

PRINCIPLES & STANDARDS:

- All excavations, grading, or filling shall have a finished grade not to exceed a 3:1 slope (33%). Steeper grades may be approved by the designated official if the excavation is through rock or the excavation or fill is adequately protected (a designed head wall or toe wall may be required). Retaining walls that exceed a height of four (4) feet shall require the construction of safety guards as identified in the appropriate section(s) of the adopted BOCA Codes and must be approved by the Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.
- Sediment and erosion control plans for sites that exceed 20,000 square feet of grading shall provide for sediment basins, silt traps or filters, staked straw bales or other approved measures to remove sediment from run-off waters. The design to be approved by the Designated Official. Temporary siltation control measures (structures) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
- Where natural vegetation is removed during grading, vegetation shall be reestablished in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible during the next seeding period after grading has been completed.
- When grading operations are completed or suspended for more than 14 days permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided according to the City Engineer's recommendations. All finished grades (areas not to be disturbed by future improvement) in excess of 20% slope (5:1) shall be mulched and locked at the rate of 100 pounds per 1,000 square feet when seeded.
- Provisions shall be made to accommodate the increased runoff caused by changed soils and surface conditions during and after grading. Unretained open channels shall be designed so that gradients result in velocities of 2 fps (feet per second) or less. Open channels with velocities more than 2 fps and less than 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock rip rap or concrete or other suitable materials as approved by the City Engineer. Detention basins, diversions, or other appropriate structures shall be constructed to prevent velocities above 5 fps.
- The adjoining ground to development sites (lots) shall be provided with protection from accelerated and increased surface water, silt from erosion, and any other consequence of erosion. Run-off water from developed areas (parking lots, paved sites and buildings) above the area to be developed shall be directed to diversions, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bales may be temporarily substituted with the approval of the City Engineer.
- Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas or driveways set back a minimum of 25 feet from the top of the existing stream bank. The watercourse shall be maintained and made the responsibility of the subdivision trustees or in the case of a site plan by the property owner. Permanent vegetation should be left intact. Variances will include designed stream bank erosion control measures and shall be approved by the City Engineer, FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.
- All traffic control shall be per MoDOT or MUTCD whichever is most stringent.
- All lots shall be seeded and mulched at the minimum rates defined in Appendix A or sodded before an occupancy permit shall be issued except that a temporary occupancy permit may be issued by the Building Department in cases of undue hardship because of unfavorable ground conditions.

VEGETATIVE ESTABLISHMENT FOR Urban Development Sites 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
Wheat or Rye - August 1 to October 1
March 15 to November 1
Oats - March 15 to September 15
- Mulch Rates:**
100 lbs. per 1,000 sq. feet (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.

U.S.G.S. BENCHMARK

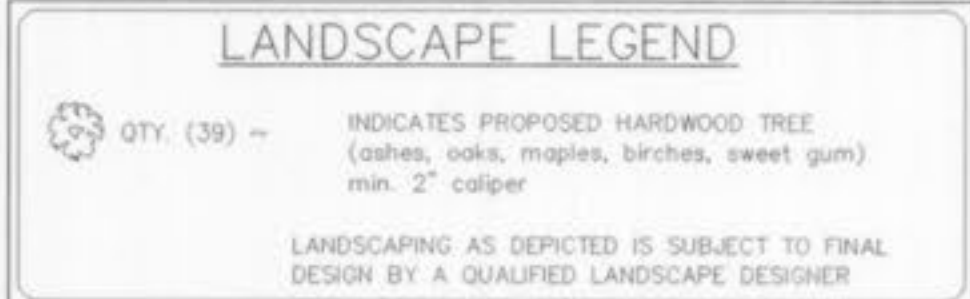
REFERENCE BENCHMARK: RMSB 487.55' CHASELED SQUARE ON NORTHWEST WINGWALL OF COUNTY HWY. K BRIDGE OVER DARDENNE CREEK.

