

WAL-MART STORE #2616-04

O'FALLON, MISSOURI

FINAL SEWER & WATER MEASUREMENTS

VOLZ

INDEX

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BENCHMARK CONTROL:

FEMA RM66 - "CROSS" CUT ON THE WEST BOLT OF A FIRE HYDRANT AT N.E. CORNER OF MILL POND DRIVE AND SPRING HILL DRIVE. ELEVATIONS = 581.74

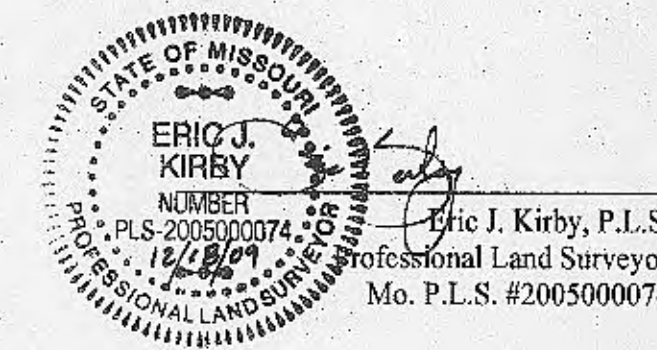
SITE BENCHMARK CONTROL

TBM "1" - CUT "L" IN THE S.E. CORNER OF BRIDGE OVER BELLEAU CREEK, AT TOP OF BRIDGE WALL, WEST OF THE INTERSECTION OF MEXICO ROAD AND WOODLAWN AVENUE. ELEVATION = 518.50

TBM "A" - CHISELED "SW" ON TOP CONCRETE BASE OF LIGHT STANDARD IN PARKING LOT DIRECTLY IN FRONT OF "OFFICE MAX" BUILDING. ELEVATION 539.65

TBM "B" - CHISELED "SQ" ON CONCRETE BASE OF LIGHT STANDARD AT N.W. CORNER OF INTERSECTION OF MAIN ENTRANCE TO WAL-MART AND OUTSIDE DRIVE FOR PARKING LOT. ELEVATION = 542.78

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. Since the wye locations have been plotted from information provided by the sewer contractor or other sources, I disclaim any responsibility for that specific information.



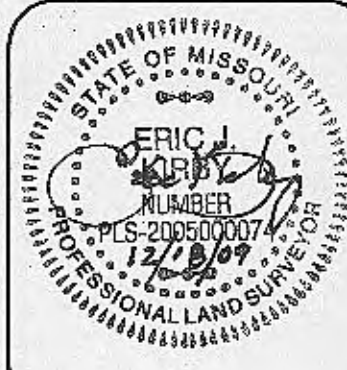
Note:
The results of those measurements are shown on this drawing by lining out the planned number and indicating the measured number adjacent to the planned number. All other numbers shown have not been measured or verified.

The location of the sewers were determined by locating the manholes and traversing in a straight line between them.

No hydraulic computations have been done on the measured lines to verify or confirm the capacity, freeboard or design requirements of the sewers or stormwater facilities.

CITY OF O'FALLON
COMMUNITY DEVELOPMENT DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: *[Signature]* DATE: 2-8-10
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

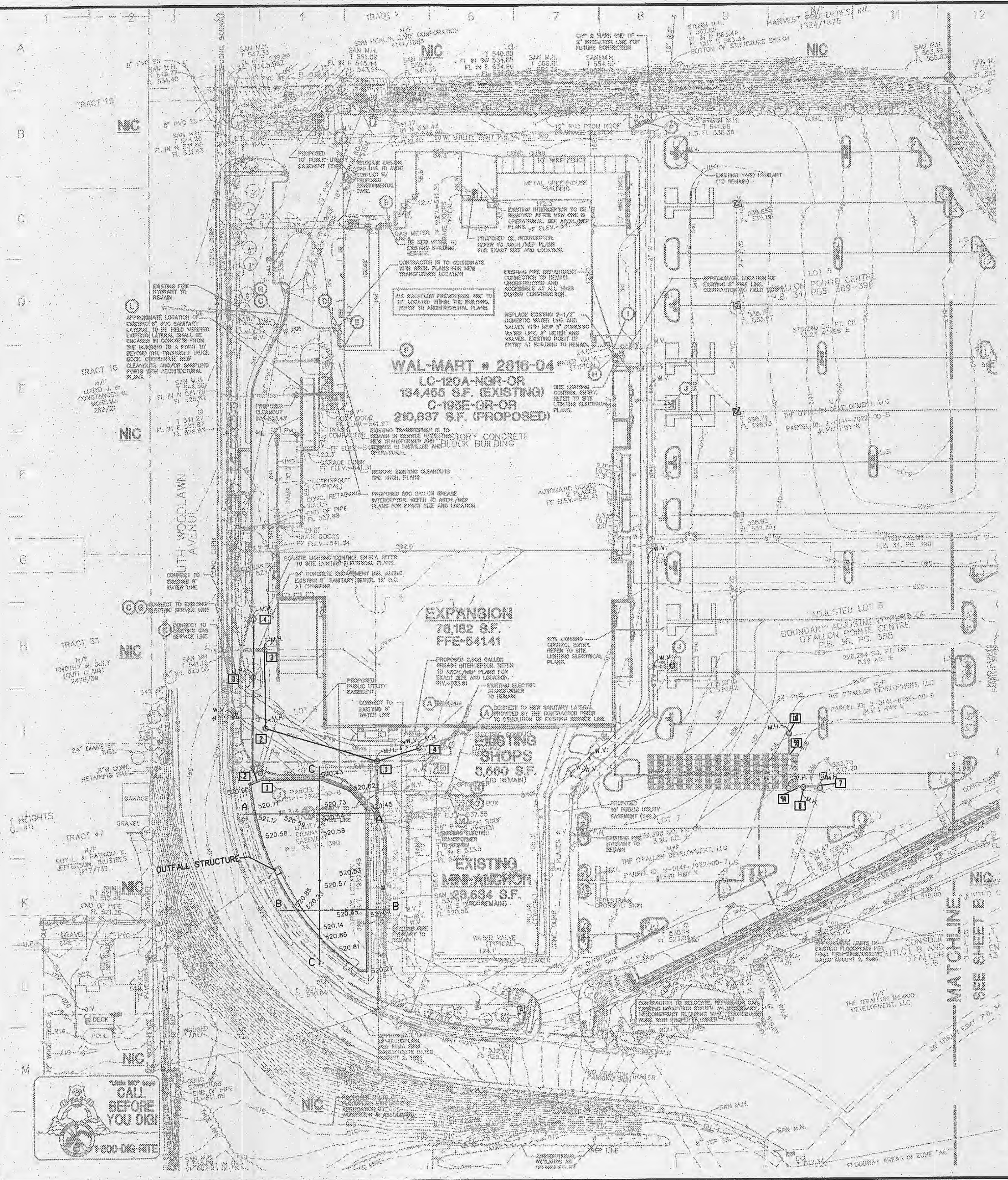
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O'Fallon, Missouri

