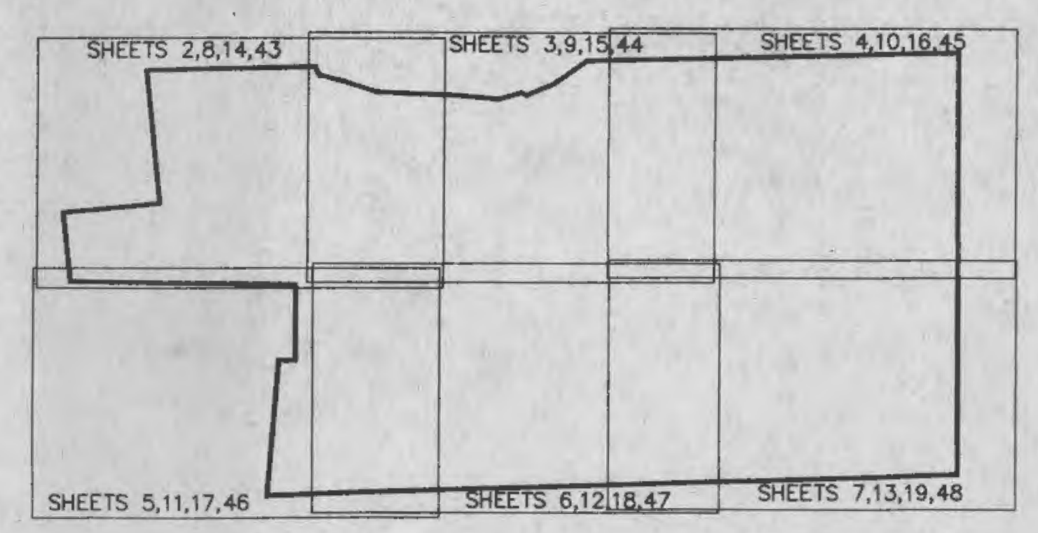
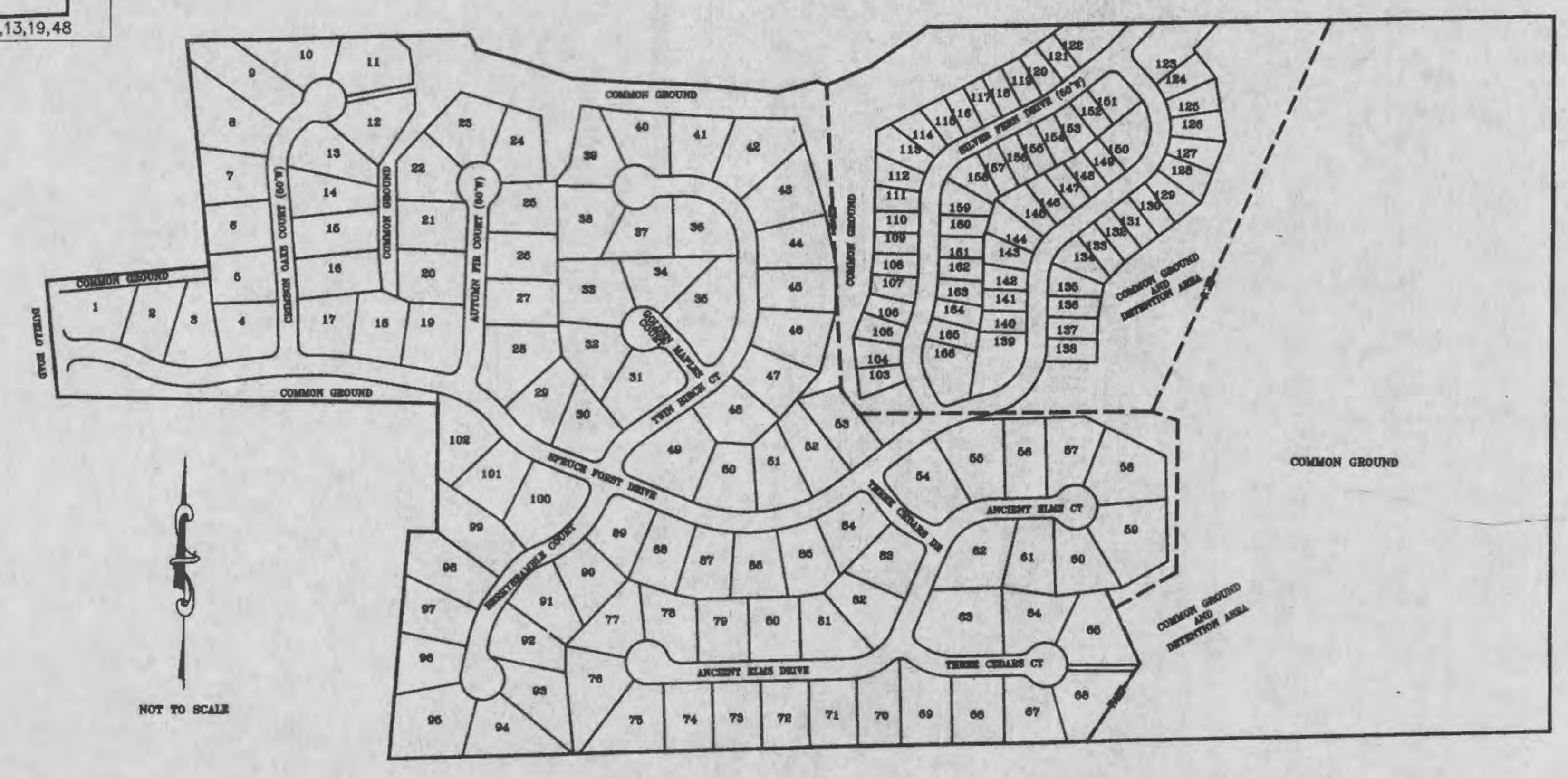
LOCATION MAP
NOT TO SCALE



IMPROVEMENT PLANS FOR

THE MANORS AT CRIMSON OAKS

A TRACT OF LAND BEING PART OF U.S. SURVEY 1801, TOWNSHIPS 46 AND 47 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN, ST. CHARLES COUNTY, MISSOURI



KEY MAP

ESTIMATED GRADING & CONSTRUCTION SCHEDULE

1. Clearing and installation of erosion control devices: 7/9/01 – 8/10/01
2. Excavation, Construction of Sediment Basin and Outflow Pipes: 8/06/01 – 9/24/01
3. Construction of Interim Storm Sewers with Grading: 9/10/01 – 9/24/01
4. Construction of Sediment Traps, Diversion Swales and Outflow pipes: 8/06/01 – 8/24/01
5. All exposed slopes in excess of 5 (horizontal) : 1 (vertical) and all exposed finish graded areas shall be seeded and mulched with temporary vegitation by SEPTEMBER 30, 2001
6. Sanitary Sewer Installation: 10/01/01 – 11/16/01
7. Storm Sewer Installation: 11/19/01 – 11/30/01
8. Utility Installation: 12/03/01 – 12/17/01
9. Pavement Installation: 12/17/01 – 12/27/01
10. Final Landscaping: By 3/11/02

DEVELOPMENT NOTES

1. Area of Tract: 124.44 Acres
2. Existing Zoning: R1B – 67.99 Acres; R2 – 21.48 Acres; A – 34.97 Acres
3. Proposed Use: Single Family and Multi–family homes
4. Number of Residences Proposed: 166 Units
   Single Family: 102 Lots
   Multi–Family: 64 units
5. Current Owners of Property:
   C.L. Investment Co. & Big Bend Development
   11906 Manchester Rd. Suite 111
   St. Louis, MO 63131
6. Owner/Developer:
   LAD PROPERTIES
   2458 Old Dorsett Rd. S–110
   St. Louis, Mo. 63043
7. Site is served by:
   St. Charles County Public Water District #2 Sewers
   Cuiver River Electric Company
   St. Charles Gas Company
   St. Charles County Public Water District #2
   G.T.E. Telephone Company
   Wentzville School District
   Wentzville Fire Protection District
8. Flood Plain is present on this tract per F.I.R.M. #29183C0215 E and dated August 2, 1996.
9. Topographic information is per Walker & Assoc. on U.S.G.S. Datum.
10. Boundary information is per deed and record information as compiled by Bax Engineering Co., during October, 1998.
11. All streets will be constructed to St. Charles County Class A standards. Streets will consist of 26 foot wide concrete pavement with integral rolled curb centered in a 50 foot right–of–way. Minimum radius shall be 150 feet.
12. Minimum street grades shall be 2%.
13. All utilities must be located underground.
14. All cul–de–sacs and bubbles will have pavement radii of 42 feet with right–of–way radii of 54 feet. Street intersections shall have a minimum rounding radius of 25 feet with pavement radii of 37 feet.
15. St. Charles Soil and Water Conservation District comments will be addressed during the design of the subdivision improvements. A sediment and erosion control plan will be submitted to St. Charles County Highway Department for review and approval.
16. Escrow funds to cover the cost of the required erosion and sediment control measures shall be addressed during construction drawings.
17. All homes must have driveway access to interior subdivision streets.
18. All lots must have a minimum lot width of 100 ft. for R1B zoning at the front building line.
19. A sediment and erosion control plan must be submitted to the County Highway Department for their review and approval relating to this project.
20. All parking for vehicles will be provided off the public right–of–way.
21. An entrance permit will be required from the St. Charles County Highway Dept.
22. All lot lines will be required to be a minimum of 25 feet from creek banks or from the 100–year high water elevation where no bank tops can be determined.
23. R1B P.I. Factor = 2.20, R2 P.I. Factor = 2.60
24. Stormwater Detention and Stormwater Sewer design for this site will be in compliance with the rules and regulations as set forth by St. Charles County Highway Department.

GENERAL NOTES

1. 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.
2. All manhole tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
3. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
4. All filled places under proposed storm and sanitary sewer lines and/or 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" (A.S.T.M.–D–1557). All tests shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
5. All filled places in proposed and existing St. Charles County roads (highways) shall be compacted from the bottom of the fill up to 90 percent maximum density as determined by the "Modified AASHTO T–180 Compaction Test" (ASTM D–1557). paved areas in cuts shall meet the same compaction requirements. All tests shall be verified by the Soils Engineer concurrent with grading operations.
6. Gas, water and other underground utilities shall not conflict with the depth of horizontal location or existing or proposed sanitary and storm sewers, including house laterals.
7. No area shall be cleared without the permission of the Project Engineer.
8. All grades shall be within 0.2 feet of those shown on the grading plan.
9. No slope shall be steeper than 3:1 or as called for in the soils report for the project. All slopes shall be sodded or seeded and mulched.
10. All construction and materials used shall conform to current St. Charles County Standards.
11. All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
12. All soils test shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
13. All pipes shall have positive drainage through manholes. No flat base structures are allowed.
14. Maintenance and upkeep of the common ground area shall be the responsibility of the developer and/or successors.
15. A 25' building line shall be established along all Public Right–Of–Way.
16. The access/wash off area should consist of a 6" – 8" layer of aggregate underlain with filter cloth. Water should be available at this location for vehicle wash off by providing a water truck onsite.
17. Any wells and/or springs which may exist on this property should be located and sealed in a manner acceptable to the St. Charles County Highway and Building Department.
18. Please notify the Chief Inpector of the St. Charles County Highway Department 24 hours prior to the commencement of grading and\or prior to the commencement of construction.
19. Concrete pipe joints shall be MSD type "A" approved compression–type joints and shall conform to the requirements of the specifications for joints for circular concrete sewer and culvert pipe, using flexible, watertight, rubber–type gaskets ASTM C443. Band–type gaskets depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.
20. Concrete pipe for storm sewers shall be Class III, A.S.T.M. C–76 with a minimum diameter of 12".
21. All flared end sections and inlet structures will be concrete. a minimum diameter of 12".
22. The temporary siltation basins will be cleared out when all upstream areas have been properly stabilized with vegetation or other suitable permanent surface. The riser pipes will be removed and replaced with permanent overflow structures to be able to detain the extra run–off caused by this development. The outflow pipes are sized for permanent use and will remain as shown.
23. Upon completion of storm sewers, siltation control shall be provided around all open sewer inlets and shall remain until the disturbed drainage areas have been properly stabilized.
24. 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 the 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 County Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.
25. Sediment and erosion control plans for sites that exceed 20,000 square feet of grading shall provide for sediment or debris 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 (structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site. (Refer to Appendix A.)
26. Where natural vegetation is removed during grading, vegetation shall be re–established 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. (Refer to Appendix A.)
27. When grading operations are completed or suspended for more than 30 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 Designated Official's recommendation. (Refer to Appendix A.)
28. All finished grades (areas not to be disturbed by future improvement) in excess of 20% slopes (5:1) shall be mulched and tacked at the rate of 100 pounds per 1,000 square feet when seeded.
29. Provisions shall be made to accommodate the increased runoff caused by changed soils and surface conditions during and after grading. Unvegetated 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 that 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock riprap or concrete or other suitable materials as approved by the Designated Official. Detention basins, diversions, or other appropriate structures shall be constructed to prevent velocities above 5 fps. (Refer to Appendices B, C, D, E, and F.)
30. 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 Designated Official. (Refer to Appendices B, C, D, E, and F.)
31. 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 Designated Official. FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.
32. 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.
33. Designated official shall be the St. Charles County Highway Administrator (County Highway Engineer).
34. Soft soil in the bottom and banks of any existing or former pond sites or tributaries or on any sediment basins or traps should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed public right–of–way locations or on any storm sewer locations.
35. All trash and debris on site, either existing or from construction, must be removed and properly disposed of off–site.
36. Debris and foundation material from any existing on–site building or structure which is scheduled to be razed for this development must be disposed of off–site.
37. 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.
38. All cul–de–sacs must be hand–formed beginning at the PC's of the roundings. A continuous slope must be maintained from the center of the cul–de–sac to the curb.
39. All lots with sanitary house connections have been designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding house connection is not less than the diameter of the pipe plus the vertical distance of 2 1/2 feet.
40. Upon completion of storm sewers, siltation control shall be provided around all open sewer inlets and shall remain until the disturbed drainage areas have been properly stabilized.
41. Fill and backfill should be compacted to the criteria specified in the following table:

CATEGORY	MINIMUM PERCENT COMPACTION
Fill in building areas below footings	90%
Fill under slabs, walks, and pavement	90%
Fill other than building areas	88%
Natural subgrade	88%
Pavement subgrade	90%
Pavement base course	90%

Measured as a percent of the maximum dry density as determined by modified Proctor Test (ASTM–D–1557).

Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.

42. Designated official shall be the St. Charles County Highway Administrator (County Highway Engineer).

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.

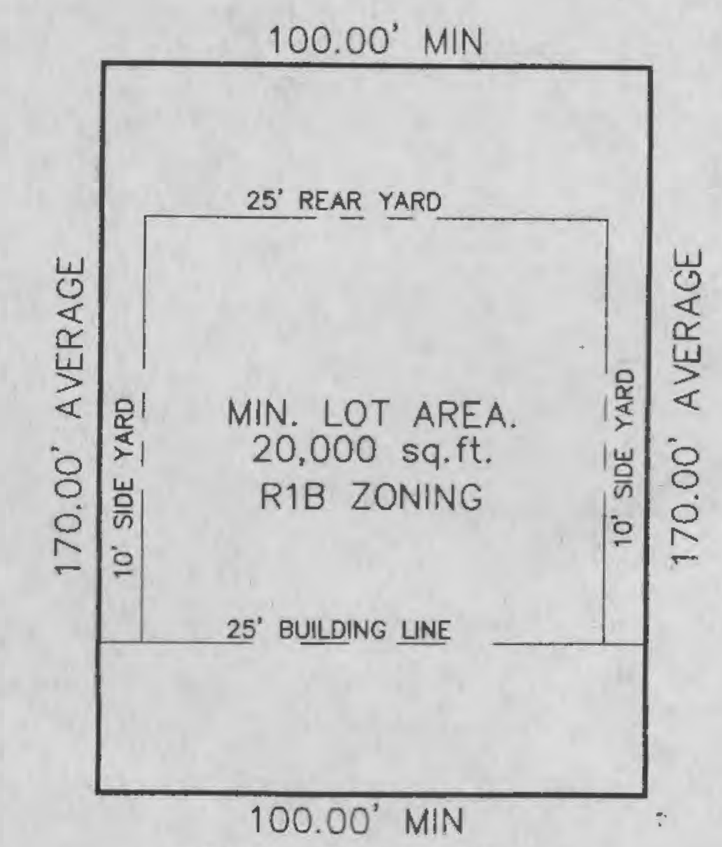
Temporary:
Wheat or Rye – 150 lbs./ac. (3.5 lbs. per 1000 square feet)
Oats – 120 lbs./ac. (2.75 lbs. per 1000 square feet)

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. feet (4,356 lbs. per acre)

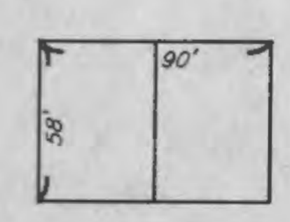
Fertilizer Rates:
Nitrogen 30 lbs./ac.
Phosphate 30 lbs./ac.
Potassium 30 lbs./ac.
Lime 600 lbs./ac. ENM*

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



SINGLE FAMILY RESIDENTIAL LOTS

TYPICAL VILLAS
NO SCALE



2–UNIT VILLA
R2 ZONING

NOTE:
Villa units shown are typical and preliminary in dimension.

REFERENCE BENCHMARK

R.M.–23
U.S.G.S. ELEVATION = 515.49
CHISLED CROSS"+" ON BOLT ON NORTHWEST STEEL PIER OF DUELLO ROAD BRIDGE OVER PERUQUE CREEK.

SITE BENCHMARK

U.S.G.S. ELEVATION = 562.82
OLD IRON ROD AT THE NORTHWEST CORNER OF SUBJECT PROPERTY.

LEGEND

Abbreviation	Meaning	Symbol	Meaning
C.I.	CURB INLET		STREET LIGHT
D.C.I.	DOUBLE CURB INLET	582	EXISTING CONTOUR
A.I.	AREA INLET	582	PROPOSED CONTOUR
M.H.	MANHOLE	S×S	STREET SIGN
F.E.	FLARED END SECTION		NO PARKING SIGN
E.P.	END PIPE		WATER VALVE
C.P.	CONCRETE PIPE	B.O.	BLOW OFF ASSEMBLY
R.C.P.	REINFORCED CONCRETE PIPE		FLOWLINE ELEVATION OF HOUSE CONNECTION
C.M.P.	CORRUGATED METAL PIPE		FLOWLINE ELEVATION OF SEWER MAIN
C.I.P.	CAST IRON PIPE		
P.V.C.	POLY VINYL CHLORIDE (PLASTIC)		
C.O.	CLEAN OUT		
	FIRE HYDRANT		
	STORM SEWER		
	SANITARY SEWER		

SHEET INDEX

PREPARED FOR: THE MANORS AT CRIMSON OAKS

L.A.D. PROPERTIES
2458 OLD DORSETT, SUITE 110
ST. LOUIS, MISSOURI 63043
(314) 298–5148

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

STATE OF MISSOURI — RICHARD L. FRANCIS — NUMBER E-23061 — REGISTERED PROFESSIONAL ENGINEER
8-21-01

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REVISIONS

ENGINEERING
PLANNING
SURVEYING
1052 South Cloverleaf Drive
St. Peters, MO. 63376–6445
(636) 928–5552
FAX 928–1718

JULY 9, 2001
DATE
92–3561C
PROJECT NUMBER
1 OF 56
SHEET OF
3561CCON.DWG
FILE NAME
BWF/JLK JLK
DRAWN CHECKED

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SITE PLAN

THE MANORS AT CRIMSON OAKS

JULY 9, 2001 — 92-3561C

SHEETS 1,2,8,14,43 | SHEETS 3,9,15,44 | SHEETS 4,10,16,45 | SHEETS 5,11,17,46 | SHEETS 6,12,18,47 | SHEETS 7,13,19,48

PROPERTY N/F
BYRON & ELIZABETH HEALZER
1261/778

PROPERTY N/F
KEVIN AND PENNY SHINE
1446/95

PROPERTY N/F
LAKE SAINT LOUIS COMMUNITY ASSOCIATION
1162/1205

PROPERTY N/F
JOHN J. THORNTON
1385/384

PROPERTY N/F
SHIRLEY M. DODSON
1022/805

PROPERTY N/F
RONALD BIRKENNEIER
566/339

PROPERTY N/F
JAMES AND JANE DOLSON
1437/1948

DAILY
PROPERTY N/F
537/100
RAYMOND & PATRICIA

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft

100 YEAR FLOOD HAZARD AREA ELEV. = 517.0

EX. FLOODWAY LIMITS

N88°40'23"E 700.53' (S) 701.00' (R1)

S28°15'13"E 39.87'

S74°56'38"E 109.23'

S72°06'08"E 136.71'

S86°48'57"E 144.35'

S88°01'00"E 183.61'

N05°59'37"W 555.73' (S) 556.00' (R1) 556.00' (R3)

N84°39'02"E 401.09' (S) 402.80' (R1) 402.80' (R3)

N89°11'58"W 938.34' (S) 938.33' (R1)

EXISTING FENCE (T.B.R.)

COMMON GROUND

EXISTING DRIVEWAY TO REMAIN

EXISTING DRIVEWAY (T.B.R.)

PROPOSED PERMANENT INGRESS/EGRESS EASEMENT

PROPOSED 30' WIDE RIGHT-OF-WAY DEDICATION STRIP

EX. 18" C.M.P.

EXISTING 10" WATER MAIN

EXISTING BUILDING (T.B.R.)

LOT SERVED WITH GRINDER PUMP TO GRAVITY LATERAL

EMERGENCY RELIEF SWALE (SEE DETAIL SHEET 50 OF 56)

PROPOSED 10' WIDE ACCESS ROAD

8" ROLLED STONE BASE W/3" TYPE "C" ASPHALT WEARING SURFACE

4" P.V.C. LATERAL (TYPICAL)

2" P.V.C. FORCE MAIN

FORCE MAIN STA. 0+00.00

EXISTING PIPE AND HEAD WALLS TO BE REMOVED

CRIMSON OAKS COURT (50' W.) (PUBLIC) (26'W CONCRETE PAVEMENT)

SPRUCE FOREST DRIVE (50' W.) (PUBLIC) (26'W CONCRETE PAVEMENT)

AUTUMN FIR COURT (50' W.) (PUBLIC) (26' WIDE CONCRETE PAVEMENT)

GOLDEN MAPLES COURT (50'W.) (PUBLIC)

TWIN

STREET LIGHT (TYPICAL)

CURB RAMP (TYPICAL)

4' WIDE CONCRETE SIDEWALK

STREET/STOP SIGN (TYPICAL)

NOTE:
CONTRACTOR TO PROVIDE A SMOOTH AND UNIFORM EDGE FOR PAVEMENT CONNECTION.
SAWCUT EXISTING ASPHALT PAVEMENT

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.

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2
56

SITE PLAN

THE MANORS AT CRIMSON OAKS

JULY 9, 2001 — 92-3561C

SHEETS 2,8,14,43 | SHEETS 3,9,15,44 | SHEETS 4,10,16,45
SHEETS 5,11,17,46 | SHEETS 6,12,18,47 | SHEETS 7,13,19,48

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

PROPERTY N/F
LAKE SAINT LOUIS
COMMUNITY ASSOCIATION
1162/1205

PROPERTY N/F
LAKE SAINT LOUIS
COMMUNITY ASSOCIATION
1126/1832

PROPERTY N/F
OAK BLUFF PRESERVE
A LIMITED PARTNERSHIP
826/736

100 YR = 517.00

S28°15'13"E 39.87'
S74°56'38"E 109.23'
S72°06'08"E 136.71'
S86°48'57"E 144.35'
S88°01'00"E 183.61'
S84°51'34"E 180.75'
N74°17'49"E 99.47'
S68°33'22"E 25.57'
N67°08'26"E 118.20'
N54°38'00"E 170.61'

COMMON GROUND

100 YR = 516.00
100 YEAR FLOOD HAZARD AREA ELEV. = 516.0
EX. FLOODWAY LIMITS

EXISTING FENCE (TO REMAIN)
REMOVE FENCE

PROPOSED (HERCULES) RETAINING WALL

NOTE: PROPOSED FENCE - MINIMUM 3' HIGH THAT DOES NOT ALLOW A 4" MINIMUM SPHERE TO PASS THROUGH. FENCE TO BE CONSTRUCTED 12" BEHIND THE BACK OF WALL.

R1B - ZONING
R2 - ZONING

TWIN BIRCH (PUBLIC) (50' W.)
AUTUMN FIR (PUBLIC) (50' W.) COURT
GOLDEN MAPLES (PUBLIC) (50' W.) COURT
SILVER FERN DRIVE (PUBLIC) (50' W.)
SPRUCE FOREST DRIVE (PUBLIC) (50' W.)