REFERENCE BENCHMARK - RM57 Elev. 548.01' "chiseled square" on the southwest end of the south headwall of the culvert located at the junction of U.S. Highway 40 and Missouri State Highway "K". FEMA Map 29183C0430 E.

The developer shall comply with current Tree Preservation Ordinance Number 1689 and provide landscaping as set forth in Article 23 of the City of O'Fallon zoning ordinances.

20% of existing trees or 15 trees per acre shall remain whichever is greater.

20% of Existing Tree Masses = 0.0 Ac.
Existing Tree Masses = 0.0 Ac.
Existing Tree Mass to Remain = 0.0 Ac.
No proposed trees needed to meet requirement.



A SET OF SANITARY AND STORM SEWER AS-BUILT PLANS FOR WATERBURY TOWN CENTER

"DISCOVERY DRIVE"

A TRACT OF LAND BEING PART OF LOT 15 OF "JOHN D. COALTER'S HOWELL'S PRAIRIE TRACT" IN U.S. SURVEY 1669.

TOWNSHIP 46 NORTH, RANGE 3 EAST OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

O'FALLON NOTES

- 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.
- All filled places under proposed storm and sanitary sewer, proposed roads, and/or paved areas shall be compacted to 90% of the maximum density as determined by the Modified AASHTO T-180 Compaction Test, or 65% of maximum density as determined by the standard Proctor Test AASHTO T-99. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. All filled places in proposed roads shall be compacted from the bottom up. All test shall be verified by a soils engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in the fill area 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.
- No area shall be cleared without the permission of the Project Engineer.
- The City of O'Fallon shall be notified 48 hours prior to construction for coordination and inspection.
- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre-construction conditions.
- All construction and materials shall conform to the current construction standards of the City of O'Fallon.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- No slopes shall exceed 3(Horizontal) : 1(Vertical).
- 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 his methods as deemed fit to protect property and improvements. Any depositing of silt 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.
- Erosion control systems shall not be limited to what is shown on the plan. Whatever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadways, properties and ditches.
- All building mounted lights shall be pointed downward and fully screened to prevent light from spilling over onto adjacent properties.
- All ground and roof hvac mechanical units to be screened from view.
- The Developer must supply City Construction Inspectors with soil reports prior to or during site soil testing.
- All paving to be in accordance with St. Charles County standards and specifications except as modified by the City of O'Fallon ordinances.
- All sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved "Americans 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. Ensure at least one 8' wide handicap access aisle is provided and curb ramps do not project into handicap access aisles.
- Brick shall not be used in the construction of storm or sanitary sewer structures.
- The Contractor shall ensure all storm and sanitary sewer joint shall be gasketed O-Ring Type.
- Lighting values will be reviewed on the site prior to the final occupancy inspection. Corrections will need to be made if not in compliance with City standards.
- All proposed fencing requires a separate permit through the Planning Division.
- All sign locations and sizes must be approved separately through the Planning Division.
- All sign post and backs and bracket arms shall be painted black using Carboline Rustbond Penetrating Sealer 50 and Carboline 133 HB paint (or equivalent as approved by the City of O'Fallon and MoDOT). Sign designating street names shall be on the opposite side of the street from traffic control signs.
- All new utility lines shall be located underground.
- All erosion control systems shall be inspected and necessary corrections shall be made within 24 hours of any rainstorm resulting in one-half inch of rain or more.
- All graded areas that are to remain bare for over 2 weeks shall be seeded and mulched per DNR requirements.
- Rip-rap shown at flood ends will be evaluated in the field after installation for effectiveness and field modified if necessary to reduce erosion on and off-site.
- Marking to be provided on storm sewer inlets. The City will allow the following markers and adhesive procedures only as shown in the table below. "Peel and Stick" adhesive pods will not be allowed.

