General Construction Notes

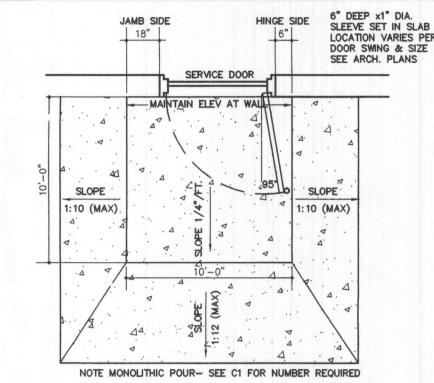
- 1. All existing on-site structures, sidewalks, concrete or asphalt surfaces, curbing, utility poles, sewer structures, utility services, fences, trees, shrubs, and debris noted for removal on the drawings shall be demolished and removed from the site and properly disposed of all in a manner approved by the regulating
- 2. Contractor shall be responsible for coordinating and providing all services and fees necessary to obtain the required building demolition permits and for fees by the various utilities associated with the disconnection and termination of their services.
- 3. Contractor shall be responsible for determining the amount of removals, demolition, clearing and grubbing, stripping of vegetation, pavement breaking, and haul off.
- 4. Contractor shall obtain all necessary state and local permits required for hauling and disposal of demolition, clearing, and non-suitable materials from the project site. Hauling methods and conditions of the permit shall be strictly adhered to.
- 5. Contractor shall preserve and protect all existing improvements (which are not to be removed) within the project limits or adjacent thereto from damage as a result of his activities in the performance of work
- 6. Underground facilities, structures and utilities have been plotted from available surveys, records and information and, therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, location or depth of these facilities, structures and utilities. The Contractor shall be responsible for verifying the actual location of all underground facilities, structures and utilities, either shown or not shown on these plans. The underground facilities, structures and utilities shall be located in the field prior to any grading, excavation or construction of improvements. Should the actual location, size or depth or any underground facilities, structures or utilities differ from those indicated on these plans, the Contractor shall immediately notify Clayton Engineering prior to proceeding with the installation of any proposed improvements in the area where the difference exists. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMO.
- 7. Contractor to verify location and flow line of all existing utilities prior to connection. All connections to be made in accordance with local codes and/or utility companies requirements.
- 8. Contractor to notify Engineer as soon as possible if conditions on ground differ from those shown on
- 9. The original of these drawings are on file at the office of The Clayton Engineering Company. Any modifications to these drawings shall release said Clayton Engineering Company, the Engineer and/or the

Surveyor whose seal appears hereon from any liability resulting from said unauthorized modifications.