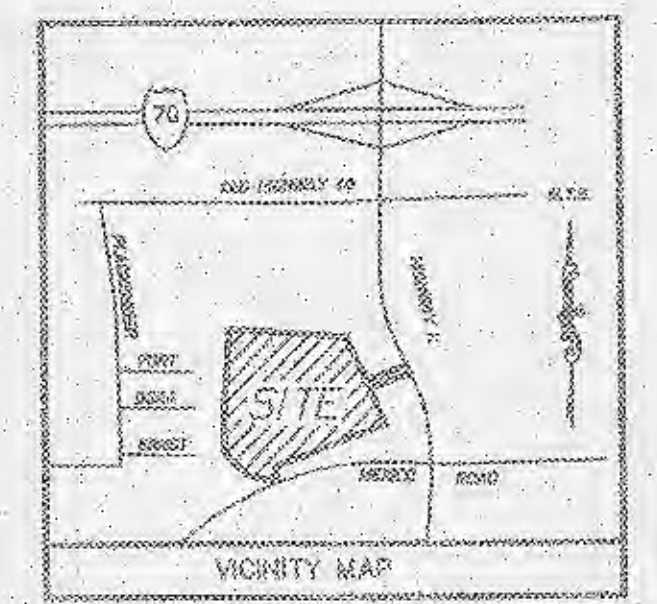
COVER SHEET
AS-BUILT
Drawn By: E.J.K.
Checked By: E.J.K.
VOLZ P. 9829-24

File



SANITARY SEWER SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	TOP CASTING	INVERT CUT	INVERT IN	PIPE LENGTH (FEET)	PIPE TYPE	PERCENT SLOPE
1	DOGHOUSE MH	538.40	522.37	522.57 (2)	-	-	-
1-2	(INSIDE DROP)	-	-	528.94 (4)	137'	8"	0.84%
2	MANHOLE	538.58	525.88	524.08	-	-	-
2-3	-	-	-	-	82'	8"	0.84%
3	DOGHOUSE	548.40	524.53	525.13*	-	-	-
3-4	MANHOLE	-	-	-	-	-	-
4	MANHOLE	539.50	530.00	-	-	-	-



NOTES:
 * APPROXIMATE ELEVATION OF EXISTING IMPROVEMENTS. CONTRACTOR TO FIELD VERIFY AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
 ** PORTIONS OF THIS PIPE MUST BE DIP. REFER TO PROFILE SHEETS.

UTILITY LEGEND

- (A) 6" SANITARY SEWER LATERAL AT MINIMUM 1.0% SLOPE. COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT ELEVATION AT BUILDING.
- (B) PROPOSED GAS ENTRY WITH GAS METER AT BUILDING. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL PLANS AND GAS COMPANY FOR ANY NECESSARY METER UPGRADES.
- (C) UNDERGROUND ELECTRIC SERVICE FROM POLE TO BUILDING. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, REDUNDANT CONDUIT, CABLES, PULL WIRES, SECONDARY CONDUIT, TRACE TAPE, BACKFILL, ETC., WHICH MAY BE REQUIRED BY ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH POWER COMPANIES. THE CONTRACTOR IS COORDINATING WITH THE UTILITY COMPANIES SHALL DETERMINE THE AMOUNT OF UTILITY LINE HE IS TO PROVIDE OUTSIDE THE UTILITY COMPANY'S ALLOWANCE.
- (D) PROPOSED LOCATION OF TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH ARCHITECTURAL PLANS AND POWER COMPANY PRIOR TO INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD, CONDUIT AND PIPE BOLLARDS AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.
- (E) PROPOSED LOCATION OF FLEEDING SERVICE ENTRY.
- (F) EXISTING LOCATION OF TELEPHONE SERVICE ENTRY (TO REMAIN).
- (G) CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE UTILITY COMPANIES FOR THE INSTALLATION/RELOCATION OF OVERHEAD/UNDERGROUND ELECTRICAL AND TELEPHONE LINES TYPICAL. CONTRACTOR SHALL COORDINATE THE TYPING OF INDIVIDUAL METER WITH THE ELECTRIC COMPANY. SEE NOTES C, D, E, F & G. FOR ADDITIONAL NOTES PERTAINING TO ELECTRIC AND TELEPHONE LINES.
- (H) EXISTING DOMESTIC WATERLINE ENTRY WITH METER PER LOCAL WATER COMPANY REQUIREMENTS (TO REMAIN). CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE WATERLINE SUCH AS BACKFLOW PREVENTER DEVICES, GATE VALVES, ETC., WHICH MAY BE REQUIRED DUE TO EXPANSION. REFER TO ARCHITECTURAL PLANS.
- (I) EXISTING 8" SPRINKLER ENTRY (TO REMAIN). CONTRACTOR SHALL BE REQUIRED TO INSTALL ANY APPURTENANCES ON THE SPRINKLER LINE AS REQUIRED DUE TO EXPANSION. REFER TO ARCHITECTURAL PLANS.
- (J) RELOCATED FIRE HYDRANT AND ASSEMBLY, TYPICAL AS BURGATED. CONTRACTOR TO PROVIDE FIRE DELAYED PROTECTION WHEN FIRE HYDRANT IS LOCATED IN PAVED AREA OR WHERE SHOWN.
- (K) CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH GAS COMPANY REGARDING THE SIZE AND INSTALLATION/RELOCATION OF GAS SERVICE LINE.
- (L) LOCATION OF EXISTING 6" SANITARY LATERAL BUILDING EXIT (TO REMAIN).
- (M) PROPOSED SHOPS GAS ENTRY WITH GAS METER AT BUILDING. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING PIPE BOLLARD PROTECTION AT METERS. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYPING OF INDIVIDUAL METER. REFER TO ARCHITECTURAL PLANS.
- (N) EXISTING SHOPS SPRINKLER AND DOMESTIC WATERLINE ENTRY WITH METER PER LOCAL WATER COMPANY REQUIREMENTS (TO REMAIN). CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE WATERLINE SUCH AS BACKFLOW PREVENTER DEVICES, GATE VALVES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR SHALL COORDINATE WITH WATER COMPANY AND ARCHITECTURAL PLANS.
- (O) EXISTING LOCATION OF ADJACENT TENANTS TELEPHONE SERVICE ENTRY TO REMAIN.
- (P) REMOVE RELOCATED METER WITH DECV/222 BACKFLOW PREVENTOR IN VALVE PER SITE IRRIGATION SYSTEM. PROVIDE 2" STUB FOR SITE IRRIGATION CONTRACTOR.

UTILITY PLAN LEGEND

- UGE — ELECTRICAL CONDUIT
- UGT — TELEPHONE CONDUIT
- 8"SG — SANITARY SEWER PIPE
- 8"WM — WATER MAIN PIPE
- 3"DW — DOMESTIC WATER PIPING
- 2"IW — IRRIGATION WATER PIPING
- GAS — GAS PIPE
- TS — TAMPER SWITCH CONDUIT
- CON — CONCRETE ENCASMENT
- TAPPING SLEEVE & VALVE
- WATER VALVE
- FIRE HYDRANT
- TRUST BLOCK
- SANITARY SEWER MANHOLE
- POWER POLE

EXISTING CONDITIONS LEGEND

- GL - Gravel Inlet
- CL - Clay Inlet
- D.C.I. - Duct Clay Inlet
- E.M. - Electric Meter
- R.W. - Raw Water
- F.H. - Fire Hydrant
- FL - Flowline
- D.M. - Gas Meter
- CU - Gas Valve
- L.S. - Light Standard
- M.H. - Manhole
- P.C. - Poly Vinyl Chloride
- RCP - Reinforced Concrete Pipe
- W.C.P. - Wrought Clay Pipe
- U.P. - Utility Pole
- LE - Light Entry
- SM - Sewer Manhole
- W.M. - Water Main
- W.V. - Water Valve
- W.L. - Water Line
- T — Telephone Line
- G — Gas Line
- E — Overhead Electric
- S — Sanitary Sewer
- U — Underground Electric
- W — Water Line

SECURITY CAMERAS ARE NOT REQUIRED AT THIS LOCATION, PER EMAIL INFORMATION PROVIDED BY ROBIN HINKLEY AT WAL-MART, DATED 7/26/2006

HIGH PLASTIC CLAY ARE PRESENT ON SITE AND WILL NOT BE ALLOWED WITHIN THE UPPER 2 FEET OF THE FLOOR SLABS, PERIMETER FOOTING, OR BACKFILL OF RETAINING WALL.