Manufacturer	Size	Adhesive	Style	Message (Port #)	Website
ACP International	3 7/8"	Epoxy	Crystal Cap	No Dumping Drains To Waterways (SD-W-CO)	www.acpinternational.com
DAS Manufacturing, Inc.	4"	Epoxy	Standard	No Dumping Drains To Stream (SDS)	www.dasmanufacturing.com

- 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 (Proctor reports) for projects within the City:
 - Maximum dry density
 - Optimum moisture content
 - Maximum and minimum 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.
 - Natural 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 activities to proceed on any project site.

O'FALLON NOTES (CONTINUED)

- 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. Landfill tickets for such disposal shall be maintained on file by the developer. Burning on site shall be allowed only by permit from the local fire district. If a burn pit is proposed the location and mitigation shall be shown on the grading plan and documented by the soils engineer.
- HDPE pipe is to be N-12WT or equal and to meet ASTM F1417 water tight field test.
- If there are any physical changes to MoDOT's right of way, such as grading or entrance modification, MoDOT requests the opportunity to review the plans. There may be improvements to the roadway required to support the proposed development within MoDOT's Access Management Guidelines.
- All inlets shall have a 1/2" trash bar.
- All drop structures shall have compacted rock backfill in the disturbed ground around the structure.
- Traffic is to be per MoDOT or MUTCD whichever is most stringent.
- Developer will insure the proposed siltation will be erected and maintained in a timely manner throughout the length of the development, to minimize migration of silt into the detention/retention basin. Any silt added to the basin will be removed by the developer prior to occupancy of the building. A measurement to verify the depth of the lakes in question shall be provided once the silt is removed by Taylor Morley and once the construction of the site is complete.
- Connections at all storm structures to be made with A-lock joint or equal.

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- 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 improvements.
- 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.
- All existing site improvements, disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
- All fill including places under proposed storm and sanitary sewer lines and paved areas included 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.
- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
- All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
- It is the responsibility of the contractor to adjust all sanitary manholes (that are affected by the development) to finish grade.
- Easements shall be provided for all sanitary sewers, storm sewers and all utilities on easement exhibits.
- All sanitary sewer construction and materials shall conform to the current construction standards of Duckett Creek Sanitary District.
- The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination and inspection.
- 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.
- All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10CSR-8.120(7)(E).
- All 12" PVC sanitary sewer pipe is to be SDR-35 or equal with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe.
- All sanitary and storm sewer trench backfills shall be water jetted. Granular backfills will be used under pavement areas.
- All pipes shall have positive drainage through manholes. No flat invert structures are allowed.
- All creek crossings shall be grouted rip-rap as directed by District inspectors.
- Brick shall not be used on sanitary sewer manholes.
- Existing sanitary sewer service shall not be interrupted.
- Maintain access to existing residential driveways and streets.
- Pre-manufactured adapters shall be used at all PVC to DIP connection. Rubber boot/Mission type couplings will not be allowed.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- Type N' Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.

ASBUILTS ADDED MAY, 2007

GRADING NOTES:

- A Geotechnical Engineer shall be employed by the owner and be on site during grading operations. All soils tests shall be verified by the Geotechnical Engineer concurrent with the grading and back filling operations.
- The grading contractor shall perform a complete grading and compaction operation as shown on the plans, stated in these notes, or reasonably implied there from, all in accordance with the plans and notes as interpreted by the Geotechnical Engineer.
- The Contractor shall notify the Soils Engineer at least two days in advance of the start of the grading operation.
- All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
- A sediment control plan that includes monitored and maintained sediment control basins and/or straw bales should be implemented as soon as possible. No graded area is to be allowed to remain bare over the winter without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property and silted up existing downstream storm drainage system.
- Any existing trash and debris currently on this property must be removed and disposed of off-site.
- Soft soil in the bottom and banks of any existing or former pond sites or tributaries should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed right-of-way locations or on storm sewer locations.
- Site preparation includes the clearance of all stumps, trees, bushes, shrubs, and weeds; the grubbing and removal of roots and other surface obstructions from the site; and the demolition and removal of any man-made structures. The unsuitable material shall be properly disposed of off-site. Topsoil and grass in the fill areas shall be thoroughly discing prior to the placement of any fill. The Soils Engineer shall approve the discing operation.
- Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory roller, or high speed impact type drum rollers acceptable to the Soils Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
- The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of fill density tests will be determined on each lift of fill. Interim reports showing fill quality will be made to the Owner at regular intervals.
- The Soils Engineer shall notify the Contractor of rejection of a lift of fill or portion thereof. The Contractor shall rework the rejected portion of fill and obtain notification from the Soils Engineer of its acceptance prior to the placement of additional fill.
- All areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted in accordance with the specifications given below. Natural slopes steeper than 1 vertical to 5 horizontal to receive fill shall have horizontal benches, cut into the slopes before the placement of any fill. The width and height to be determined by the Soils Engineer. The fill shall be loosely placed in horizontal layers not exceeding 8 inches in thickness and compacted in accordance with the specifications given below. The Soils Engineer shall be responsible for determining the acceptability of soils placed. Any unacceptable soils placed shall be removed at the Contractor's expense.
- The surface of the fill shall be finished so that it will not impound water. If at the end of a days work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
- All siltation control devices shall be inspected by the contractor after dry rain of 1/2" or more with any appreciable accumulation of mud to be removed and siltation measures required where necessary.
- No slope shall be steeper than 3(Horizontal):1(Vertical). All slopes shall be sodded or seeded and mulched.
- Any contaminated soil encountered during excavation shall be hauled and placed as directed by the owners environmental engineering representative.
- The location of and details for all siltation control devices (silt fences and sediment basins) must follow the "St. Charles County Soil and Water Conservation District Erosion and Sediment Control" guidelines.



CALL BEFORE YOU DIG!
1-800-DIG-RITE
AND
MoDOT
(314) 340-4100
*FIBER OPTICS ARE PRESENT

GRADING QUANTITIES:

92,719 C.Y. FILL (INCLUDES 15% SHRINKAGE)
4,101 C.Y. CUT (INCLUDES SUBGRADES)
88,618 C.Y. SHORT

LOT 4 IMPORTS 30,000 C.Y.:
88,618-30,000=58,618 C.Y. SHORT

THE ABOVE GRADING QUANTITY IS APPROXIMATE ONLY, NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY QUANTITIES TO CONSTRUCTION.
NOTE: THIS ESTIMATE EXCLUDES LOT 4 DEVELOPMENT.

STANDARD SYMBOLS & ABBREVIATIONS

TREE OR BUSH	○
LIGHT POLE	○
SANITARY SEWER & MAINHOLE	—○—
STORM SEWER & INLET	—○—
MAILBOX	□
ELECTRIC LINE	—E—
GAS LINE	—G—
WATER LINE	—W—
TELEPHONE LINE	—T—
CABLE TV LINE	—CATV—
OVERHEAD WIRE	—OHW—
UTILITY POLE	○
UTILITY POLE W/ DOWN GUY	○
FIRE HYDRANT	○
WATER VALVE	○
WATER METER	○
GAS VALVE	○
ROAD SIGN	○
TELEPHONE PEDESTAL	○
FENCE	—

