BRIGHT START DAY CARE CENTER

TRACTS OF LAND BEING PART OF FRACTIONAL
SECTIONS 16 & 17, AND U.S. SURVEYS 61 & 417,
TOWNSHIP 46 NORTH, RANGE 2 EAST,
ST. CHARLES COUNTY, MISSOURI

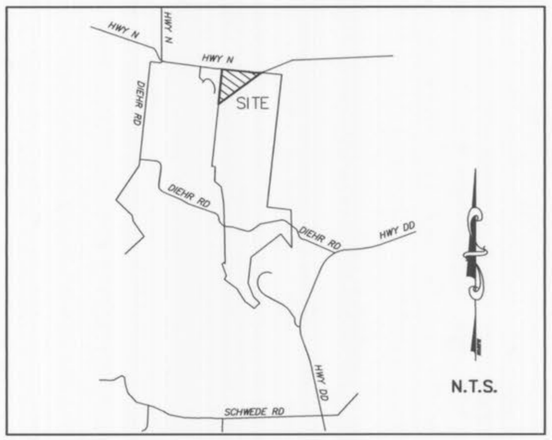
IMPROVEMENT PLANS

AS-BUILT PLANS

CITY OF O'FALLON GENERAL NOTES

1. Gas, water and other underground utilities shall not conflict with the depth or horizontal locations of existing and proposed sanitary and storm sewers, including house laterals.
2. Underground utilities have been plotted from available information and, therefore, their locations must 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 grading or construction of improvements.
3. Polyvinyl Chloride (PVC) shall conform to the requirements of ASTM D-3034 Standard Specifications for the PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR-35.
4. Storm sewers 18" in diameter or smaller shall be ASTM C-14.
5. Storm sewers 21" in diameter or larger shall be ASTM C-76, Class II.
6. All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (ASTM C-76, Class III) unless noted otherwise in the plans.
7. Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe M-36, A.A.S.H.T.O. See plans for gauge.
8. All filled places under proposed roads, proposed sanitary and storm sewer lines, and/or paved areas including trench backfills shall be compacted to 90% of maximum density as determined by the "Modified AASHTO T-180 Compaction Test" or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99. All filled placed in proposed roads shall be compacted from the bottom of the fill up. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in 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. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill. Proof rolling may be required to verify soil stability at the discretion of the City of O'Fallon.
9. All earthen filled places within State, County, or City roads (Highways) shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test A.A.S.H.T.O. T-99" (ASTM D-698) unless otherwise specified by local governing authority specifications. All tests will be verified by a soils engineer.
10. All storm and sanitary trench backfills shall be water jetted. Granular fill will be used under paved areas.
11. Easements shall be provided for storm sewers, sanitary sewers, and all utilities on the record plat. See record plat for location and size of easements. This does not apply to house laterals.
12. No area shall be cleared without the permission of the developer.
13. All grades shall be within 0.2 feet (more or less) of those shown on the grading plan.
14. No slope shall be steeper than 3' (horizontal) to 1' (vertical) sodded or seeded and mulched.
15. Hazard markers will consist of three (3) standard specification, "Manual on Uniform Traffic Control Devices," end of roadway markers mounted on two (2) pound "U" channel sign post. Each marker shall consist of an eighteen (18) inch diamond reflectorized red panel. The bottom of each panel shall be mounted a minimum of four (4) feet above the elevation of the pavement surface.
16. All manhole and curb inlet tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor. At the time of construction stake-out of the sewer lines, all curb and grate inlets will be face staked. If normal face stakes fall in line with sewer construction, the Engineer will set these stakes on a double offset. It shall be the responsibility of the sewer contractor to preserve all face stakes from destruction.
17. All standard street curb inlets to have front of inlet 2 feet behind curb.
18. The minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding house connection shall not be less than the diameter of the sanitary sewer plus a vertical distance not less than two and one-half feet (2-1/2').
19. Water lines, valves, sleeves, meters and etc., shall meet all specifications and installation requirements of the local governing authority. Water mains shall have a minimum of 42" of cover.
20. All cast iron pipe for water mains shall conform to A.W.W.A. specification C-106 and/or C-108. The cast iron fittings shall conform to A.W.W.A. specification C-110. All rubber gasket joints for water cast iron pressure pipe and fittings shall conform to A.W.W.A. specification C-111.
21. All water hydrants and valves shall be cast iron and installed in accordance with plans and details.
22. All sanitary and storm sewers shall meet all specifications and installation requirements of the local governing authority.
23. All PVC water pipe shall have a minimum pressure rating of PR-200 or SDR-21.
24. All PVC sanitary sewer pipe shall be DR-35 or equal with crushed stone bedding uniformly graded between 1" and 1/4" size. This bedding shall extend from 6" below the pipe to 12" above the top of the pipe.
25. All grading on Missouri State Highway Right-of-Way shall be seeded and mulched and all disturbed Right-of-Way markers shall be reest at the completion of grading.
26. All streets must meet the specifications and installation requirements of the City of O'Fallon.
27. All sanitary manholes top shall be set 0.2' higher than the proposed ground except in pavement areas.
28. All sanitary manholes shall have a 31 mil thick coat of coal tar pitch waterproofing.
29. All sanitary service lines shall have a 6" diameter.
30. Manhole frame and cover shall be Clay and Bailey No. 2008 or Neenah R-1736 or Deeter 1315 or approved equal.
31. A drop of 0.2 feet is required through each sanitary manhole. Minimum cover of 42" is required on all sanitary sewer mains.
32. The City of O'Fallon shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspection.
33. Brick shall not be used on in the construction of sanitary or storm sewer structures.
34. 5/8" diameter trash bars shall be provided for all inlets.
35. Waterproofing: Waterproofing will be required on the exterior of all manholes. The bitumen shall consist of two coats of asphalt, coat-tar pitch, or a coating meeting American Society for Testing and Materials (ASTM) D-41. Asphalt shall conform to the requirements of ASTM D 449. Coal-tar pitch shall conform to the requirements of ASTM D-450. Coating shall be 31 mils thickness.
36. All concrete pipe shall be installed with "O-Ring" Rubber type gaskets per M.S.D. standard construction specifications or manufacturer.
37. 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 limited 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 hs methods as deemed fit to protect property and improvements. Any depositing of silts or mud on new or existing pavement 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.
38. Developer must supply City construction inspectors with soils reports prior to or during site soil testing.
39. All paving to be in acordance with St. Charles County standards and specifications except as modified by the City of O'Fallon ordinances.
40. Owner shall provide a copy of the soils report to grading contractor. Contractor shall be responsible for adhering to all recommendations outlined in the soils report.
41. Project is Served By:
    A. Public Water Supply District #2
    B. St. Charles Gas Company
    C. CenturyTel Telephone Company
    D. Duckett Creek Sewer District
    E. Cuivre River Electric
    F. Wentzville Fire Protection District
42. HDPE pipe is to be N-12WT and shall meet ASTM F1417 water tight field test.
43. Traffic control shall be per MODOT or MUTCD whichever is most stringent.
44. All new utilities under City streets shall be bored.
45. Developer must supply city construction inspectors with soil reports prior to or during site soil testing. The soil report will be required to contain the following information on soil test curves (Procter reports) for projects within the city:
    A. Maximum dry density
    B. Optimum moisture content
    C. Maximum and minimum allowable moisture content
    D. 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 minumum of 95% as determined by the "Standard Procter Test ASSHTO T-99, Method C" (A.S.T.M.-D-698). Proctor type must be designated on document.
    E. Curve must have at least 5 density points with moisture content and sample locations listed on document.
    F. Specific gravity
    G. Natural Moisture content
    H. Liquid limit
    I. Plasic limit

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



LOCATION MAP

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

1. Underground utilities have been plotted from available information and therefore location shall be considered approximate only. The verification of the location of all underground utilities, either shown or not on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction of 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 house laterals.
3. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
4. All fill including places under proposed storm and sanitary sewer lines and paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the "Modified AASHTO T-180 Compaction Test (ASTM D1557)". All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-yielding and non-pumping during proofrolling and compaction.
5. The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
6. All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
7. Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
8. All sanitary sewer construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
9. The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination of inspection.
10. All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2-1/2 feet.
11. All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
12. All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe.
13. All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
14. All pipes shall have positive drainage through manholes. No flat invert structures are allowed.
15. All creek crossings shall have grouted rip-rap as directed by district inspectors. (all grout shall be high slump ready-mix concrete).
16. Brick shall not be used on sanitary sewer manholes.
17. Existing sanitary sewer service shall not be interrupted.
18. Maintain access to existing residential driveways and streets.
19. Pre-manufactured adapters shall be used at all PVC to DIP connection. Rubber boot/Mission-type couplings will not be allowed.
20. Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
21. "Type N" Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.

