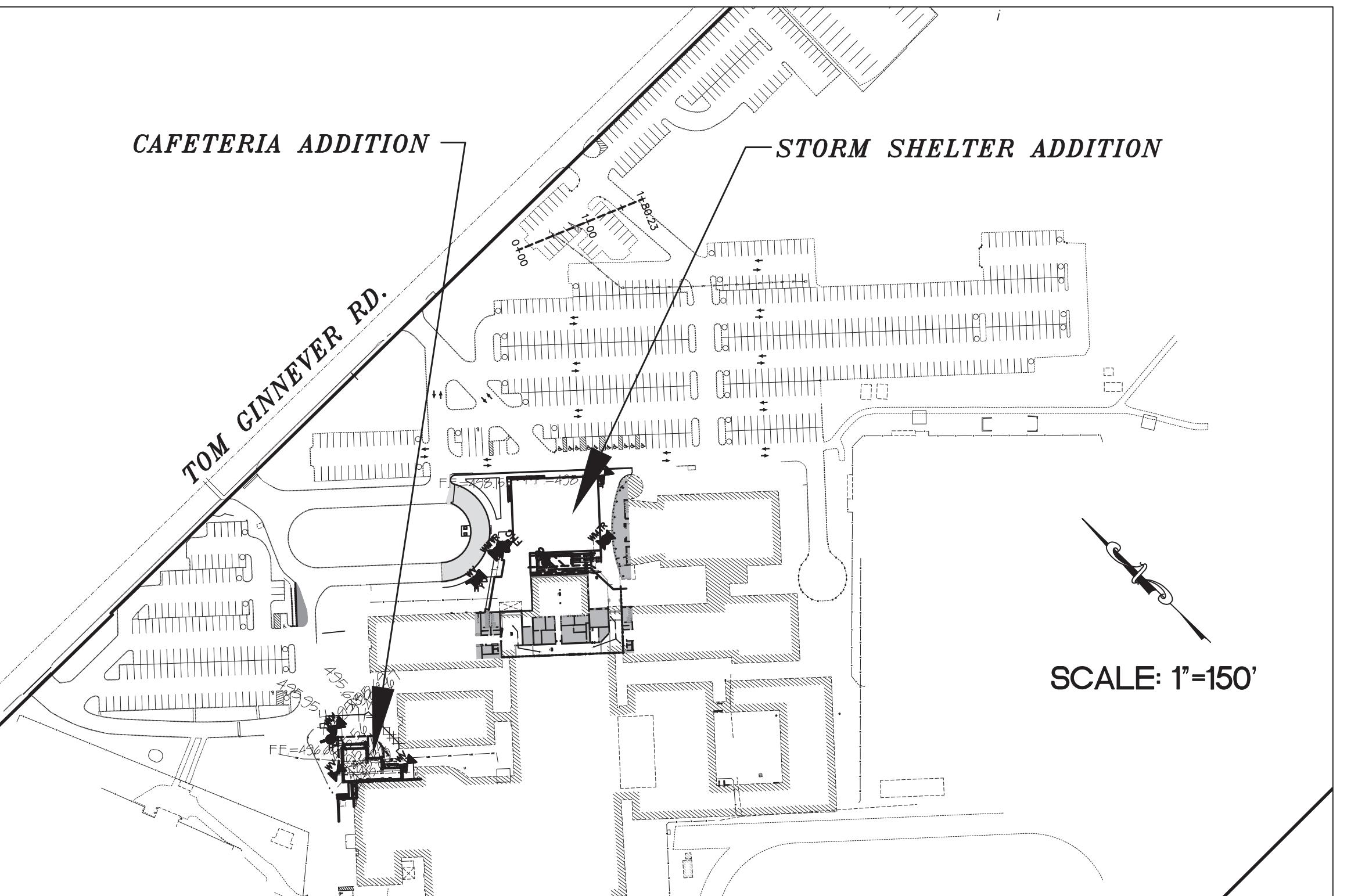
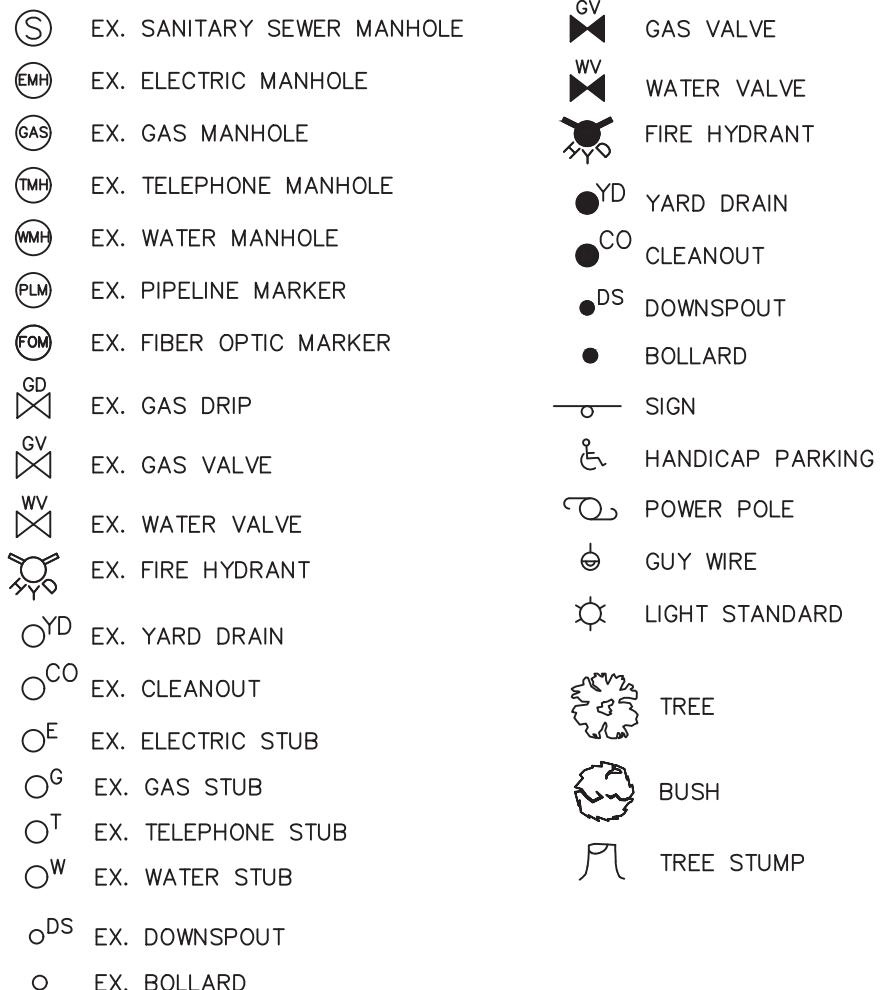


Locator Map

NOT TO SCALE

A SET OF AS-BUILT PLANS FOR
FORT ZUMWALT NORTH HIGH SCHOOL BUILDING 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

Legend



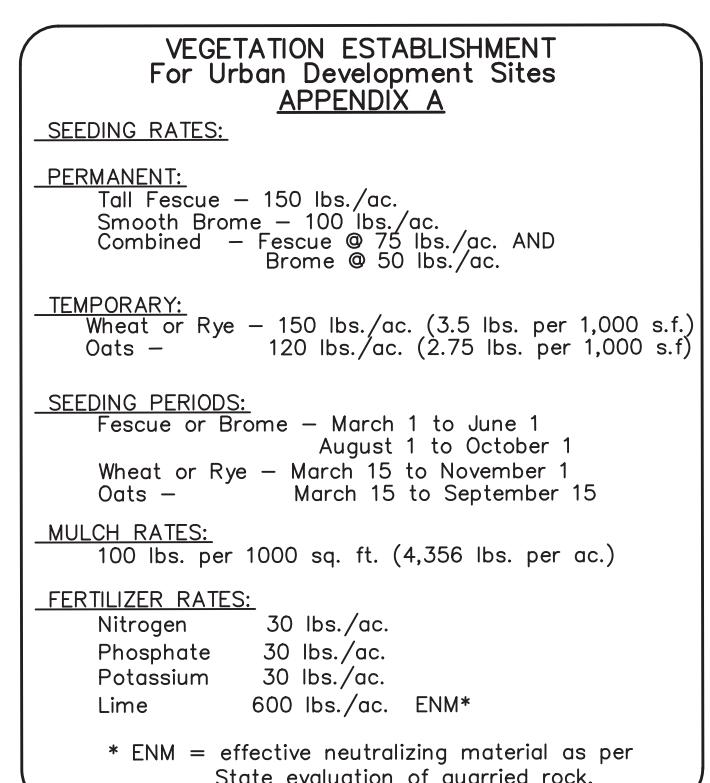
Plan View

REFERENCE BENCHMARK:

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
BY: Ryan Rockwell DATE 11/03/2025
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

* City of O'Fallon Construction work hours per City Ordinance 3429 as shown in section 500.420 of the Municipal Code of the City of O'Fallon are as follows:

October 1 through May 31
7:00 A.M. To 7:00 P.M. Monday Through Sunday
June 1 Through September 30
6:00 A.M. To 8:00 P.M. Monday Through Friday
7:00 A.M. to 8:00 P.M. Saturday and Sunday

* The area of this phase of development is _____

The area of land disturbance is _____

Number of proposed lots is _____

Building setback information. Front _____

Side _____

Rear _____

* The estimated sanitary flow in gallons per day is _____

* Parking calculations

* Tree preservation calculations



CALL BEFORE
YOU DIG!
1-800-DIG-RITE

REMEDIAL NOTES
• The rerouting of water and gas lines around the northern portion of the storm shelter should be completed prior to the placement and compaction of the fill.
• SCI personnel should observe a protrusion of the existing subgrade prior to fill placement, and any soft or otherwise unsuitable material should be removed and replaced.
• Place compacted fill, in accordance with Section 5.2 of the geotechnical report, to the planned subgrade elevation as soon as possible to allow for the occurrence of total and differential settlements prior to foundation construction in the northern half of the storm shelter.
• The fill should extend to the edge of the planned foundations and then may be sloped downward to the existing grade.
• SCI will place settlement points upon completion of the fill placement and monitor the settlement and provide the owner and contractor notice when the rate of settlement is acceptable for foundation construction in the northern half of the storm shelter. For planning purposes, we expect settlement will be complete within four weeks of completion of grading.
• Contractor shall verify with Geotechnical Engineer on site before doing remediation work.
• Existing utilities to be removed shall be backfilled as recommended by Geotechnical Report.