DEVELOPMENT NOTES

- Area of Tract: 7.22 Ac.
- Existing Zoning: C-2 P.U.D. Planned Unit Development (City of O'Fallon)
- Proposed Use: Commercial Development
- The required height and building setbacks are as follows:
Minimum Front Yard: 25 feet
Minimum Side Yard: 10 feet
Minimum Rear Yard: 10' (if adjacent to residential)
Maximum Height of Building: Not to exceed 50'
- Site is served by:
Duckett Creek Sanitary Sewer District 636-441-1244
Ameren Union Electric Company 636-639-8312
Laclede Gas Company 314-858-5417
Public Water Supply #2 636-961-3737
SBC Telephone Company 636-949-1321
- According to the Flood Insurance Rate Map of the City of O'Fallon, (Community Panel number 290316 0430 E dated August 2, 1996) this property lies within zone X. Zone X is an area determined to be outside the 500-year floodplain.
- Site Coverage Calculations:
Site = 314,503.20 s.f.
Pavement = 31,798.80 s.f. 10%
Green Space = 282,704.40 s.f. 90%
- Existing detention basin provided for with the overall Waterbury Development.
- Only above ground utilities have been located as shown on this site. Underground utilities have been shown on this site based on the respective utility company base maps only. These utilities should be verified before construction begins on this property.
- All new utilities shall be located underground.
- All mechanical units shall be screened from public view.
- All signage is reviewed and approved under a separate permit.
- All construction methods and practices to conform with OSHA standards.
- Street Tree Requirements:
1 tree every 40' of frontage = 1545.88 / 40 = 38.65 ~ 39
39 Provided
- There are no existing or proposed drainage swales along Hwy K. All stormwater drains off the R.O.W. onto our proposed site and is collected by the proposed stormwater system.
- No loading/unloading operations or trash pick-up shall occur between the hours of 9:00pm. and 7:00am.
- Plan subject to review and approval by Cottleville Community Fire Protection District.
- No slope shall be steeper than 3:1.
- Siltation shall be per the St. Charles County soils conservation district.
- No trees exist on site. No trees to preserve.
- Roadway must be kept clean and free of all mud, dirt and debris at all times.

SHEET INDEX

- SHEET 1 COVER SHEET
SHEET 2 SITE PLAN
SHEET 3 PROFILES

SEWER MEASUREMENTS

THE EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS.

ALL PUBLIC SEWERS WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS SHOWN ON THESE PLANS.



THE ABOVE GRADING QUANTITY IS APPROXIMATE ONLY, NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY QUANTITIES TO CONSTRUCTION.
NOTE: THIS ESTIMATE EXCLUDES LOT 4 DEVELOPMENT.

DONG IN DEVELOPMENT USA L.L.C.
4122 KEATON CROSSING GLEVE., STE. 105
O'FALLON, MISSOURI 63366
636-300-1810

PREPARED FOR:

DISCLAIMER OF RESPONSIBILITY: I hereby certify that the documents attached to this sheet are true and correct to the best of my knowledge and belief. I am not responsible for any errors or omissions in this document. The user of this document is advised to verify all information contained herein before using it for any purpose. The user of this document is advised to verify all information contained herein before using it for any purpose.