EMERGENCY RELIEF SWALE (SEE DETAIL SHEET 50 OF 56)

2" P.V.C. FORCE MAIN

4" P.V.C. LATERAL (TYPICAL)

6" P.V.C. LATERAL (TYPICAL)

4' WIDE CONCRETE SIDEWALK

26' WIDE CONCRETE PAVEMENT

STREET LIGHT (TYPICAL)

PROPOSED 20'W ACCESS ROAD

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.

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SITE PLAN
THE MANORS AT CRIMSON OAKS
JULY 9, 2001
92-3561C
PROPERTY N/F
OAK BLUFF PRESERVE
A LIMITED PARTNERSHIP
826/736
EXISTING FENCE (TO REMAIN)
REMOVE FENCE
END OF PAVEMENT
BARRICADE
SEE DETAIL SHEET 49 OF 56
N88°40'23"E 1541.08' (S) 1541.08' (R1)
100 YEAR FLOOD
HAZARD AREA
ELEV. = 516.0
PROPOSED (HERCULES)
RETAINING WALL
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
FERN
DRIVE
28' WIDE CONCRETE PAVEMENT
4' WIDE
CONCRETE SIDEWALK
50' W.
FOREST
(PUBLIC)
SPRUCE
STREET LIGHT
(TYPICAL)
EMERGENCY RELIEF SWALE
(SEE DETAIL SHEET 50 OF 56)
NOTE:
PROPOSED FENCE–
MINIMUM 3' HIGH THAT DOES
NOT ALLOW A 4" MINIMUM
SPHERE TO PASS THROUGH.
FENCE TO BE CONSTRUCTED
12" BEHIND THE BACK OF WALL.
COMMON GROUND
AND
DETENTION AREA
LAKE "B"
TOP OF DAM = 524.00
R2 ZONING
A ZONING
EXISTING
100 YEAR FLOOD
HAZARD AREA
ELEV. = 515.5±
1754.04' (R1)
1759.56' (R2)
1759.56' (R3)
1753.58' (S)
S00°10'54"E
OAK BLUFF PRESERVE
PLAT ONE
P.B.20 PG.163
PROPOSED 20'W
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.
4
56

SITE PLAN

THE MANORS AT CRIMSON OAKS

JULY 9, 2001 92-3561C

PROPERTY N/F
RONALD BIRKENNEIER
566/339

PROPERTY N/F
JAMES AND JANE DOLSON
1437/1948

PROPERTY N/F
RENALDO AND NANCY LARES
1270/48

PROPERTY N/F
ROY KRAEMER
1506/1355

GRAPHIC SCALE

50 0 25 50

(IN FEET)
1 inch = 50 ft.

N89°11'58"W 938.34' (S) 938.33' (R1)

S89°10'33"E 70.00' (S) 70.00' (R1)

N00°04'17"W 315.12' (R) 314.90' (S)

N04°38'08"E 562.38' (R1) 562.38' (S)

COMMON GROUND

PROPOSED (HERCULES) RETAINING WALL

NOTE:
PROPOSED FENCE- MINIMUM 3' HIGH THAT DOES NOT ALLOW A 4" MINIMUM SPHERE TO PASS THROUGH. FENCE TO BE CONSTRUCTED 12' BEHIND THE BACK OF WALL.

SPRUCE FOREST (PUBLIC) (50' W.) DRIVE PHASE ONE PHASE TWO

TWIN BIRCH (PUBLIC) (50' W.) COURT

BERRYBRAMBLE (PUBLIC) (50' W.)

LOT SERVED WITH GRINDER PUMP TO PRESSURE SEWER

EXISTING FENCE

SHEETS 2,8,14,43 | SHEETS 3,9,15,44 | SHEETS 4,10,16,45
SHEETS 5,11,17,46 | SHEETS 6,12,18,47 | SHEETS 7,13,19,48

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.

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SITE PLAN

THE MANORS AT CRIMSON OAKS

JULY 9, 2001 92-3561C

SPRUCE FOREST (50' W.) DRIVE (PUBLIC) PHASE ONE PHASE TWO

TWIN BIRCH (50' W.) COURT (PUBLIC)

COMMON GROUND DRIVE (PUBLIC)

SPRUCE FOREST (50' W.) DRIVE (PUBLIC) PHASE ONE PHASE TWO

THREE CEDARS (50' W.) DRIVE (PUBLIC)

ANCIENT ELMS (50' W.) COURT (PUBLIC)

BERRYBRAMBLE (50' W.) COURT (PUBLIC)

ANCIENT ELMS (50' W.) DRIVE (PUBLIC)

THREE CEDARS (50' W.) COURT (PUBLIC)

PROPOSED 20'W ACCESS ROAD

8" ROLLED STONE BASE W/3" TYPE "C" ASPHALT WEARING SURFACE

R-2 ZONING
R-1B ZONING

PHASE ONE
PHASE TWO

COMMON GROUND ACCESS

PROPOSED (HERCULES) RETAINING WALL
TOP=531.00
GRADE=521.50

PROPOSED (HERCULES) RETAINING WALL
TOP=530.50
GRADE=530.00

PROPOSED (HERCULES) RETAINING WALL
TOP=522.20
GRADE=521.70

EMERGENCY RELIEF SWALE (SEE DETAIL SHEET 50 OF 56)

4" P.V.C. LATERAL (TYPICAL)

2" P.V.C. FORCE MAIN

FORCE MAIN STA. 11+87.54

10" BLOW-OFF AIR RELEASE VALVE AND VAULT

2" PVC PRESSURE SEWER

TERMINUS VALVE

4' WIDE CONCRETE SIDEWALK

26' WIDE CONCRETE PAVEMENT

STREET LIGHT (TYPICAL)

STREET/STOP SIGN (TYPICAL)

CURB RAMP (TYPICAL)

3 SIDES OPEN

4 SIDES OPEN

10' X 20' RIPRAP

7' X 5' RIPRAP

EXISTING FENCE

LOT SERVED WITH GRINDER PUMP TO PRESSURE SEWER

PROPERTY N/F
ROY KRAEMER
1506/1355

S88°15'03"W 2865.71' (S) 2866.07' (R1)

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.

SHEETS 2,8,14,43 | SHEETS 3,9,15,44 | SHEETS 4,10,16,45
SHEETS 5,11,17,46 | SHEETS 6,12,18,47 | SHEETS 7,13,19,48

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

6
56

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SITE PLAN

THE MANORS AT CRIMSON OAKS

JULY 9, 2001 — 92-3561C

OAK BLUFF PRESERVE
PLAT ONE
P.B.20 PG.163

S00°10'

GRAPHIC SCALE

50 0 25 50

(IN FEET)
1 inch = 50 ft.

COMMON GROUND

4" P.V.C. FORCE MAIN

11+75.65 — AIR RELEASE VALVE AND VAULT

N/F
BIG BEND DEVELOPMENT CO.
2088/1798

DRIVE

8" ROLLED STONE BASE W/3" TYPE "C" ASPHALT WEARING SURFACE

PROPOSED 20'W ACCESS ROAD

R-2 ZONING
R-1B ZONING

PHASE ONE
PHASE TWO

LINE

55 1+22
56 0+19
57 1+08
58 1+03
59 0+19
60 0+76
61 0+08
62 1+03
63
64 LOT SERVED WITH GRINDER PUMP TO PRESSURE SEWER
65 LOT SERVED WITH GRINDER PUMP TO PRESSURE SEWER
66 LOT SERVED WITH GRINDER PUMP TO PRESSURE SEWER
67 LOT SERVED WITH GRINDER PUMP TO PRESSURE SEWER
68 LOT SERVED WITH GRINDER PUMP TO PRESSURE SEWER

ANCIENT ELMS (50' W.) COURT (PUBLIC)
S88°15'03"W

BUILDING

EMERGENCY RELIEF SWALE (SEE DETAIL SHEET 50 OF 56)

20' ANCIENT ELMS COURT
200 ANCIENT ELMS DRIVE
56.45 THREE CEDARS DRIVE

E CEDARS (50' W.) COURT (PUBLIC)
S88°15'03"W

CONCRETE PAVEMENT

TERMINUS VALVE

2" PVC PRESSURE SEWER

COMMON GROUND ACCESS

EMERGENCY RELIEF SWALE (SEE DETAIL SHEET 50 OF 56)

NORMAL WATER LEVEL = 518.00
15YR. HIGH WATER = 518.59
100YR. HIGH WATER = 518.79

LAKE "A"

TOP OF DAM = 520.90

COMMON GROUND AND DETENTION AREA

10' X 10' RIPRAP
TOP=521.00
GRADE=520.50

NOTE:
PROPOSED FENCE-
MINIMUM 3' HIGH THAT DOES NOT ALLOW A 4" MINIMUM SPHERE TO PASS THROUGH. FENCE TO BE CONSTRUCTED 12" BEHIND THE BACK OF WALL.

PROPOSED (HERCULES) RETAINING WALL
TOP=531.00
GRADE=521.50

R1B — ZONING
A — ZONING

7' X 5' RIPRAP

PROPOSED (HERCULES) RETAINING WALL
TOP=530.50
GRADE=530.00

TOP=522.20
GRADE=521.70

EXISTING FENCE

2865.71' (S) 2866.07' (R1)

SHEETS 2,8,14,43 | SHEETS 3,9,15,44 | SHEETS 4,10,16,45
SHEETS 5,11,17,46 | SHEETS 6,12,18,47 | SHEETS 7,13,19,48

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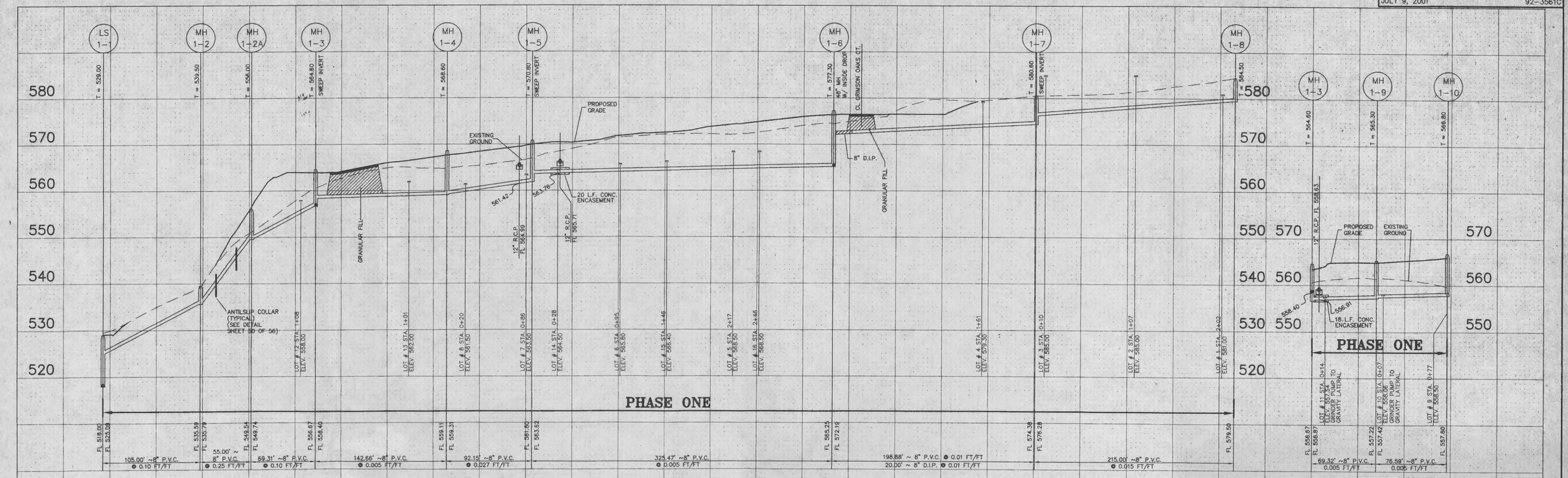
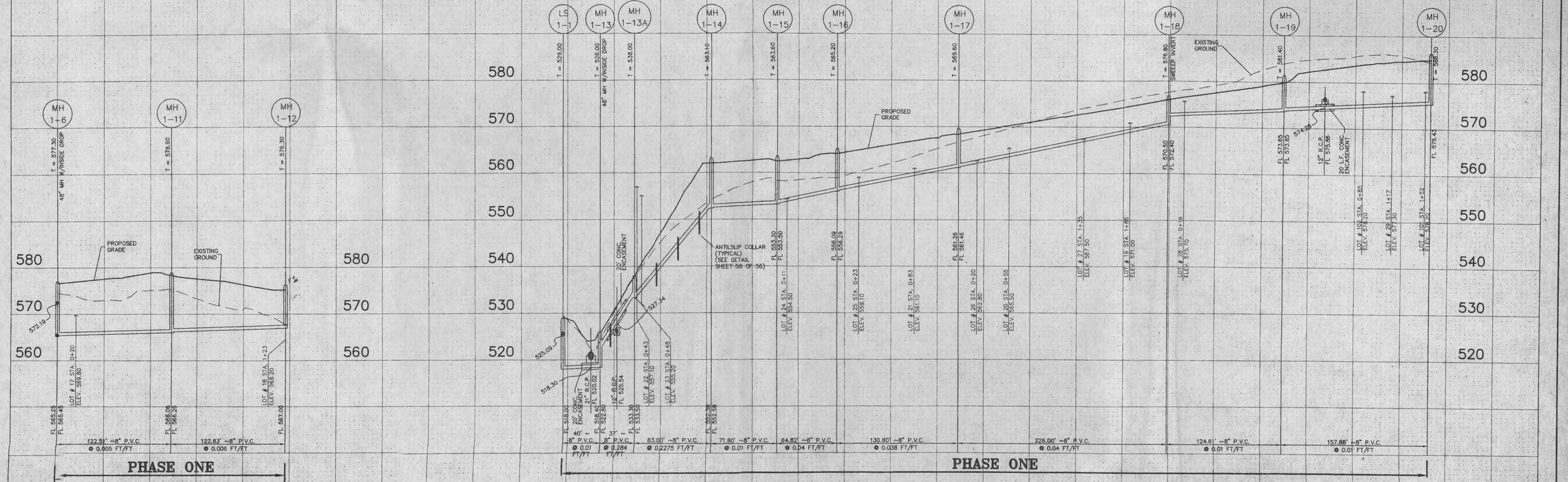
REVISED : 8-8-02 PER WATER DIST. NO. 2