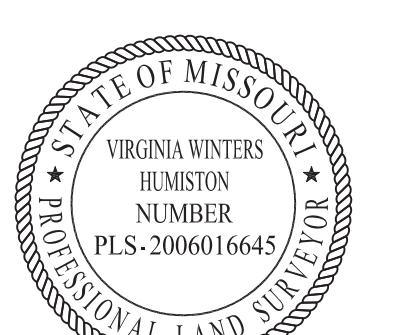
Conditions of Approval From
Planning and Zoning

- Provide the height of the building addition.
- Clarify the building materials to confirm compliance with the metal siding ordinance.

AS-BUILT PUBLIC UTILITY
FINAL MEASUREMENTS

THE FOLLOWING UTILITIES HAVE BEEN LOCATED AND MEASURED AND THE RESULTS OF THESE 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.
- NEW STORM SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES.
- FIRE HYDRANTS
- WATER VALVES
- LIGHT STANDARDS
- NEW CONCRETE PAVEMENT
- NEW CONCRETE CURBS
- NEW SPOTLIGHTS
- NEW CONCRETE
- NEW CONCRETE WALLS
- NEW CONCRETE SHOTS



10/27/2025 DATE
VIRGINIA W. HUMSTON, P.L.S.
MISSOURI PLS NO. #2006016645

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE 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 IMPROVEMENTS.

PROJECT TITLE:
A SET OF AS-BUILT PLANS
FOR
NORTH HIGH SCHOOL
BUILDING ADDITION
Box Project #03-12613B ISSUE 0-24-25

Engineering
Planning
Surveying
■ Point West Blvd.
St. Charles, MO 63301
636-328-1552
FAX 636-328-1518

DISCLAIMER OF RESPONSIBILITY
I hereby certify that the documents intended to be
authenticated by my seal are limited to this sheet,
and that any other sheet or sheets of the original
Drawings, Specifications, Estimates, Reports or other
documents, or any portion thereof, which may be
used for any part or parts of the architectural or
engineering project or survey.

Bid / Permit Set 03/20/2023
Addendum 2 04/13/2023
Addendum 3 04/21/2023
Utility 2* WM at Auditorium 02/29/2024
Added 2* WM at Auditorium 02/29/2023

Developer / Owner:
Fort Zumwalt School District
555 E. Terra Ln
O'Fallon, MO 63367

P+Z No. #22-010174
APPROVAL DATE: 12-01-22

City No. #

Page No. C1

GENERAL NOTES

- Driveway locations shall not interfere with the sidewalk, handicap ramps, or curb inlet ramps.
- 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. If any conflict occurs between the above information and the plans, the ADAAG guidelines shall take precedence and the contractor prior to any construction shall notify the Project Engineer.
- Any runways, driveways, curb ramps, located in public right of way shall meet PROWAG requirements and shall be constructed using red aggregate, traction, down slope, permeable materials.
- Any proposed pavilions or playground areas will need a separate permit from the Building Division.
- 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 cable for street lights and traffic signals, all other utilities shall be listed in the Missouri One Call 1-800-348-7483.
- All proposed utilities and/or utility relocation shall be located underground.
- All proposed fencing requires a separate permit through the Building Safety Division.
- All construction operations and work zone traffic control within the right of way will follow MoDOT or M.U.T.C.D. standards whenever it is more stringent.
- Any intentionally omitted sign(s) must have the locations and sizes approved and permitted separately through the Planning and Development Division.
- 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. If the material listed previously are reused, a letter from the City of O'Fallon shall be obtained, located etc. and be approved with the construction plans. Drift tickets for such disposal shall be submitted on file with the developer. Surrounding site shall be cleared 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.
- Two-and-a-half (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.
- The City Engineer or their duly authorized representative shall make all necessary inspections of City infrastructure, escrow items and infrastructure located on the approved plans.
- All materials and methods shall conform to approved engineering drawings. However, if the developer chooses to make minor modifications in design and/or specifications during construction, he/she shall make such changes at his/her 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 shall be required to correct the installed improvements 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 inspectors.
- 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.

Grading Notes

- Developer must supply City Construction Inspectors with an Engineer's soil reports with an Engineer's 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:
 - Maximum dry density
 - Optimum moisture content
 - Minimum and maximum allowable moisture content
 - Curve must be plotted to show density from a minimum of 90% compaction and above 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 AASHTO T-99, Method C" (A.S.T.M.-D-698). Proctor type must be designated on document.
 - Curve must have at least 5 density points with moisture content and sample locations listed on document
 - Specific gravity
 - Moisture content
 - 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 and to proceed on any project site.
- All fill areas and proposed storm sewers, sanitary sewers, proposed roads, and paved areas shall be compacted from the bottom of the fill up to 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. Ensure that moisture content of the fill areas corresponds to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the soil that was used for compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill.
- The surface of the fill shall be finished so it will not impound water. If at the end of 0 days work it would appear that there may be any issues, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen soil. If any soil is frozen, the temperature is to be checked prior to the layer being placed. If the soil is frozen, the fill shall be removed and the fill area shall be scarified until the soil is no longer frozen.
- All sediment and detention basins are to be constructed during the initial phase of the grading operation in accordance with the approved SWPPP.
- Permanent grass plantings are complete or suspended for more than 14 days, permanent grass must be established at sufficient density to provide erosion control on site. Between permanent grass seeding periods, temporary cover shall be provided according to Missouri Department of Natural Resources Protecting Water Quality - a field guide to erosion, sediment and stormwater best management practices for development sites in Missouri and Kansas. 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.
- Temporary grass plantings (2' horizontal; 1' vertical) unless otherwise approved by the soils report and specifically located on the plans and approved by the City Engineer.
- All low places whether on site or off shall be graded to provide drainage with temporary ditches.
- 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.
- (INTENTIONALLY OMITTED)
- 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 tamping or water jetting. Granular material and earth material associated with new construction outside of pavements may be jetted, taking care to avoid any debris that may fall into the trench. 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.
- Depth: Trench back fills less than 8' in depth shall be probed to a depth extending half the depth of the trench back fill but not greater than 8' feet. The probe route on not greater than 8' feet in depth shall be probed to half the depth of the trench back fill but not greater than 8' feet.
- Equipment, the jetting probe shall be a metal pipe with an interior diameter of 1.5 to 2 inches.
- Method: Jetting shall be performed from the lowest surface topographic point and proceed toward the highest point. Retaining walls will not be allowed in public right-of-way without written approval from the City Engineer.
- 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.
- 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.
- See section 405.275 of the City code for additional design requirements.
- Site grading.
- 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. One (1) compaction test will be performed every two hundred fifty (250) feet along the center line.
- 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.
- Access to the site from any other location other than the proposed construction entrance is strictly prohibited!

Erosion Control Notes

- 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 fabric fences (possible methods 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 into the City of O'Fallon and as required by MoDOT may, at their discretion the Permittee in his methods as deemed fit to protect public health and safety. Any silt or debris left on the site after the completion of the work shall be removed immediately. Any depositing of silt or mud in new or existing storm sewers and/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.
- All erosion control systems are to be inspected and corrected weekly, especially within 48 hours of any rain storm resulting in one-quarter inch or more. Any silt or debris left on the site after the completion of the work shall be removed immediately. Any depositing of silt or mud in new or existing storm sewers and/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.
- Erosion control devices (silt fence, sediment basin, etc.) shall be in accordance with Missouri Department of Natural Resources Protecting Water Quality - a field guide to erosion, sediment and stormwater best management practices for development sites in Missouri and Kansas.
- Any erosion control system 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)
- Graded areas shall be done and mulched (straw) within 14 days of stopping land disturbance activities. Unless it can be shown to the City Engineer that weather conditions are not favorable, vegetative growth is to be established within 6 weeks of stopping grading work on the project. The vegetative growth established shall be sufficient to prevent erosion and the standard shall be as required by EPA and DNR. (70% coverage per square foot) Ord. 6496, Section 405.09

Sanitary Sewer Notes

- All sanitary sewer installation is to be in accordance with M.S.D. standards and specifications except as modified by the City of O'Fallon Ordinances.
- 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.
- Connections to all sanitary structures are to be made with A-Lock joint or equal
- All sanitary laterals shall be a minimum of 4" residential, 6" commercial diameter pipe.
- All sanitary mains shall be a minimum of 8" diameter pipe.
- All sanitary sewer lines with a slope greater than 20% will require concrete cradle or concrete collar at each pipe joint.
- Sanitary lines shall be back filled within 100 year flood plain must have lock type watertight manhole covers.
- All manholes built within the 100 year flood plain must have lock type watertight manhole covers.
- All sanitary sewer mains must have a minimum of 42" cover.
- When sanitary mains cross over storm lines the sanitary main must be ductile iron pipe for 10 feet on each side of the crossing.
- Ends with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches above sanitary sewer. Add concrete cradle to only RCP storm sewer and encase flexible storm sewer when it is more than 18 inches above sanitary line. Show on profile sheet.
- The sanitary sewer should run diagonally through the side yards to minimize any additional utility easements required.
11. The sanitary sewer should run diagonally through the side yards to minimize any additional utility easements required.
12. All sanitary sewer structures shall be water proof on the exterior in accordance to Missouri DNR specifications 10CSR-8.120 (7)(C).
13. All sanitary sewer pipes shall be SDR35 or equal. All sanitary sewer laterals shall be Schedule 40.
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.
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