REVISIONS

NO.	DATE	REVISIONS
6-26-07		City Comments

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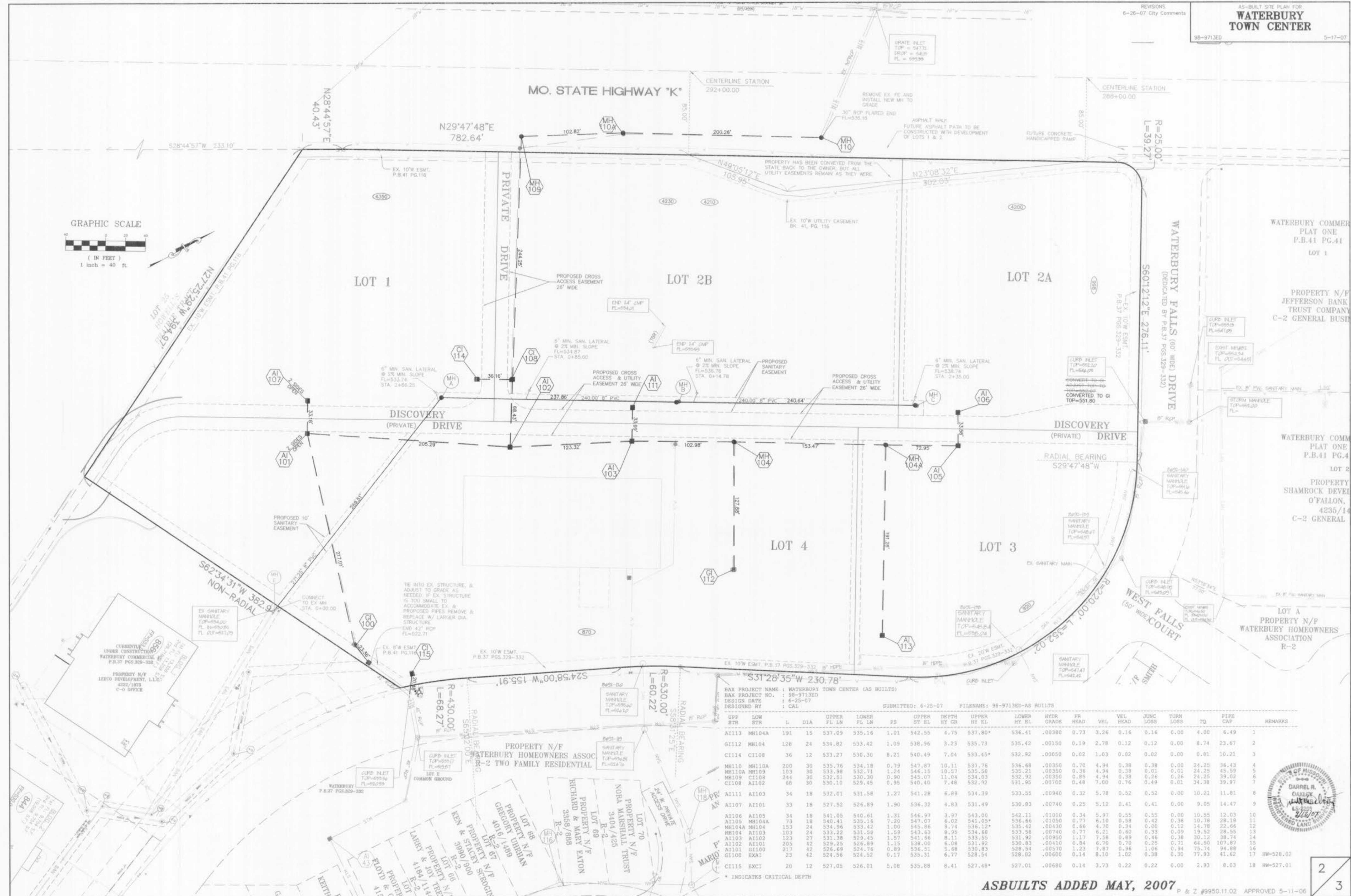
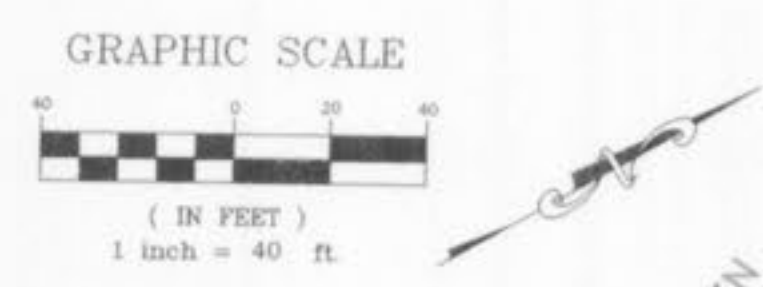
REVISIONS

