content
- Be advised that if this information is not provided to the City's Construction Inspector the City will not allow grading or construction activities to proceed on any project site.
- 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 Water Notes density as determined by the Standard Proctor Test AASHTO T-99. Ensure the moisture content of the soil in fill areas corresponds to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill.
- the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before WN # 4 Provide water valves to isolate the system. proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze. 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 estA.B.lished at sufficient density to provide erosion control on site. Between permanent grass seeding periods, temporary cover shall be provided according to St. Charles Soil and Water Conservation District — Model Sediment and Erosion Control Regulations, All finished grades (areas not to be disturbed by improvements) in excess of 20% slopes (5:1) shall be mulched and tacked at a rate of 100 pounds per 1000 square feet when seeded.
- GRN # 6 No slopes shall exceed 3 (horizontal): 1 (vertical) unless otherwise approved by the soils report 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 All existing wells on site shall be capped per DNR standards.

### AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

THE FOLLOWING UTILITIES HAVE BEEN LOCATED AND MEASURED AND THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS:

- STORM SEWERS, STORM SEWER LENGTHS, STORM SEWER PIPE SIZES, STORM SEWER FLOWLINES SANITARY SEWERS. SANITARY SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES. FIRE HYDRANTS
- WATER VALVES LIGHT STANDARDS
- CURBS AND PAVEMENT FOR NEW PARKING AREAS

ALL PUBLIC UTILITIES SHOWN HEREON AS BEING AS-BUILT ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED FASEMEN



#### Grading Notes Continued

GRN #10 All trench back fills under paved areas shall be granular back fill, and compacted mechanically. All other trench back fills may be earth material (free of large clods, or stones) and compacted using either mechanical or water jetting, Granular material and earth material associated with new construction outside of pavements may be jetted, taking care to avoid damage to newly laid sewers. The jetting shall be performed with a probe route on not greater than 7.5 foot centers with the jetting probe centered over and parallel with the direction of the pipe. Trench widths greater than 10 feet will require multiple probes every 7.5 foot centers.

a) 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. Trench back fill greater than 8 feet in depth shall be probed to half the depth of the trench back fill but not greater than 8

- b) Equipment, The jetting probe shall be a metal pipe with an interior diameter of 1.5 to 2 inches.
- c) 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. The flooding of each jetting probe shall be started slowly allowing slow saturation of the soil. Water is not allowed to flow away from the trench without first saturating the trench.
- d) 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). The contractor shall break down the bridged areas using an appropriate method such as wheels or bucket of a backhoe. When surface crust is collapsed, the void shall be back filled with the same material used as trench back fill and rejetted. Compaction of the materials within the sunken/jetted area shall be compacted
- such that no further surface subsidence occurs. 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 RN # 7 All street stub—outs over 250' in length will require a temporary turnaround.
  - requirements. One (1) compaction test will be performed every two hundred fifty (250) feet along the centerline for each lift. 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. One (1) compaction test will be performed at two (2) foot vertical intervals and approximately every one thousand (1,000) cubic yards.
- Sanitary Sewer Notes
- SAN # 1 All sanitary sewer installation is to be in accordance with current M.S.D. standards and specifications except as modified by the City of O'Fallon
- SAN # 2 Brick shall not be used in the construction of sanitary sewer structures. Pre cast concrete structures are to be used unless otherwise approved by the City of O'Fallon.
- SAN # 3 Connections at all sanitary structures are to be made with A-Lock joint or equal SAN # 4 All sanitary laterals shall be a minimum of 6" diameter pipe with minimum 2% slopes.
- SAN # 5 All sanitary mains shall be a minimum of 8" diameter pipe with minimum 1% slopes.
- will require a special approved design as shown on detail sheet.
- SAN # 7 All manholes built within the 100 year flood plain must have lock type watertight manhole covers.
- SAN # 8 All sanitary sewer mains must have a minimum of 42" cover.
- to only RCP storm sewer and encase HDPE storm sewer when it is more than 18 inches A.B.ove sanitary line. Show on profile sheet.
- SAN #11 The sanitary sewers should run diagonally through the side yards to minimize any additional utility easements required. SAN #12 All sanitary sewer structures shall be waterproofed on the exterior in accordance to Missouri DNR specifications 10CSR-8.120 (7)(E).
- SAN #13 All sanitary sewer pipe shall be SDR35 or equal. SAN #14 All sanitary sewer manholes and pipes will be tested to the following specifications. ASTM C1244, Standard testing method for Concrete Sewer Manhole by Negative Air Pressure (Vacuum), Latest revision ASTM F1417, Standard testing method for Installation Acceptance of Plastic Gravity
- Sewer Lines Using Low Pressure Air, Latest revision. SAN #15 Add 1" minus rock back fill to all sanitary sewer and all other utilities that lie within the 1:1 shear plane of the road.

### Storm Sewer Notes

- The vegetative growth estA.B.lished shall be sufficient to prevent erosion and the standard shall be as required by EPA and DNR. (70% coverage per STM # 1 All Storm Sewer installation is to be in accordance with current M.S.D. standards and specifications except as modified by the City of O'Fallon
  - STM # 2 Brick shall not be used in the construction of storm sewer structures. Pre cast concrete structures are to be used unless otherwise approved by the City of O'Fallon.
  - 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 A.B.ove sanitary sewer. Add concrete cradle to only RCP storm sewer and encase HDPE storm sewer when it is more than 18 inches A.B.ove sanitary line. Show on profile sheet.
  - 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 0-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. All structures and flared end sections must be concrete. Manufacturing specifications must be followed and details provided for the installation of H.D.P.E. pipe. H.D.P.E. pipe will not be allowed for detention
  - basin outflows, final pipe run to detention basins, creek discharge or other approved means. 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.