- All Storm Sewer installation is to be in accordance with M.S.D. standards and specifications except as modified by the City of O'Fallon Ordinances.
- 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.
- A 5/8" trash shall be installed horizontally in the center of the opening(s) in all curb inlets and area inlets.
- (INTENTIONALLY OMITTED)
- Ends with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches above sanitary sewer. Add concrete cradle to only RCP storm sewer and encase flexible storm sewer when it is more than 18 inches above sanitary line. Show on profile sheet.
- The storm sewer should run diagonally through the side yards to minimize any additional utility easements required.
- All concrete shall be back filled using rubber type gaskets.
- Connections at all storm structures are to be made with A-lock joint or equal.
- Pre cast concrete inlet covers are not to be used.
- The sediment in the detention basins shall have a minimum 2% longitudinal slope and be lined with a permanent erosion control blanket that is greater than 100 mils or storm water only.
- All structures and flared end sections must be concrete. 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.
- (INTENTIONALLY OMITTED)
- 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 provide the base before concrete or surface course is placed. The sub grade and base shall be so constructed that it will be uniform in density throughout.
- All concrete shall be back filled using rubber type gaskets.
- Provide pavement striping at any point where the multi-use trail crosses existing or proposed pavement.
- All street stub-outs over 250' in length will require a temporary turnaround.
- All sub grade in cut or fill will need to conform to the City of O'Fallon Compaction requirements
- Materials 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 quality control guidelines, in accordance with St. Louis County requirements 501.3.1.
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 provide the base before concrete or surface course is placed. The sub grade and base shall be so constructed that it will be uniform in density throughout.
11. All concrete shall be back filled using rubber type gaskets.
12. The test results 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.
13. 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.
- 12.1. 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 (50) cubic yards and one (1) set per one hundred (100) cubic yards thereafter. One (1) cylinder must be tested at seven (7) days, three (3) at twenty-eight (28) days, and one (1) held in reserve.
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 load. The sub grade and base beneath pavements shall be compacted to St. Louis 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 content.
15. The entire width and length must conform to line, grade and cross section shown on the plans or as established by the engineer. If any cracking or voids occur, or where hauling results in route or other objectionable 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 (.004) feet.
16. Utility Work Prior to Base Construction. No base course work may proceed on any street until all utility excavations (storm and sanitary sewer, 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. Louis County standards.
17. Equipment calibration. The developer's contractors and subcontractors must have their equipment calibrated by the following minimum standards:
 - 17.1. 100' meter--weekly.
 - 17.2. Cylinder compression--annually by independent calibration service.
 - 17.3. Batch scales--monthly.
 - 17.4. Nuclear testing devices--every six (6) months.
 - 17.5. Proctor equipment--every six (6) months.
 - 17.6. Soil compaction--monthly.
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 locations accompanied with either w16-9p or w16-7p signs.
19. All traffic signals, street signs, curb, sidewalks, backfill, curbs, and other items shall be painted black using Carboline Rust Bond Penetrating Sealer S-900. Carboline S-900 shall be applied to the City of O'Fallon and MoDot.
20. If the excavations are made in the improved portion of the right-of-way, twelve inches of granular backfill will be placed over exposed facilities and controlled low strength material (CLSM) aka flowable fill will fill the hole with eight inches of the finished surface for concrete pavement. There will be a plastic membrane placed between the rock base and the CLSM to prevent the material from bleeding into the rock base. The remaining eight inches will be restored by placing a 28 day, 4,000 psi concrete mix.

Retaining Walls: Terraced and Vertical

- 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.
- Retaining walls will not be allowed in public right-of-way without written approval from the City Engineer.
- 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.
- 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.
- See section 405.275 of the City code for additional design requirements.

Flood plain Information


- Refer to Section 415 for Floodplain Development Information

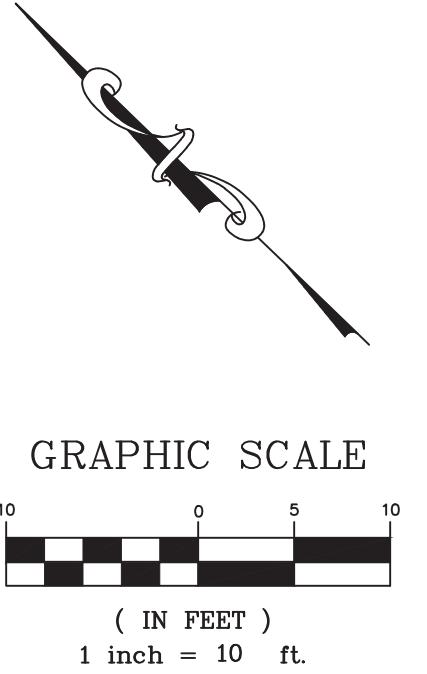
Water Notes

- Fire hydrants shall be a maximum of 600' apart. Local fire district approval is required.
- Coordinate with the water company on the location of water meters. For meters in the City's district, meters shall be in the right-of-way, otherwise an easement from the right-of-way shall be provided.
- All water main must have a minimum of 42" of cover. (City water mains)
- Provide fire valves on system.
- Water main shall be class 200 or 210 or equal with locator/tracer wires.
- If the excavations are made in the improved portion of the right-of-way, twelve inches of granular backfill will be placed over exposed facilities and controlled low strength material (CLSM) aka flowable fill will fill the hole with eight inches of the finished surface for concrete pavement. There will be a plastic membrane placed between the rock base and the CLSM to prevent the material from bleeding into the rock base. The remaining eight inches will be restored by placing a 28 day, 4,000 psi concrete mix.
- DISINFECTING: Disinfecting shall be accomplished by placing sufficient hypo chloride granule (HTI) in each section of pipe to achieve a chlorine residual in the pipeline, upon initial filling, of 50 mg/L (PPM). HTI tablets 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 shall be 50 mg/L or greater. The solution will be allowed to stand for 24 hours and the chlorine residual shall be taken. The chlorine residual after 24 hours shall be 39 mg/L or greater. If the piping shows insufficient chlorine residuals in either test, all disinfecting shall be re-chlorinated by the injection of hypo chloride 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.
- PRESSURE TESTING: Immediately following disinfection, the piping shall be pumped to a pressure (at the HIGHEST point in the project) of 150 psi and higher where the working pressure is higher than 150 psi as determined by the City. In such cases, the pressure shall be specified. The pressure shall be held for 24 hours. The fire hydrant shall be closed. The fire hydrant shall be re-opened. The hydrant auxiliary valve open or to 50 PSI. The pressure test shall be done 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 to be failing in judgment of the City's representative, to be continued, the test shall be conducted for two (2) hours and if it further does not occur, the test will be conducted. If failure occurs in the pressure test, 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 results are achieved. Any MDNR required dechlorination will be performed by the contractor.
9. All tops for valves, meters, and manholes shall be constructed to within 1 inch (0.08") of finish grade. Grading products shall be taken on slopes not to be exceeded for
10. BACTERIOLOGICAL TESTING: For bacteriological inspection, 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. After 24 hours, a second sample shall be taken in a like manner and submitted to the City for bacteriological analysis. The two samples taken on consecutive days, a minimum of 24 hours apart, must be found to be "safe" by testing. If the second sample taken on the second day is not found to be "safe" further flushing and/or disinfecting, 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

- All paving (public and private) to be in accordance with St. Louis County Standards and Specifications except as modified by the City of O'Fallon ordinances.
- 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.
- Provide 6" of concrete over 5" of aggregate base rock or asphalt equivalent for minor residential streets per City Code 405.370.
- 3.1. Rock to meet the requirements of MoDot type 5 rock with a lighter restriction on fines being that no more than ten (10) percent (10%) fine sand shall be a maximum. Type 5 rock is 40-310 G.B. The graduation of this rock must be submitted to the City for approval. Any deliveries made without the proper delivery ticket, including signature, will not be accepted. The delivery ticket must list the project name or jobsite location. A separate certification sheet may be provided attached to the delivery ticket with a signature of the company's quality control manager. The quality control certification must be current and dated within 4 weeks of the delivery. (City Code 405.210.A.2.k)
4. Multi-use trail (when required) shall have a minimum density according to St. Louis Co. Standard Specifications.
5. Type 5 (10%) fine sand shall be a maximum density according to St. Louis Co. Standard Specifications.
6. Provide pavement striping at any point where the multi-use trail crosses existing or proposed pavement.
7. All street stub-outs over 250' in length will require a temporary turnaround.
8. All sub grade in cut or fill will need to conform to the City of O'Fallon Compaction requirements
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 quality control guidelines, in accordance with St. Louis County requirements 501.3.1.
10. The sub grade and base beneath pavements shall be compacted to St. Louis 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 content.
11. The entire width and length must conform to line, grade and cross section shown on the plans or as established by the engineer. If any cracking or voids occur, or where hauling results in route or other objectionable 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 (.004) feet.
12. Utility Work Prior to Base Construction. No base course work may proceed on any street until all utility excavations (storm and sanitary sewer, 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. Louis County standards.
13. Equipment calibration. The developer's contractors and subcontractors must have their equipment calibrated by the following minimum standards:
 - 13.1. 100' meter--weekly.
 - 13.2. Cylinder compression--annually by independent calibration service.
 - 13.3. Batch scales--monthly.
 - 13.4. Nuclear testing devices--every six (6) months.
 - 13.5. Proctor equipment--every six (6) months.
 - 13.6. Soil compaction--monthly.
14. 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 locations accompanied with either w16-9p or w16-7p signs.
15. All traffic signals, street signs, curb, sidewalks, backfill, curbs, and other items shall be painted black using Carboline Rust Bond Penetrating Sealer S-900. Carboline S-900 shall be applied to the City of O'Fallon and MoDot.
16. If the excavations are made in the improved portion of the right-of-way, twelve inches of granular backfill will be placed over exposed facilities and controlled low strength material (CLSM) aka flowable fill will fill the hole with eight inches of the finished surface for concrete pavement. There will be a plastic membrane placed between the rock base and the CLSM to prevent the material from bleeding into the rock base. The remaining eight inches will be restored by placing a 28 day, 4,00