UNDERCUTTING AND RECOMPACTION OR REPLACEMENT OF EXISTING MATERIAL MAY BE NECESSARY FOR INSTALLATION OF RETAINING WALL.

CONTRACTOR TO RELOCATE, REPAIR, OR CAP EXISTING IRRIGATION SYSTEM AS NECESSARY TO CONSTRUCT RETAINING WALL. COORDINATE WORK WITH PROPERTY OWNER.

CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY SEALED BY A MISSOURI RLS FOR ALL NEW STORM SEWER LINES, DETENTION FACILITIES, SANITARY SEWER LINES AND WATER LINES AT LEAST 30 DAYS PRIOR TO POSSESSION.

CONTRACTOR TO VERIFY EXISTING SITE LIGHTING WIRE SIZE AND CONDITION BEFORE BEGINNING DEMOLITION AND/OR WIRING FOR NEW LIGHTS. REFER TO ARCH/MEP PLANS. COORDINATE REWIRING OF SITE LIGHTING OUTSIDE OF WAL-MART LEASE AREA WITH PROPERTY OWNER.

ALL PARKING LIGHTS WITHIN WAL-MART LEASE AREA SHALL BE WIRED OR REROUTED TO WAL-MART LIGHTING CIRCUIT

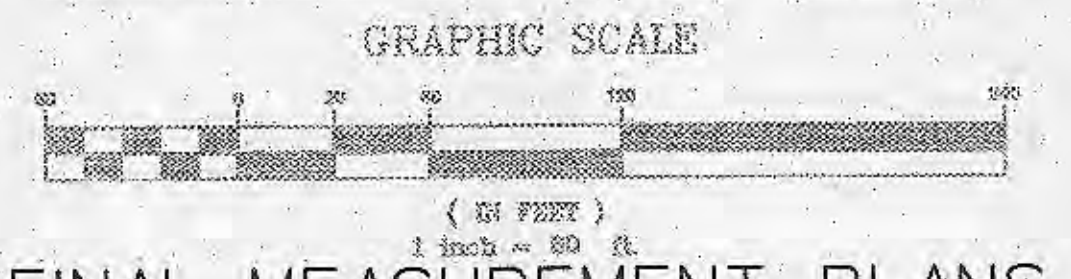
LINE MODIFICATION CAN NOT BE USED TO STABILIZE HIGH PLASTIC MATERIAL.

** NOTE **
 PIPE LENGTHS LISTED ARE BASED ON HORIZONTAL DISTANCE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND USED FOR DESIGN. CONTRACTOR TO FIELD VERIFY ACTUAL PIPE LENGTHS NEEDED FOR CONSTRUCTION.
 CONTRACTOR IS RESPONSIBLE FOR COMPARING THE STORM SEWER AND SANITARY SEWER CHARTS WITH THE PROFILES FOR THE STORM SEWER & SANITARY SEWER LINES AND INFORMING THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

PLANNING AND DEV. DEPT. FILE NO. 00-109.02
 DATE OF PLANNING APPROVAL: 09/08/2007

REFER TO SHEET C-N FOR SITE UTILITY NOTES

UTILITY PLAN



FINAL MEASUREMENT PLANS

OWNER-
 THE O'FALLON DEVELOPMENT, L.L.C.
 2127 BOURBON BELT BUSINESS CENTER DR.
 SUITE 200
 ST. LOUIS, MISSOURI 63114
 CONTACT: MR. DAFFIN PROSNIOR
 (314) 420-0900
 (314) 420-0908

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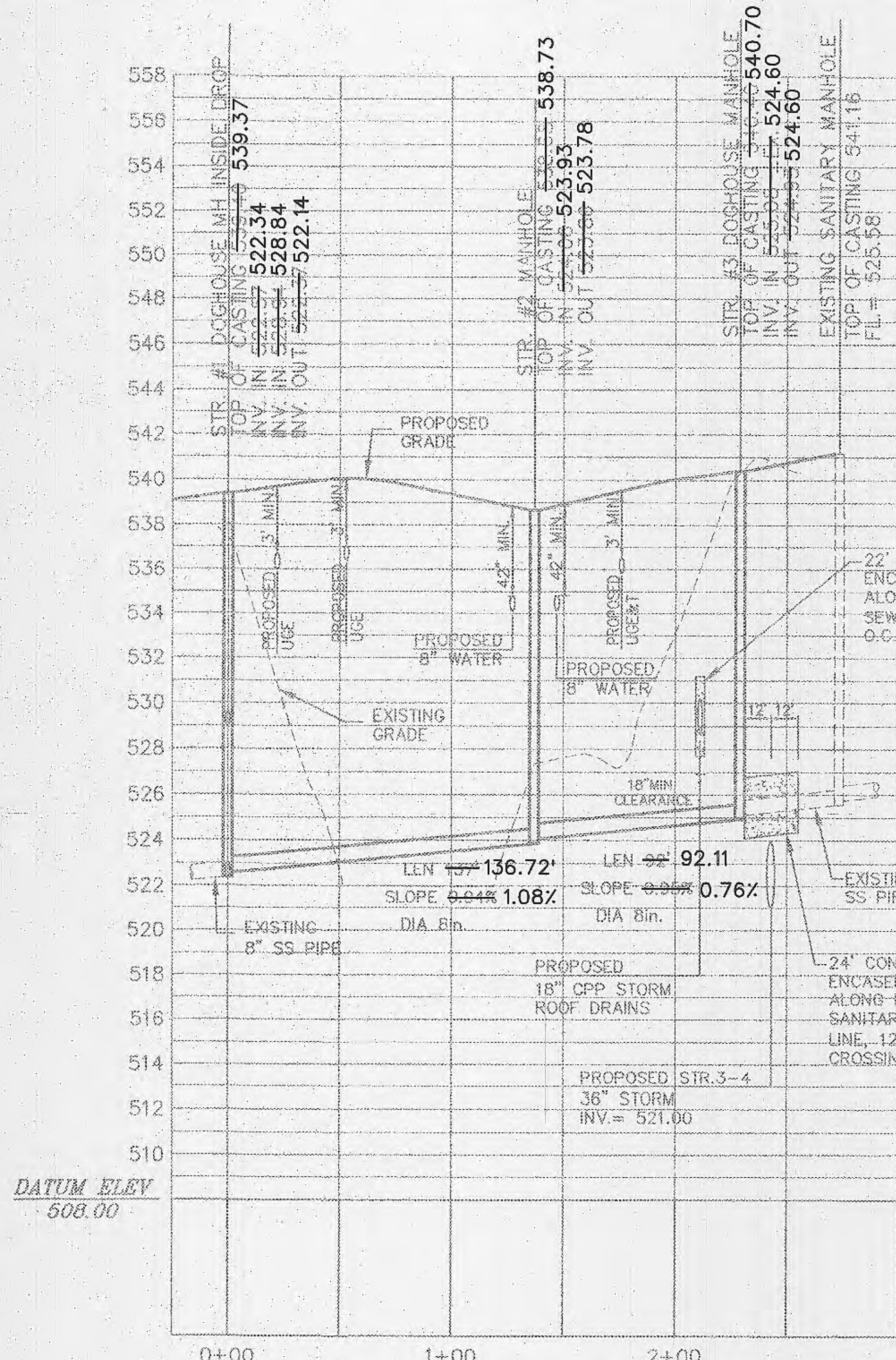
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O'Fallon, Missouri