DRAWING INDEX

These " As-Built" Storm Sewer and Water plans, are based on actual field measurements conducted during September 2006, and the results are shown hereon.

By: _____ 9-28-06

JAMES R. CHERVEK P.L.S., #2211
STATE OF MISSOURI
PICKETT, RAY & SILVER'S CORPORATE
REGISTRATION NO. LS-54-D

LEGEND

——	Sanitary Sewer (Proposed)	MH 30	Sanitary Structure	R.C.P.	Reinforced Concrete Pipe
—○—	Sanitary Sewer (Existing)	CI 30	Storm Structure	C.M.P.	Corrugated Metal Pipe
- -⊟- -	Storm Sewer (Proposed)		Test Hole	C.I.P.	Cast Iron Pipe
= =○= =	Storm Sewer (Existing)		Power Pole	P.V.C.	Polyvinyl Chloride
-6"-	Water Line & Size		Light Standard	V.C.P.	Vitrified Clay Pipe
-EX #-	Existing water line		Double Water Meter Setting		
	Tee & Valve		Single Water Meter Setting	C.O.	Clean Out
	Hydrant	C.I.	Curb Inlet	V.T.	Vent Trap
	Cap	S.C.I.	Skewed Curb Inlet	T.B.R.	To Be Removed
18	Lot or Building Number	D.C.I	Double Curb Inlet	T.B.R.&R	To Be Removed & Relocated
— x —	Existing Fence Line	G.I.	Grate Inlet	T.B.P.	To Be Protected
	Existing Tree Line	A.I.	Area Inlet	T.B.A.	To Be Abondoned
	Street Sign	D.A.I.	Double Area Inlet	B.C.	Base Of Curb
	Existing Contour	C.C.	Concrete Collar	T.C.	Top Of Curb
	Proposed Contour	F.E.	Flared End Section	T.W.	Top Of Wall
	Grouted Rip-Rap	E.P.	End Pipe	B.W.	Base Of Wall
	End of Lateral	E.D.	Energy Dissipator	(TYP)	Typical
	Asphalt Pavement	M.H.	Manhole	U.N.O.	Unless Noted Otherwise
	Concrete Pavement	C.P.	Concrete Pipe	U.I.P.	Use In Place

Call BEFORE you DIG
TOLL FREE
1-800-344-7483
MISSOURI ONE-CALL SYSTEM, INC.

MoDOT UNDERGROUND LOCATE
(314) 340-4100
*FIBER OPTICS MAY BE PRESENT

PROJECT BENCH MARK

U.S.G.S BENCH MARK
At Dardenne T.46N., R.2E. Near Approx. Corner Sections 1, 2, 11 & 12, 31' north & 20' west of crossroads, 49' south of S.E. corner of Catholic Church, 2.0' north of sidewalk & in a concrete post standard tablet stamped "TT" 60C 1936 616".
Elev. 616.50

NOTE: TOPOGRAPHIC AND EXISTING UTILITY INFORMATION OBTAINED FROM PLANS FOR THE WYNDGATE SUBDIVISION PREPARED BY PICKETT, RAY AND SILVER, INC. ACTUAL EXISTING GRADES HAVE NOT BEEN FIELD VERIFIED AND MAY DIFFER FROM THOSE SHOWN. EXISTING UTILITY LOCATIONS ARE TO BE CONSIDERED APPROXIMATE. EXISTING UTILITIES AND TOPO SHALL BE FILED VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

FILE #3203.05

PICKETT RAY & SILVER
Civil Engineers
Planners
and Surveyors
333 Mid Rivers Mall Dr.
St. Peters, MO 63376
397-1211 FAX 397-1104

PICKETT RAY & SILVER
CIVIL ENGINEERS
PLANNERS
LAND SURVEYORS
333 Mid Rivers Mall Drive
St. Peters, MO 63376
Phone (636) 397-1211
Fax (636) 397-1104

BRIGHT START
IMPROVEMENT PLANS
ST. CHARLES, MO

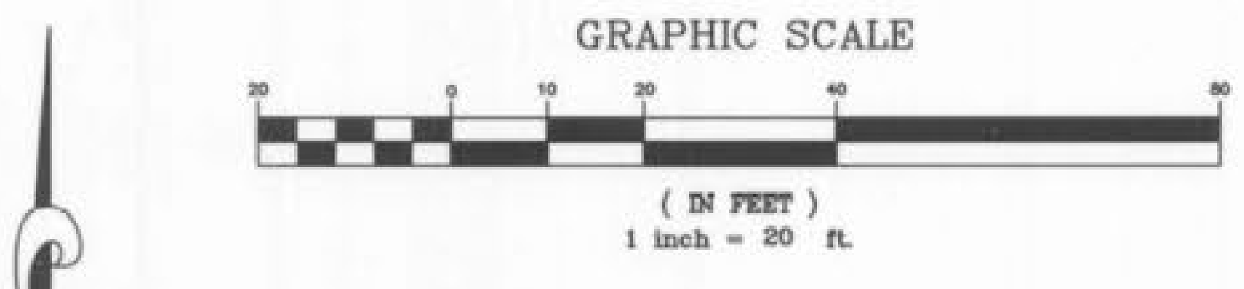
Prepared For:
SUMMIT POINTE, L.L.C.
239 FOX HILL ROAD
ST. CHARLES, MO 63301
(636)940-9300

REVISIONS NO.	DATE	
1	01-09-06	PER CITY OF O'FALLON & DUCKETT CR.
2	1.16.06	REVISED PER MSD COMMENTS
3	02-21-06	PER CITY OF O'FALLON
4	03-10-06	PER CITY OF O'FALLON
5	04-13-06	PER MoDOT
6	04-13-06	PER MoDOT

ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after this date unless reauthenticated.
PICKETT, RAY & SILVER, INC