GRAPHIC SCALE

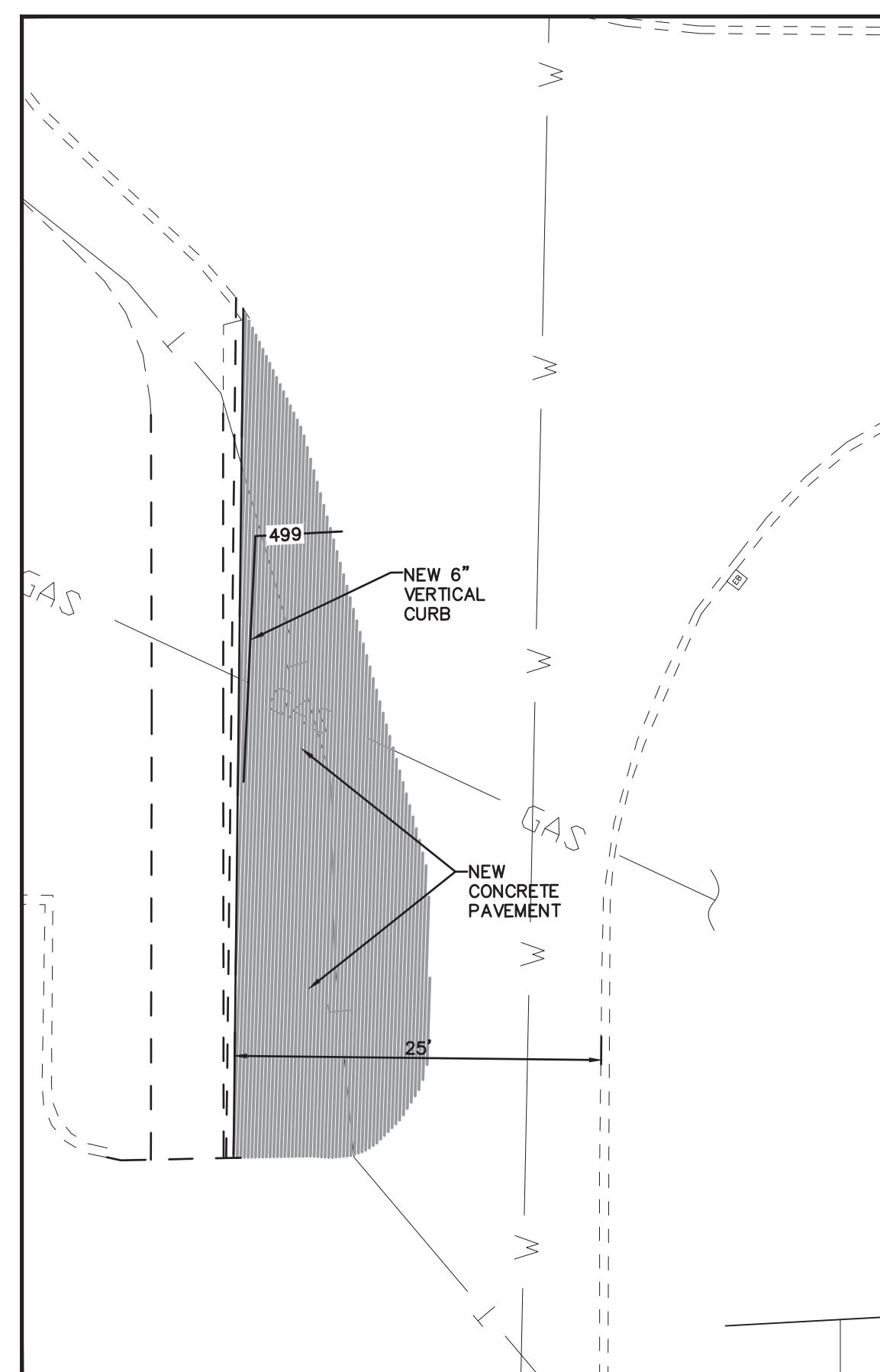
0 5 10

(IN FEET)

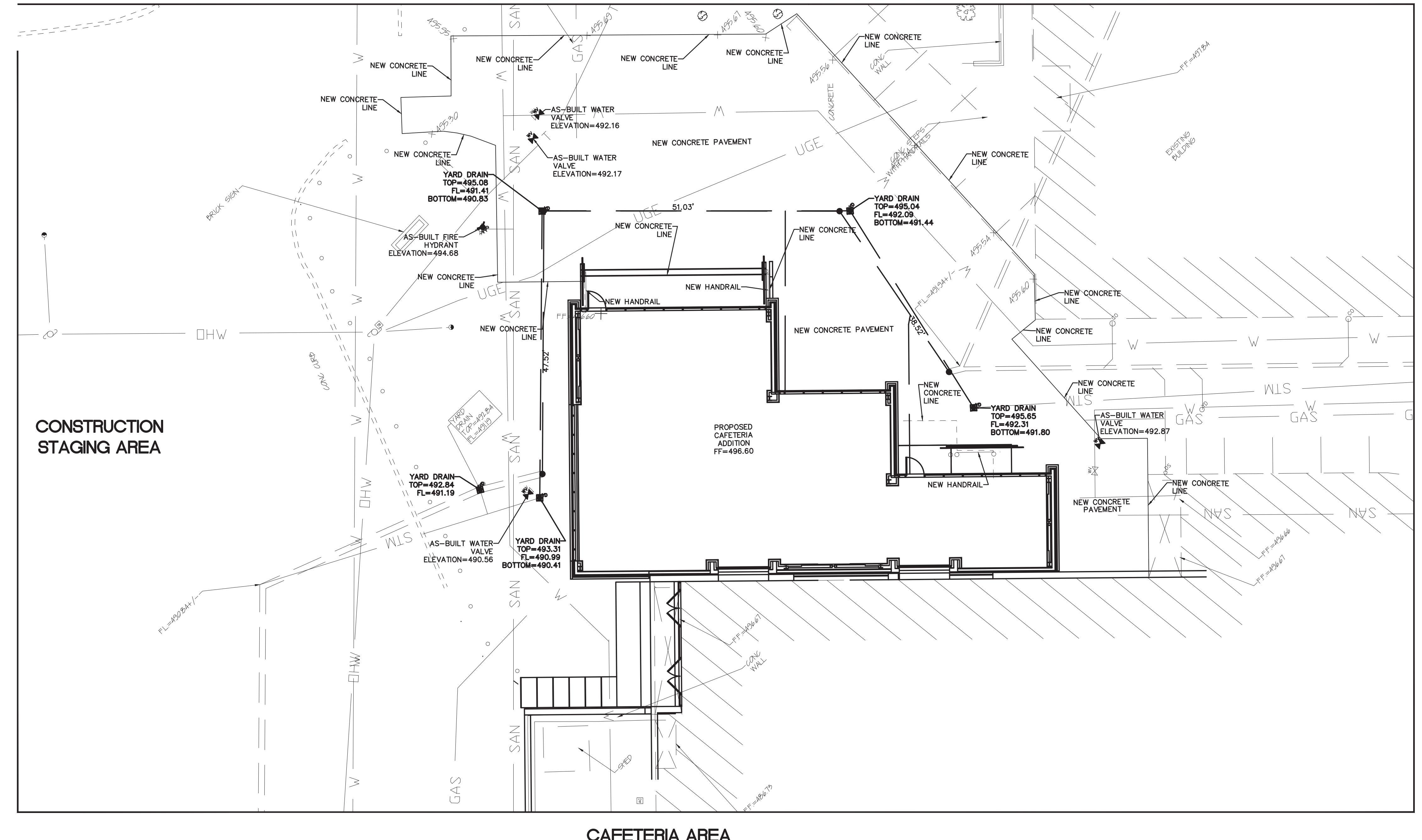
1 inch = 10 ft.

PROJECT TITLE:	<p>A SET OF AS-BUILT PLANS FOR NORTH HIGH SCHOOL BUILDING ADDITION</p>	Bax Project #03-12613B	ISSUE: 10-24-2
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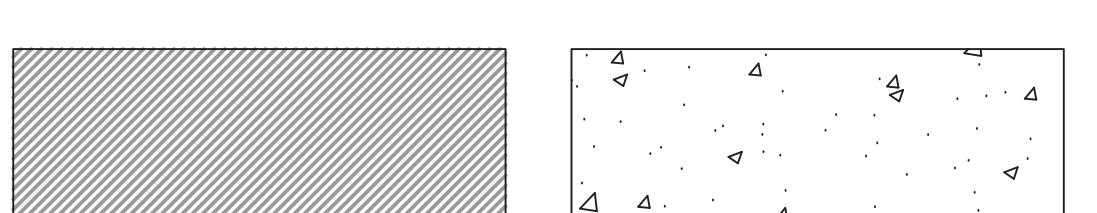
**ALL UTILITY LOCATIONS
(HORIZONTAL AND VERTICAL)
TO BE VERIFIED IN THE FIELD
BY CONTRACTOR**