SANITARY SEWER,
 STORM SEWER, WATER LINE
 AS-BUILT SITE PLAN

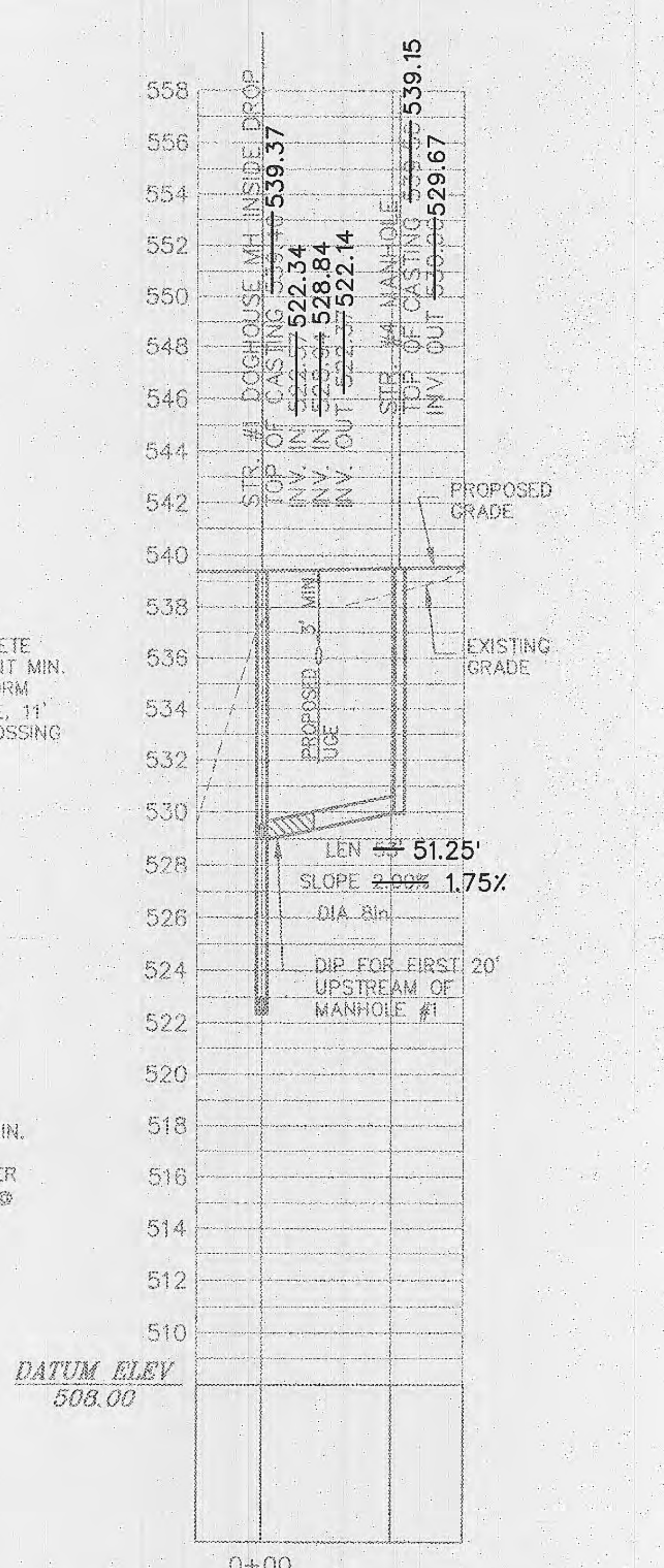
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 Checked By: EJK
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12-18-09
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SANITARY SEWER STR. #1 THRU #3
 (PUBLIC)
 HORIZONTAL SCALE: 1" = 40'
 VERTICAL SCALE: 1" = 4'

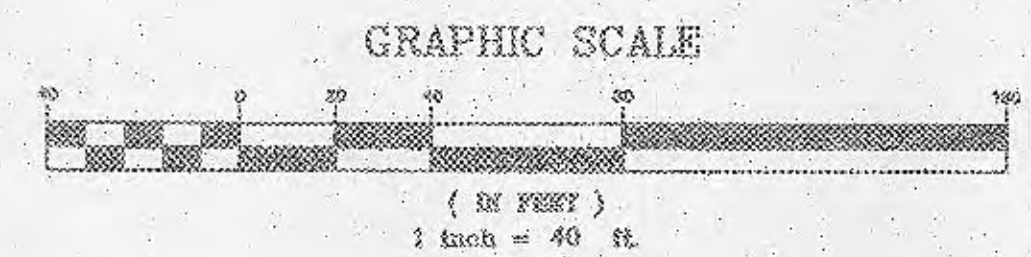


SANITARY SEWER STR. #1 TO #4
 (PUBLIC)
 HORIZONTAL SCALE: 1" = 40'
 VERTICAL SCALE: 1" = 4'

FINAL MEASUREMENT PLANS

PLANNING AND DEV. DEPT. FILE NO. 00-109.02
 DATE OF PLANNING APPROVAL: 09/06/2007

SANITARY SEWER PROFILES

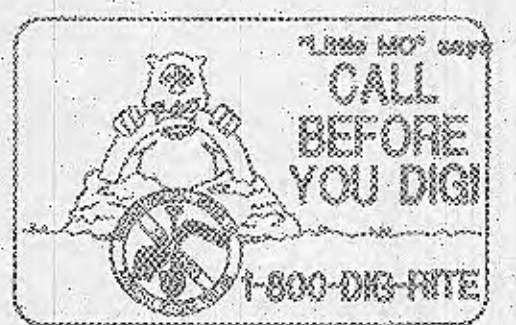


NOTE:
 A CONCRETE CRADLE FOR RCP AND ENCASEMENT FOR HDPE WILL BE REQUIRED FOR ALL STORM SEWER LINES WHEN CROSSING MORE THAN 18" ABOVE SANITARY LINES.