SANITARY SEWER PROFILES

THE MANORS AT CRIMSON OAKS

JULY 9, 2001 92-3561C





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STORM SEWER PIPES WHICH CROSS OVER EXISTING OR PROPOSED SANITARY SEWER TRENCHES SHALL BE CRADLED IN CONCRETE THROUGH THE FULL WIDTH OF THE SANITARY SEWER TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED WITH GRANULAR FILL TO THE BOTTOM OF THE CONCRETE CRADLE.

IF THE STORM AND SANITARY SEWERS ARE PARALLEL AND IN THE SAME TRENCH OR OVERDIG, THE UPPER PIPE SHALL BE PLACED ON A SHELF AND THE LOWER PIPE SHALL BE BEDDED IN COMPACTED GRANULAR FILL TO THE FLOW LINE OF THE UPPER PIPE.

ALL SANITARY LATERAL STREET CROSSINGS, IF TRENCHED, SHALL BE BACKFILLED WITH GRANULAR MATERIAL (AGGREGATE).

SCALE:
VERTICAL = 1" = 10'
HORIZONTAL = 1" = 50'

27/56

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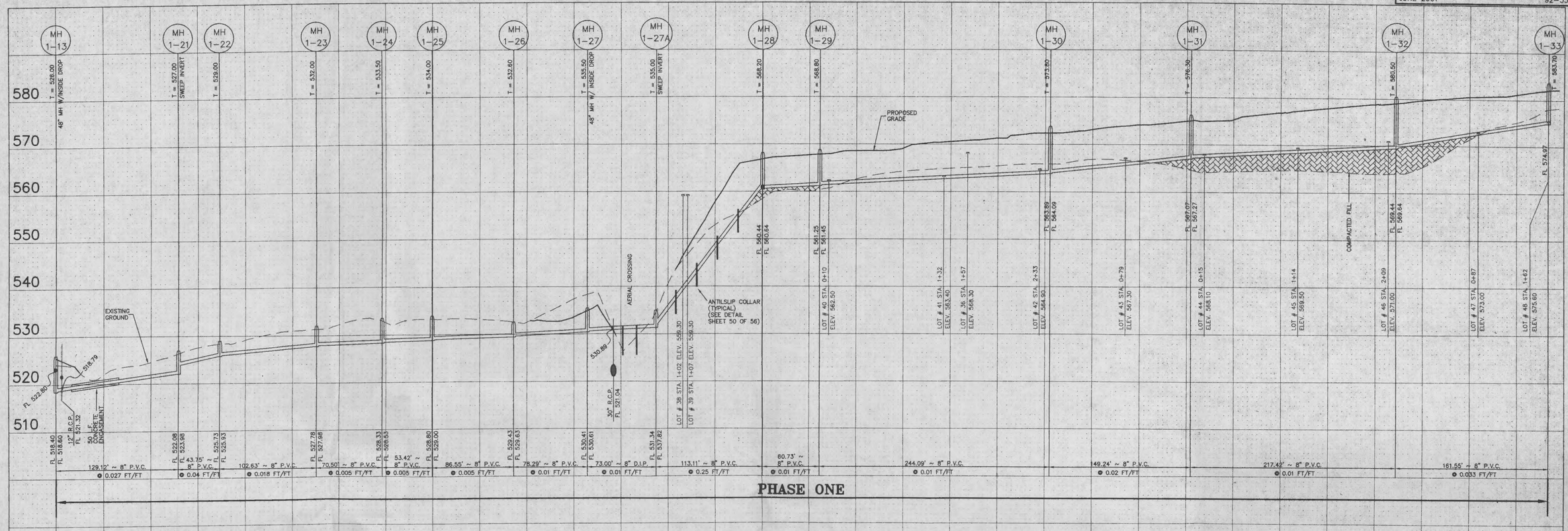
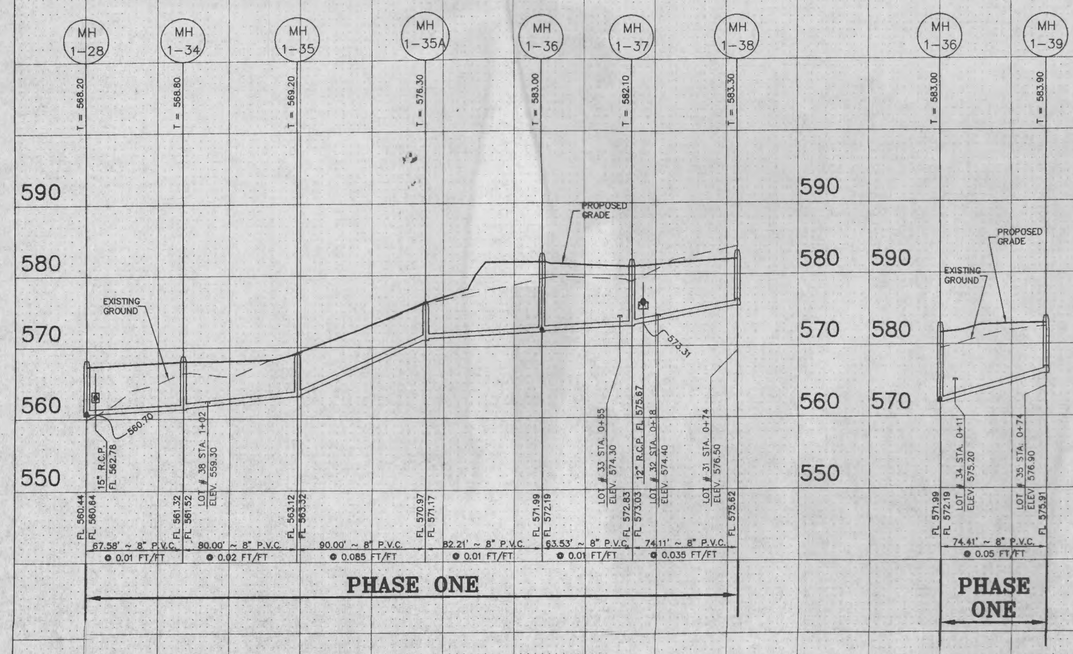
SANITARY SEWER PROFILES

THE MANORS AT CRIMSON OAKS

JUNE 2001 — 92-3561C





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SCALE:
VERTICAL = 1" = 10'
HORIZONTAL = 1" = 50'

28/56

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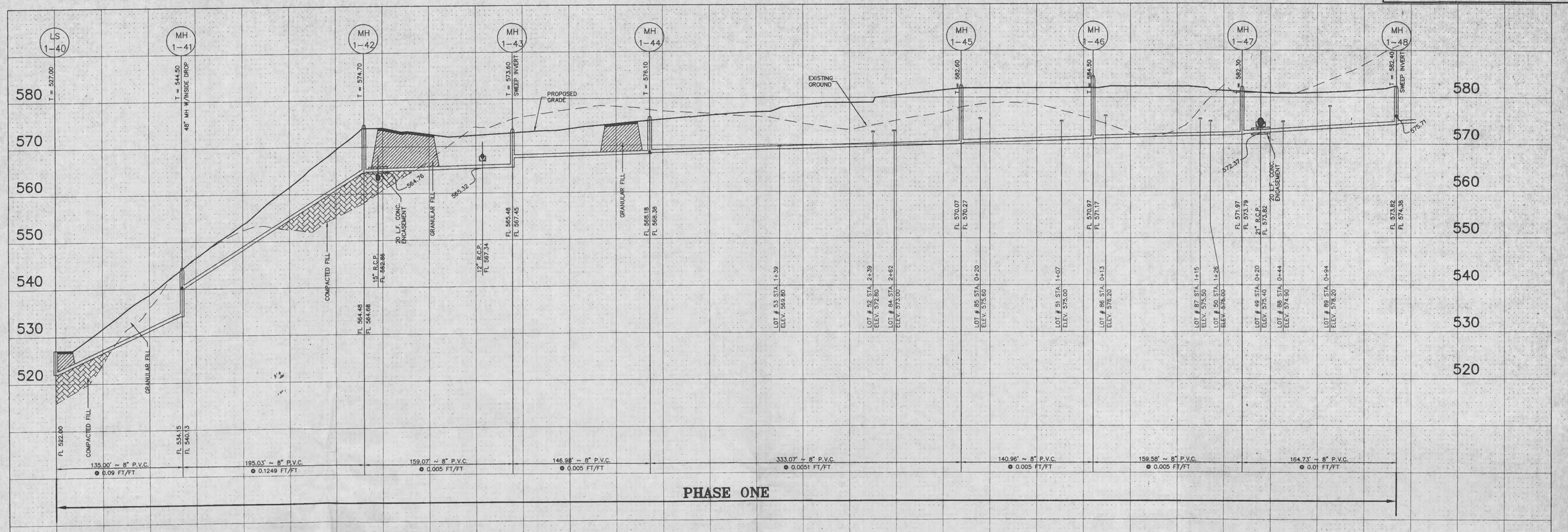
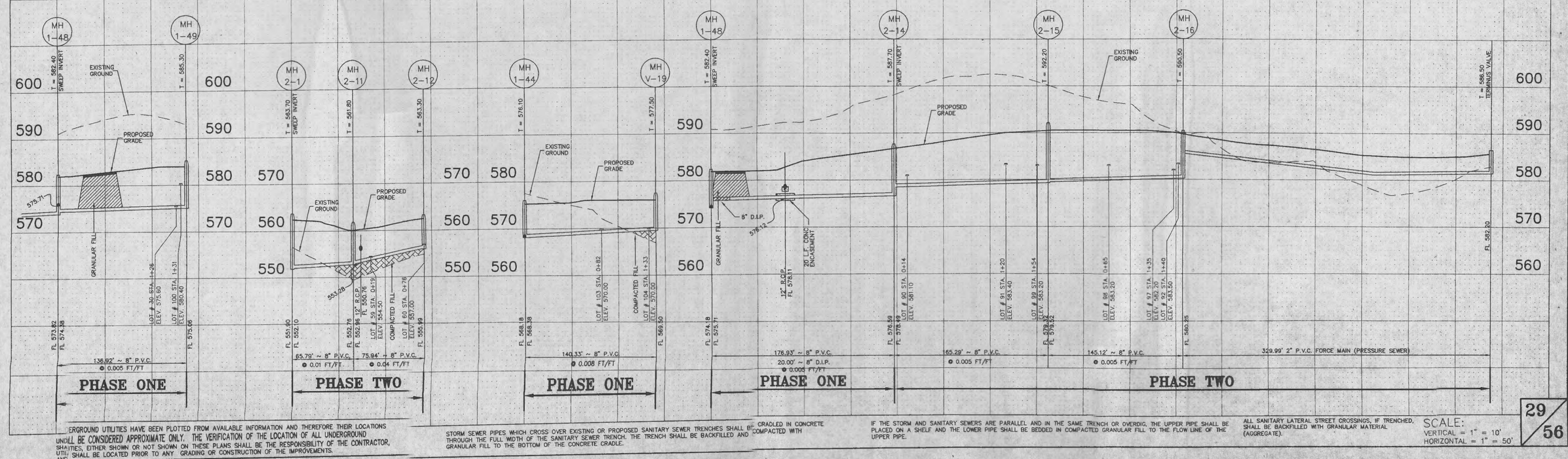
SANITARY SEWER PROFILES

THE MANORS AT CRIMSON OAKS

JUNE 2001 92-3561C





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ALL SANITARY LATERAL STREET CROSSINGS, IF TRENCHED, SHALL BE BACKFILLED WITH GRANULAR MATERIAL (AGGREGATE).