DRIVE LANE WIDENING



CAFETERIA AREA



CONCRETE PAVEMENT

CONCRETE SIDEWALK

SEE DETAILS ON C10

DOWNSPOUT SYSTEM B				
No.	Sta.	Type	Elevation	
B1	0+00	NEW 10" DRAIN MANHOLE	T-493.50 FL-491.29+/-	
B2	0+44	10" GRATED STORM DRAIN	T-495.10 FL-491.51	
B3	0+84	10"X4" TEE WYE		FL491.71
B4	0+93	10" GRATED STORM DRAIN	T-495.10 FL491.76	
B5	1+14	10"X4" WYE W/11-1/4° BEND		FL491.86
B6	1+25	10" GRATED STORM DRAIN	T-495.55 FL491.92+/-	
B7	B3+30'RT	4" DRAIN LINE		FL492.10
B8	B5+27'RT	4" DRAIN LINE		FL492.60

Developer / Owner:
Fort Zumwalt School District
555 E. Terra Ln
O'fallon, MO 63367

Site Plan

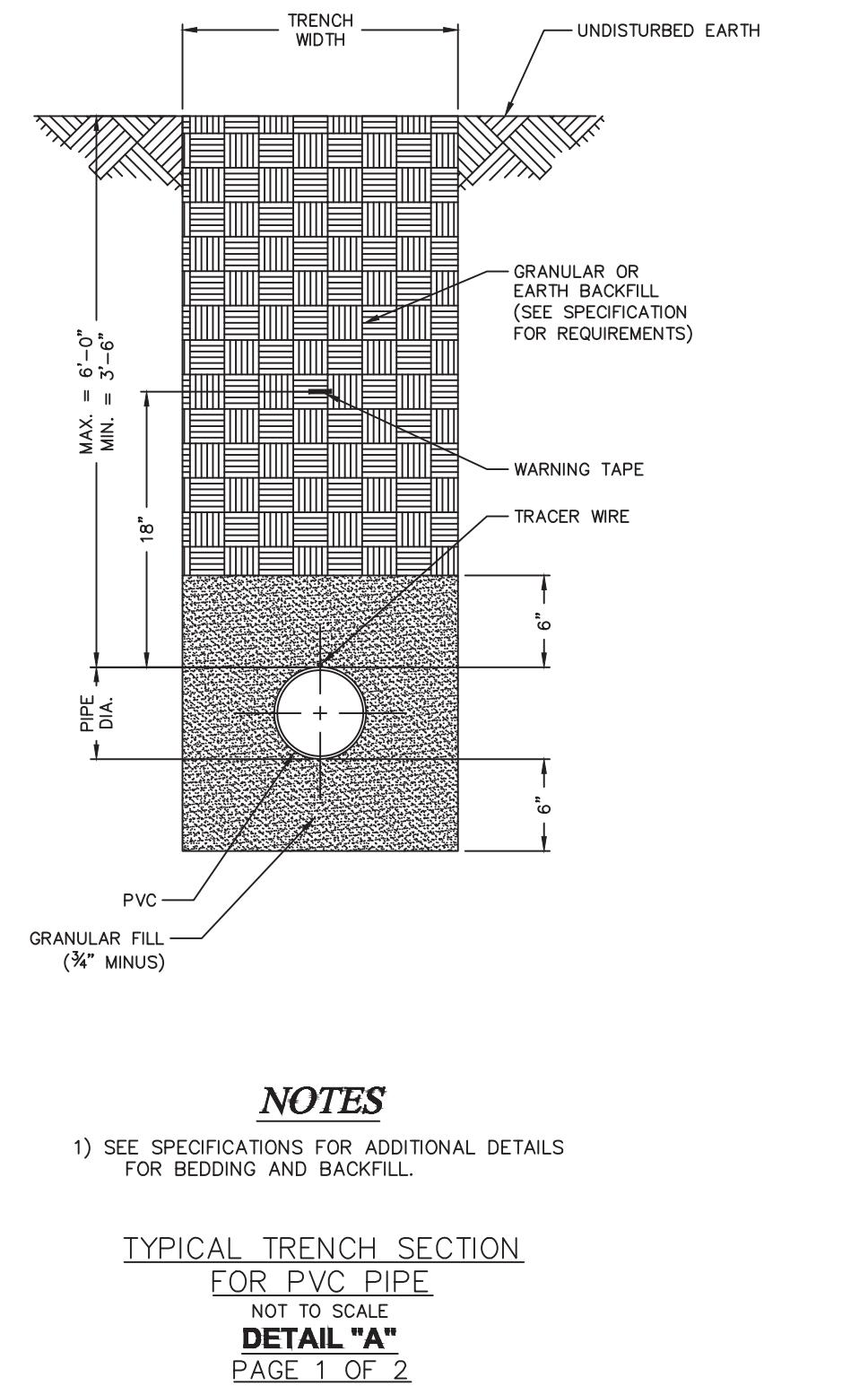
P+Z No. #22-010174
APPROVAL DATE: 12-01-22

City No. #

Page No. **C7**

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE 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 IMPROVEMENTS.

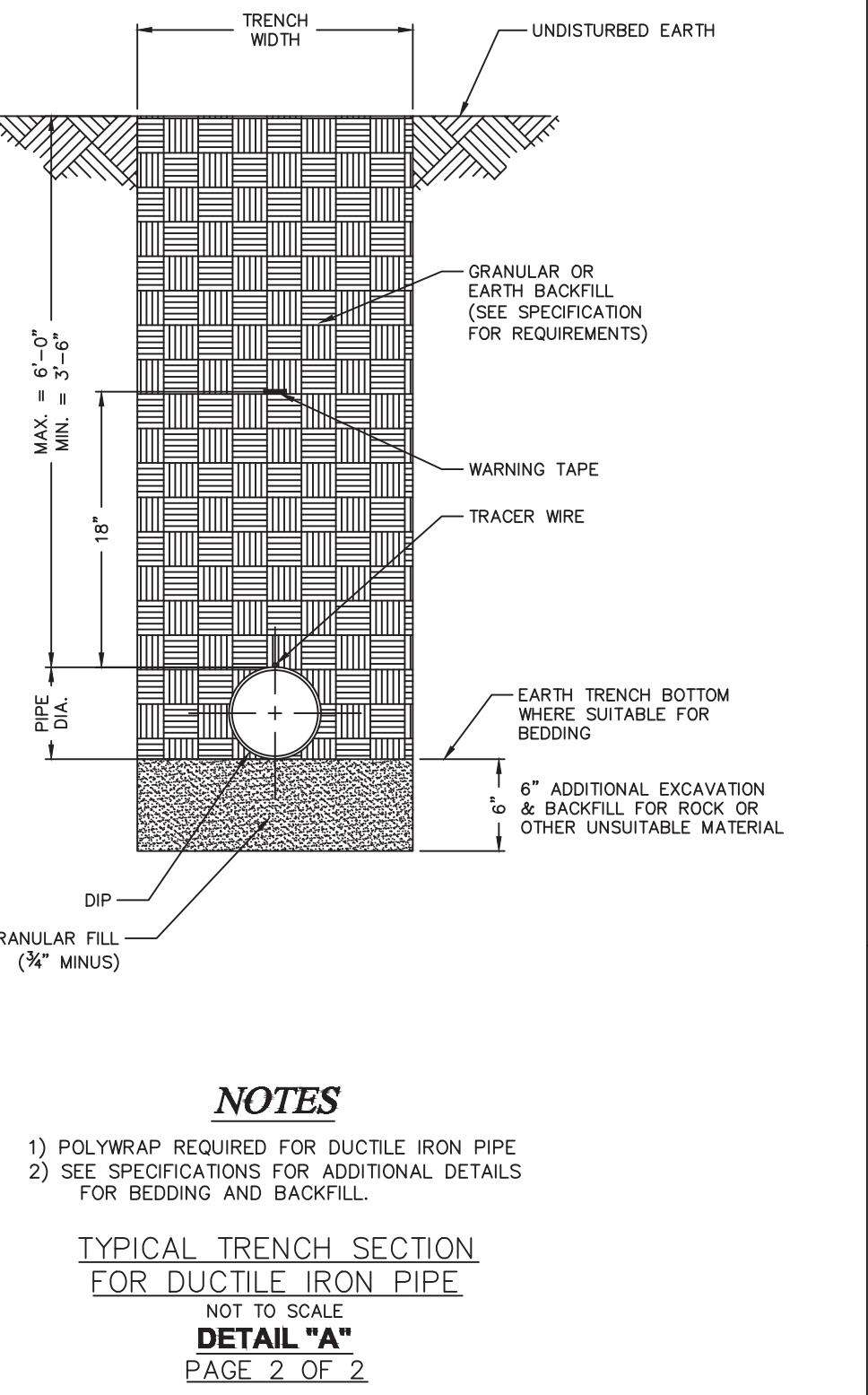
NOTE: THIS DETAIL IS FROM PWSD#2



NOTES
1) SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR BEDDING AND BACKFILL.
2) POLYWRAP REQUIRED FOR DUCTILE IRON PIPE
3) SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR BEDDING AND BACKFILL.