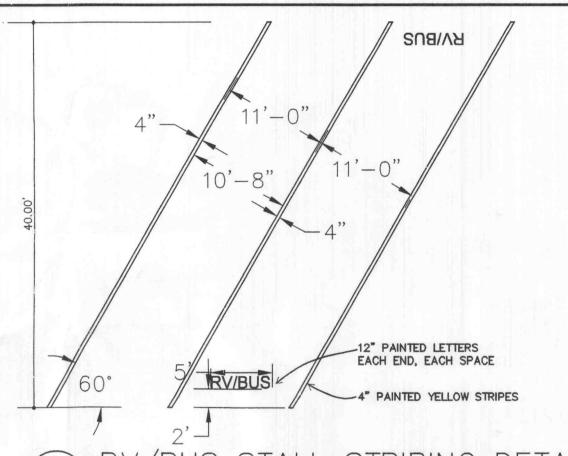
- 10. Benchmark Station: SC-18-Standard MO DNR aluminum GRS disk stamped "SC-18, 1999," located at the August A. Bush Wildlife Area in a grassy area west of the paved parking lot for the main building of the Bush Wildlife Area. Station is located 24' south of the center of the entrance road and 18' west of the service drive to the back of the building. Elevation = 611.55.
- 11. Site Benchmark: "SQ" on southerly end of westerly headwall of a box culvert under Weldon Spring Road approximately 1025' North of the Southwestern Bell Building driveway. Elev. = 532.51
- 12. All grading shall be within 0.5 feet more or less of the contours shown on the grading plan, unless otherwise directed by the Owner or Engineer.
- 13. All fills are to be left with a temporary lip (berm) at the top of the slope at the end of each day's
- 14. Any trees, brush, organic topsoil and other objectionable material remaining shall be removed and disposed of at an off-site location. Additional suitable fill material as needed shall be brought onto the site. Areas which are to be filled shall be compacted to a minimum density of 90 % maximum density as determined by the Modified AASHTO Compaction Test, T-180-74 (ASTM D-1557) in the building and pavement area and in other areas, or as set forth in a Geotechnical Engineer's investigative written report setting forth the grading specifications and requirements.
- 15. Before filling, the Contractor shall thoroughly clean out and remove all objectionable material, organic material, rubbish and debris. Existing concrete and asphalt paving shall be broken up to a maximum dimension of 6 inches in size, and may be mixed with sufficient excavated soil to eliminate voids and disposed of in fill areas on the site.
- 16. Broken asphalt or concrete shall not be placed in building areas or utility trenches.
- 17. During the excavation for footings, if any unsuitable soil is uncovered, the Contractor shall remove it and deepen the footings as necessary to build on natural, undisturbed soil or properly compacted fill.
- 18. The General Contractor shall be responsible for rough grading of all landscape areas. Grade to match top of proposed pavement elevation, not top of curb elevation. All areas shall be free of debris. Landscape Contractor shall be responsible for a minimum of 6" of topsoil in all landscape areas.
- 19. The developer is advised that utility companies will require compensation for relocation of their utility facilities within the public road right-of-way. Utility relocation cost shall be considered the developer's responsibility. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of road improvements.
- 20. Provide adequate off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driveway conditions.
- 21. All storm water shall be discharged at an adequate natural discharge point.
- 22. Interim storm water drainage controls in the form of siltation control measures are required.
- 23. The developer is required to provide adequate storm water systems in accordance with the City of O'Fallon, standards.
- 24. All disturbed earth areas within the right-of-way shall be sodded.
- 25. All offsite property owners shall be given notice 48 hours in advance of any work.
- 26. Any disturbed offsite property (i.e. bushes, fences, mailboxes, etc.) shall be replaced, in kind, at the developer's expense.
- 27. Damage to offsite streets and downstream properties due to soil erosion or siltation shall be prevented by erecting silt barriers or basins, or by utilizing similar devices to effect soil stabilization prior to the start of any grading operations.
- 28. All protective measures shall be installed down slope of every location where the original ground is to be disturbed.
- 29. Storm water pipes, outlets and channels shall be protected by silt barriers and kept free of waste and silt at all times prior to final surface stabilization and paving.
- 30. No slopes shall be steeper than 3 (horizontal) to 1 (vertical).
- 31. Slopes steeper than 5 to 1 and all swales shall be protected by sodding or paving upon completion of construction or compaction. Slopes steeper than 5 to 1 shall be beached. All other areas disturbed by grading operations to be protected by seeding and mulching as soon as possible.
- 32. Inspection of, and necessary repairs made, to the erosion and silt control measures must be made daily and/or following periods of precipitation.
- 33. If siltation basins are utilized, they shall remain functional until tributary area to each basin has been seeded or sodded and sufficient growth established to prevent erosion.
- 34. All excavated rock material shall remain onsite for use in bank or ditch stabilization as directed by the Owner or Engineer. The excavated rock shall only be removed from the site if so directed by the Owner or Engineer.
- 35. Face of all inlets to be set 2 feet behind back of curb and 3 inches above top of curb where 3" lip curbs are installed. Top of inlets shall be set flush with top of curb where 6" vertical curbs are installed.
- 36. All concrete pipe in shall be reinforced concrete pipe and meet current A.S.T.M. Specification C-76 and shall be Class III unless otherwise noted on profiles.