WN # 7 PRESSURE TESTING:

- 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. GRN # 3 The surface of the fill shall be finished so it will not impound water. If at the end of a days work it would appear that there may be rain prior to WN # 3 All water main must have a minimum of 42" of cover. (City water mains)

  - 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. tA.B.lets will not be allowed. Following completion of the pipeline, it shall be slowly filled with water and a sample will be taken immediately and the chlorine residual must be 50 mg/L or greater. The solution shall be allowed to stand for 24 hours and a sample shall then be taken. The chlorine residual after 24 hours shall be 30 mg/L or greater. If the piping shows insufficient FP #1 A flood plain development application from the City is required for any work within the flood plain limits. chlorine residuals in either test, the piping shall be re-chlorinated by the injection of hypo chlorite solution until satisfactory results are achieved. All disinfecting shall be done by the contractor. Only the testing to determine the chlorine residual will be done by the City.
  - Immediately following disinfection, 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. In such cases, the pressure shall be as specified by the City and two pressure tests shall be conducted. The first test shall be with the fire hydrant auxiliary valve open and be to 150 PSI. The second test shall be with the fire hydrant auxiliary valve closed and be to the higher pressure as directed by the City. All pumping equipment and pressure gauges shall be provided by the contractor. After achieving the test pressure, the piping shall be left closed for a period of two (2) hours. At the end of this time the pressure drop shall not exceed 2 psi. In addition, if the pressure appears, in judgment of the City's representative, to be continuing to drop, the test shall be continued for another two (2) hours and if any further drops occur, the test shall be considered a failure. If the pressure test fails, the contractor will be required to find and correct the source of the leakage. If this requires draining of the pipeline,

when the leakage is corrected, the pipeline must be re-disinfected and the pressure tested again until satisfactory result are achieved. Any

MDNR required dechlorination will be performed by the contractor. WN # 8 All tops for valves, meters, and manholes are to be constructed to within 1 inch (0.08') of finish grade. Grading around structure tops on slopes need to be accounted for.

#### Water Notes

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 IA.B.oratory approved by the Missouri Department of Natural Resources and the City for bacteriological analysis. After 24 hours, a second sample shall be taken in a like manner and submitted for analysis. The two samples taken on consecutive days ,a minimum of 24 hours apart, must be found to be "safe" by the testing IA.B.oratory, and copies of the test results must be supplied to the City. If the samples are not found to be "safe" further flushing and/or disinfection as directed by the City shall be conducted by the contractor until "safe" samples on two consecutive test days are achieved. Following successful bacteriological testing and a determination by the City that the samples are "safe", the mains may be placed into service.

#### Roadway Notes

- RN # 1 All paving (public and private) to be in accordance with current St. Louis 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 # 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. The developer's engineer shall perform the following quality control guidelines: 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. One (1) cylinder must be tested at seven (7) days, one (1) at fourteen (14) days and two (2) at twenty—eight (28) days. If the first (1st) cylinder does not meet specifications at twenty—eight (28) days, then the second (2nd) cylinder must be held and tested
- at day fifty—six (56). b. Percent air and temperature. First (1st) truck batch each day and two (2) thereafter until a consistency is encountered. Once a consistency is encountered, then tests will be performed in conjunction with the concrete cylinders.
- c. Slump. First (1st) truck batch each day and two (2) thereafter until a consistency is encountered. Once a consistency is encountered, then tests will be performed in conjunction with the concrete cylinders
- d. If concrete is batched from more than one (1) plant, then the aforementioned guidelines will be applicA.B.le 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 sIA.B.. c. Gradation test for sub base material.
- 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. The sub grade and base shall be so constructed that it will be uniform in
- 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. Concrete pavements shall not be approved unless it reaches a strength of four thousand (4,000) psi.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. One (1) cylinder must be tested at seven (7) days, one (1) at fourteen (14) days and two (2) at twenty-eight (28) days. If the first (1st) cylinder does not meet specifications
- at twenty-eight (28) days, then the second (2nd) cylinder must be held and tested at day fifty-six (56). 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. If soft spots are detected, or pumping, rutting or heaving occurs greater than one (1) inch at the sub grade, the roadbed shall be considered unsatisfactory and the soil in these areas shall be remediated to the depth indicated by the contractor's testing
- firm and approved by a representative of the City Engineer. RN #14 Sub grade and base beneath pavements shall be compacted to St. Charles County Highway Department specifications. The moisture range shall be determined by the Standard or Modified Proctor Density Method AASHTO T-99 and within -2/+4 percentage points of the optimum moisture
- RN #15 The entire width and length will conform to line, grade and cross section shown on the plans or as estA.B.lished by the engineer. If any settling or washing occurs, or where hauling results in ruts or other objection A.B.le irregularities, the contractor shall improve the sub grade or base to the satisfaction of the City before the pavement is placed. Additional rolling or methods to verify compaction shall be at the discretion of the City Engineer. Tolerance allowed on all lines, grades and cross sections shall be plus or minus
- four-hundredths (+0.04) feet. 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. Utilities installed after sub grade preparation shall be bored. Compaction requirements shall follow St. Charles County standards (2006).
- 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.

locations accompanied with either w16-9p or w16-7p signs

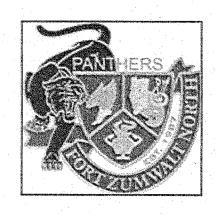
- c. Batch scales——monthly.
- d. Nuclear testing devices—every six (6) months. e. Proctor equipment—every six (6) months.
- f. Slump cone—monthly. RN #18 All permanent traffic control will be per M.U.T.C.D. or MoDot standards. S1—1 from the M.U.T.C.D. manual will be used at all crosswalk
- RN #19 All traffic signals, street signs, sign post, backs and bracket arms shall be painted black using Carboline Rust Bond Penetrating Sealer SG and Carboline 133 HB paint (or equivalent as approved by City of O'Fallon and MoDOT).
- Flood plain Information
- 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 walking 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 channeled 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.