PIPE LENGTHS LISTED ARE BASED ON HORIZONTAL DISTANCE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND USED FOR DESIGN. CONTRACTOR TO FIELD VERIFY ACTUAL PIPE LENGTHS NEEDED FOR CONSTRUCTION.
 CONTRACTOR IS RESPONSIBLE FOR COMPARING THE STORM SEWER AND SANITARY SEWER CHARTS WITH THE PROFILES FOR THE STORM SEWER & SANITARY SEWER LINES AND INFORMING THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

DIP PIPE

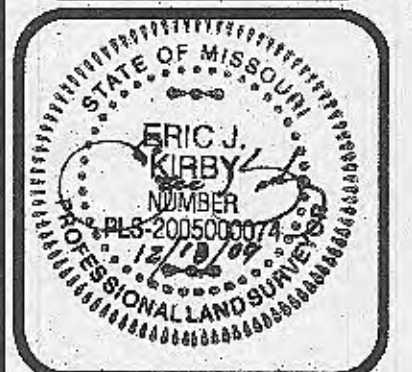
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN BY THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



OWNER-
 THE O'FALLON DEVELOPMENT, L.L.C.
 2127 BARNHART BUSINESS CENTER DR.
 SUITE 200
 ST. LOUIS, MISSOURI 63114
 CONTACT: MRS. DARSHEN FRIENHOUR
 63141 489-0800 PHONE
 63143 489-3200 FAX

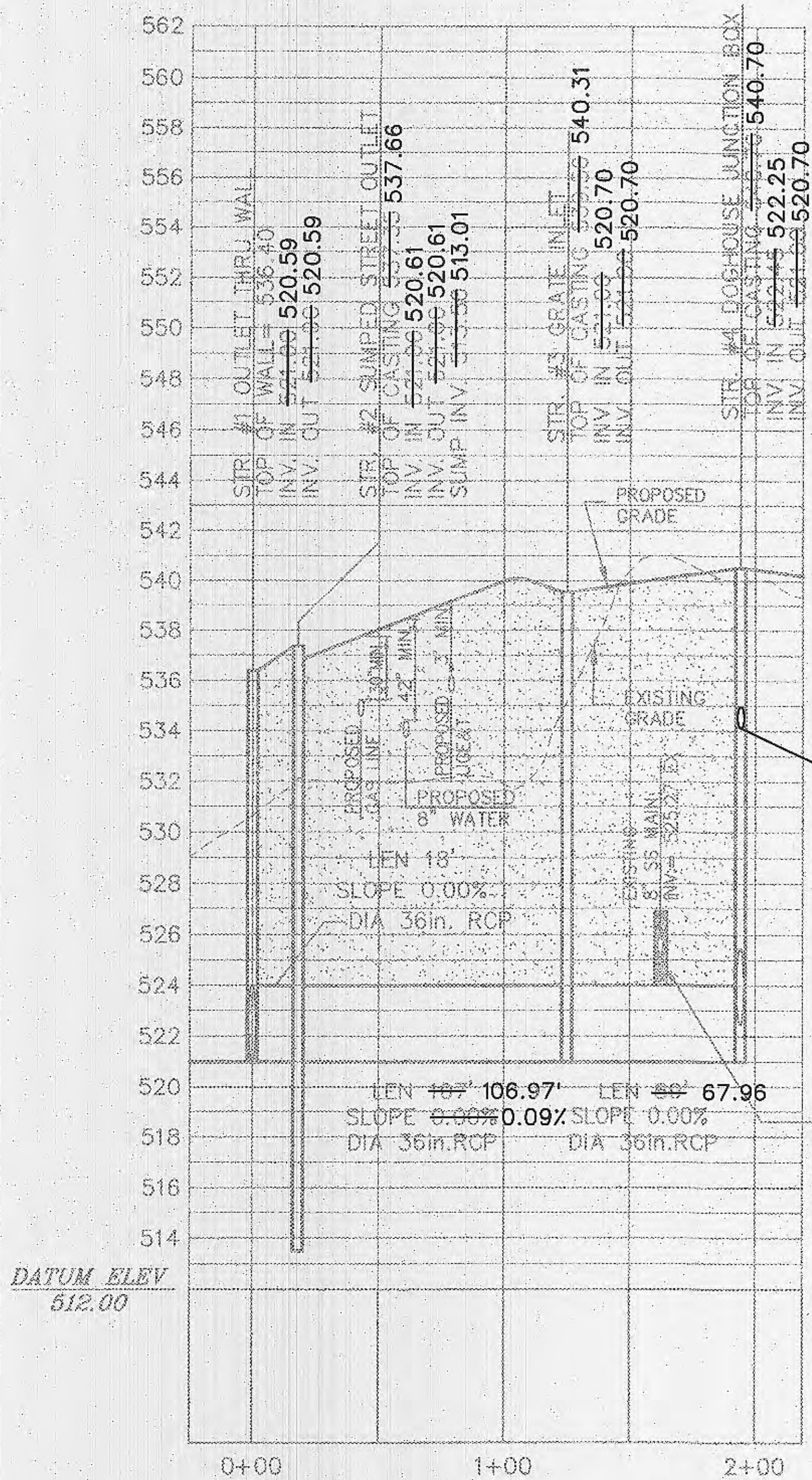
SANITARY PROFILES
 Drawn By: EJK
 Created By: EJK
 VOLZ JOB# 9428-34
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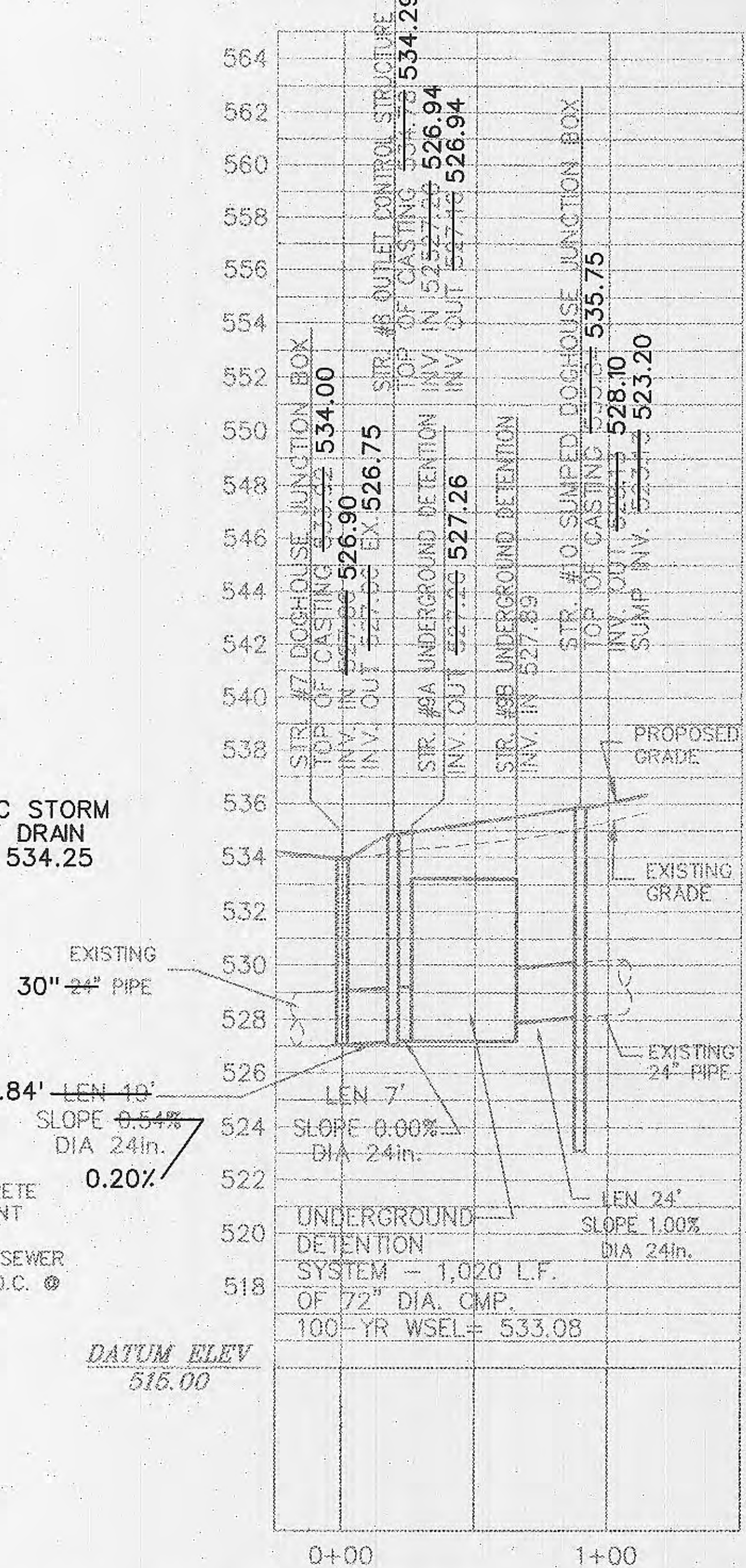
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STORM SEWER STR. #1 THRU #4