- 37. Joints for concrete pipe shall be rubber gasketed meeting ASTM C-443 with a main sealing surface of no less than 3 inches.
- 38. All filled places under proposed storm or sanitary sewer, proposed roads, and/or paved areas shall be compacted 90% of maximum density as determined by the Modified AASHTO T-180 Compaction Test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99. All filled placed in proposed roads shall be compacted from the bottom of the full up. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations.
- 39. Location and elevation of field inlets, manholes and culvert pipes to be verified by Engineer after stakeout and prior to construction.
- 40. All "on-site" storm sewer will remain privately owned and maintained.
- 41. All materials and methods of construction for sewers to meet the requirements of the City of O'Fallon, MO, Duckett Creek Sewer District, and St. Charles County.
- 42. All sewer construction and materials to be in accordance with the City of O'Fallon, MO, Duckett Creek Sewer District, and St. Charles County.
- 43. All sanitary connection pipe and fittings shall be polyvinyl chloride pipe (PVC) with the material meeting and the pipe conforming to current ASTM Specification D-3034, SDR-35, and shall be bedded to meet manufacturer's specifications. Joints for PVC pipe shall conform to current ASTM Specification
- 44. Manhole frames and covers shall be standard frames and cover; Frame No. B-1113, Cover No. B-1114, as manufactured by Tower Grove Foundry, or equivalent, approved by the Engineer.
- 45. Cleanouts to consist of 4 inch on 6-inch wye turned up, 4-inch elbow and riser. Cap with a round frame and cover, Neenah Foundry Company R-1976 or equivalent, approved by the Engineer. Frame to be set in
- 46. The minimum vertical distance from the low point of a basement to the flow line of a sanitary sewer at the corresponding house connection shall be not less than the diameter of the sewer plus a vertical distance of two and one half (2-1/2') feet.
- 47 All materials and methods of construction for new water mains, service lines and appurtenances to meet the requirements of the Public Water Supply District No. 2, Missouri, Missouri State Division of Health, and Missouri Department of Natural Resources. Installation to be in accordance with ANSI/AWWA C600,
- 48. All new 6" water line to be Ductile Iron Pipe conforming to ANSI/AWWA C151/A21.51, latest edition.
- 49. Joints on ductile iron pipe shall be push on type rubber gasket joints meeting ANSI/AWWA C111/A21.11, latest edition.
- 50. Adaptors, couplings and/or other accessories and materials shall be those recommended for the pipe being used. Ductile-Iron Fittings shall meet ANSI/AWWA C110/A21.10, latest edition.
- 51. The 2-1/2" Service Line shall be flexible or rigid Type "K" or "L" copper as outlined in above referenced "Tap and Service Line Information".
- 52. The 3/4" Service Lines shall be flexible Type "K" or "L" copper as outlined in above referenced "Tap and service Line Information".
- 53. Joints on copper service lines shall be either flared, compression or silver soldered.
- 54. Gate valves and stopcocks must be of a type approved by Public Water Supply District No. 2. Gate Valves shall meet ANSI/AWWA C500, latest edition.
- 55. All Gate Valves shall meet AWWA Standard C500 for 200 pounds working pressure; Mueller Iron Body Double Disc Gate Valve with 2 inch wrench nut; parallel seats bronze mounted, with recommended adapters and couplings for PVC Pipe, or equivalent, approved by the Engineer.
- 56. All gate valves and stopcocks shall be provided with a stop or curb box of a type approved by Public Water Supply District No. 2. Boxes shall extend to and be flush to the finished ground or pavement surface.
- 57. All Valve Boxes shall be Mueller Buffalo Screw Type or equivalent, approved by the Engineer. Top shall be set even with finish grade.
- 58. Install water meter according to Public Water Supply District No. 2 standards.
- 59. All water lines shall be installed in accordance with ANSI/AWWA C-600, latest edition or City Plumbing Code, whichever is most stringent, with a minimum of 42 inches of cover to proposed finish
- 60. Thrust blocks shall consist of poured in place concrete and shall be placed at all changes in direction, tees and ends of water lines.
- 61. All water lines shall be laid at least 10 feet horizontally, from any sanitary sewer, storm sewer, or manhole. Whenever water lines must cross sanitary sewers, laterals or storm drains the water lines shall be laid at such an elevation that a minimum vertical distance of 18 inches between the outside of the water line and the outside of the sewer where the water line crosses the sewer line. This shall be the case where the water line is either above or below the sanitary. 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 there from 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.
- 62. All water lines to be tested and disinfected in accordance with the current Missouri State Division of Health and Missouri Department of Natural Resources' requirements and project specifications
- 63. All materials and methods of construction for pavement to meet the requirements of the State of
- 64. All trenches under, or adjacent to proposed pavement shall be backfilled to subgrade elevation with compacted 3/4" minus crushed limestone. Crushed limestone shall be compacted to 90 % density as determined by the Standard Proctor Test AASHTO T-99 (ASTM D-698). All other trenches within the road right of way shall be backfilled with suitable earth embankment material free from rubbish and debris and lumps, clods or rocks larger than 2, inches placed in 6" layers and compacted to the same density as above. Trenches not in road right-of-way or under or adjacent to pavement may be backfilled with earth embankment material defined above, jetted and neatly mounded to allow for subsequent settlement, unless otherwise directed by the Engineer.
- 65. Entire Right-of-Way shall be graded and compacted prior to paving. All fill in the right-of-way and the upper 18 inches of subgrade in cut areas where deemed necessary, shall be compacted. Shoulders shall be backfilled, compacted and shaped to finish grade as soon as curbs are in place and sufficiently set to remove
- 66. Subgrade for pavement shall be compacted with a self-propelled steel wheel roller weighing not less than 10 tons. Pavement shall consist of 9" Rolled Stone base course with a 2" Type 'X' Asphaltic Concrete base course and a 2" Asphaltic Concrete surface course. The base course shall be placed in two or more layers of approximately equal thickness, rolled and compacted. The surface course shall be spread in a single layer, rolled and compacted using not less than a 10 ton two wheel roller.
- 67. Type D joints will be required for all concrete pavement terminations at the end of a working day.
- 68. All materials and methods of construction for the entrance on Progress Point Court to meet the requirements of the Missouri Department of Transportation. Pavement shall consist of 9" Rolled Stone base course with a 2" Type 'X' Asphaltic Concrete base course and a 2" Asphaltic Concrete surface course. Entire subgrade shall be shaped, compacted and rolled prior to placing base course. Local soft spots in subgrade encountered during pavement construction shall be undercut and replaced with a thicker rolled stone base section.
- 69. Contractor shall guarantee paving for one year after final completion of construction against settlement, low spots or rayeling out of surface. Make any repairs necessary during guarantee period to maintain paving in original condition, including cost of repainting within repaired areas. Repairs shall include but not be limited to removing defective paving and replacing with new paving. (No overlays will be allowed).
- 70. All 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 contact the Project Engineer.