SCALE:
VERTICAL = 1" = 10'
HORIZONTAL = 1" = 50'

29/56

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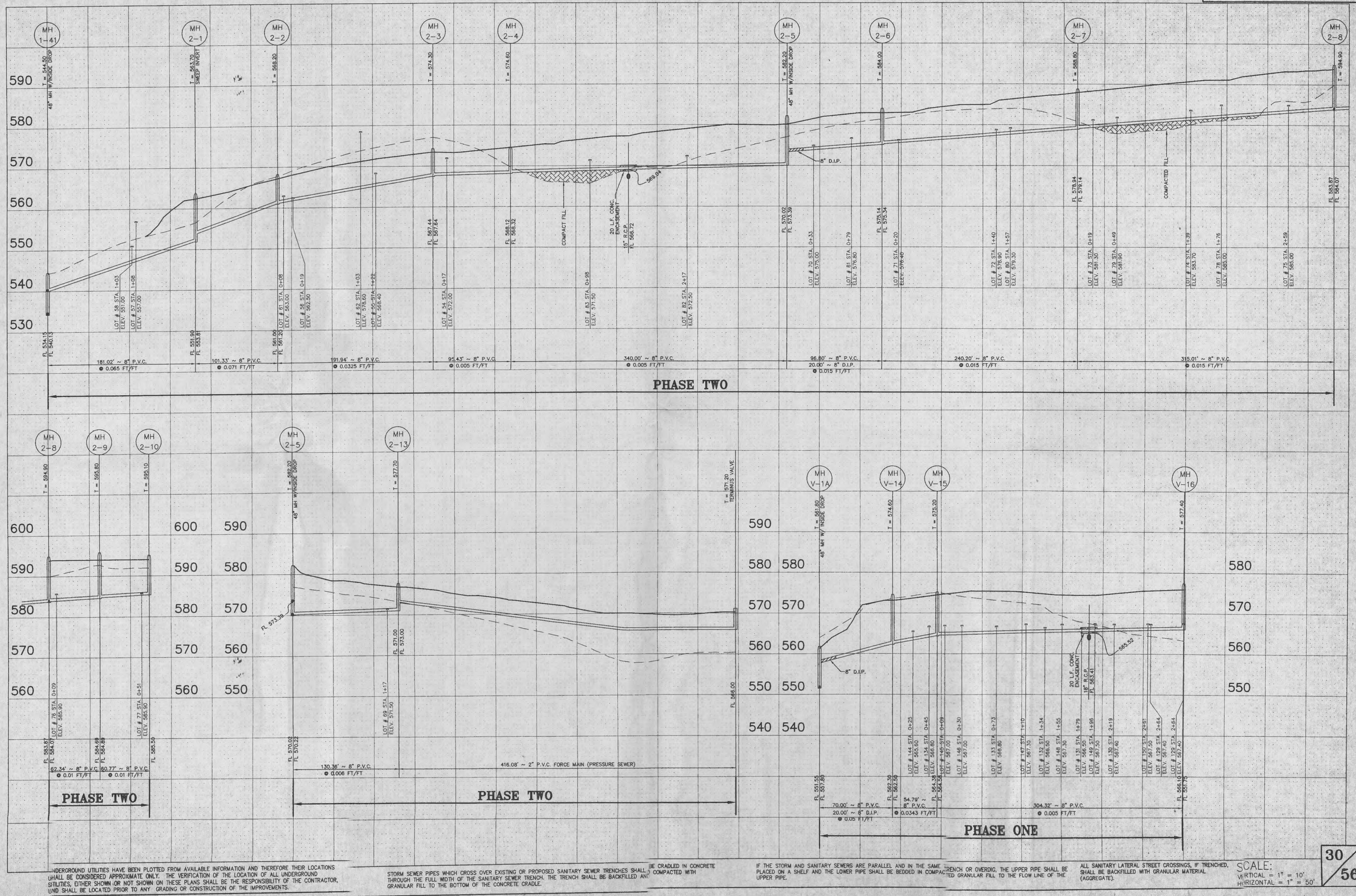
SANITARY SEWER PROFILES

THE MANORS AT CRIMSON OAKS

JUNE 2001 92-3561C



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SCALE:
VERTICAL = 1" = 10'
HORIZONTAL = 1" = 50'

30/56

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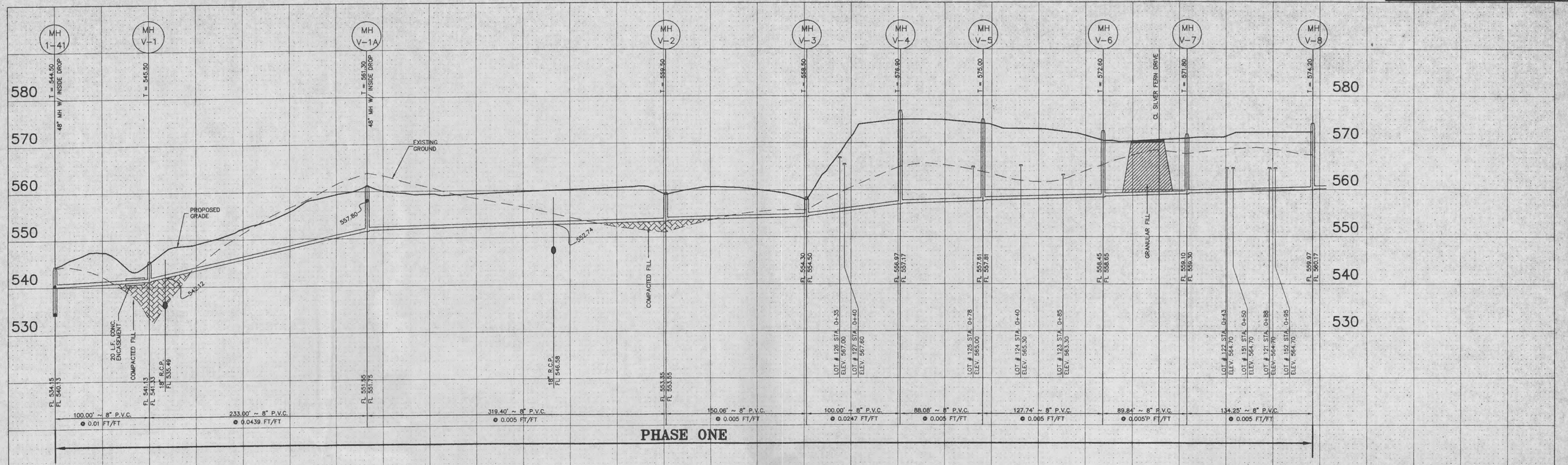
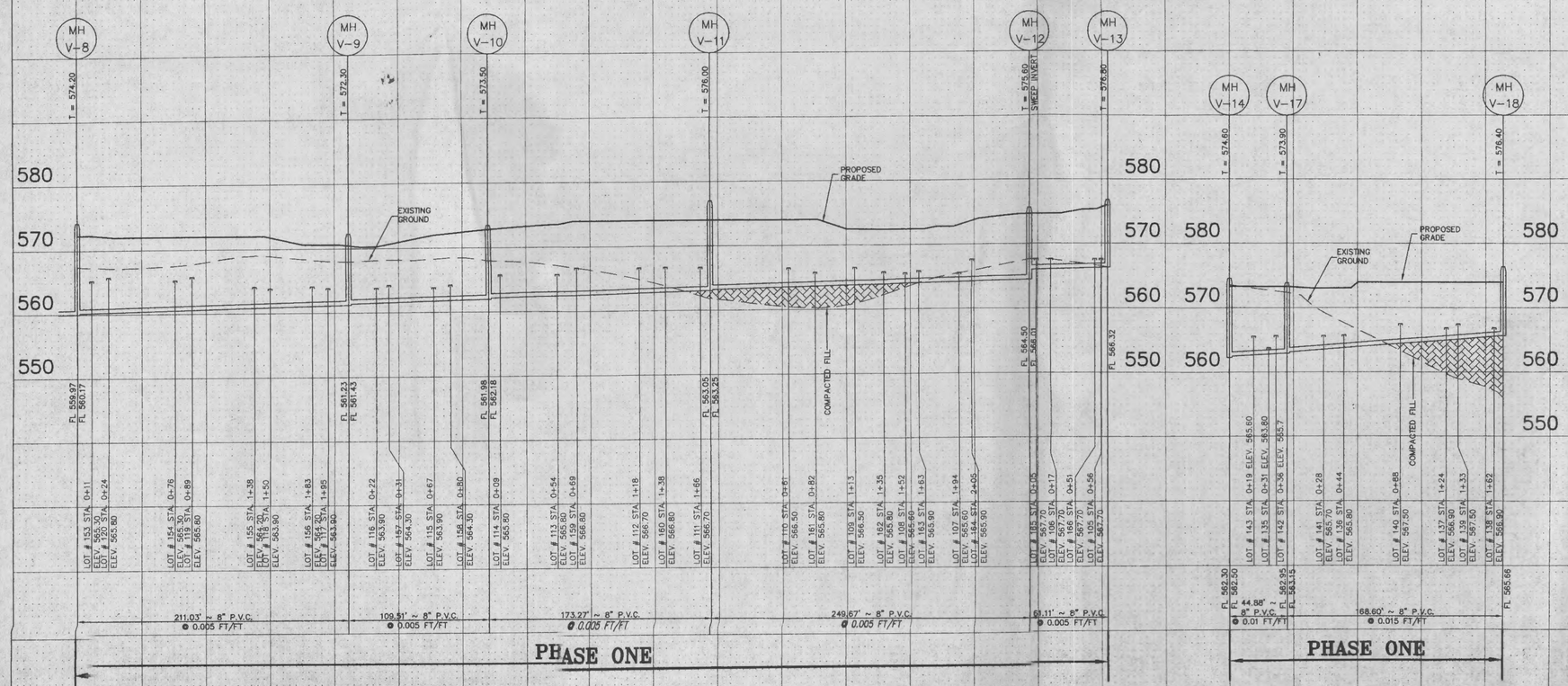
SANITARY SEWER PROFILES

THE MANORS AT CRIMSON OAKS

JUNE 2001 92-3561C





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SCALE:
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HORIZONTAL = 1" = 50'