(PRIVATE)
 HORIZONTAL SCALE: 1" = 40'
 VERTICAL SCALE: 1" = 4'



STORM SEWER STR. #7 THRU #10

(PRIVATE)
 HORIZONTAL SCALE: 1" = 40'
 VERTICAL SCALE: 1" = 4'

NOTE:
 A CONCRETE CRADLE FOR RCP AND ENCASEMENT FOR HDPE WILL BE REQUIRED FOR ALL STORM SEWER LINES WHEN CROSSING MORE THAN 18" ABOVE SANITARY LINES.

NOTE:
 GRANULAR FILL IS REQUIRED AROUND STORM SEWER LINE #1-#4

PIPE LENGTHS LISTED ARE BASED ON HORIZONTAL DISTANCE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND USED FOR DESIGN. CONTRACTOR TO FIELD VERIFY ACTUAL PIPE LENGTHS NEEDED FOR CONSTRUCTION.
 CONTRACTOR IS RESPONSIBLE FOR COMPARING THE STORM SEWER AND SANITARY SEWER CHARTS WITH THE PROFILES FOR THE STORM SEWER & SANITARY SEWER LINES AND INFORMING THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

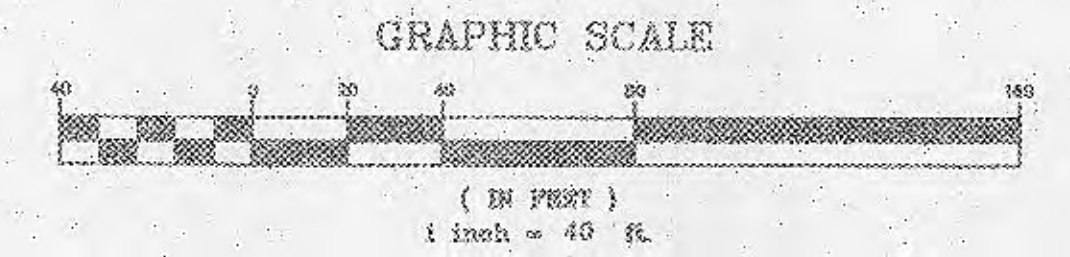
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

GRANULAR FILL

FINAL MEASUREMENT PLANS

PLANNING AND DEV. DEPT. FILE NO. 00-109.02
 DATE OF PLANNING APPROVAL: 09/08/2007

STORM SEWER PROFILES



OWNER-
 THE O'FALLON DEVELOPMENT, L.L.C.
 2827 HARBORVIEW BUSINESS CENTER DR.
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 CONTACT: MR. DARRIN HOENHOUR
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 (314) 489-0688 FAX

STORM PROFILES

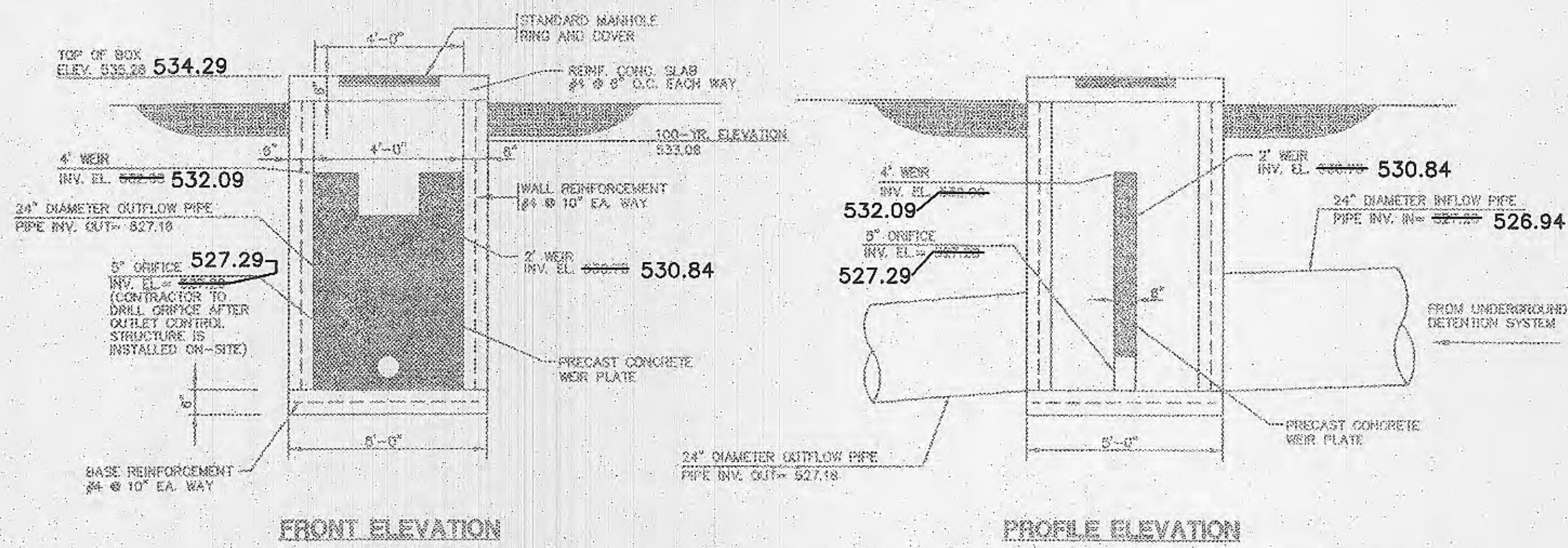
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FRONT ELEVATION PROFILE ELEVATION