PLANNING & ZONING FILE # 19-000685

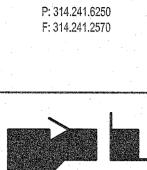
APPROVAL DATE: 03-07-19

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILA.B.LE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOW ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.



FORT ZUMWALT SCHOOL DISTRICT

NORTH HIGH SCHOOL **ADDITIONS &** 



St. Louis, MO 63102

ENGINEERING **PLANNING** SURVEYING

221 Point West Blvd. St. Charles, MO 63301 636-928-5552 FAX 928-1718

KEY PLAN Drawing Title:

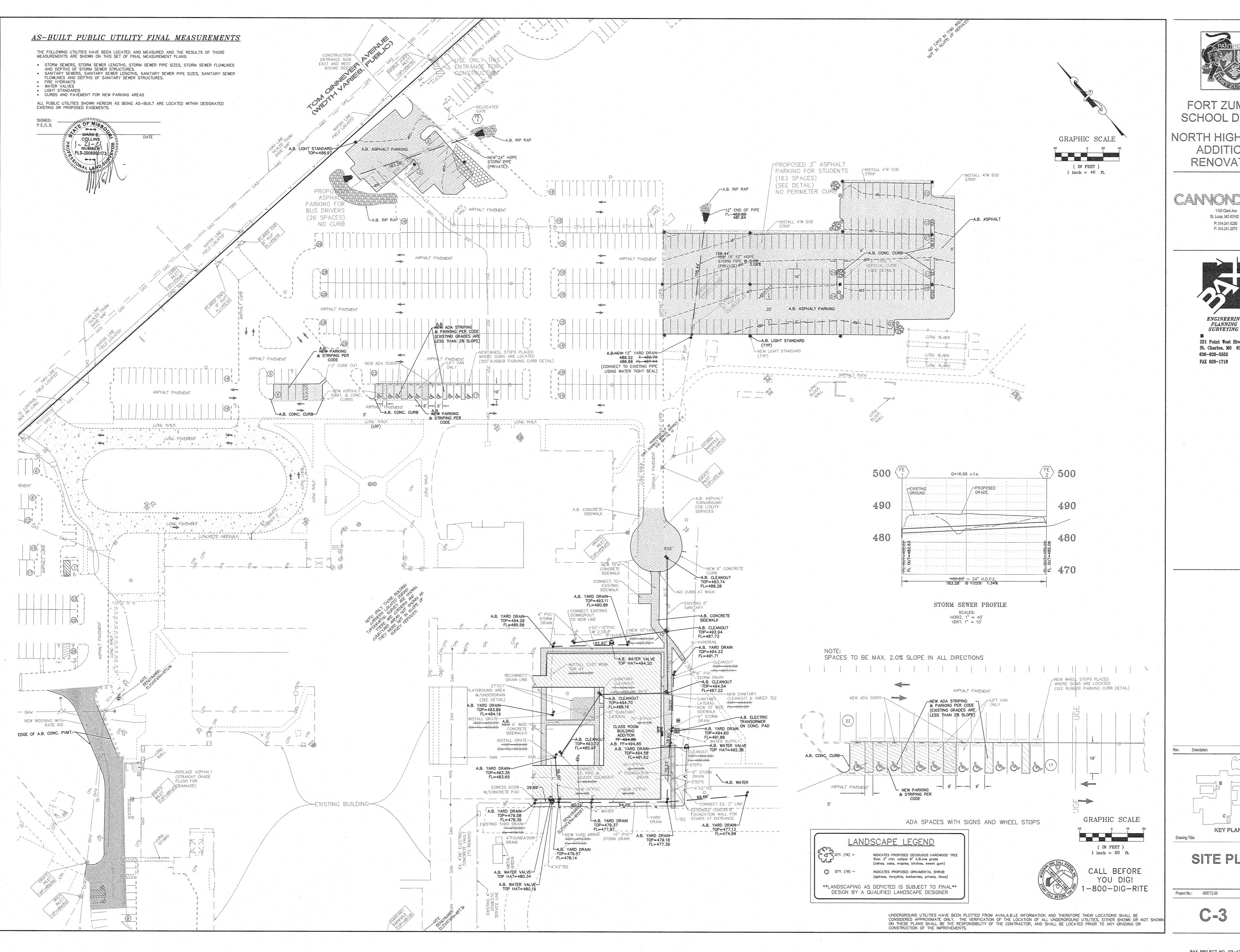
Rev. Description

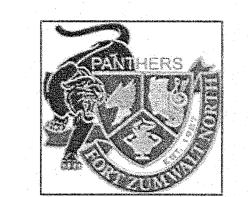
CITY NOTES

Project No.: 005772.00

BAX PROJECT NO. 03-12613F

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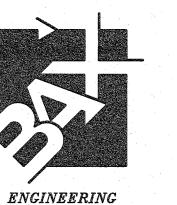