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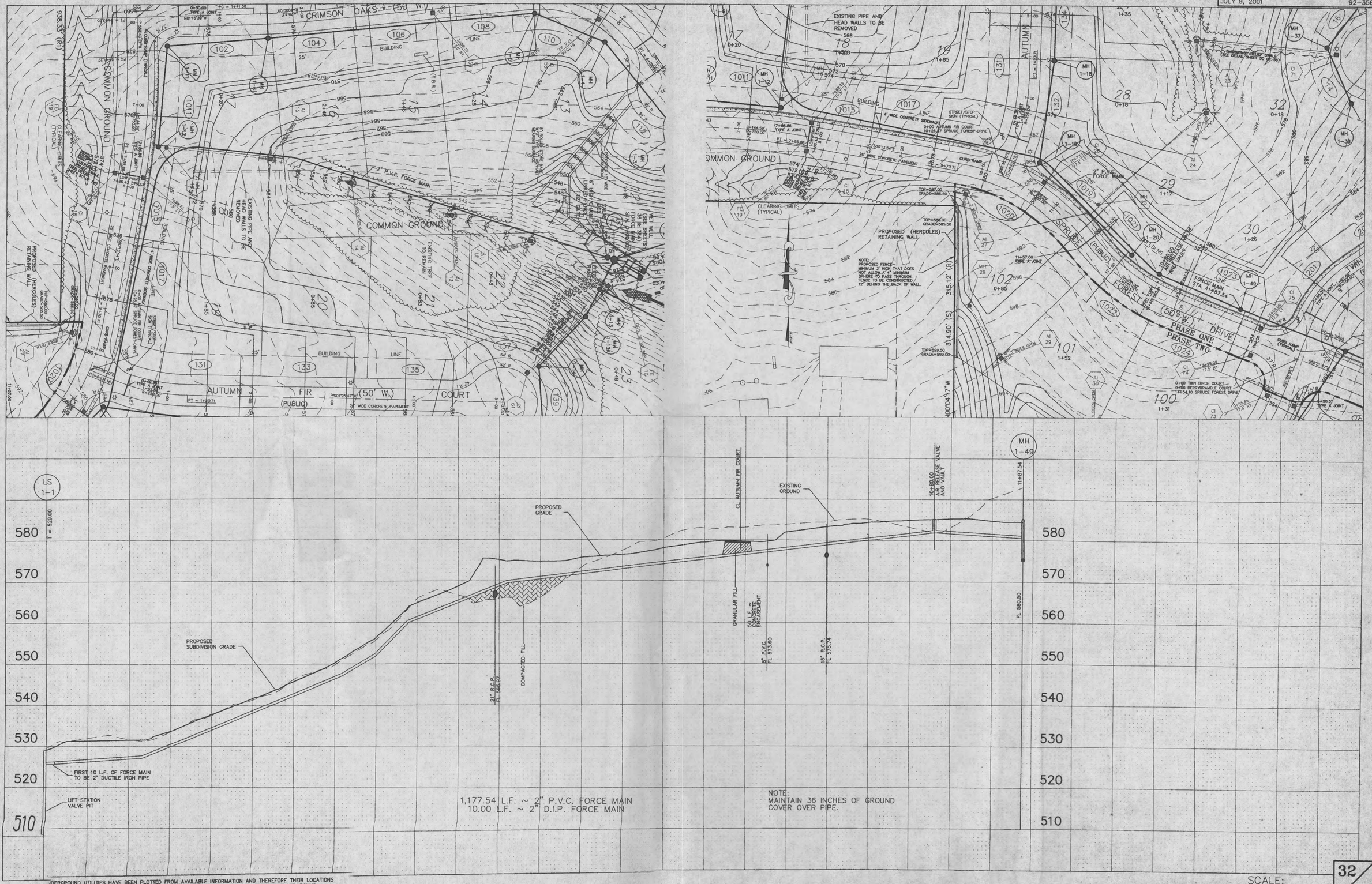
REVISED: 8-14-01 PER WATER DISTRICT COMMENTS

SANITARY FORCE MAIN PLAN AND PROFILE

THE MANORS AT CRIMSON OAKS

JULY 9, 2001 92-3561C



1,177.54 L.F. ~ 2" P.V.C. FORCE MAIN
10.00 L.F. ~ 2" D.I.P. FORCE MAIN

NOTE:
MAINTAIN 36 INCHES OF GROUND COVER OVER PIPE.

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.

SCALE:
VERTICAL = 1" = 10'
HORIZONTAL = 1" = 50'

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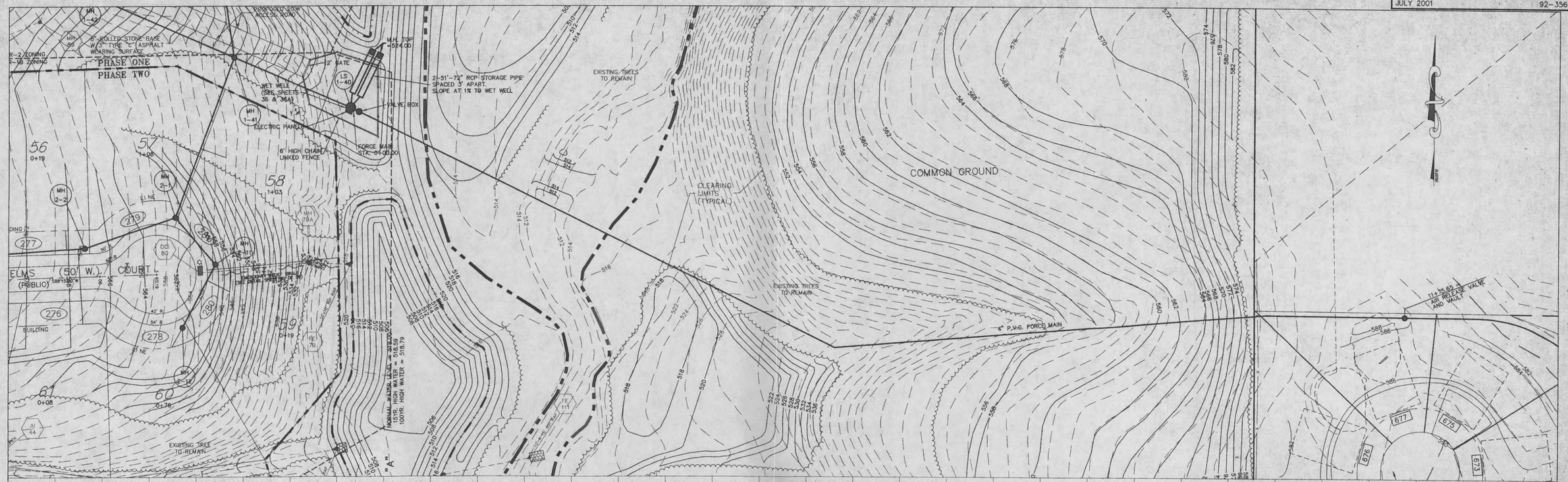
REVISED: 8-14-01 PER WATER DISTRICT COMMENTS

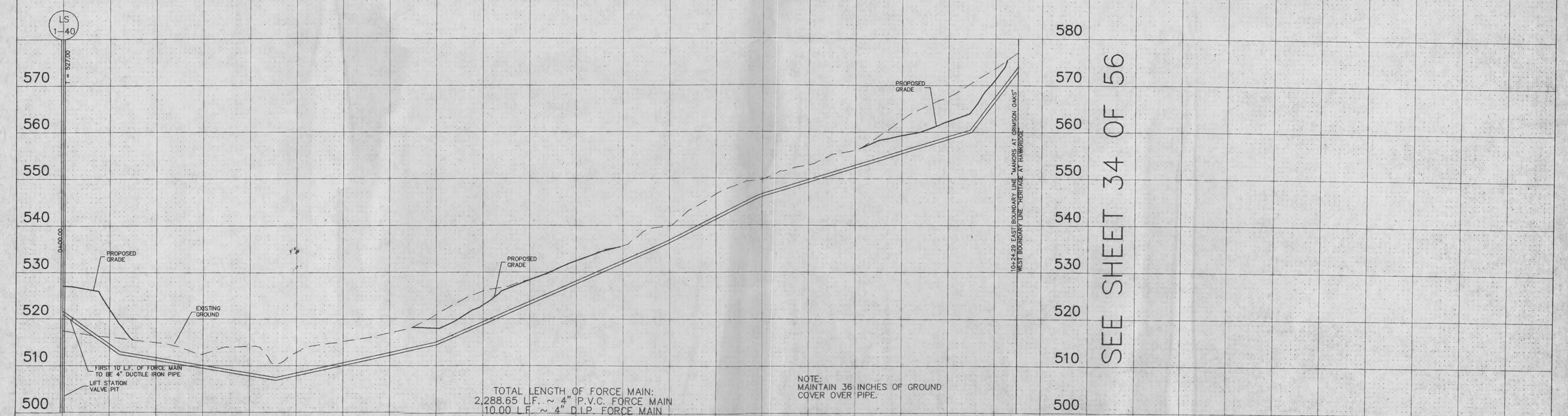
SANITARY FORCE MAIN PLAN AND PROFILE

THE MANORS AT CRIMSON OAKS

JULY 2001

92-3561C





TOTAL LENGTH OF FORCE MAIN:
2,288.65 L.F. ~ 4" P.V.C. FORCE MAIN
10.00 L.F. ~ 4" D.I.P. FORCE MAIN

NOTE:
MAINTAIN 36 INCHES OF GROUND COVER OVER PIPE.

SEE SHEET 34 OF 56

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.

SCALE:
VERTICAL = 1" = 10'
HORIZONTAL = 1" = 50'

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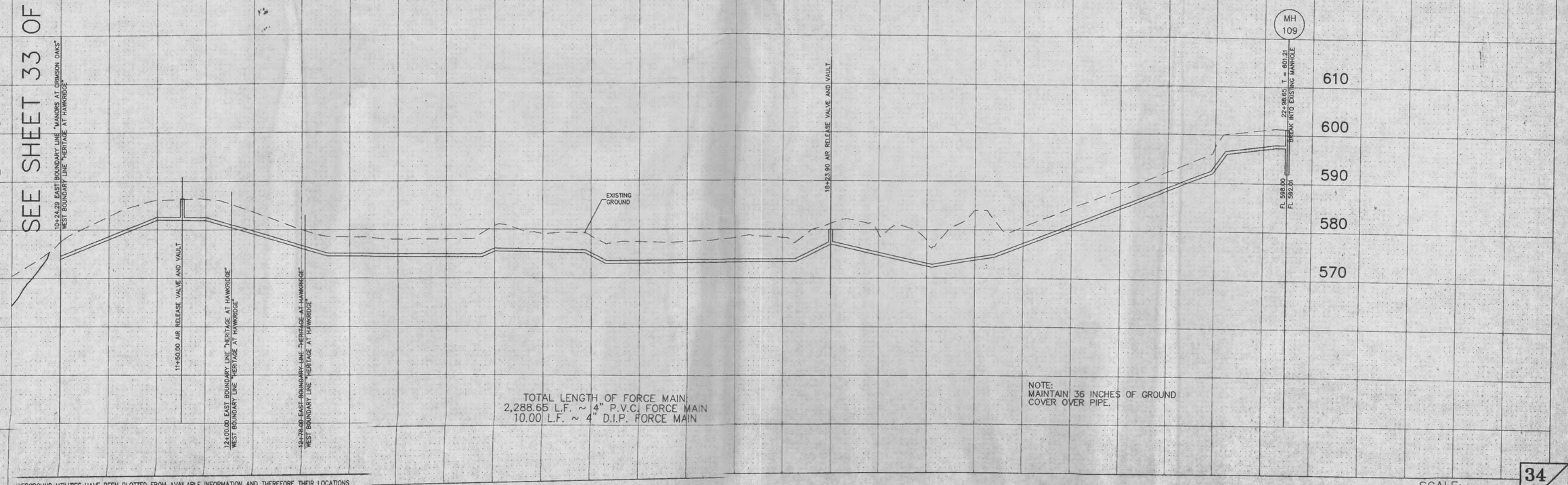
REVISED: 8-14-01 PER WATER DISTRICT COMMENTS

SANITARY FORCE MAIN PLAN AND PROFILE

THE MANORS AT CRIMSON OAKS

JULY 2001

92-3561C



TOTAL LENGTH OF FORCE MAIN:
2,288.65 L.F. ~ 14" P.V.C. FORCE MAIN
10.00 L.F. ~ 4" D.I.P. FORCE MAIN

NOTE:
MAINTAIN 36 INCHES OF GROUND COVER OVER PIPE.