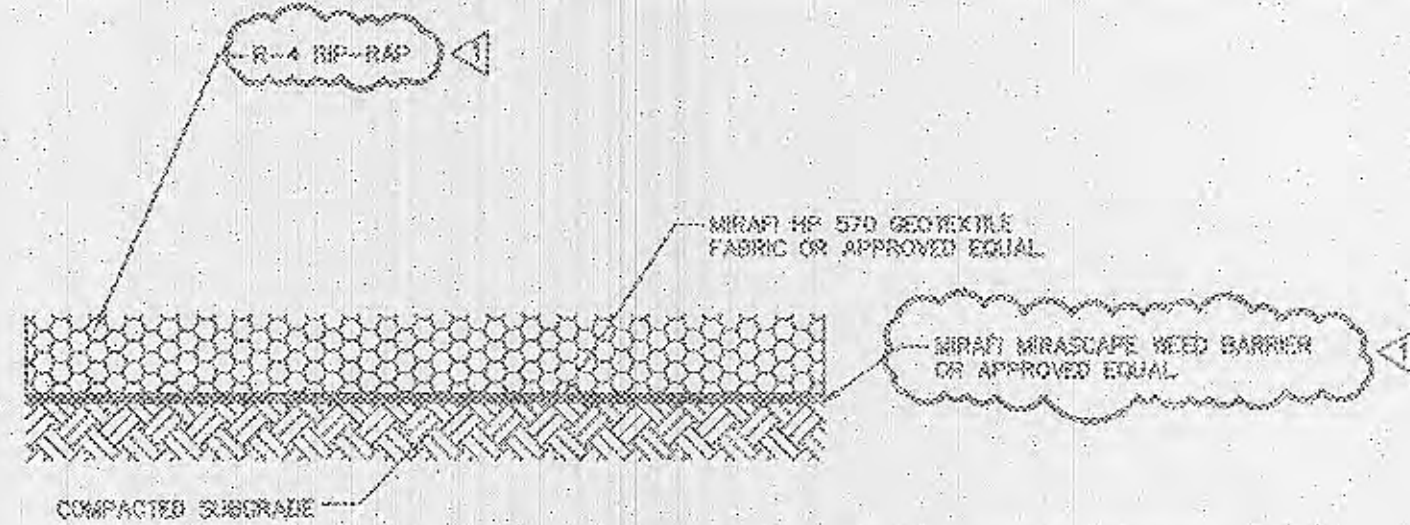
NOTE: CONTRACTOR SHALL SUBMIT A SHOP DRAWING SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MISSOURI FOR APPROVAL.

OUTLET CONTROL STRUCTURE DETAIL
N.T.S.
(STORM STRUCTURE #8)

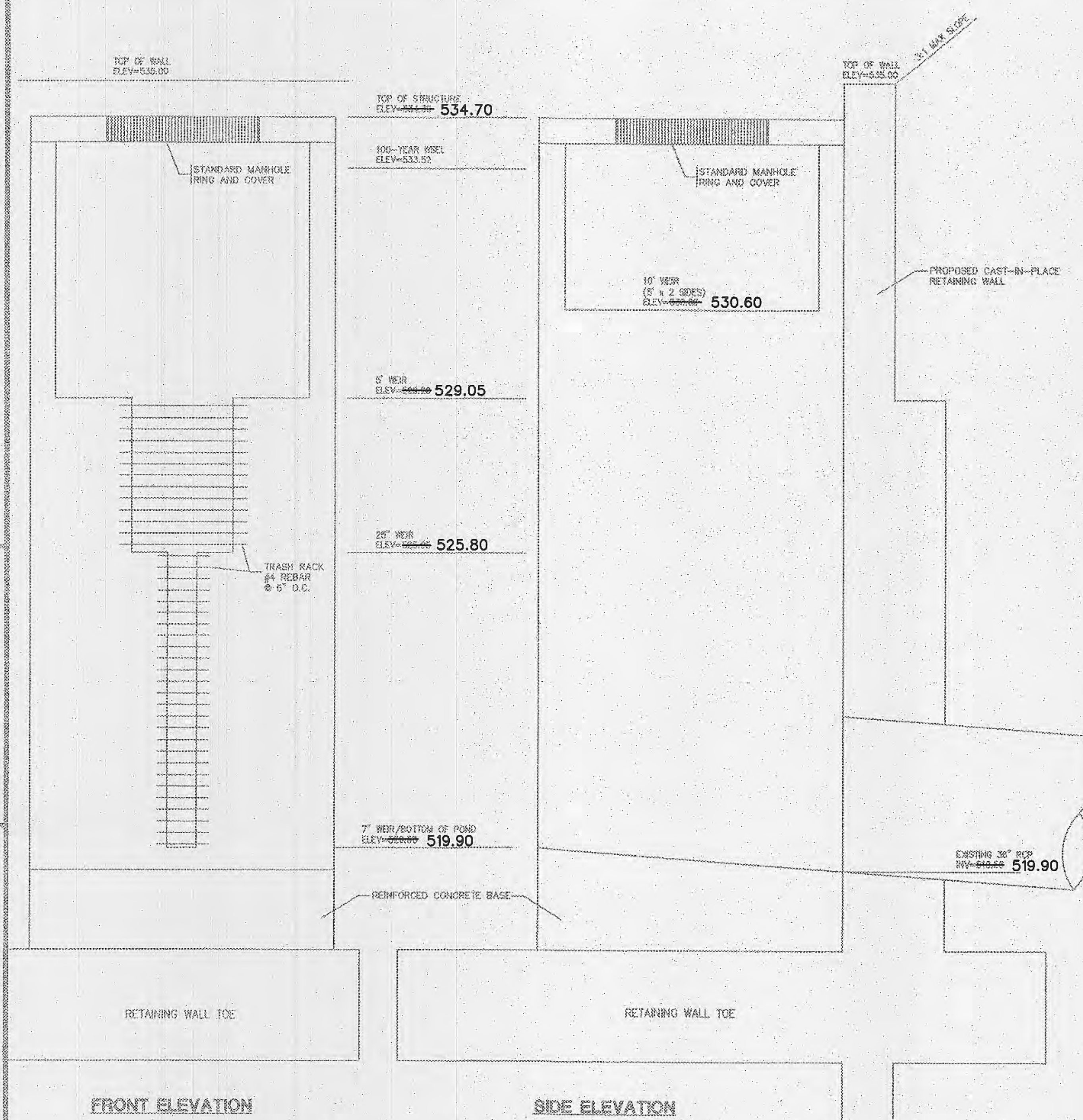
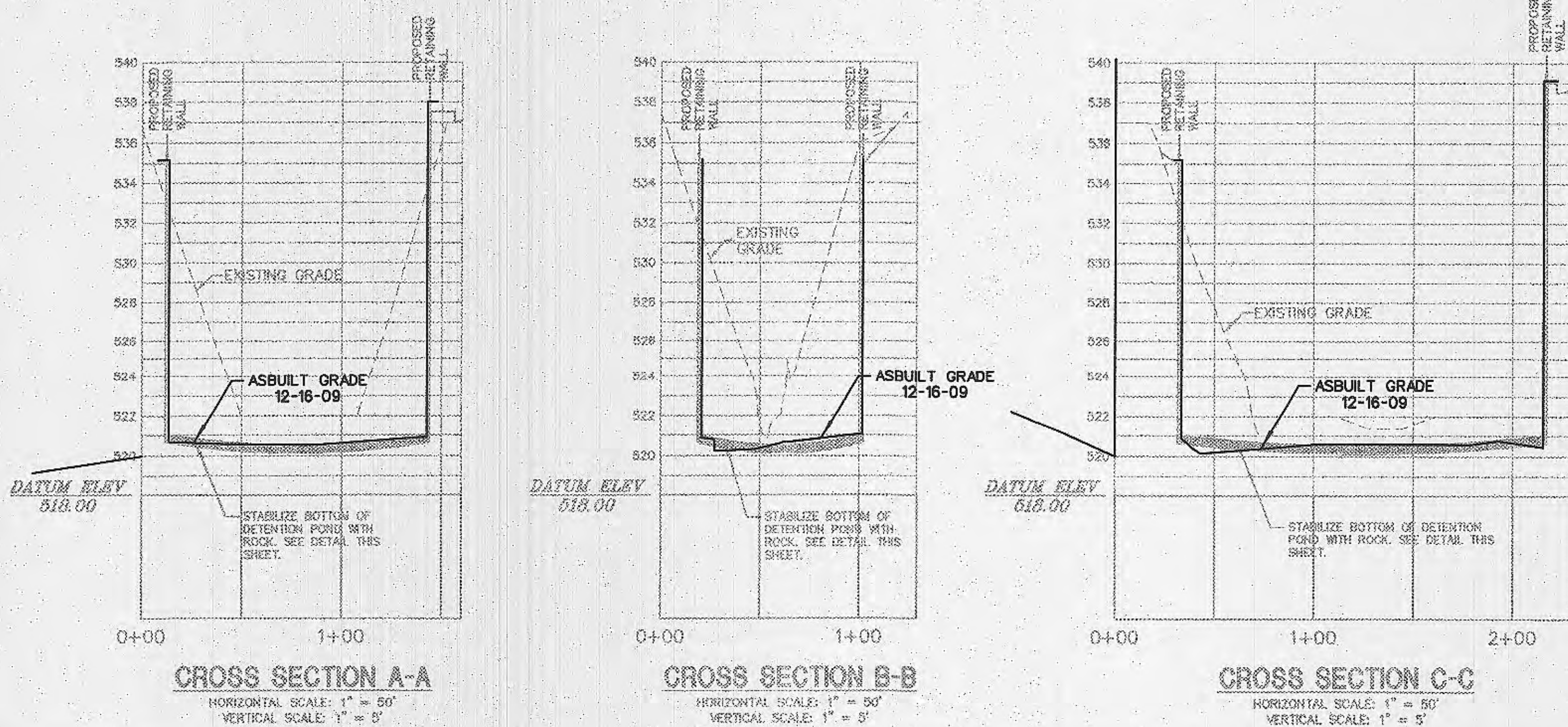
Provide a marking on the storm sewer inlets. The City will allow the following markers and adhesive procedures only as shown in the table below or an approved equal by Almetek Industries. 'Peel and stick' adhesive pads will not be allowed.