NO.	DATE	REVISIONS



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

5-17-07
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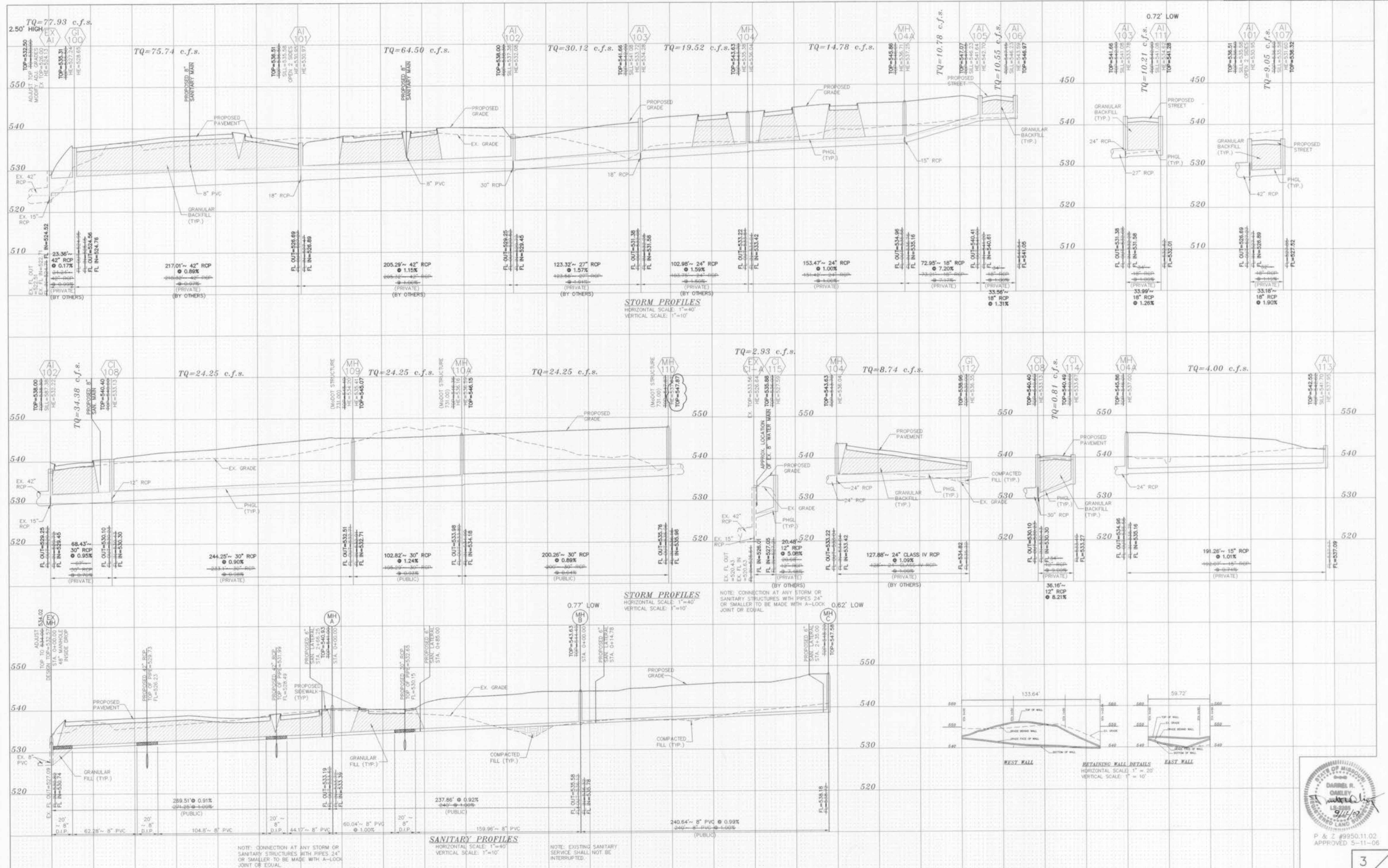