FORT ZUMWALT SCHOOL DISTRICT

NORTH HIGH SCHOOL ADDITIONS & RENOVATIONS

> 1100 Clark Ave St. Louis, MO 63102 P: 314.241.6250



PLANNING SURVEYING

221 Point West Blvd. St. Charles, MO 63301 636-928-5552 FAX 928-1718

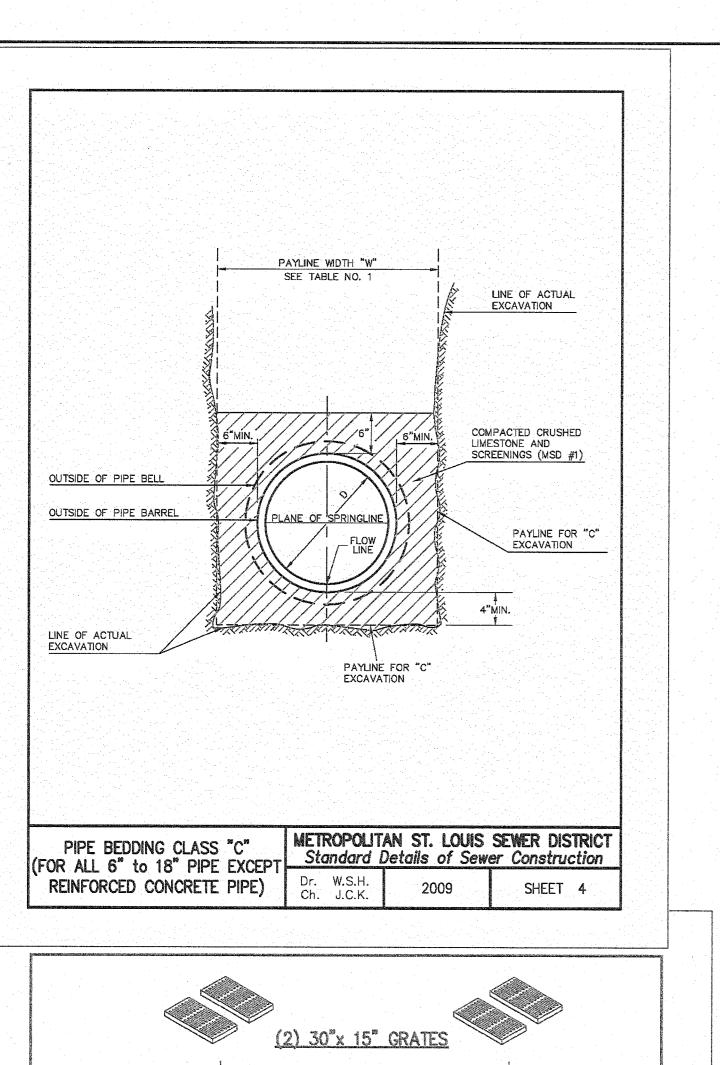
KEY PLAN

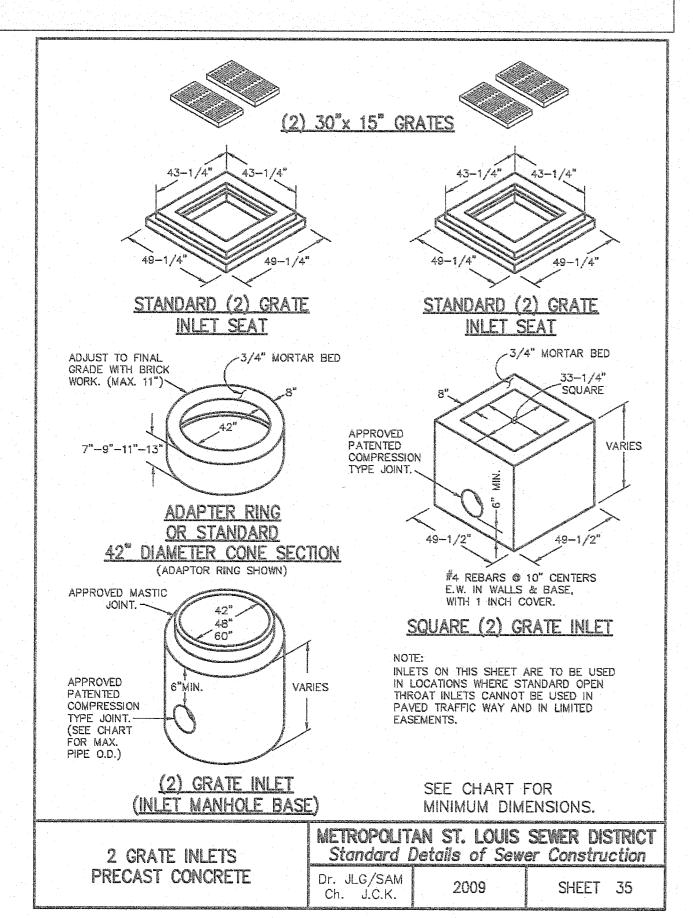
SITEPLAN

Project No.: 005772.00 Checked by: CHK

BAX PROJECT NO. 03-12613F

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AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

STORM SEWERS, STORM SEWER LENGTHS, STORM SEWER PIPE SIZES, STORM SEWER FLOWLINES

· SANITARY SEWERS, SANITARY SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER

THE FOLLOWING UTILITIES HAVE BEEN LOCATED AND MEASURED AND THE RESULTS OF THOSE

ALL PUBLIC UTILITIES SHOWN HEREON AS BEING AS-BUILT ARE LOCATED WITHIN DESIGNATED

MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS:

THE OF MISSO

COLLINS 21-21-NUMBER

: PLS-200600017

FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES.