Manufacturer	Size	Adhesive	Style	Message (Font #)	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

STORM SEWER INLET MARKINGS



DETENTION POND BOTTOM STABILIZATION
N.T.S.

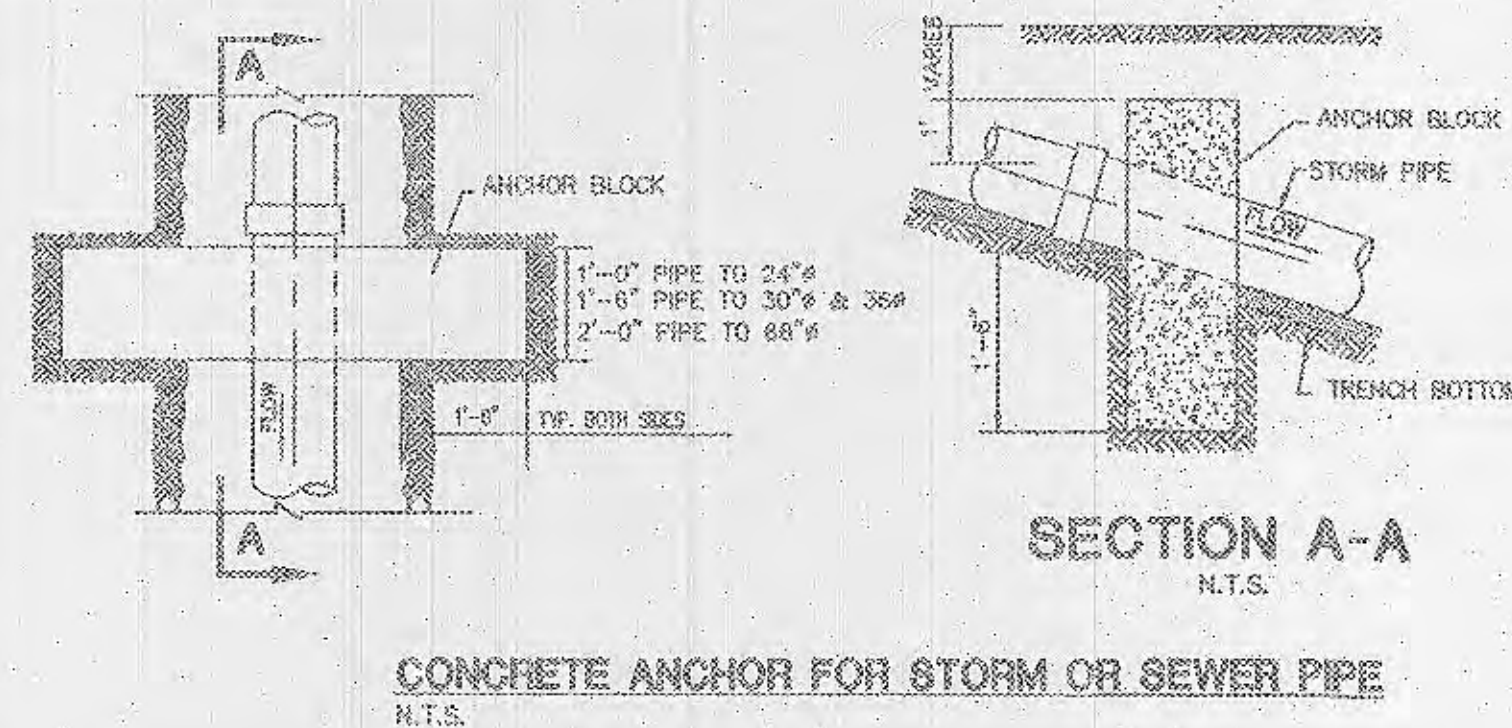


FRONT ELEVATION SIDE ELEVATION

OUTLET CONTROL STRUCTURE SHOWN FOR REFERENCE ONLY. REFER TO RETAINING WALL DESIGN DRAWINGS FOR CONSTRUCTION DETAIL.

DETENTION POND OUTLET CONTROL STRUCTURE
N.T.S.

FINAL MEASUREMENT PLANS



CONCRETE ANCHOR FOR STORM OR SEWER PIPE
N.T.S.

PLANNING AND DEV. DEPT. FILE NO. 00-109.02 DATE OF PLANNING APPROVAL: 09/06/2007

GRADING PLAN DETAILS

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STORM OUTLET CONTROL STRUCTURE DETAILS
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Checked By: EJK
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