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SCALE:
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HORIZONTAL = 1" = 50'

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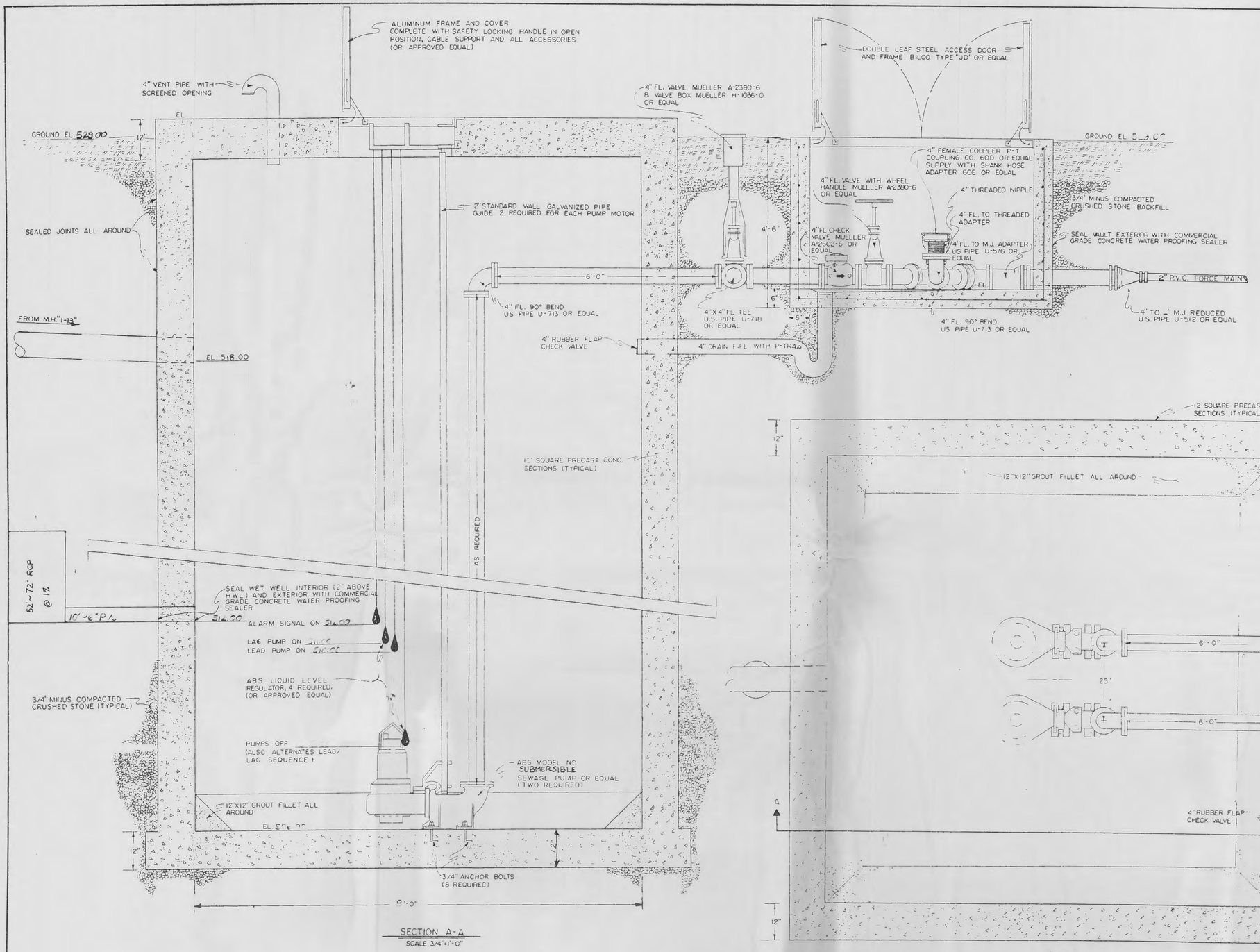
LIFT STATION DETAILS

THE MANORS AT CRIMSON OAKS

JULY 9, 2001 92-3561C

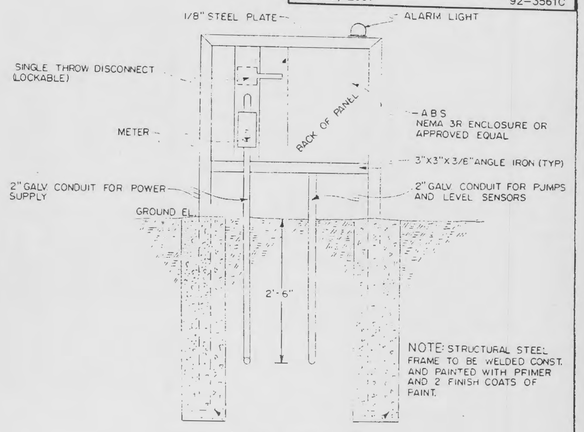


SECTION A-A

SCALE 3/4"=1'-0"

PLAN VIEW

SCALE 3/4"=1'-0"



CONTROL PANEL AND METER BASE

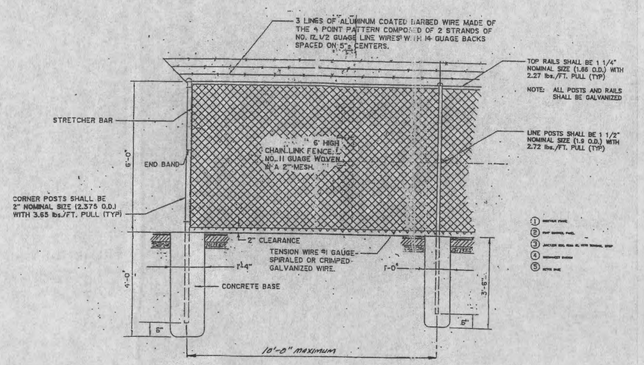
NOT TO SCALE

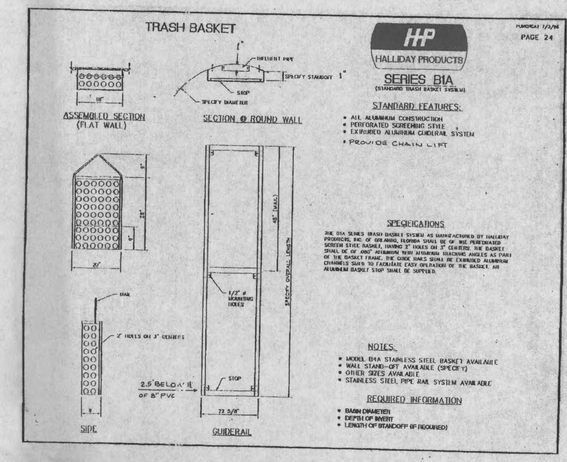
35/56

ST. CHARLES COUNTY
PUBLIC WATER SUPPLY DISTRICT NO. 2

SANITARY SEWAGE PUMPING STATION
PLAN AND DETAILS

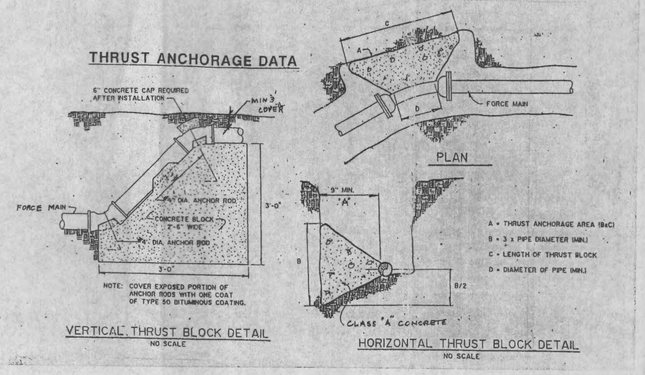
REVISIONS

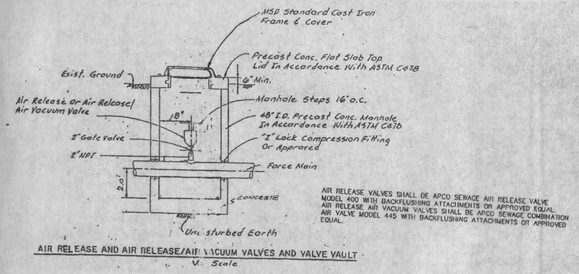




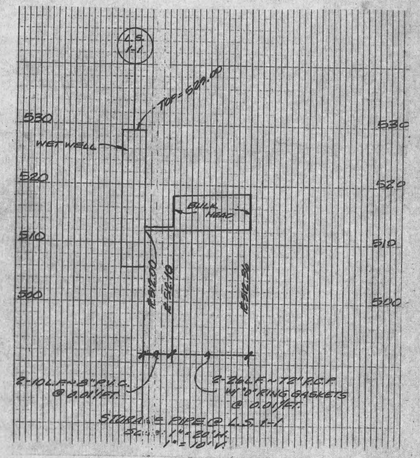
NOTES:

1. PRECAST 60" I.D. MANHOLES TO BE USED FOR PUMP STATION AND VALVE BOX AS APPROVED BY ENGINEER.
2. PRECAST WET WELL ENTRANCE STEPS SHALL BE COPOLYMER POLYPROPY-LINE PLASTIC TYPE MANHOLE STEPS.
3. STEPS SHALL NOT BE PLACED IN FRONT OF INCOMING GRAVITY LINES OR LOCATED UNDER OR NEXT TO ANY OBSTRUCTIONS.
4. THE STEPS SHOULD PROVIDE A CLEAR-IN-LINE VISIBLE UNOBSTRUCTED ACCESS FROM THE TOP OF THE CHAMBER TO THE BOTTOM OF THE STATION AND BE PLACED ON ONE OF THE STATION SIDEWALLS APPROXIMATELY CENTERED WITH THE HATCH COVER.
5. ALL PIPES MUST ENTER THE STRUCTURE WALLS WITH A ONE (1) FOOT MINIMUM DISTANCE FROM THE CENTERLINE OF THE PIPE TO THE FACE OF THE ADJOINING WALL TO ALLOW PROPER PIPE JOINT PLACEMENT.
6. 6" PVC AND BELOW FORCE MAIN TO BE ASTM 1785 SCHEDULE 80 PVC.
7. AIR RELIEF VALVE - AN AUTOMATIC COMBINATION VACUUM AIR RELIEF VALVE SHALL BE PLACED AT HIGH POINTS IN THE FORCE MAIN TO PREVENT AIR LOCKING.
8. THRUST BLOCKS SHALL BE INSTALLED AT ALL BENDS (VERTICAL AND HORIZONTAL) AND ANY TERMINATION POINT.
9. ALL PUMP STATION EQUIPMENT AND INSTALLATION SHALL BE COORDINATED WITH PUMP MANUFACTURER FOR COMPLETENESS AND COMPATIBILITY.
10. THE PUMP STATION WILL BE MODEL MSB/DUPLEX ABS PIRANHA OR APPROVED EQUAL AS DIRECTED BY WATER DISTRICT #2, ST. CHARLES COUNTY, MISSOURI, INCLUDING ALL FITTINGS AND SUPPORT EQUIPMENT.
11. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DEPARTMENT OF NATURAL RESOURCES AND WATER DISTRICT #2 STANDARDS AND SPECIFICATIONS WHICHEVER IS GREATER.
12. ON PRECAST STATIONS GRAVITY LINES MUST HAVE THEIR ANGLES OF ENTRY INCLUDED ON THE STRUCTURE PLANS AT THEIR POINTS OF ENTRY TO THE STRUCTURE. THE MAXIMUM ANGLE OF DEFLECTION ALLOWED FOR PIPE GASKET TO BE "Z-LOCK" = 2.5 DEGREE AND "A-LOCK" = 0.7 DEGREE.





AIR RELEASE VALVES SHALL BE APCO SERIES AIR RELEASE VALVE MODEL 400 WITH BACKFLUSHING ATTACHMENTS OR APPROVED EQUAL AIR RELEASE AIR VACUUM VALVES SHALL BE APCO SERIES COMBINATION AIR VALVE MODEL 445 WITH BACKFLUSHING ATTACHMENTS OR APPROVED EQUAL



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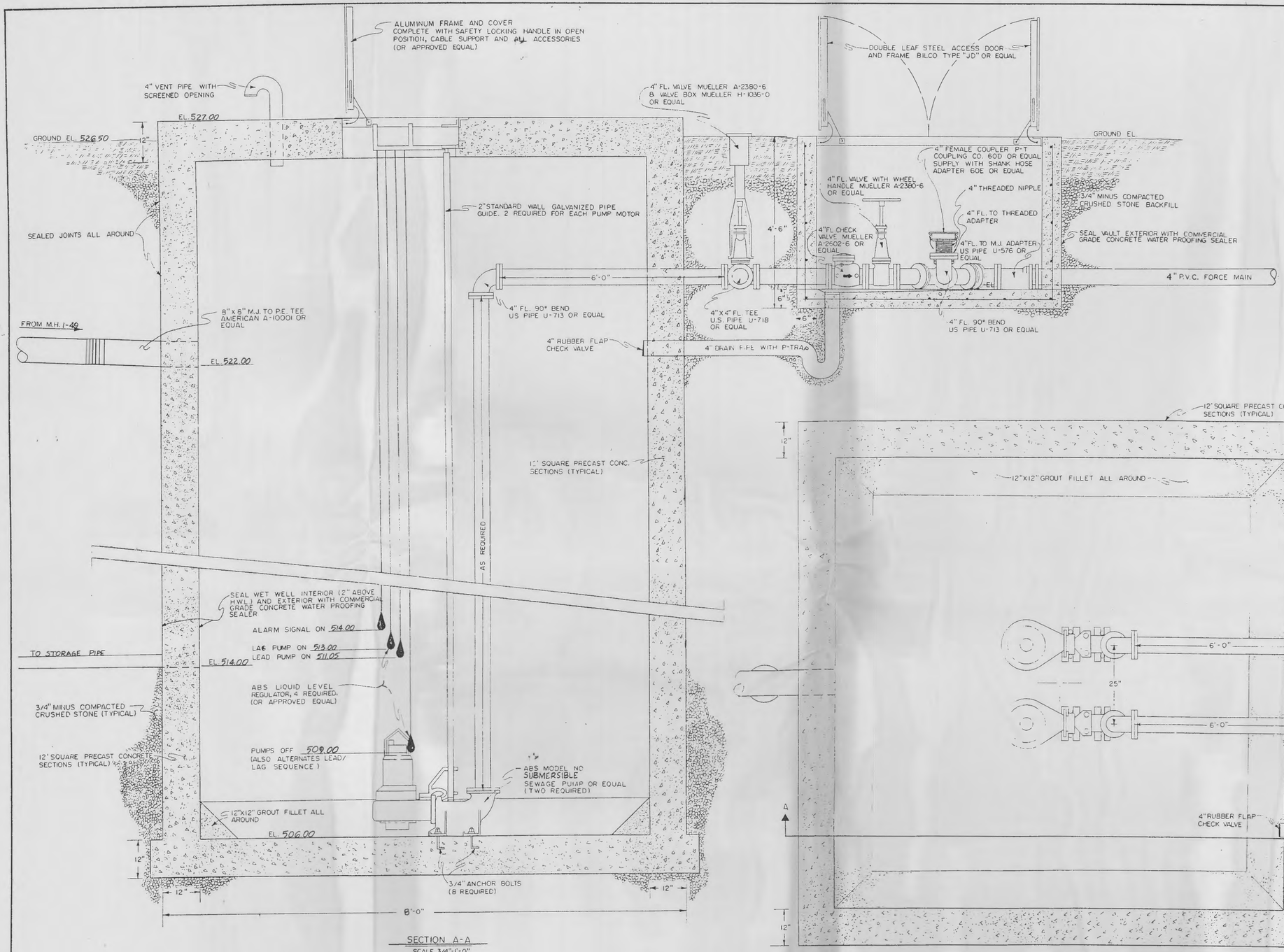
LIFT STATION DETAILS