AND DEPTHS OF STORM SEWER STRUCTURES.

CURBS AND PAVEMENT FOR NEW PARKING AREAS

FIRE HYDRANTS

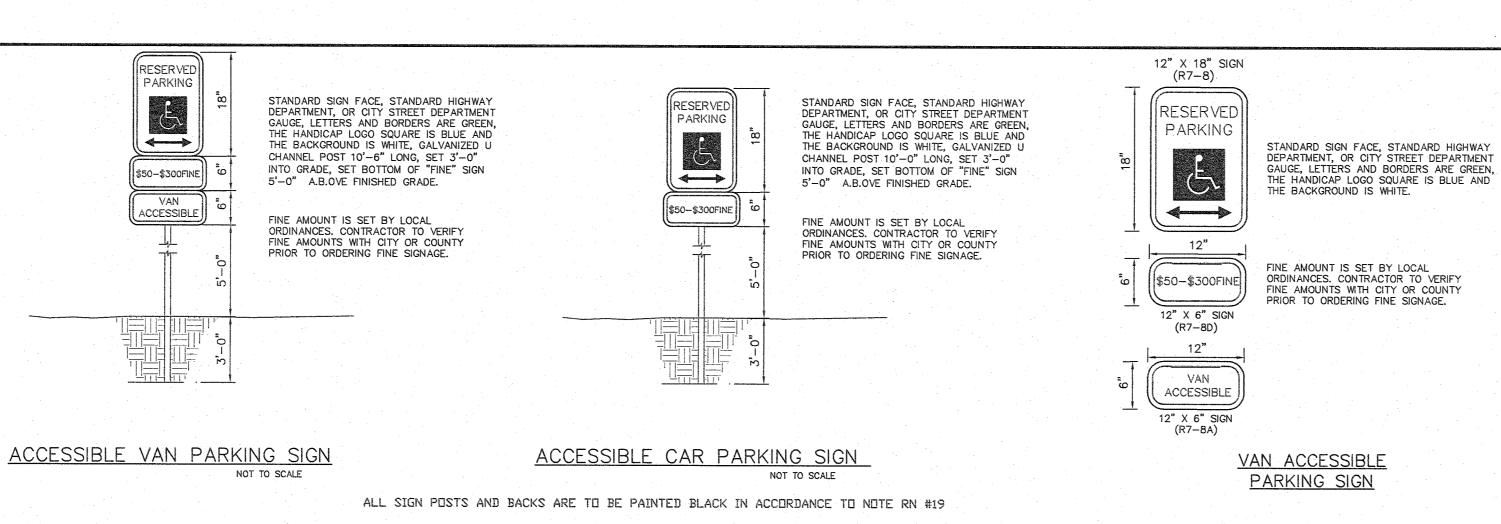
WATER VALVES

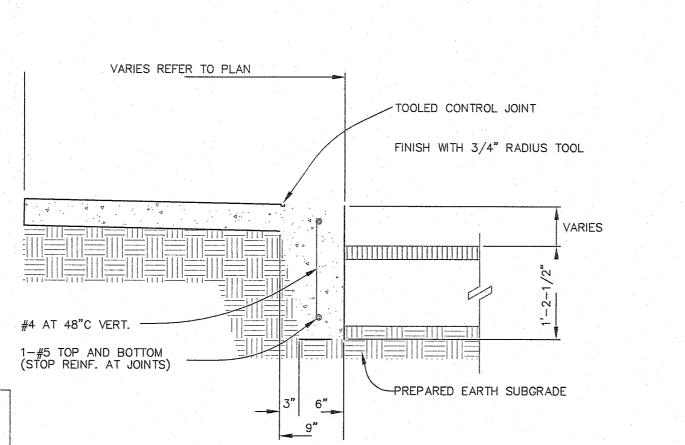
SIGNED:

P.E/L.S.

LIGHT STANDARDS

EXISTING OR PROPOSED EASEMENTS.