TYPICAL TRENCH SECTION FOR PVC PIPE
NOT TO SCALE
DETAIL "A"
PAGE 1 OF 2

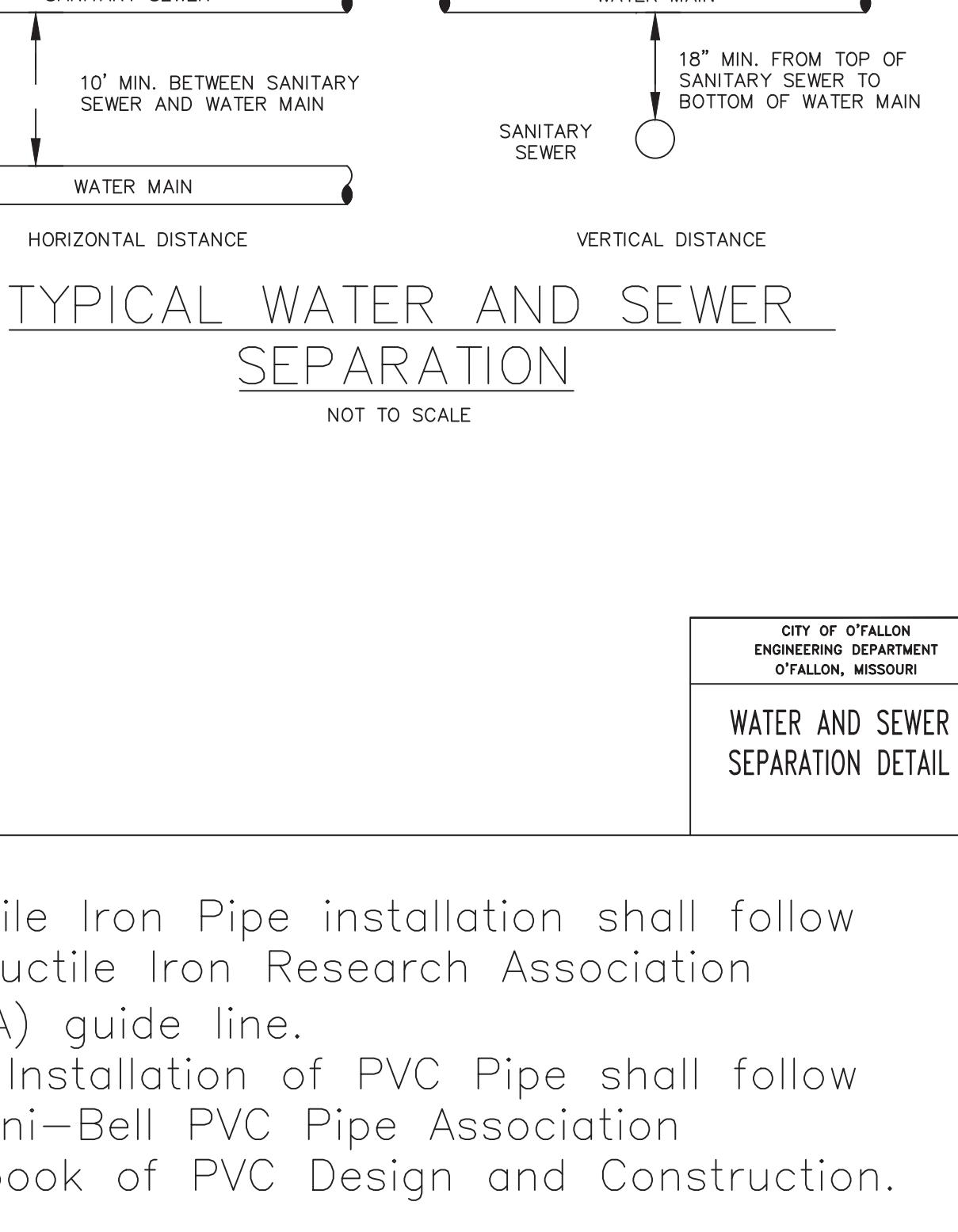
NOTE: THIS DETAIL IS FROM PWSD#2



NOTES
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2) POLYWRAP REQUIRED FOR DUCTILE IRON PIPE
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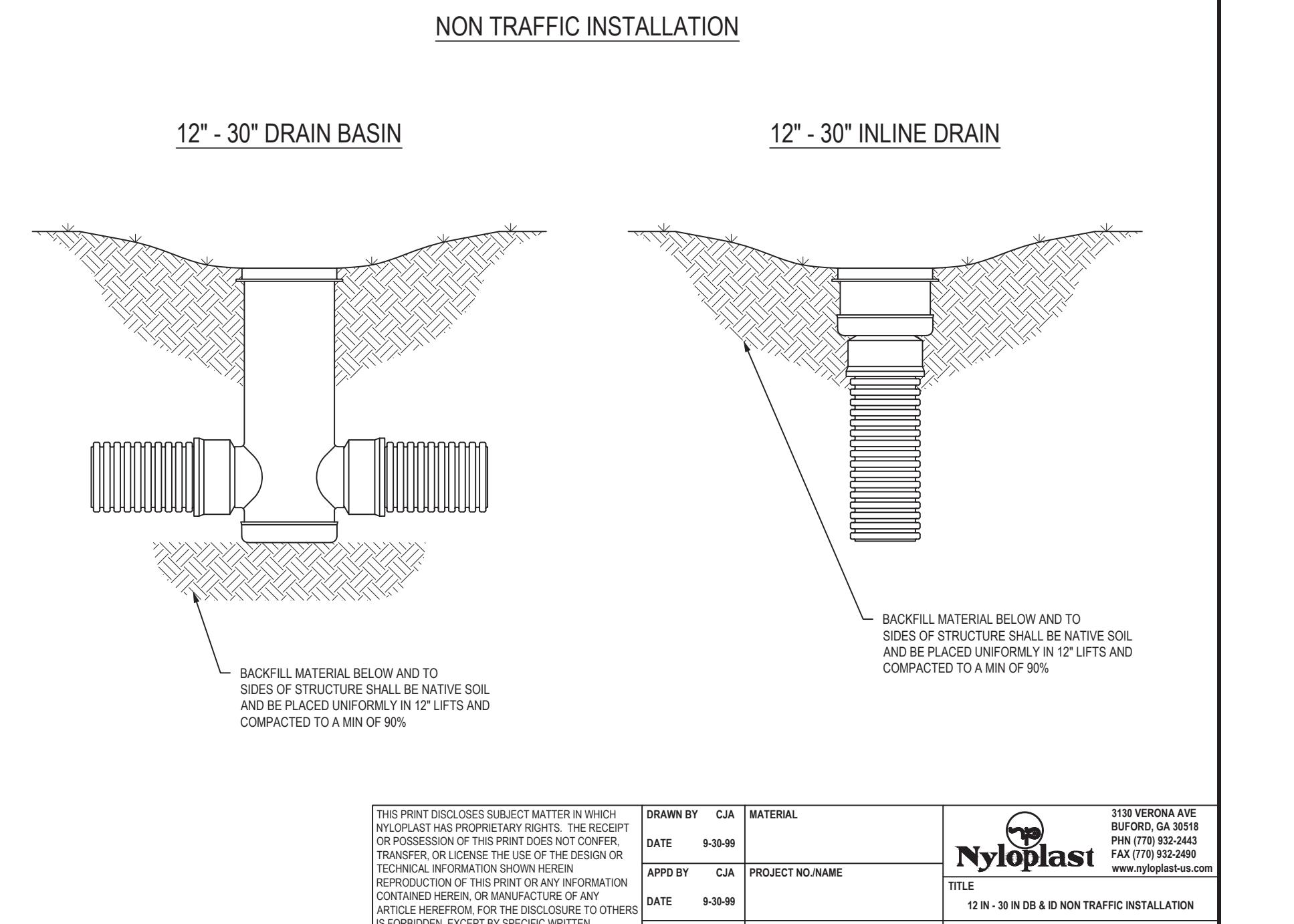
TYPICAL TRENCH SECTION FOR DUCTILE IRON PIPE
NOT TO SCALE
DETAIL "A"
PAGE 2 OF 2

NOTE: THIS DETAIL IS FROM PWSD#2



TYPICAL WATER AND SEWER SEPARATION
NOT TO SCALE

NOTE: THIS DETAIL IS FROM PWSD#2

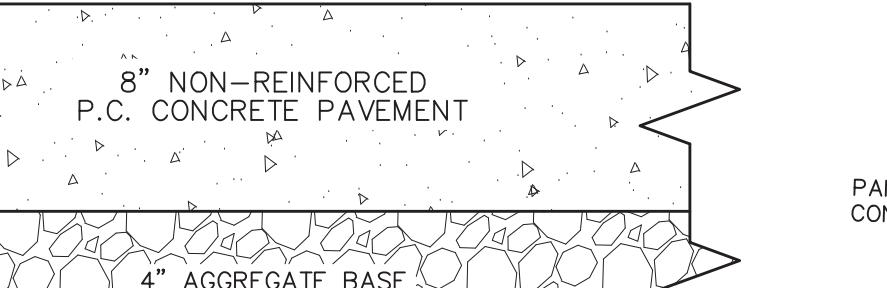


NON TRAFFIC INSTALLATION

12" - 30" DRAIN BASIN
12" - 30" INLINE DRAIN

FINISH GRADE
BACKFILL MATERIAL BELOW AND TO SIDES OF STRUCTURE SHALL BE NATIVE SOIL AND BE PLACED UNIFORMLY IN 12" LIFTS AND COMPACTED TO A MIN OF 90%
M.J. VALVE
LOCATOR WIRE TAPE TO TOP OF PIPE
UNDISTURBED EARTH AT BOTTOM OF TRENCH
2"X4"X8" CONCRETE BLOCK
4"X8"X16" CONCRETE BLOCK
TEES AND TAPPING SLEEVE
BLICCS
BENDS
TYPICAL SECTION
NOT TO SCALE

NOTE: THIS DETAIL IS FROM PWSD#2



CONCRETE PAVEMENT DETAIL
NOT TO SCALE

8" NON-REINFORCED P.C. CONCRETE PAVEMENT
4" AGGREGATE BASE
10' MIN. BETWEEN SANITARY SEWER AND WATER MAIN
18" MIN. FROM TOP OF SANITARY SEWER TO BOTTOM OF WATER MAIN
HORIZONTAL DISTANCE
VERTICAL DISTANCE
WATER MAIN
SANITARY SEWER
WATER MAIN
CITY OF O'FALON
ENGINEERING DEPARTMENT
O'FALON, MISSOURI
WATER AND SEWER SEPARATION DETAIL