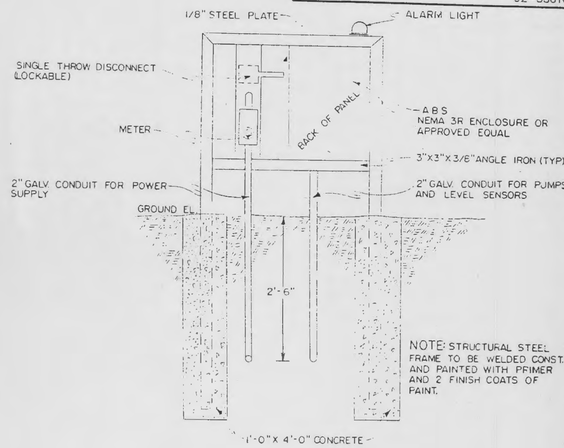
THE MANORS AT CRIMSON OAKS

JULY 9, 2001 — 92-3561C



SECTION A-A
SCALE 3/4"=1'-0"

PLAN VIEW
SCALE 3/4"=1'-0"



CONTROL PANEL AND METER BASE
NOT TO SCALE

36/56

ST. CHARLES COUNTY
PUBLIC WATER SUPPLY DISTRICT NO. 2

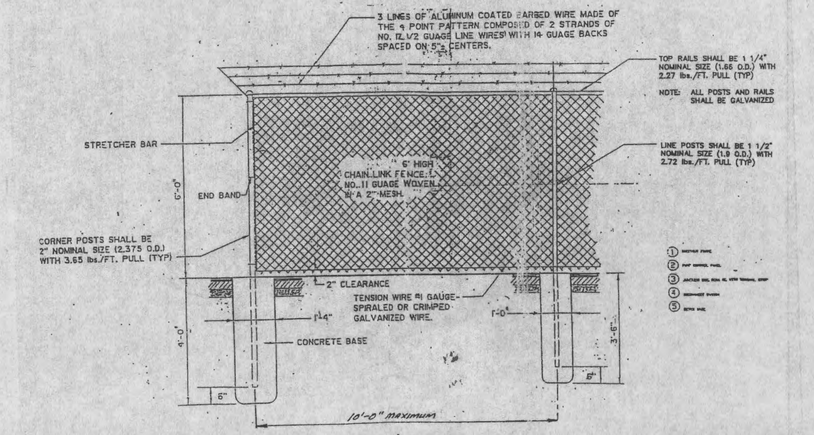
SANITARY SEWAGE PUMPING STATION
PLAN AND DETAILS

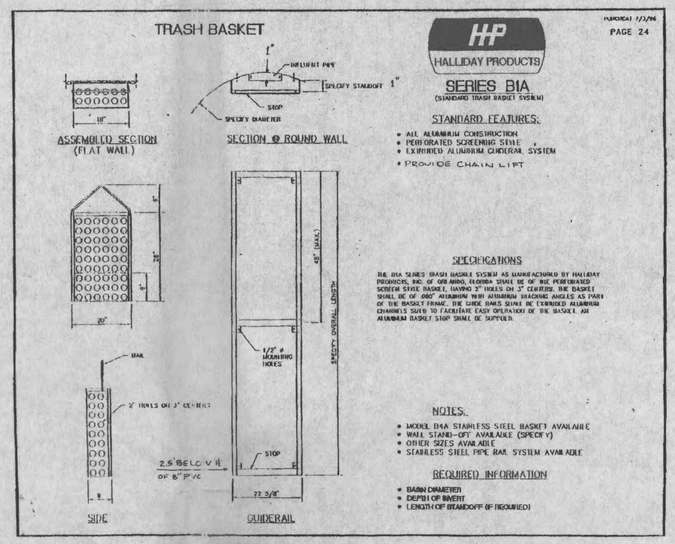
REVISIONS		

LIFT STATION DETAILS

THE MANORS AT CRIMSON OAKS

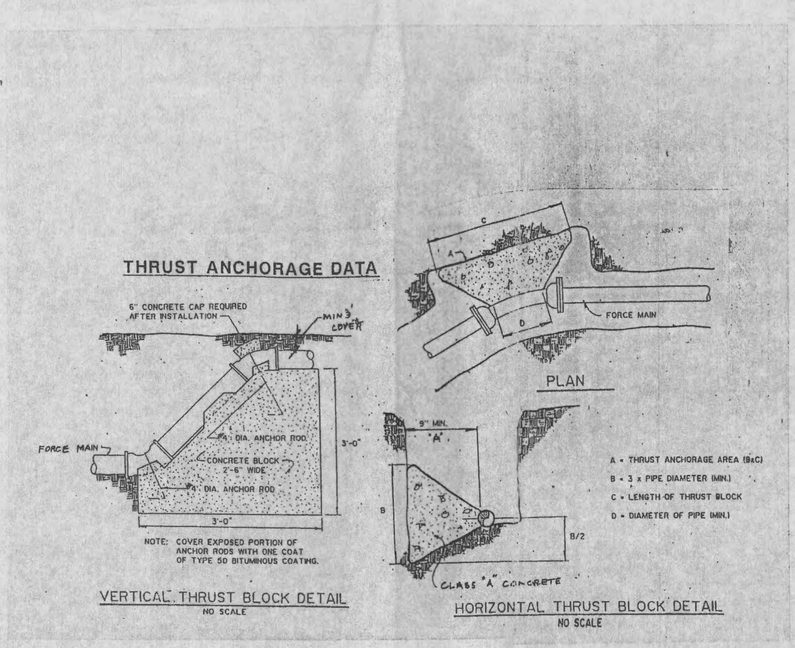
JULY 9, 2001 — 92-3561C

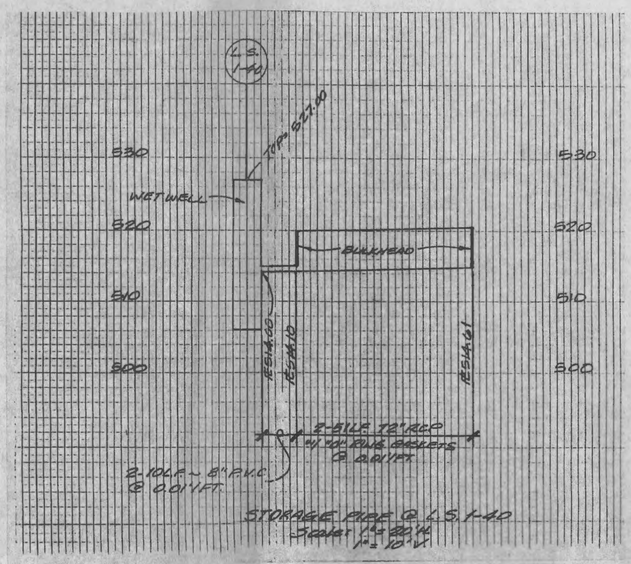


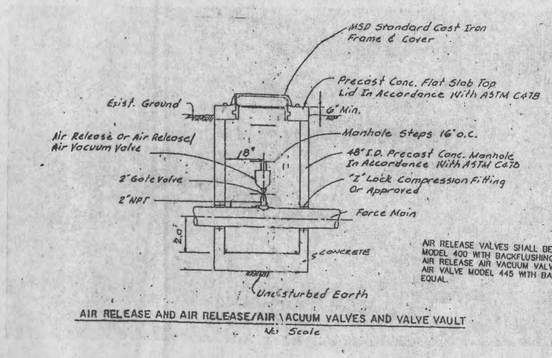


NOTES:

1. PRECAST 60" I.D. MANHOLES TO BE USED FOR PUMP STATION AND VALVE BOX AS APPROVED BY ENGINEER.
2. PRECAST WET WELL ENTRANCE STEPS SHALL BE COPOLYMER POLYPROPYLENE PLASTIC TYPE MANHOLE STEPS.
3. STEPS SHALL NOT BE PLACED IN FRONT OF INCOMING GRAVITY LINES OR LOCATED UNDER OR NEXT TO ANY OBSTRUCTIONS.
4. THE STEPS SHOULD PROVIDE A CLEAR-IN-LINE VISIBLE UNOBSTRUCTED ACCESS FROM THE TOP OF THE CHAMBER TO THE BOTTOM OF THE STATION AND BE PLACED ON ONE OF THE STATION SIDEWALLS APPROXIMATELY CENTERED WITH THE HATCH COVER.
5. ALL PIPES MUST ENTER THE STRUCTURE WALLS WITH A ONE (1) FOOT MINIMUM DISTANCE FROM THE CENTERLINE OF THE PIPE TO THE FACE OF THE ADJOINING WALL TO ALLOW PROPER PIPE GASKET PLACEMENT.
6. 3" PVC AND BELOW FORCE MAIN TO BE ASTM 1785 SCHEDULE 80 PVC.
7. AIR RELIEF VALVE – AN AUTOMATIC COMBINATION VACUUM AIR RELIEF VALVE SHALL BE PLACED AT HIGH POINTS IN THE FORCE MAIN TO PREVENT AIR LOCKING.
8. THRUST BLOCKS SHALL BE INSTALLED AT ALL BENDS (VERTICAL AND HORIZONTAL) AND ANY TERMINATION POINT.
9. ALL PUMP STATION EQUIPMENT AND INSTALLATION SHALL BE COORDINATED WITH PUMP MANUFACTURER FOR COMPLETENESS AND COMPATIBILITY.
10. THE PUMP STATION WILL BE ABS MODEL APP1068.5 M 1551/2 OR APPROVED EQUAL AS DIRECTED BY WATER DISTRICT #2, ST. CHARLES COUNTY, MISSOURI, INCLUDING ALL FITTINGS AND SUPPORT EQUIPMENT.
11. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DEPARTMENT OF NATURAL RESOURCES AND WATER DISTRICT #2 STANDARDS AND SPECIFICATIONS WHICHEVER IS GREATER.
12. ON PRECAST STATIONS GRAVITY LINES MUST HAVE THEIR ANGLES OF ENTRY INCLUDED ON THE STRUCTURE PLANS AT THEIR POINTS OF ENTRY TO THE STRUCTURE. THE MAXIMUM ANGLE OF DEFLECTION ALLOWED FOR PIPE GASKET TO BE "T-LOCK" = 25 DEGREE AND "A-LOCK" @ 7 DEGREE.







AIR RELEASE VALVES SHALL BE APCO SEWAGE AIR RELEASE VALVE MODEL 400 WITH BACKFLUSHING ATTACHMENTS OR APPROVED EQUAL. AIR RELEASE AIR VACUUM VALVES SHALL BE APCO SEWAGE COMBINATION AIR VALVE MODEL 445 WITH BACKFLUSHING ATTACHMENTS OR APPROVED EQUAL.

AIR RELEASE AND AIR RELEASE/AIR VACUUM VALVES AND VALVE VAULT
No Scale

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