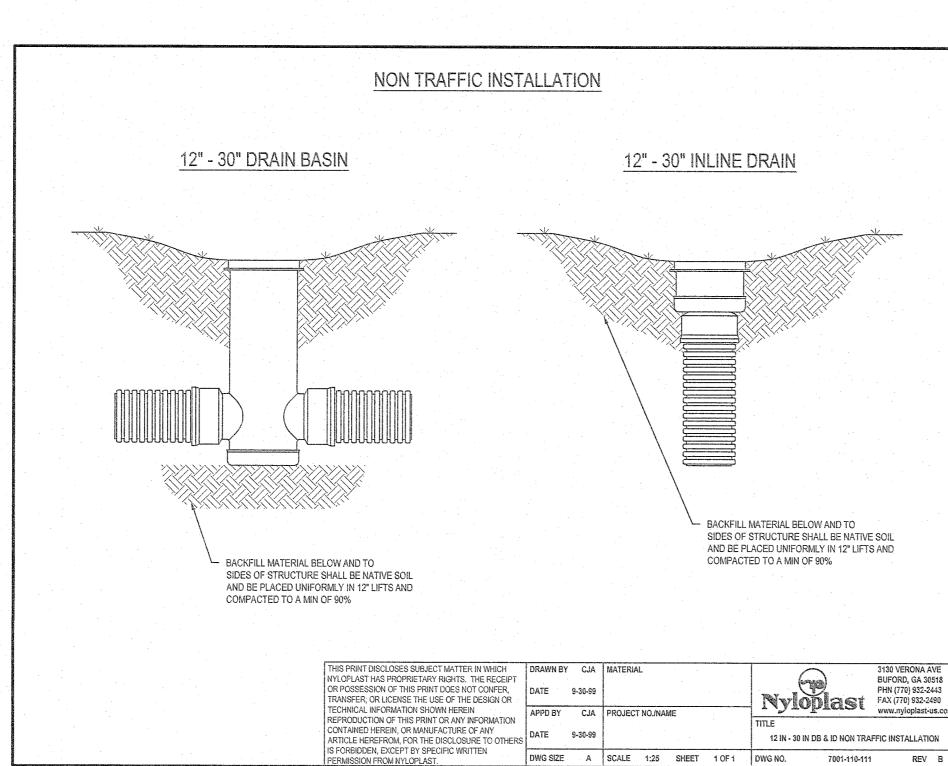


PROVIDE 1/2" PREMOLDED EXPANSION JOINT FILLER AT 60' CENTERS PROVIDE TOOLED CONTRACTION JOINTS AT 10' C.C.

TURNED DOWN CONCRETE WALK NOT TO SCALE

WOVEN FABRIC ---(MIRAFI 100X OR

EQUAL) OVER



5' MAX W/O REINFORCED BACKING

NSTALL ALONG CONTOUR

NO SLOPE

ELEVATION

FLOW

6" MIN-7

1% SLOPE IN FRONT OF BARRIER, 5' MIN-

-TRENCH TO BE BACKFILLED

─BURY 1' OF FABRIC ALONG

BOTTOM AND EDGE OF

6" MIN DEPTH

AND COMPACTED

TRENCH

DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS

NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT

TRENCH

MEABRIC

CONSTRUCTION

LONG

WRAP GEDTEXTILE ARDUND STAKES BEFORE

SECTIONS OF

SILT FENCE

GRADE LUMBER, 4'

FASTEN WITH 3-50 LB.

DIAGONAL CABLE TIES

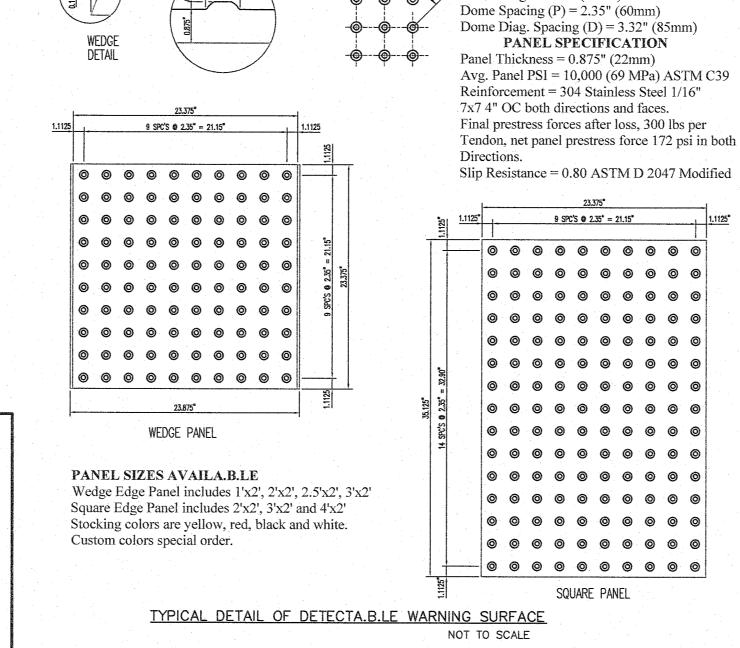
WITHIN TOP 8" OF FABRIC

FOR CONCENTRATED FLOWS,

LIEU OF WIRE MESH.

MAY 2005

OR 4-1" LONG STAPLES



CASTinTACT TM Warning Panels are the latest innovation in detectA.B.le warning systems. A long term solution meeting both state and federal guidelines for handicap detention. CASTinTACT Warning Panels are designed for exterior use at the bottom of curb ramps and other locations such as depressed corners, raised crosswalks and raised intersections, borders of median

and islands, at eh edge of transit platforms and where railroad tracks cross the sidewalk to warn people with visual impairments

CASTinTACT ™ are cementitious based concrete panels with the same co-efficient of expansion as the concrete base. 7/8" thick

resistant truncated domes are achieved with an engineered mix design of granite and quartz aggregate that produces an average compressive strength of 10,000 psi (69 MPa). CASTinTACT are quality controlled manufactured to produce a dense, freeze thaw

dur A.B.le panel. Architectural concrete finished for safe wet and dry slip resistance. Concrete surfaces are easily maintained and

CASTinTACT Warning Panels are integrally colored to provide visual contrast with the adjacent walking surface.

cleaned with pressure washing.

of potential hazards. DetectA.B.le warnings must be installed across the full width of ramps, and 24" minimum in length up the ramp.

high strength concrete reinforced with stainless steel prestress strands resulting in a high strength and crack resistant panel. A.B. rasion

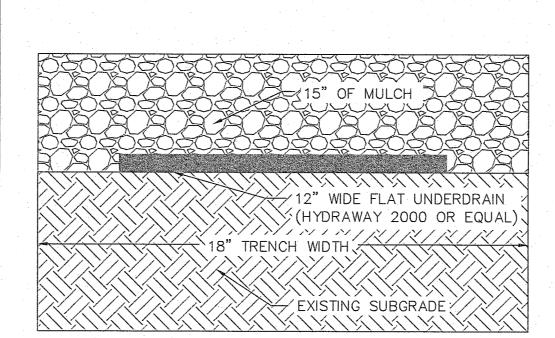
DOME SPECIFICATIONS Americans with DisA.B.ilities Act 4.29.2 Standards