DRAWN B.PARKS	DATE 12-05-05
CHECKED D.BYRD	DATE 12-05-05
PROJECT # 01267.BRST.00C	
TASK # 2	FIELD BOOK X

BRIGHT START
IMPROVEMENT PLANS
COVER SHEET
SHEET 1 OF 7

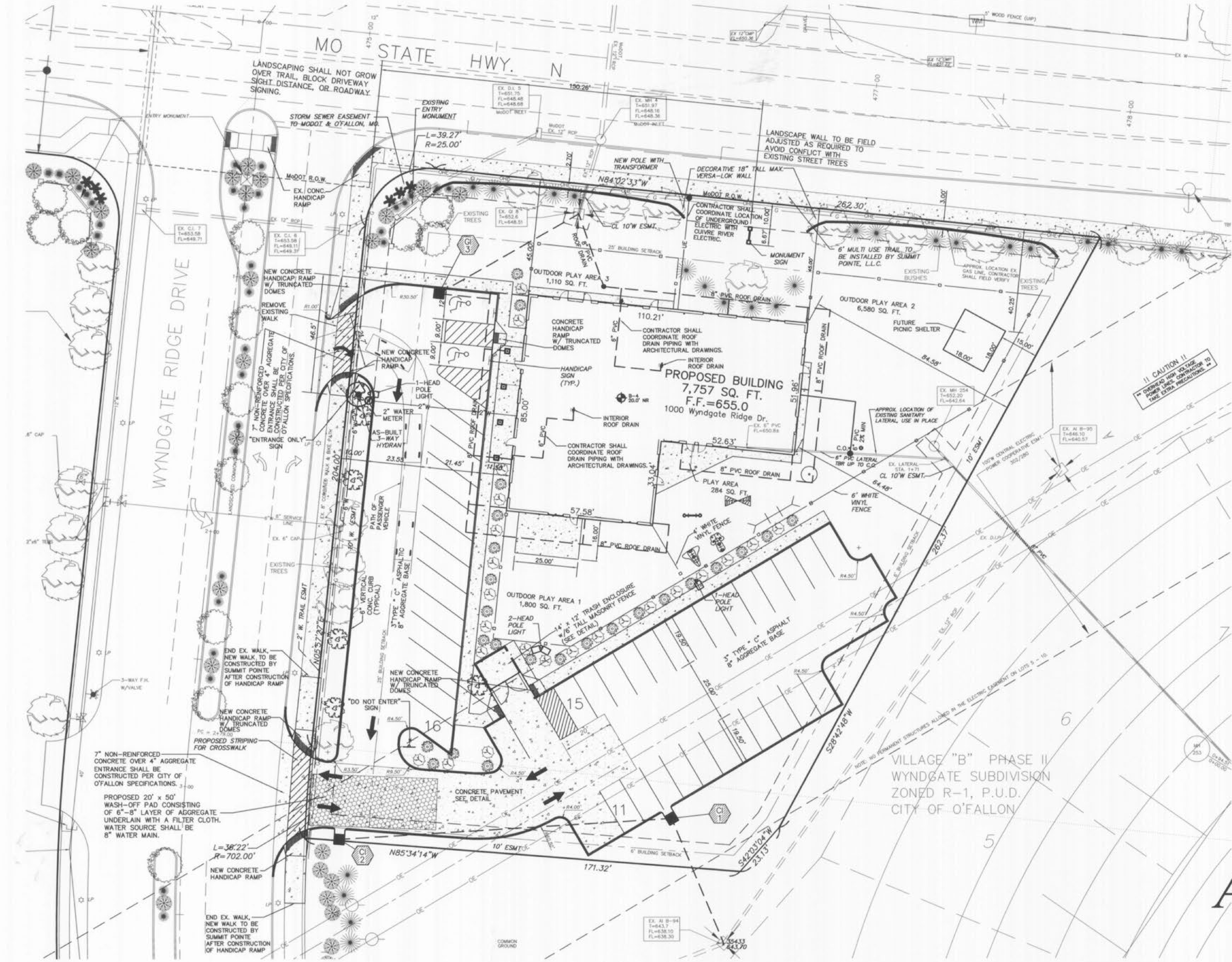


TRACTS OF LAND BEING PART OF FRACTIONAL
SECTIONS 16 & 17, AND U.S. SURVEYS 61 & 417,
TOWNSHIP 46 NORTH, RANGE 2 EAST,
ST. CHARLES COUNTY, MISSOURI

LANDSCAPE SCHEDULE				
(symbol)	23	MUGO PINE	Pinus mugo mughus	2 GAL.
(symbol)	24	EMERALD N' GOLD EUONYMUS	Euonymus fortunei "Emerald 'n Gold"	2 GAL.
(symbol)	5	RED SUNSET MAPLE	Acer rubrum 'Red Sunset'	2" CAL.

NO EXISTING TREES ARE BEING REMOVED FROM SITE.

SITE COVERAGE CALCULATIONS			
BUILDING	PAVEMENT	LANDSCAPE	TOTAL SITE
7,757 SQ. FT.	15,522 SQ. FT.	30,592 SQ.FT.	60,832 SQ. FT.
12.7%	37.0%	50.3%	



PARKING REQUIREMENTS

DAYCARE CENTER – 1 PS PER 6 PUPILS PLUS 1 PER EMPLOYEE
132 PUPILS & 19 EMPLOYEES

PARKING REQUIRED	41 PS
PARKING PROVIDED	41 PS
DIFFERENCE	0 PS

MANUFACTURER	SIZE	ADHESIVE	STYLE	MESSAGE (PART #)	WEBSITE
ACP International	3 7/8"	Epoxy	Crystal Cap	No Dumping Drains To Waterways (SD-W-CC)	www.acpinternational.com
DAS Manufacturing, Inc.	4"	Epoxy	Standard Style	No Dumping Drains To Stream (#SDS)	www.dasmanufacturing.com

GENERAL NOTES

1. Present Zoning: P.U.D. R-1 Single Family Residential
2. Proposed Use: Day Care Center (Conditional use permit required)
3. Area of Tract: 1.40 Acres
4. Project is Served By:
   A. Public Water Supply District #2
   B. St. Charles Gas Company
   C. CenturyTel Telephone Company
   D. Duckett Creek Sewer District
   E. Cuivre River Electric
   F. Wentzville Fire Protection District
5. All utilities shall be located underground.
6. Parking and building shall be in compliance with A.D.A. Accessibility Guidelines.
7. All dimensions taken from back of curb unless otherwise noted.
8. Building height, site lighting and signage shall be in accordance with City of O'Fallon's requirements.
9. Setback and yard requirements:
   Front – 25 feet
   Side – 6 feet
   Rear – 25 feet
10. Grading and drainage shall be per the requirements of the City of O'Fallon.
11. Architectural treatment to be provided on all sides of buildings. Architectural treatment shall remain consistent throughout the project.
12. All easements shall be provided for on record plat.
13. Exterior lighting details and photometric plan shall be submitted and approved prior to construction plan approval.
14. Proposed lighting shall be directed down and shielded so as not to overflow onto adjacent residential properties. Wall pack lighting shall not be permitted. Lighting details and photometrics in accordance with the City's standards shall be submitted and approved prior to construction approval.
15. No slope shall be greater than 3:1 during construction and at final grade.
16. Per F.I.R.M. #29183C0215F March 17, 2003, site is not located within the 100 Year Flood Plain.
17. Trash enclosures shall be a minimum of 6 foot high and shall be constructed of materials that match or compliment building architecture. Enclosures shall have white vinyl gates.
18. Signage locations and sizes to be reviewed separately through the Planning Division. Signage shall be permitted separately.
19. Building and parking shall be in conformance with City of O'Fallon's requirements for R-1 PUD zoning.
20. Backflow prevention devices for water service shall be located inside the building.
21. Location of backflow preventer and water services shall be addressed with architectural drawings. Water meter locations shall be coordinated with water company.
22. Demonstrate compliance with Article XIII of the Zoning Code, Performance Standards.
24. All trash pick up and loading and unloading operations will not occur between the hours of 7:00 p.m. and 7:00 a.m.
25. All handicap sidewalk ramps shall be concrete and shall meet ADA color requirements.
26. Development will remain as one lot, no subdividing of lot is proposed.
27. No outdoor display of materials or products, temporary or otherwise, shall occur beyond the area between the front of the building and the driveway aisle. No such materials shall be attached or affixed to any exterior wall.
28. Lighting values will be reviewed on site prior to final occupancy inspection. Corrections will need to be made if not in compliance with City standards.
29. All proposed fencing requires a separate permit through the Planning Division.
30. 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 City and MoDOT). Signs designating street name shall be on the opposite side of the street from traffic control signs.
31. All rooftop mounted HVAC and mechanical units shall be screened by a parapet wall that extends around the entire perimeter of the building; the parapet shall have a minimum height that is at least as tall as the tallest unit mounted on the roof. All ground mounted HVAC and mechanical units shall be screened by fencing, vegetation, or some other means (approved by the Planning and Zoning Comimission) that has a minimum height that is at least as tall as the tallest unit being screened.
32. Utility contractor shall coordinate utility connections with general
33. Detention has been provided for in detention basin for Wyndgate subdivision.
34. Site shall comply with the Tree Preservation Ordinance, Chapter 23.
35. Estimated sanitary flow–1320 gallons per day.

JAMES R. CH... LS-2211 — 9-28-06

AS-BUILTS

NOTE: SIDEWALKS, CURB RAMPS, RAMP AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAC) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAC GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER.