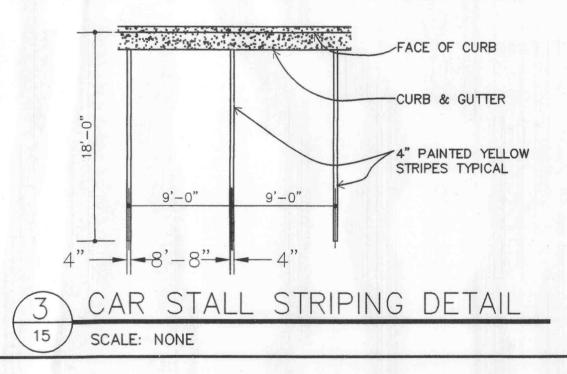
- 71. The Contractor shall repair any damage to the existing pavement that results from new the construction.
- 72. The Contractor shall assume complete responsibility for controlling all siltation and erosion of the project area. The Contractor shall use whatever means necessary to control erosion and siltation including, but not limits to, staked straw bales and/or siltation fabric 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 Owner and/or the City of O'Fallon and/or MoDOT. The Contractor's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The Owner and/or the City of O'Fallon and /or MoDOT may at their option direct the Contractor in his methods as deemed fit to protect property and improvements. Any depositing of silts or mud on new or existing payement or in new or existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the Owner and/or the City of O'Fallon and/or MoDOT.
- 73. All sign post and backs and bracket arms shall be painted black using Caroline Rustbond Penetrating Sealer SG and Carboline 133 HB paint (or equivalent as approved by the City and MoDOT). Signs designating street name shall be on the opposite side of the street from traffic control signs.
- 74. Lighting values will be reviewed on site prior to the final occupancy inspection. Corrections will need to be made if not in compliance with City Standards.
- 75. All utilities will be located underground.
- 76. Brick shall not be used in the construction of storm sewer structures.
- 77. All sign locations and sizes must be approved separately through the planning division.