1 1/2" STL. HANDRAIL

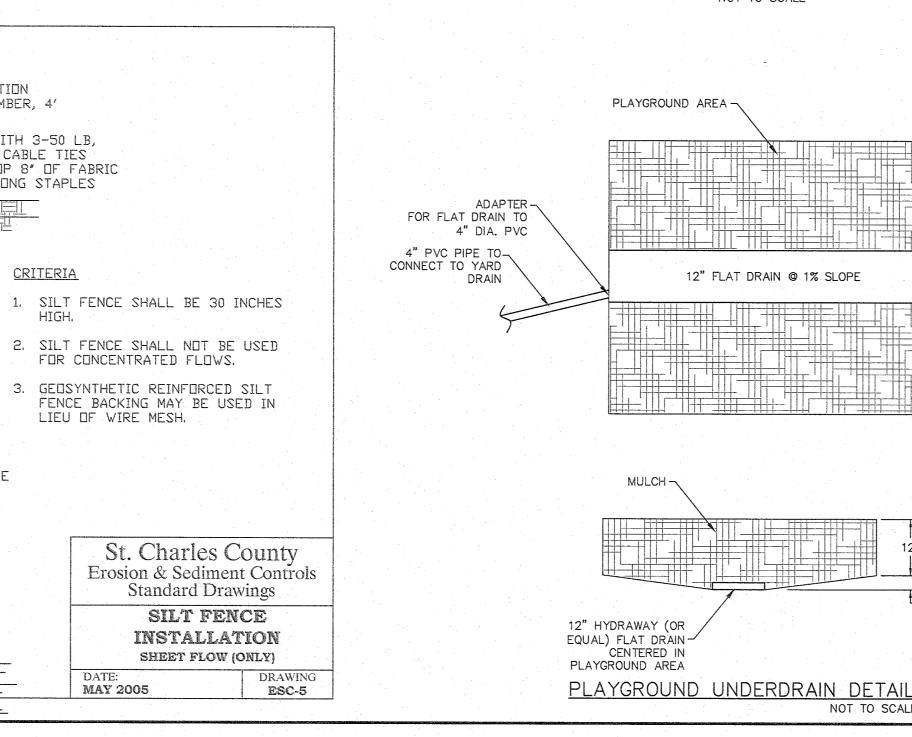
(RAILING TYPICAL BOTH

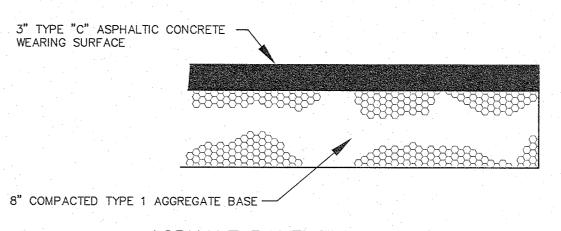
SIDES OF STAIRS)

Dome Base = 0.9'' (23 mm) Dome Top = 0.45" (12mm) Dome Height = 0.2" (5 mm)



# PAVEMENT/UNDERDRAIN DETAIL



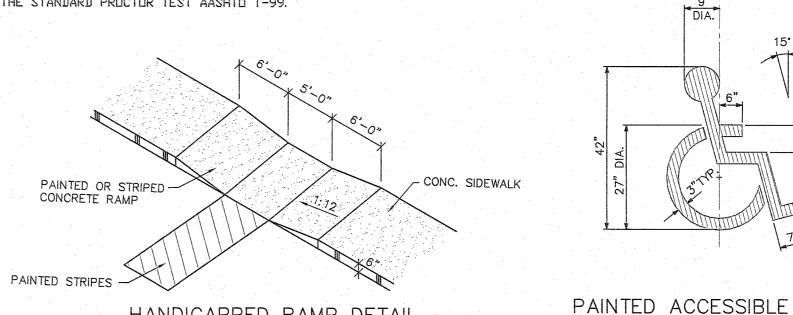


## ASPHALT PAVEMENT DETAIL

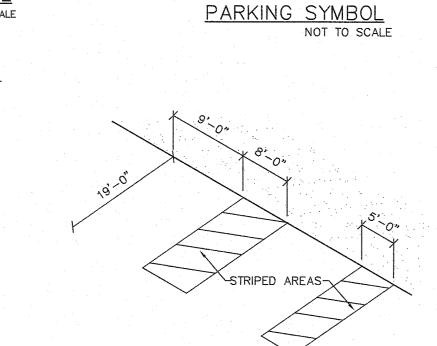
\* THE ASPHALT SURFACE SHALL BE COMPACTED TO 98% MAXIMUM DENSITY,

\* ALL GRANULAR ROLLED STONE BASE UNDER PROPOSED PAVEMENT MUST BE COMPACTED TO 100% OF THE MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99.