FILE #3203.05

PICKETT RAY & SILVER
CIVIL ENGINEERS
PLANNERS
LAND SURVEYORS
333 Mid Rivers Mall Drive
St. Peters, MO 63376
Phone (636) 397-1211
Fax (636) 397-1104

BRIGHT START
IMPROVEMENT PLANS
ST. CHARLES, MO

Prepared For:
SUMMIT POINTE, L.L.C.
239 FOX HILL ROAD
ST. CHARLES, MO 63301
(636)940-9300

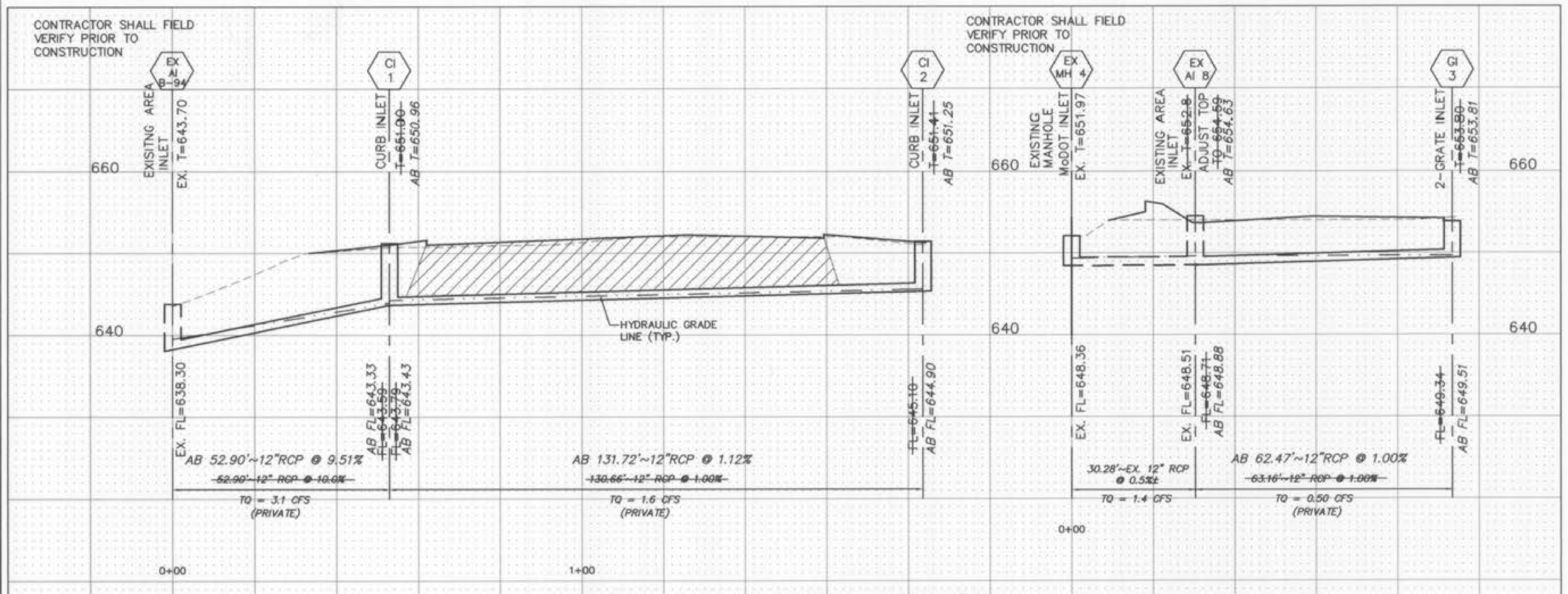
REVISIONS		
NO.	DATE	
1	01-09-06	PER CITY OF O'FALLON
2	1.16.06	REVISED PER T.R. HUGHES
3	02-06-06	REVISED PER T.R. HUGHES
4	02-21-06	PER CITY OF O'FALLON
5	03-10-06	PER CITY OF O'FALLON
6	04-13-06	PER MoDOT
	09-28-06	AS-BUILTS

ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after this date unless reauthenticated.
PICKETT, RAY & SILVER, INC