SCALE: NONE



RV/BUS STALL STRIPING DETA SCALE: NONE



" COMPACTED GRAVEL BASE

SIDEWALK EXPANSION JOINT SCALE: NONE

OR CAST IRON COVER RON COVER (SEE SHEET 42) INLET STONE PLANT INSTALLED 3/4" MORTAR BED WITH 2 5/8" DIA 1'-0" PINS SINGLE CURB INLET ADJUST TO FINAL GRADE WITH BRICK WORK (MAX 11") (SEE SHEET 37) APPROVED PATENTED COMPRESSION TYPE 3/4" MORTAR BED TO RECEIVE 3'-2" SILL SHALLOW SINGLE ADAPTER RING CURB INLET INLET SILL 6" × 8" × 3'2" SEE SHEET 31 FOR MINIMUM DEMINSIONS APPROVED PATENTED INLET BASE & INLET MANHOLE BASE METROPOLITAN ST. LOUIS SEWER DISTRICT SINGLE STREET INLETS Standard Details of Sewer Construction PRECAST CONCRETE APRIL 1991

PINE OR DOUGLAS FIR BLOCK

SETTING POST AT OBSTRUCTIONS HERE POST CANNOT BE SET TO REQUIRE

SETTING POST THRU CONCRETE

STEEL POST & WOOD BLOCK

SECTION THRU BEA

(1) \$ RADIUS (2) 2" (TOLERANCE +1 1", -1/4 ")

TYPE B GUARDRAIL

INIMUN EMBEDMENT IN

NOTE: PORTIONS OF BEAM WITH UNUSED BOLT SLOTS TO BE LAPPED BEHIND.

STEEL POST & WOOD OR PLASTIC BLOCK

OF TRAFFIC

8 & D GUARDRAIL

FOR TYPE E GUARDRAIL AND TRANSITION DETAILS SEE SHEET 5 OF 13.

6'-3" FOR TYPE A & B GUARDRAIL 6'-3" FOR TYPE A & B GUARDRAIL 12'-6" FOR TYPE D GUARDRAIL

TERMINAL CONNECTOR

POST BOLT SLOT

SPLICE BOLT SLOT

BEAM SPLICE AT POST

TYPE A. B AND D GUARD RAIL

PLANNING \$ ZONING FILE #99104.06

FOR ALL INLETS. . BRICK SHALL NOT BE USED IN

. PROVIDE %" TRASH BAR

THE CONSTRUCTION OF STORM SEWER STRUCTURES. 3. ALL LIDS SHALL BE CAST IRON,

WASHERS SHALL BE OMITTED ON ALL CONNECTIONS ON TYPE

CONCRETE WHERE REQUIRED SHALL BE CLASS B OR OF A COMMERCIAL MIXTURE MEETING THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. NO DIRECT PAYMENT WILL MADE FOR THIS CONCRETE OR ANY ADDITIONAL WORK

ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE

HOLES IN SOLID ROCK SHALL PROVIDE A DIAMETER OF LESS THAN 4 INCHES GREATER THAN THE MAXIMUM TRANSVERSE OIMENSION OF THE POST SECTION.

POST MAY BE SMORTER WHERE PLACED IN 2 FEET OF SOLI BOCK. STEEL POSTS MAY BE FLAME OR SAW CUT. REPAI OF CUT SHALL BE IN ACCORDANCE WITH SEC. 712 OF THE

SLOTTED HOLE

MISSOURI HIGHWAYS AND TRANSPORTATION

GUARDRAIL

-2003 606.00AP

END SECTION

MISSOURI HICHWAYS AND TRAMSPORTATION COMMISSION

GUARDRAIL

2003 606.00AP

CONCRETE LIDS SHALL NOT BE

Drive 3 3 3 15) ARR 30 ш

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O D

2



63304 AILS NG ROAD

TION WELDON O'FAI

SHEET:

5 of

Prepared for: Cracker Barrel clayton 307 Hartmann Drive Lebanon, Tennessee 37087 Project Number: 02262-1

engineering company, inc. INEERS . SURVEYORS . PLANNERS 11920 WESTLINE INDUSTRIAL DRIVE (314) 692-8888 FAX: (314) 692-86 clayton-engineering.com

5 DRAWN BY: HRL CHECKED BY 7/18/03