STEP AND RAILING DETAIL



HANDICAPPED RAMP DETAIL



6" NON-REINFORCED

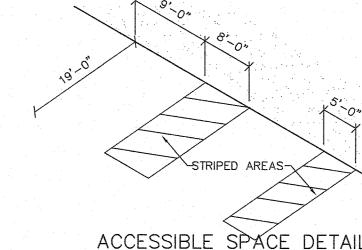
P.C. CONCRETE PAVEMENT

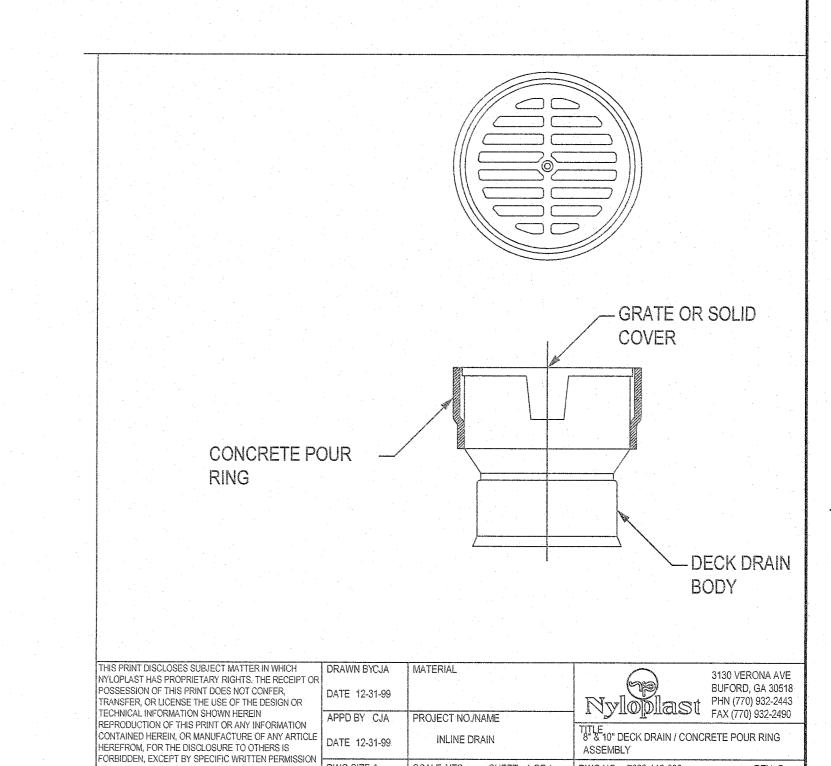
4" COMPACTED ROCK BASE

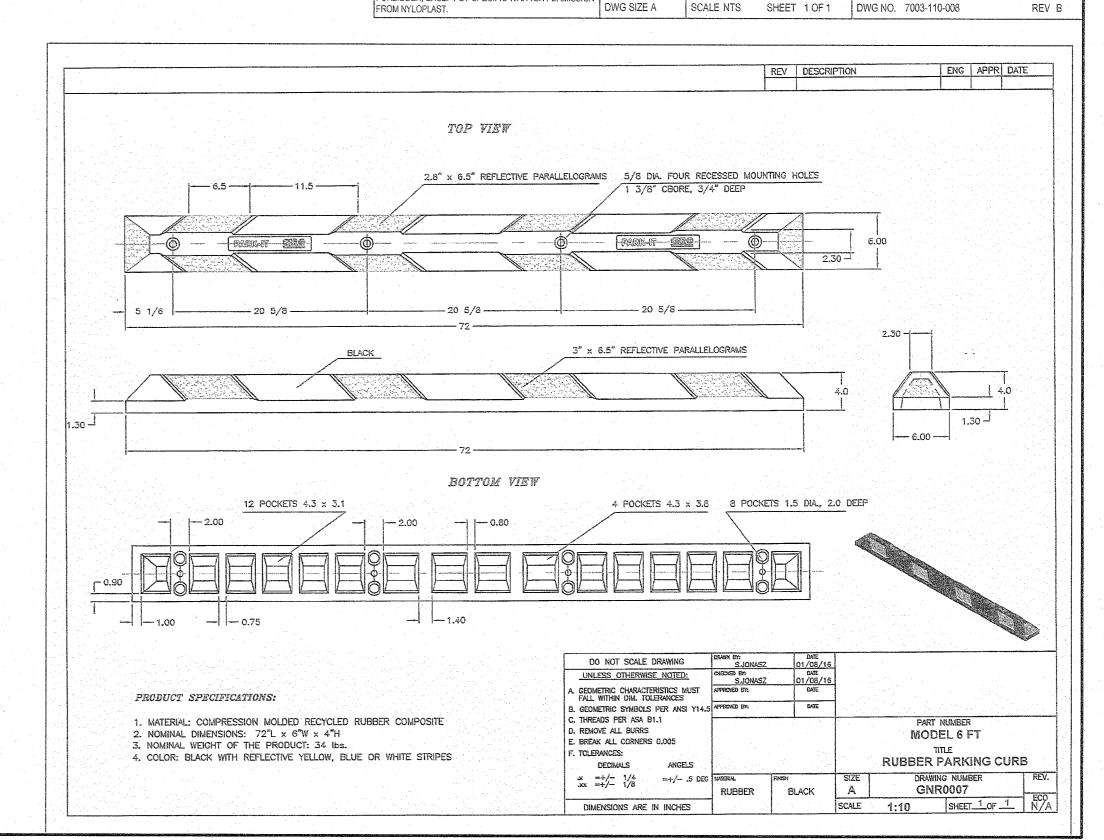
PREPARED SUBGRADE

CONCRETE PAVEMENT DETAIL

▶ (4000 PSI)



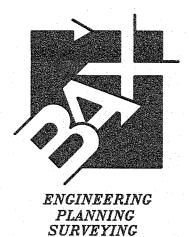




FORT ZUMWALT SCHOOL DISTRICT

NORTH HIGH SCHOOL ADDITIONS & RENOVATIONS

> 1100 Clark Ave St. Louis, MO 63102 P: 314.241.6250 F: 314.241.2570



221 Point West Blvd. St. Charles, MO 63301 636-928-5552 FAX 928-1718

Description KEY PLAN Drawing Title:

DETAILS

Project No.: 005772.00 Checked by: CHK

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