DRAWN B.PARKS	DATE 12-05-05
CHECKED D.BYRD	DATE 12-05-05
PROJECT # 01267.BRST.00C	
TASK # 2	FIELD BOOK X

BRIGHT START
IMPROVEMENT PLANS
SITE PLAN
SHEET 2 OF 7

CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION

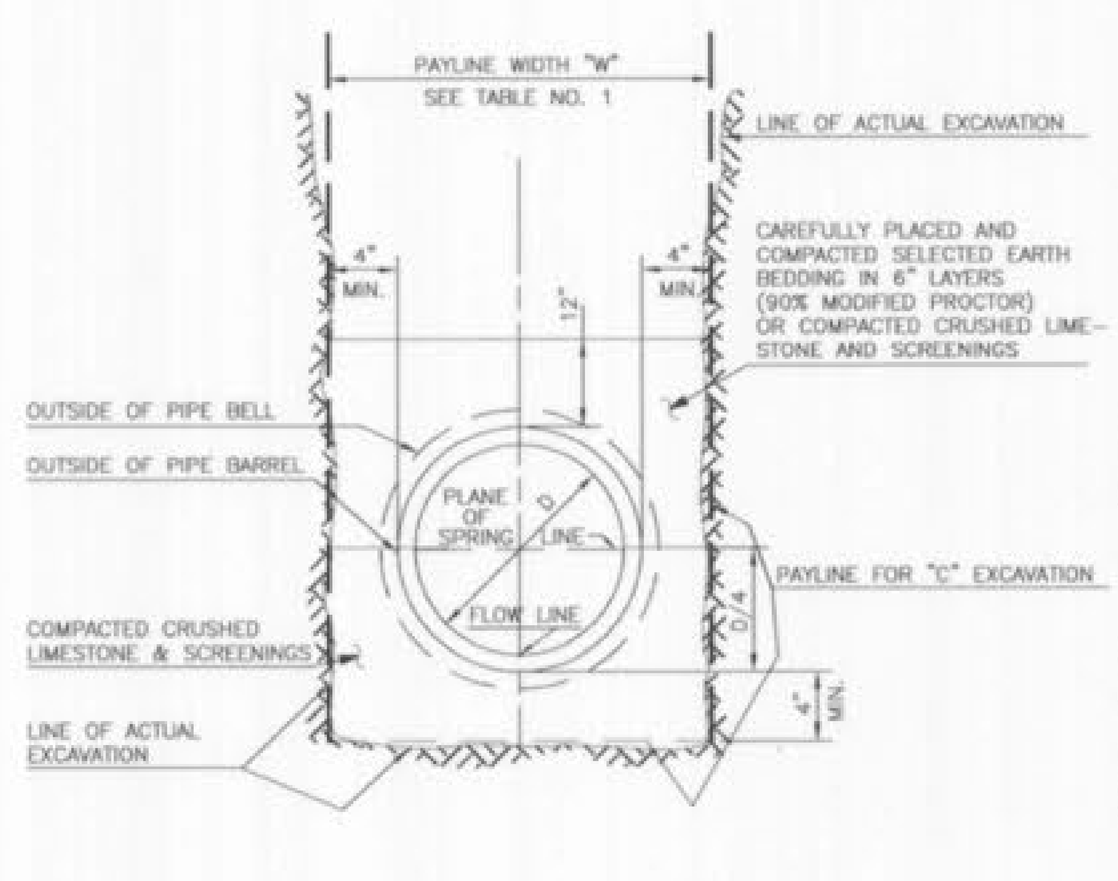


AS-BUILTS

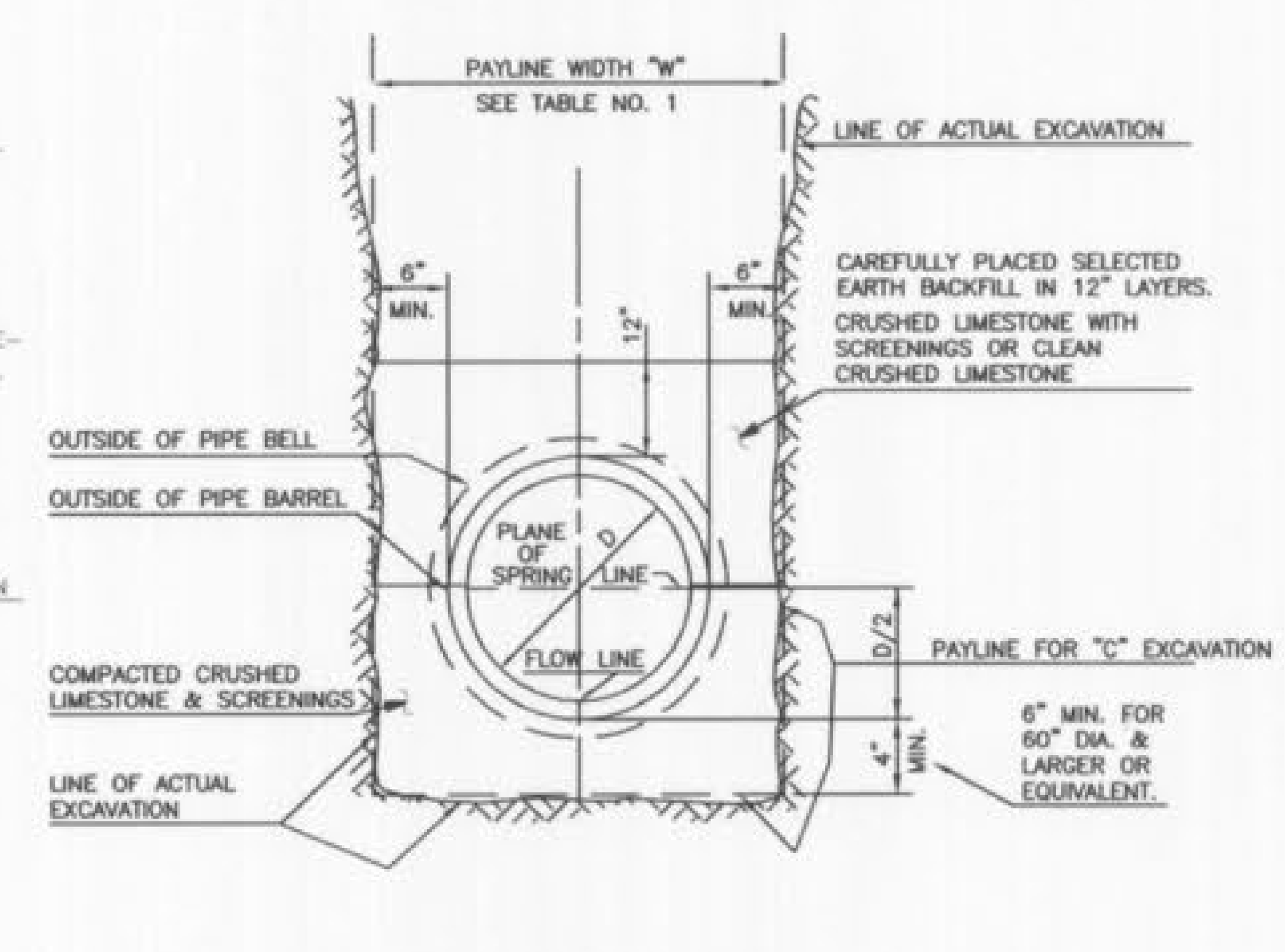
SCALE: 1" = 20' HORIZ. 1" = 10' VERT.

ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
Inside Diameter of Pipe (Inches)	"W" Payline Width of Trench (Inches)	"W" Payline Width of Trench (Feet)	Pay-volumes cu. ft. per ft. Concrete Encasement	Inside Diameter of Pipe (Inches)	"W" Payline Width of Trench (Inches)	"W" Payline Width of Trench (Feet)	Pay-volumes cu. ft. per ft. Concrete Encasement
4	28	2.33	3.20				
6	28	2.33	3.46				
8	28	2.33	3.70				
10	28	2.33	3.86				
12	28	2.33	3.98				
15	32	2.67	4.89				
18	35	2.92	5.63	14 X 23	41	3.42	5.94
21	39	3.25	6.61				
24	42	3.50	7.39	19 X 30	49	4.08	7.68
27	45	3.75	8.18	22 X 34	53	4.42	8.61
30	49	4.08	9.30	24 X 38	58	4.83	9.70
33	53	4.42	10.53	27 X 42	62	5.17	10.71
36	56	4.67	11.43	29 X 45	66	5.50	11.72
39	DISCONTINUED			32 X 49	71	5.92	13.14
42	63	5.25	13.38	34 X 53	75	6.25	14.05
48	70	5.83	15.67	38 X 60	83	6.92	16.18
54	77	6.42	18.15	43 X 68	92	7.67	18.81
60	84	7.00	20.73	48 X 76	101	8.42	21.59
66	91	7.58	23.45	53 X 83	109	9.08	24.35
72	98	8.17	26.37	58 X 91	118	9.83	27.45
78	105	8.75	29.39	63 X 98	126	10.50	30.50
84	112	9.33	32.57	68 X 106	135	11.25	33.91
90	119	9.92	35.90	72 X 113	143	11.92	36.99
96	126	10.50	39.37	77 X 121	152	12.67	40.69
102	133	11.08	42.99	82 X 128	160	13.33	44.45
108	140	11.67	46.75	87 X 136	168	14.00	47.79
114	147	12.25	50.66	92 X 143	176	14.67	51.70
120	154	12.83	54.72	97 X 151	185	15.42	56.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 X 166	202	16.83	64.48
144	182	15.17	72.40	116 X 180	218	18.17	73.59

TABLE NO. 1
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTIES OF CONCRETE



PIPE BEDDING CLASS "C"
(FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)



PIPE BEDDING CLASS "C"
(MODIFIED FOR REINFORCED CONCRETE PIPE)

APPENDIX A

Seeding Rates:

Permanent:

Tall Fescue – 30 lbs./ac.
Smooth Brome – 20 lbs./ac.
Combined: Fescue @ 15 lbs./ac. and Brome @ 10 lbs./ac.

Temporary:

Wheat or Rye – 150 lbs./ac. (3.5 lbs. per square foot)
Oats – 120 lbs./ac. (2.75 lbs. per square foot)

Seeding Periods:

Fescue or Brome – March 1 to June 1, August 1 to October 1

Wheat or Rye – March 15 to November 1
Oats – March 15 to September 15

Mulch rates: 100 lbs. per 1,000 sq. ft. (4,356 lbs. per acre)

*Fertilizer rates: Nitrogen 30 lbs./ac. Phosphate 30 lbs./ac. Potassium 30 lbs./ac. Lime 600 lbs./ac. ENM**