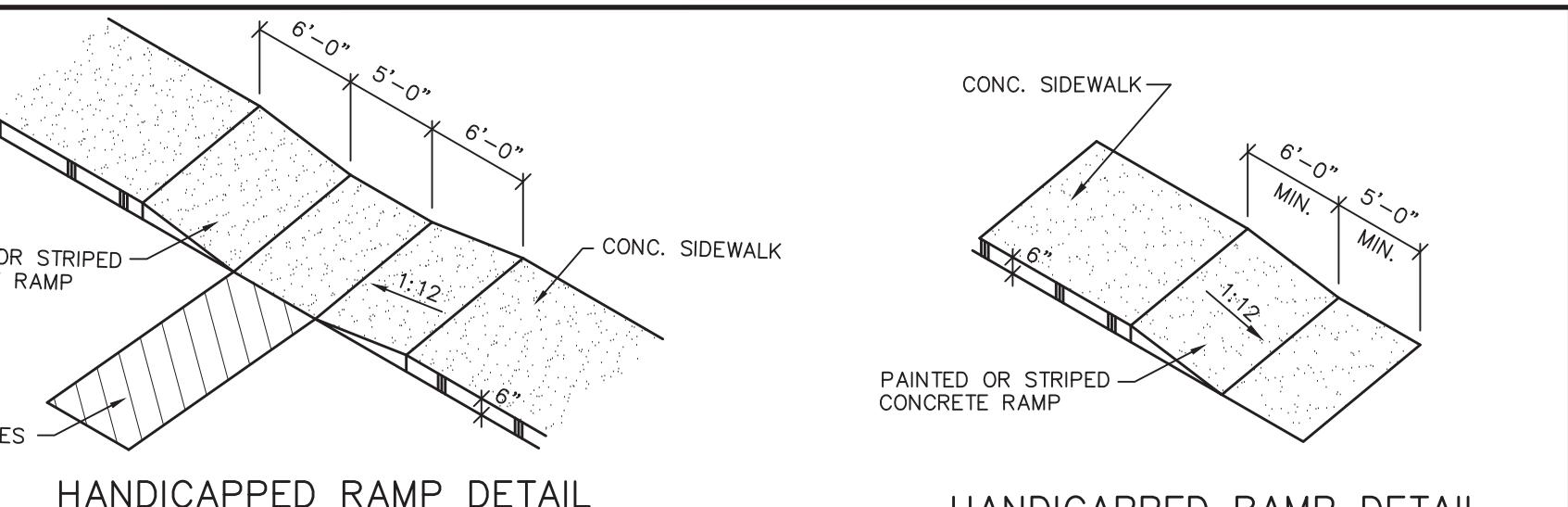
CASTiTACT™ Warning Panels are the latest innovation in detectable warning systems. A long term solution meeting both state and local standards for handicap detection. CASTiTACT Warning Panels are designed for exterior use at the bottom of curb ramps and other locations such as depressed curbs, raised crosswalks, and raised intersections, borders of pools and islands, at edge of transit platforms and where raised tracks cross the sidewalk to warn people with visual impairments of potential hazards. Detectable warnings must be installed across the full width of ramps and 24" minimum in lengths of ramp. CASTiTACT Warning Panels are integrally colored to provide visual contrast with the adjacent walking surface.

CASTiTACT™ are reinforced with stainless steel prestress strands resulting in a high strength and crack resistant panel. Abrasion 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). CASTiTACT are quality controlled manufactured to produce a dense, freeze thaw durable panel. Architectural concrete finished for safe wet and dry slip resistance. Concrete surfaces are easily maintained and cleaned with pressure washing.

DOME SPECIFICATIONS
Americans with Disabilities Act 4.29.2 Standards
Dome Base = 0.23" (3mm)
Dome Edge = 0.25" (5mm)
Dome Height = 0.2" (5mm)
Dome Spacing (P) = 2.35" (60mm)
Dome Diag. Spacing (D) = 3.32" (85mm)
PANEL SPECIFICATION
Panel Thickness = 0.075" (22mm)
Avg. Weight = 10.5 lbs/ft² ASTM C59
Reinforcement = 304 Stainless Steel 1/16" 7x7 4" OC both directions and faces
Final prestress forces after loss, 300 lbs per tendon, net panel prestress force 172 psi in both directions.
Slip Resistance = 0.80 ASTM D 2047 Modified

WEDGE DETAIL
WEDGE PANEL
SQUARE PANEL

NOTE: THIS DETAIL IS FROM PWSD#2



NOT TO SCALE

CONC. SIDEWALK
PAINTED OR STRIPED CONCRETE RAMP
CONC. SIDEWALK
PAINTED OR STRIPED CONCRETE RAMP
HANDICAPPED RAMP DETAIL
NOT TO SCALE

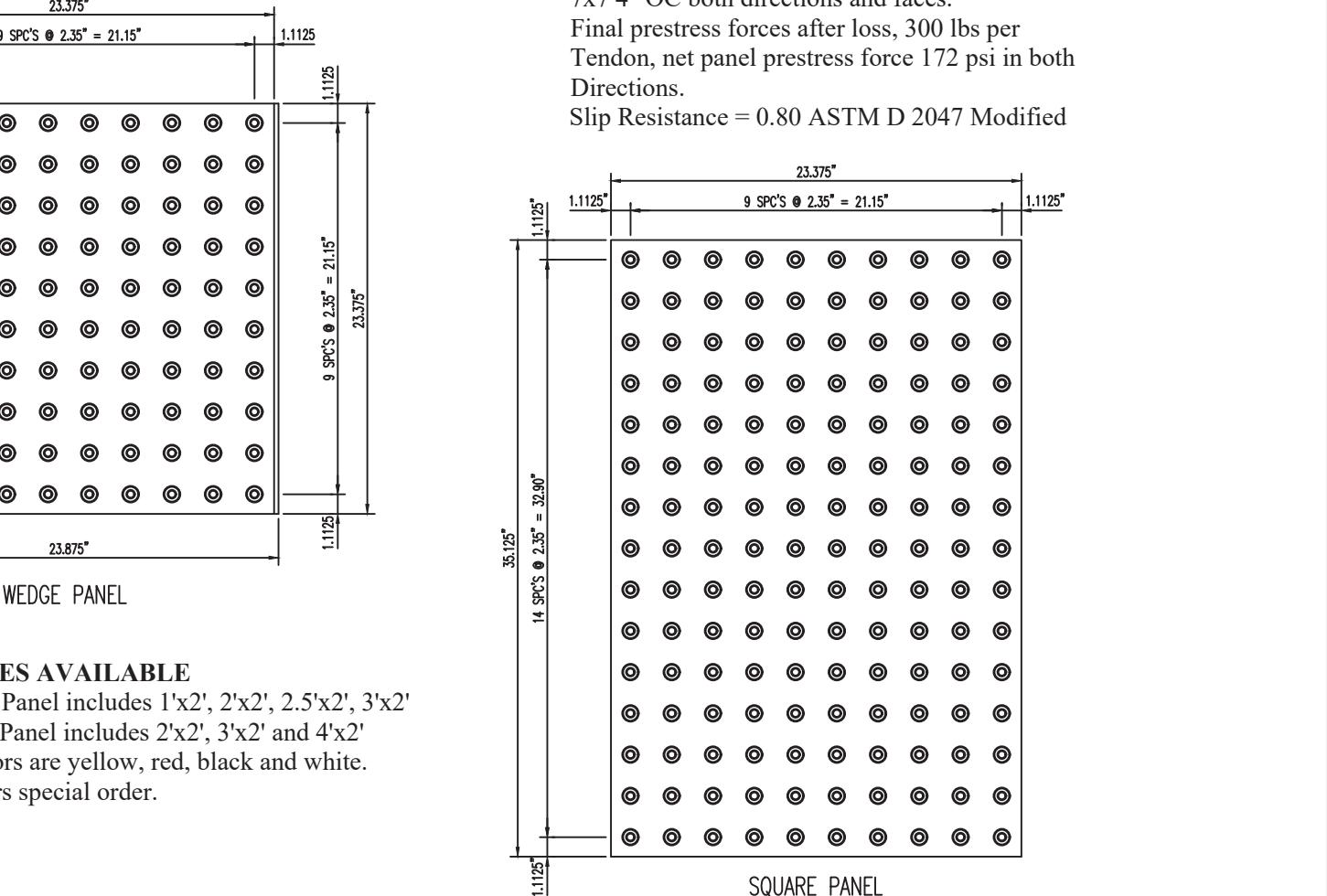
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WEDGE DETAIL
WEDGE PANEL
SQUARE PANEL