ASBULTS ADDED MAY, 2007

UPP STR	LOW STR	L	DIA	UPPER FL LN	LOWER FL LN	PS	UPPER ST EL	DEPTH HY GR	UPPER HY EL	LOWER HY EL	HYDR GRADE	FR HEAD	VEL	VEL HEAD	JUNC LOSS	TURN LOSS	TQ	PIPE CAP	REMARKS
AI113	MH104A	191	15	537.09	535.16	1.01	542.55	4.75	537.80*	536.41	.00380	0.73	3.26	0.16	0.16	0.00	4.00	6.49	1
GI112	MH104	128	24	534.82	533.42	1.09	538.96	3.23	535.73	535.42	.00150	0.19	2.78	0.12	0.12	0.00	8.74	23.67	2
CI114	CI108	36	12	533.27	530.30	8.21	540.49	7.04	533.45*	532.92	.00050	0.02	1.03	0.02	0.02	0.00	0.81	10.21	3
MH110	MH10A	200	30	535.76	534.18	0.79	547.87	10.11	537.76	536.68	.00350	0.70	4.94	0.38	0.38	0.00	24.25	36.43	4
MH10A	MH109	103	30	533.98	532.71	1.24	546.15	10.57	535.50	535.21	.00350	0.36	4.94	0.38	0.01	0.01	24.25	45.59	5
MH109	CI108	244	30	532.51	530.30	0.90	545.07	11.04	534.03	532.92	.00250	0.85	4.94	0.38	0.26	0.26	24.25	39.02	6
CI108	AI102	68	30	530.10	529.45	0.95	540.40	7.48	532.92	531.95	.00700	0.48	7.00	0.76	0.49	0.01	34.38	39.97	7
AI111	AI103	34	18	532.01	531.58	1.27	541.28	6.89	534.39	533.55	.00940	0.32	5.78	0.52	0.52	0.00	10.21	11.81	8
AI107	AI101	33	18	527.52	526.89	1.90	536.32	4.83	531.49	530.83	.00740	0.25	5.12	0.41	0.41	0.00	9.05	14.47	9
AI106	AI105	34	18	541.05	540.61	1.31	546.97	3.97	543.00	542.11	.01010	0.34	5.97	0.55	0.55	0.00	10.55	12.03	10
AI105	MH104A	73	18	540.41	535.16	7.20	547.07	6.02	541.05*	536.66	.01050	0.77	6.10	0.58	0.42	0.38	10.78	28.18	11
MH104A	MH104	153	24	534.96	533.42	1.00	545.86	9.74	536.12*	535.42	.00150	0.66	4.70	0.34	0.00	0.12	14.78	22.66	12
MH104	AI103	103	24	533.22	531.58	1.59	543.63	8.95	534.68	533.58	.00740	0.77	6.21	0.60	0.33	0.09	19.52	28.53	13
AI103	AI102	123	27	531.38	529.45	1.57	541.66	8.11	533.55	531.92	.00950	1.17	7.58	0.89	0.46	0.38	30.12	38.74	14
AI102	AI101	205	42	529.25	526.89	1.15	538.00	6.08	531.92	530.83	.00410	0.84	6.70	0.70	0.25	0.71	64.50	107.87	15
AI101	CI100	217	42	526.69	524.76	0.89	536.51	5.68	530.83	528.54	.00570	1.23	7.87	0.96	1.06	0.94	75.74	94.88	16
CI100	EXAT	23	42	524.56	524.52	0.17	535.31	6.77	528.54	528.02	.00600	0.14	8.10	1.02	0.38	0.30	77.93	41.62	17
CI115	EXCI	20	12	527.05	526.01	5.08	535.88	8.41	527.48*	527.01	.00680	0.14	3.73	0.22	0.22	0.00	2.93	8.03	18

* INDICATES CRITICAL DEPTH





STORM PROFILES
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=10'

STORM PROFILES
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=10'

SANITARY PROFILES
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=10'

NOTE: EXISTING SANITARY SERVICE SHALL NOT BE INTERRUPTED.



ASBUILT'S ADDED MAY, 2007

SCALE: VERTICAL = 10
HORIZONTAL = 40



P & Z #9950.11.02
APPROVED 5-11-06