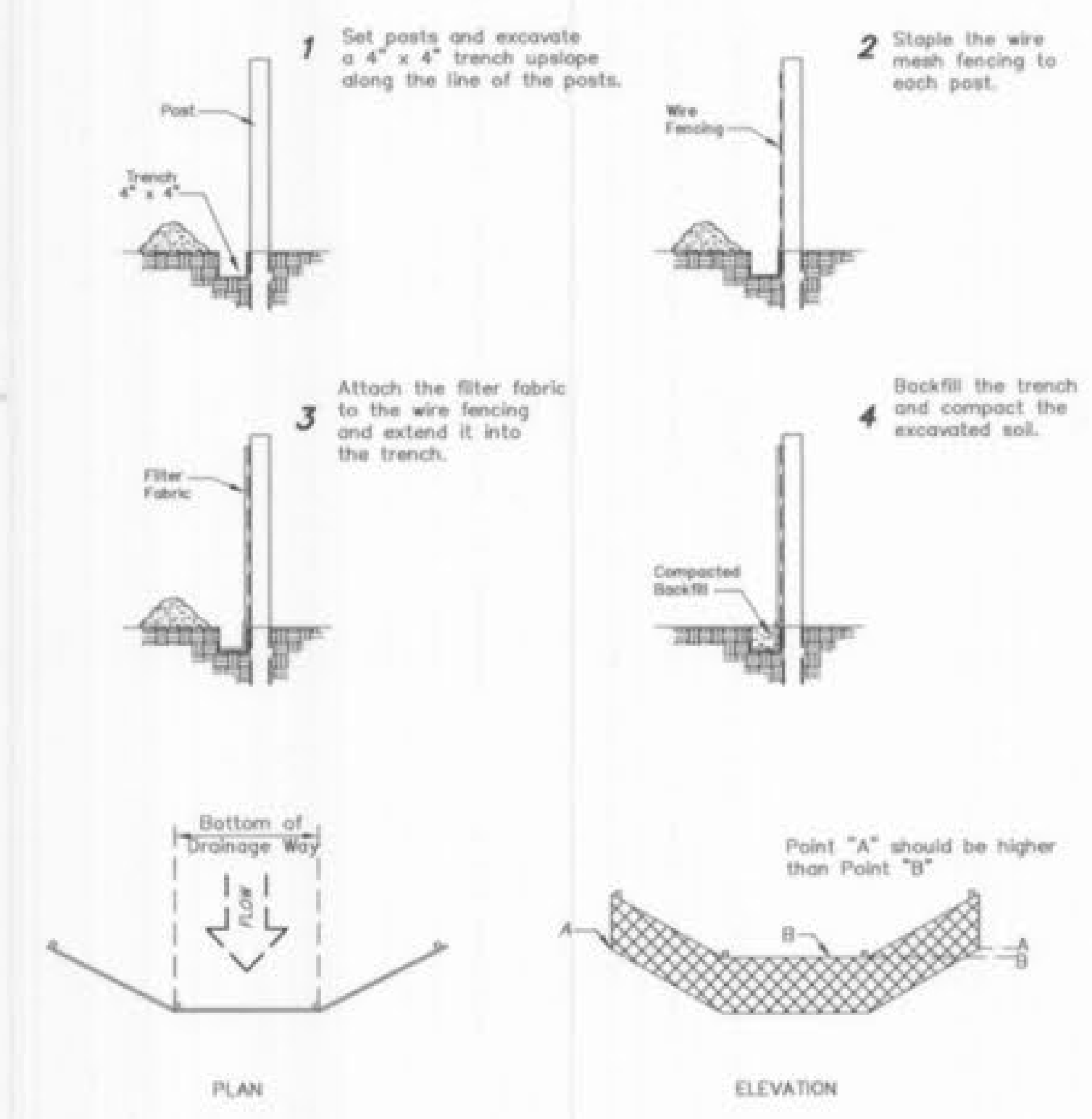
**ENM = effective neutralizing material as per State evaluation of quarried rock.*

SYNTHETIC FILTER BARRIERS
For Urban Development Sites

APPENDIX D

MAINTENANCE

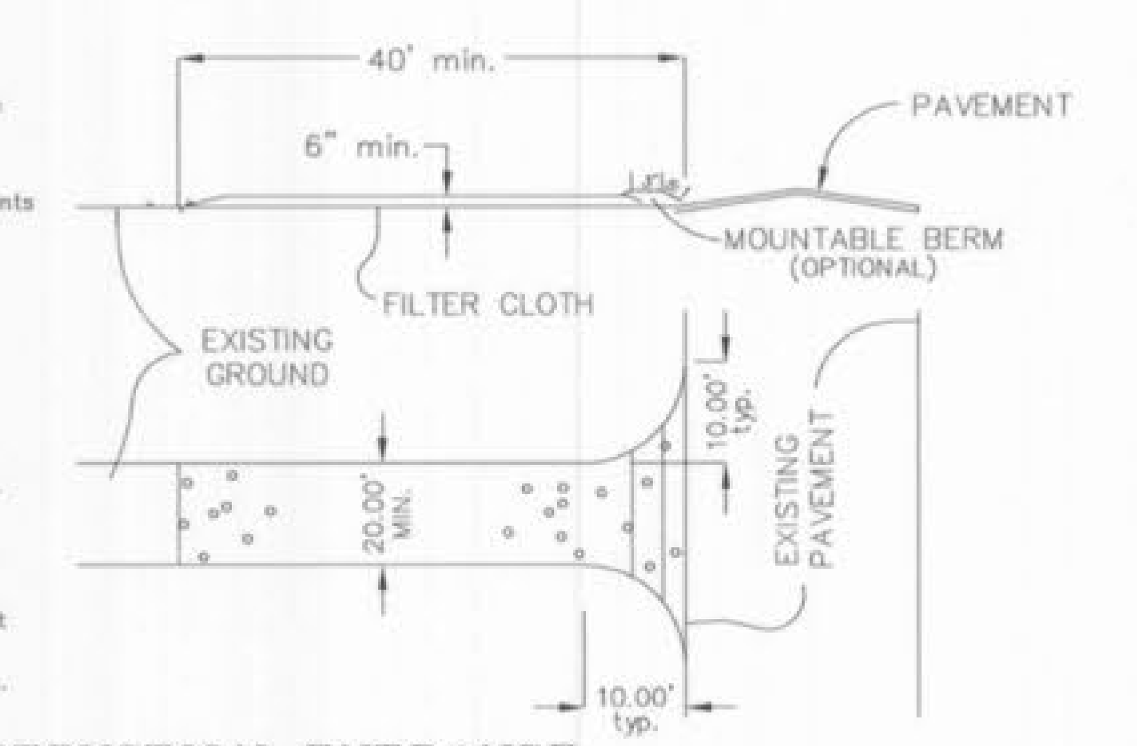
1. Filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
2. Should the fabric decompose or become ineffective prior to the end of the expected usable life and the barrier still be necessary, the fabric shall be replaced promptly.
3. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately half the height of the barrier.
4. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.



Placement and Construction of a Synthetic Filter Barrier

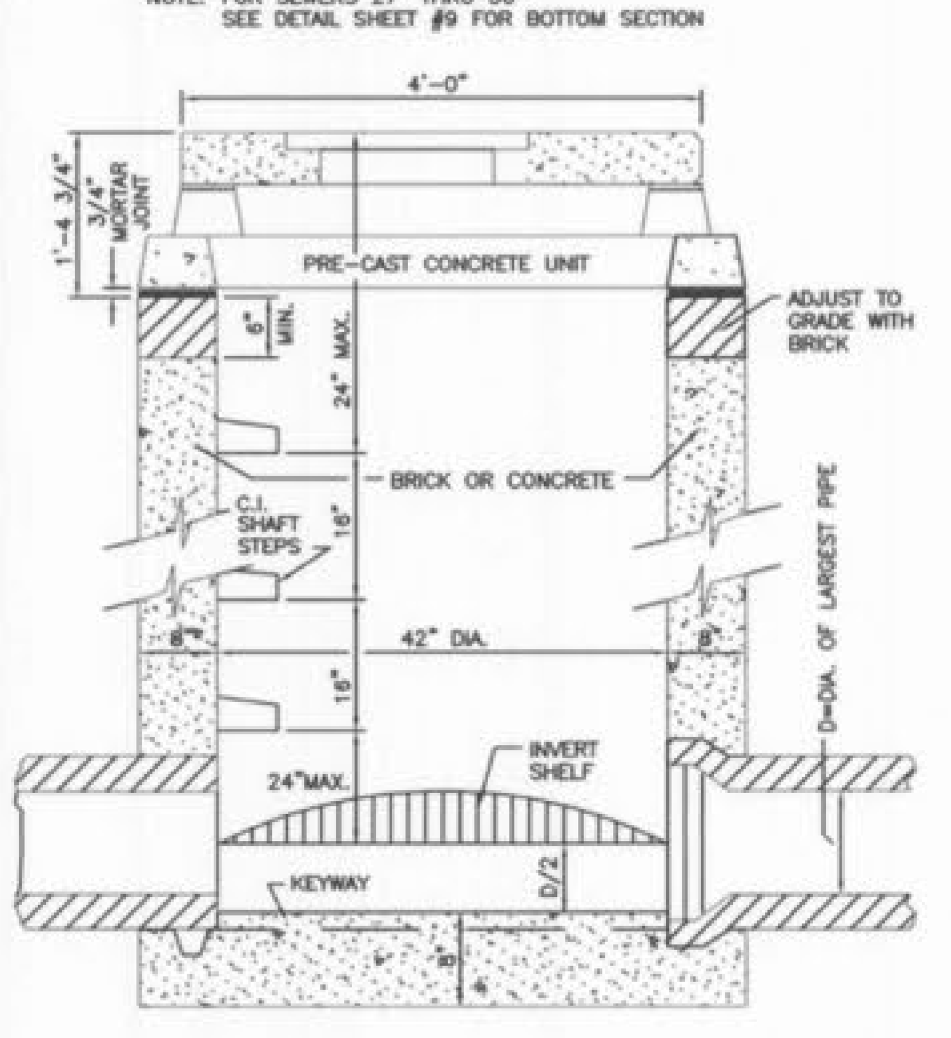
CONSTRUCTION SPECIFICATIONS

1. Stone Size: Use 2" stone or reclaimed or recycled concrete equivalent.
2. Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness: Not less than six (6) inches.
4. Width: twenty six (26) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth: Will be placed over the entire area prior to placing of the stone. Filter will not be required on a single family residence lot.
6. Surface Water: All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with a 5:1 slope will be permitted.
7. Maintenance: The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto a public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto the public right-of-way must be removed immediately.
8. Washing: Wheels shall be cleaned to remove sediment prior to entrance onto the public right-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