NOTE: THIS DETAIL IS FROM PWSD#2



TYPICAL DETAIL OF DETECTABLE WARNING SURFACE
NOT TO SCALE

CONSTRUCTION JOINT WIDTH BETWEEN JOINTS EQUALS SIDEWALK WIDTH

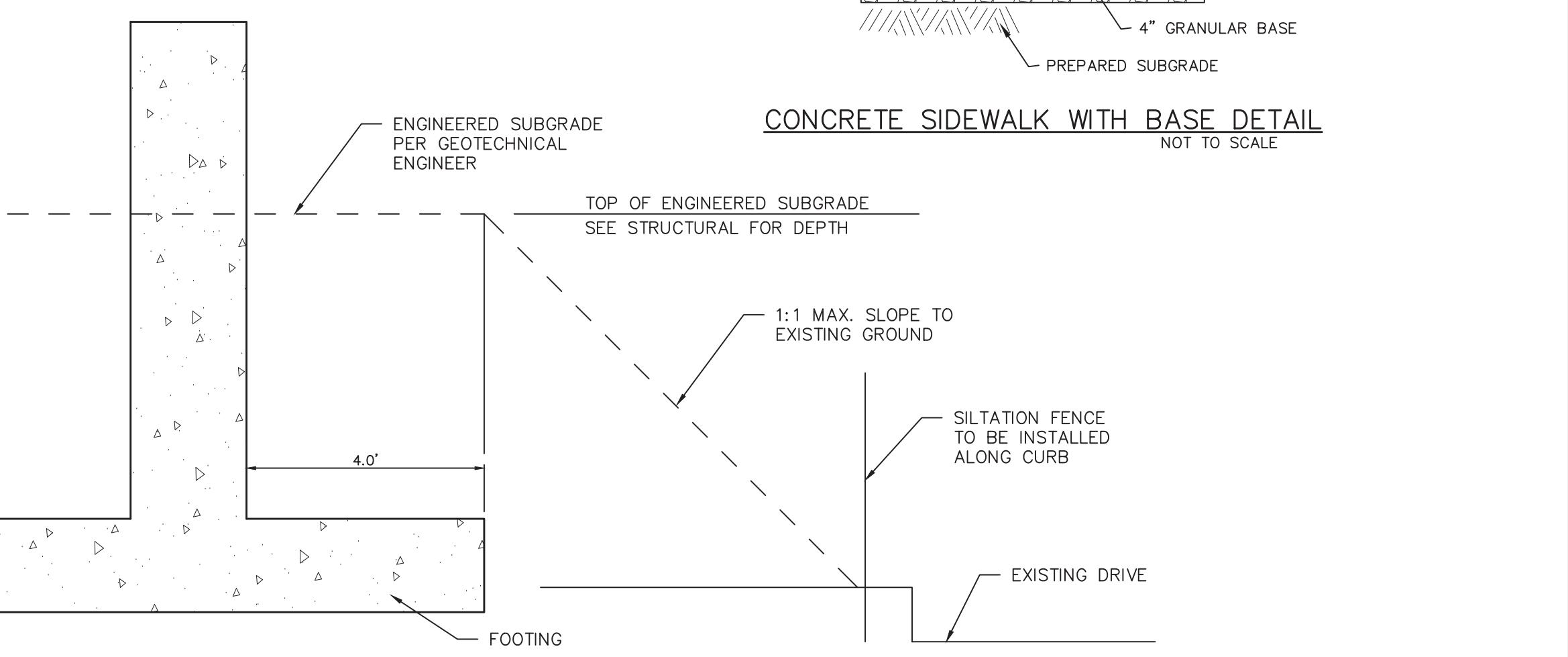
NOTE: NYOPLAST, PWSD#2 AND CITY OF ST. CHARLES DETAILS ARE REFERENCE ONLY

NON TRAFFIC INSTALLATION

12" - 30" DRAIN BASIN
12" - 30" INLINE DRAIN

FINISH GRADE
BACKFILL MATERIAL BELOW AND TO SIDES OF STRUCTURE SHALL BE NATIVE SOIL AND BE PLACED UNIFORMLY IN 12" LIFTS AND COMPACTED TO A MIN OF 90%
M.J. VALVE
LOCATOR WIRE TAPE TO TOP OF PIPE
UNDISTURBED EARTH AT BOTTOM OF TRENCH
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4"X8"X16" CONCRETE BLOCK
TEES AND TAPPING SLEEVE
BLICCS
BENDS
TYPICAL SECTION
NOT TO SCALE

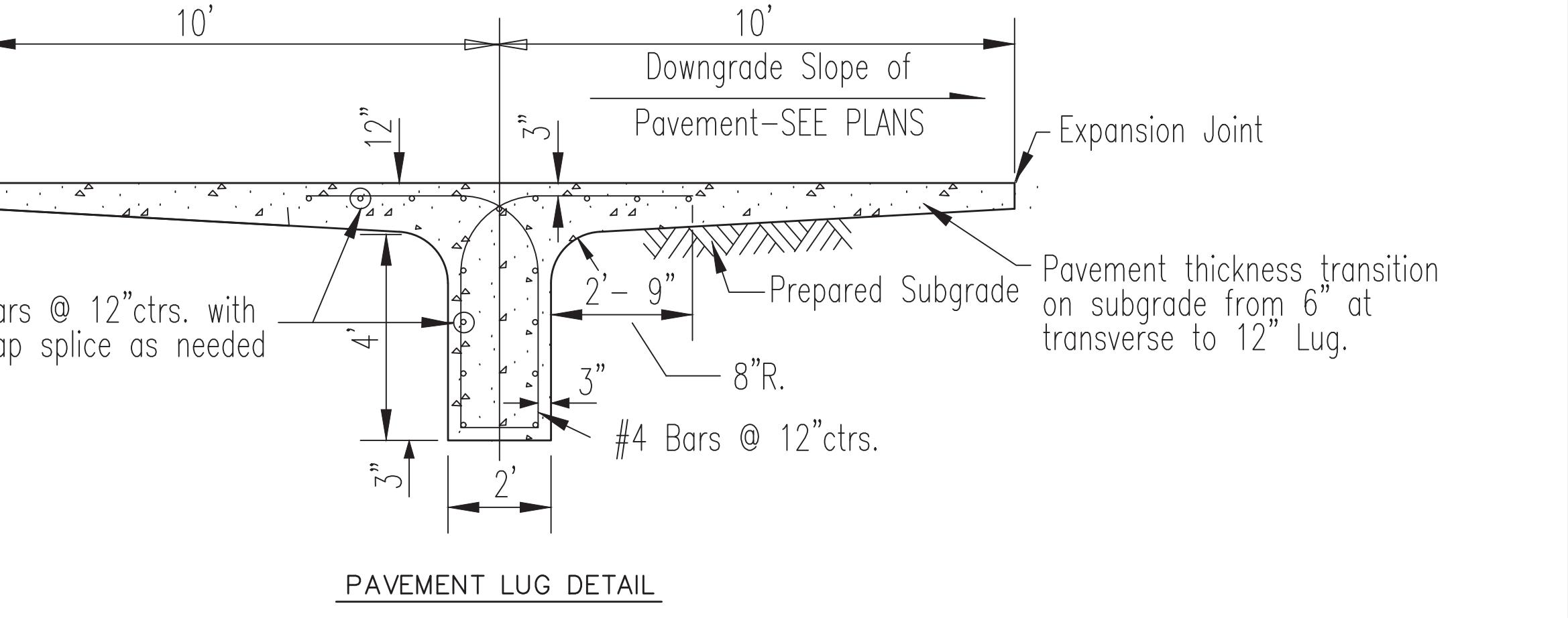
NOTE: THIS DETAIL IS FROM PWSD#2



CONCRETE SIDEWALK WITH BASE DETAIL
NOT TO SCALE

TOP OF ENGINEERED SUBGRADE
SEE STRUCTURAL FOR DEPTH
1:1 MAX. SLOPE TO EXISTING GROUND
SILTATION FENCE TO BE INSTALLED ALONG CURB
EXISTING DRIVE
FOOTING
REMEDIED FOOTING DETAIL
NOT TO SCALE

NOTE: THIS DETAIL IS FROM PWSD#2



CONCRETE LUG DETAIL
NOT TO SCALE

Expansion Joint
Downgrade Slope of Pavement-SEE PLANS
#4 Bars @ 12" ctrs. with 18" lap splice as needed
Prepared Subgrade
Pavement thickness transition on subgrade from 6" at transverse to 12" Lug.

GRATE ENGINEERING SPECIFICATION: ZURN P4-BZ
20" [1016mm] X 4-1/8" [105mm] Bronze Decorative Grate weighing 4.5 lbs. per linear foot [6.7 kg/m]. The grate has an open area of 11.5 square inches per linear foot [243.4 cm²/m] DIN Rating of Class A, ANSI rating of Light-Duty.

ZURN P4-BZ
4-1/8" [105mm] WIDE BRONZE DECORATIVE GRATE
SPECIFICATION SHEET
TAG

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice

Please Check
✓ Item No. Part Number Item I.D.
1 64304 P4-BZ

20 [508] 3/4 [19] 4 1/8 [105]

GRATE ENGINEERING SPECIFICATION: ZURN P4-BZ
20" [1016mm] X 4-1/8" [105mm] Bronze Decorative Grate weighing 4.5 lbs. per linear foot [6.7 kg/m]. The grate has an open area of 11.5 square inches per linear foot [243.4 cm²/m] DIN Rating of Class A, ANSI rating of Light-Duty.

ZURN P4-BZ
Material: Bronze
DIN Rating: Class A
Weight: 4.5 lbs/ft [6.7 kg/m]
Open Area: 11.5 in²/ft [243.4 cm²/m]
ANSI Rating: Light-Duty
Application: Decorative/Heel-Proof
Slot Width/Hole Size: 0.25" [6.4mm]
ADA: No
H-20: No
FAA: No

Regularly furnished unless otherwise specified
Zurn Industries, LLC - Specification Drainage Operation
1801 Pittsburgh Avenue, Erie, PA U.S.A. 16502 - Ph: 865-663-9876, Fax 814-454-7929
In Canada: 1-800-361-3333
9544 Nashua Drive, Mississauga, Ontario L4V 1Z2 - Ph: 905-495-8272, Fax 905-495-1292
www.zurn.com

Page 1 of 8

Rev. B Date: 11/16/15
C.N. No. 133494
Prod. Dwg. No. FT985

Project Title: A SET OF AS-BUILT PLANS FOR NORTH HIGH SCHOOL BUILDING ADDITION
Box Project #03-12613B Issue: 10-24-25

Engineering Planning Surveying
■ Point West Blvd.
St. Charles, MO 63301
636-929-4552
Fax 636-917-1718

Disclaimer of Responsibility
I hereby certify that the contents intended to be reflected by my seal are limited to this sheet, and that the original drawing, specification, or other documents from which this sheet was derived, are to be used for any part or parts of the architectural or engineering project or survey.

Reference Drawings Only, Surveyor's Seal Does Not Apply to These Details

Bid / Permit Set 03/20/2023
Addendum 2 04/13/2023
Addendum 3 04/21/2023
Utility Addendum 09/26/2023
Added 2" WM at Auditorium 02/29/24

Developer / Owner:
Fort Zumwalt School District
555 E. Terra Ln
O'Fallon, MO 63367

Construction Details

P+Z No. #22-010174
APPROVAL DATE: 12-01-22
City No. #
Page No. C10