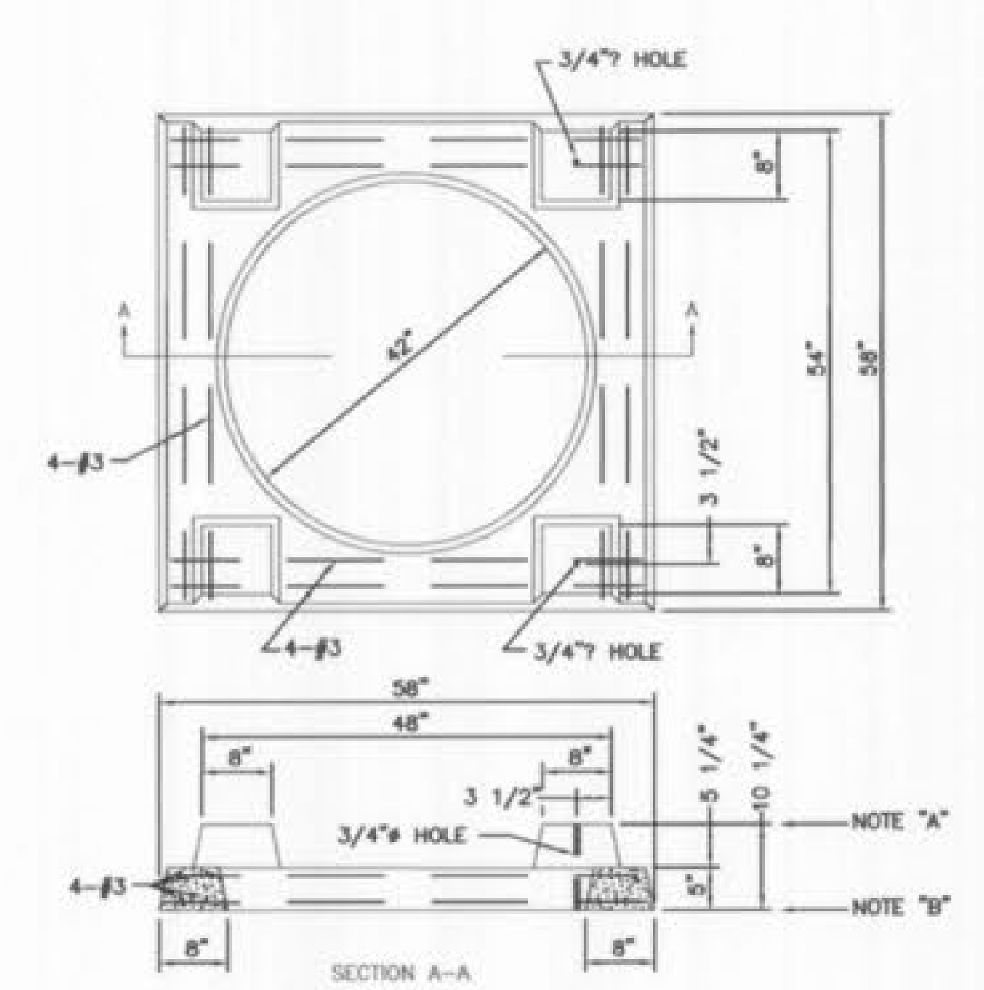


STABILIZED CONSTRUCTION ENTRANCE AND TEMP. TRUCK WASHDOWN AREA DETAIL
N.T.S.

NOTE: FOR SEWERS 27" THRU 36" SEE DETAIL SHEET #9 FOR BOTTOM SECTION



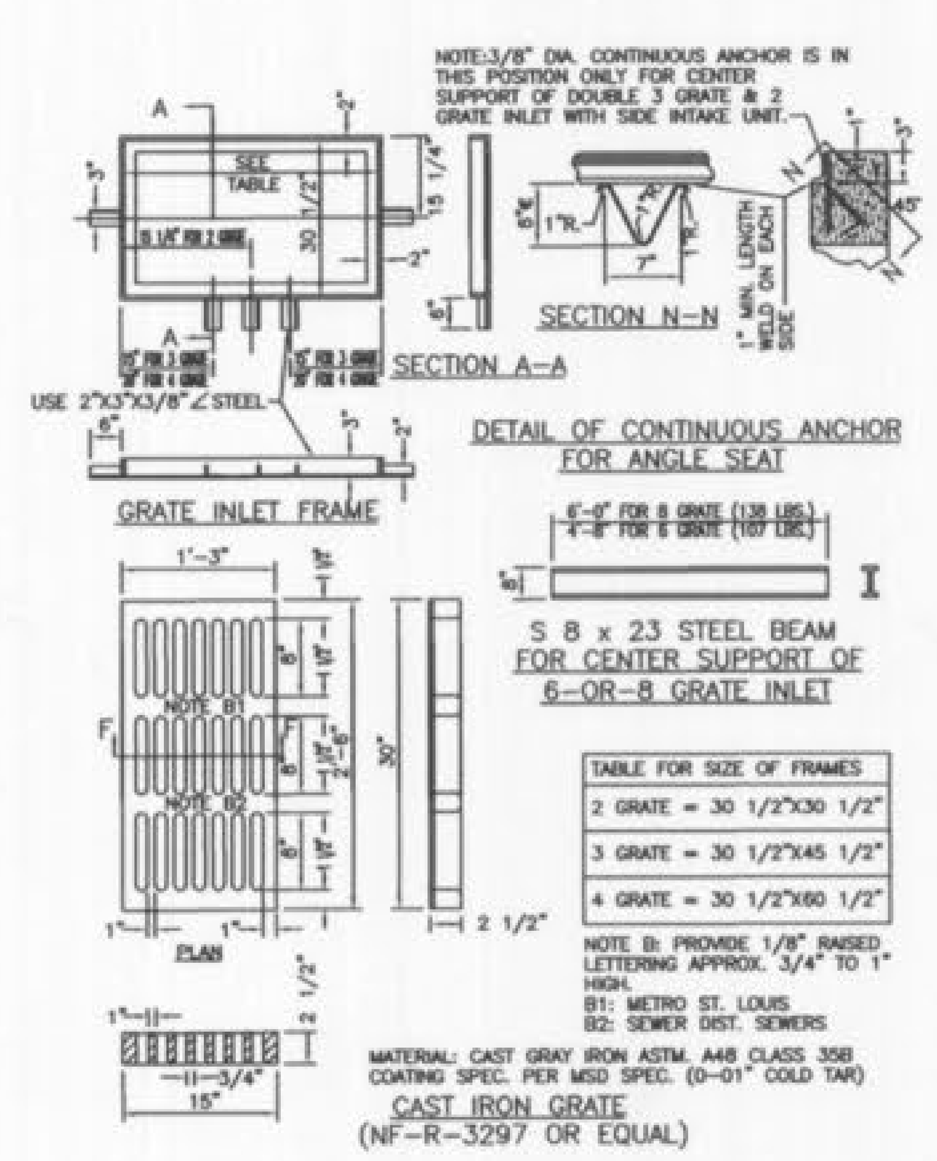
AREA INLET
(12" THRU 24")



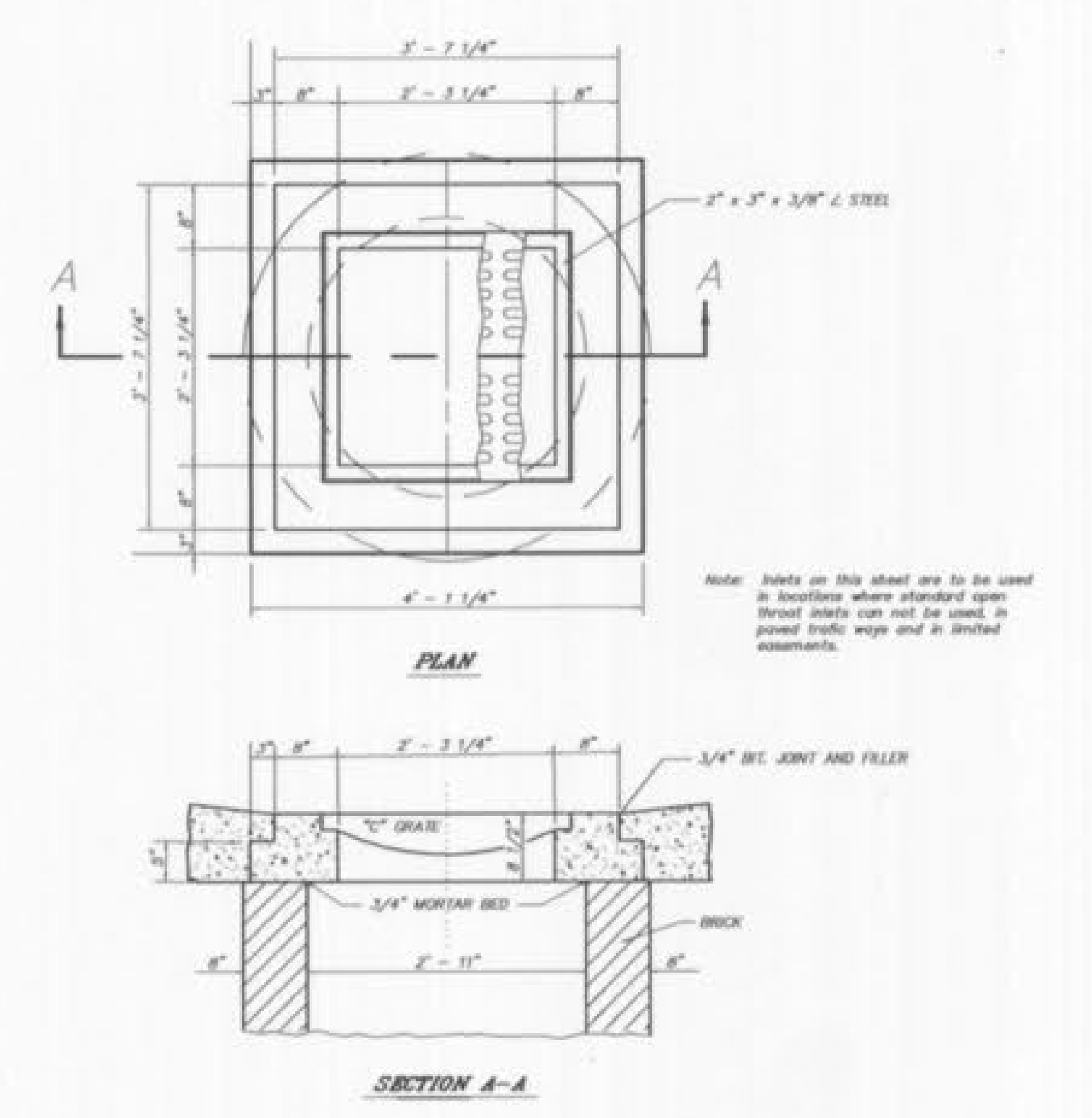
4000 P.S.I. CONCRETE REQUIRED

NOTES:
A. SET STANDARD INLET STONE IN 3/4" MORTAR BED AND DOWEL WITH 5/8"Ø 1'-0" LONG PINS AND GROUT.
B. RAISE TO FINAL GRADE WITH COURSES OF BRICK AND SET THE UNIT TO BASE WITH 3/4" MORTAR BED.
C. THIS UNIT TO BE USED WITH, 42" I.D., POURED IN PLACE CONCRETE OR BRICK BASE.

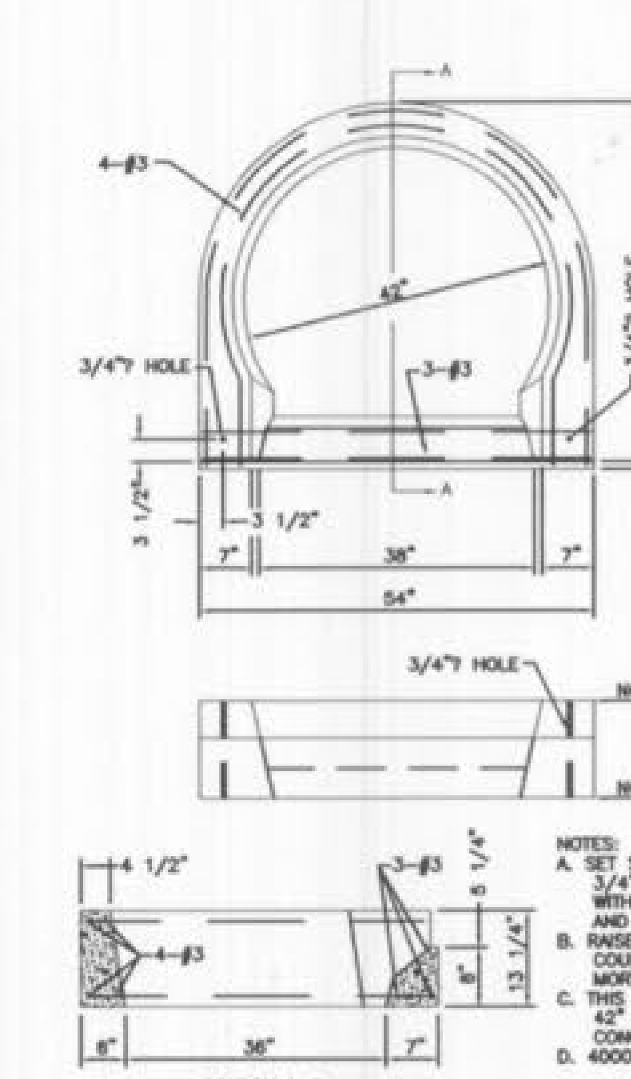
PRECAST CONCRETE UNIT FOR 4-WAY AREA INLET



DETAILS OF INLET FRAME AND GRATES



2 GRATE INLET



NOTES:
A. SET STANDARD INLET STONE IN 3/4" MORTAR BED AND DOWEL WITH 5/8"Ø 1'-0" LONG PINS AND GROUT.
B. RAISE TO FINAL GRADE WITH COURSES OF BRICK AND 3/4" MORTAR BED.
C. THIS UNIT TO BE USED WITH, 42" I.D., POURED IN PLACE CONCRETE OR BRICK BASE.
D. 4000 P.S.I. CONCRETE REQ'D.

PRECAST CONCRETE UNIT FOR SINGLE CURB INLET

FILE #3203.05

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BRIGHT START
IMPROVEMENT PLANS
ST. CHARLES, MO

Prepared For:
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239 FOX HILL ROAD
ST. CHARLES, MO 63301
(636)946-0300

REVISIONS		
NO.	DATE	
1	01-09-06	PER CITY OF O'FALLON
2	1.18.06	REVISED PER T.R. HUGHES
3	3-10-06	REVISED PER CITY OF O'FALLON
3	3-31-06	REVISED PER CITY OF O'FALLON
4	9-28-06	AS-BUILTS

ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after this date unless reauthenticated.
PICKETT, RAY & SILVER, INC

STATE OF MISSOURI — JAMES — NUMBER — REGISTERED LAND SURVEYOR
9-28-06

DRAWN B.PARKS	DATE 12-05-05
CHECKED D.BYRD	DATE 12-05-05
PROJECT # 01267.BRST.00C	
TASK # 2	FIELD BOOK X

BRIGHT START IMPROVEMENT PLANS SEWER PROFILES/ CONSTRUCTION DETAILS
SHEET 5 OF 7