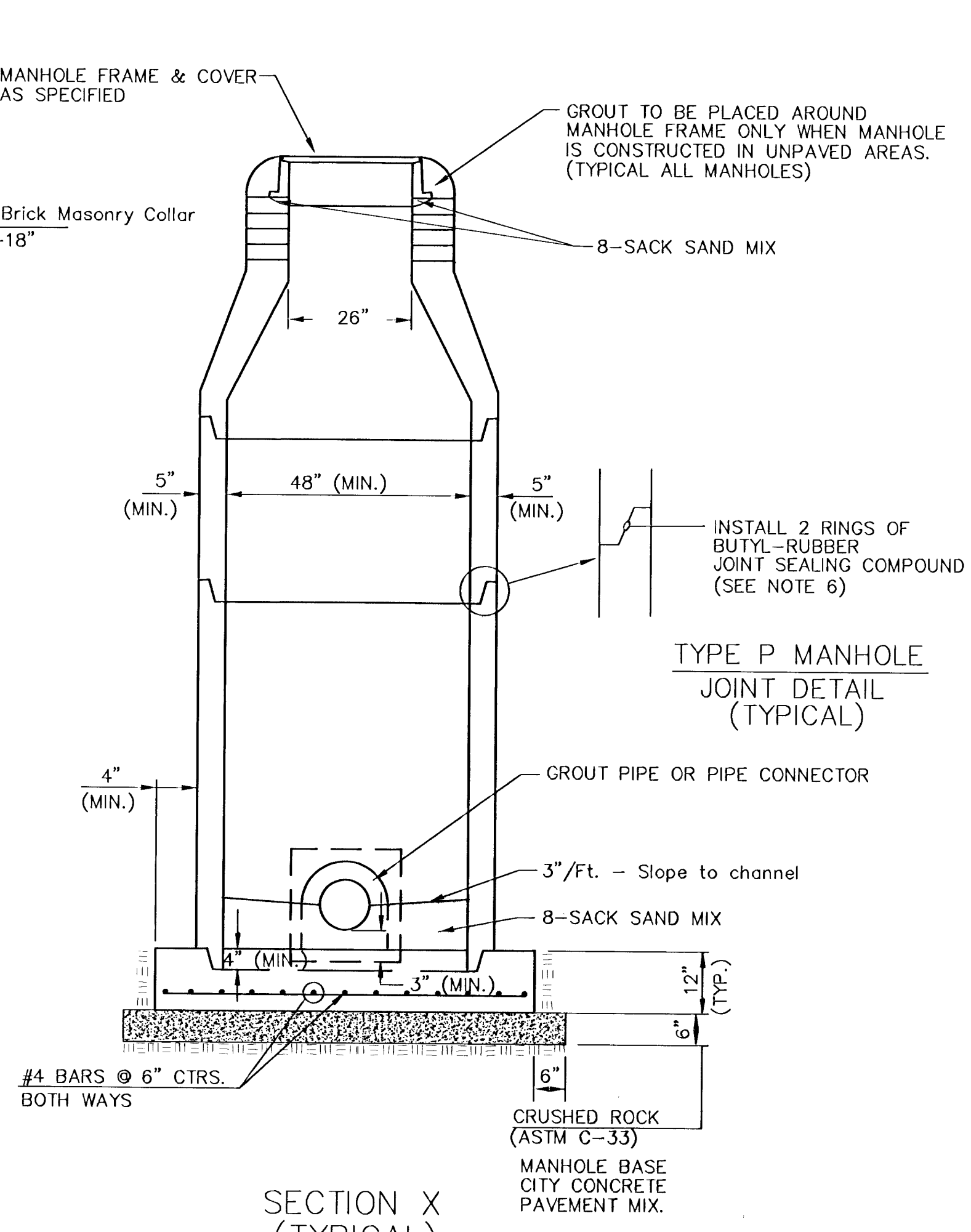
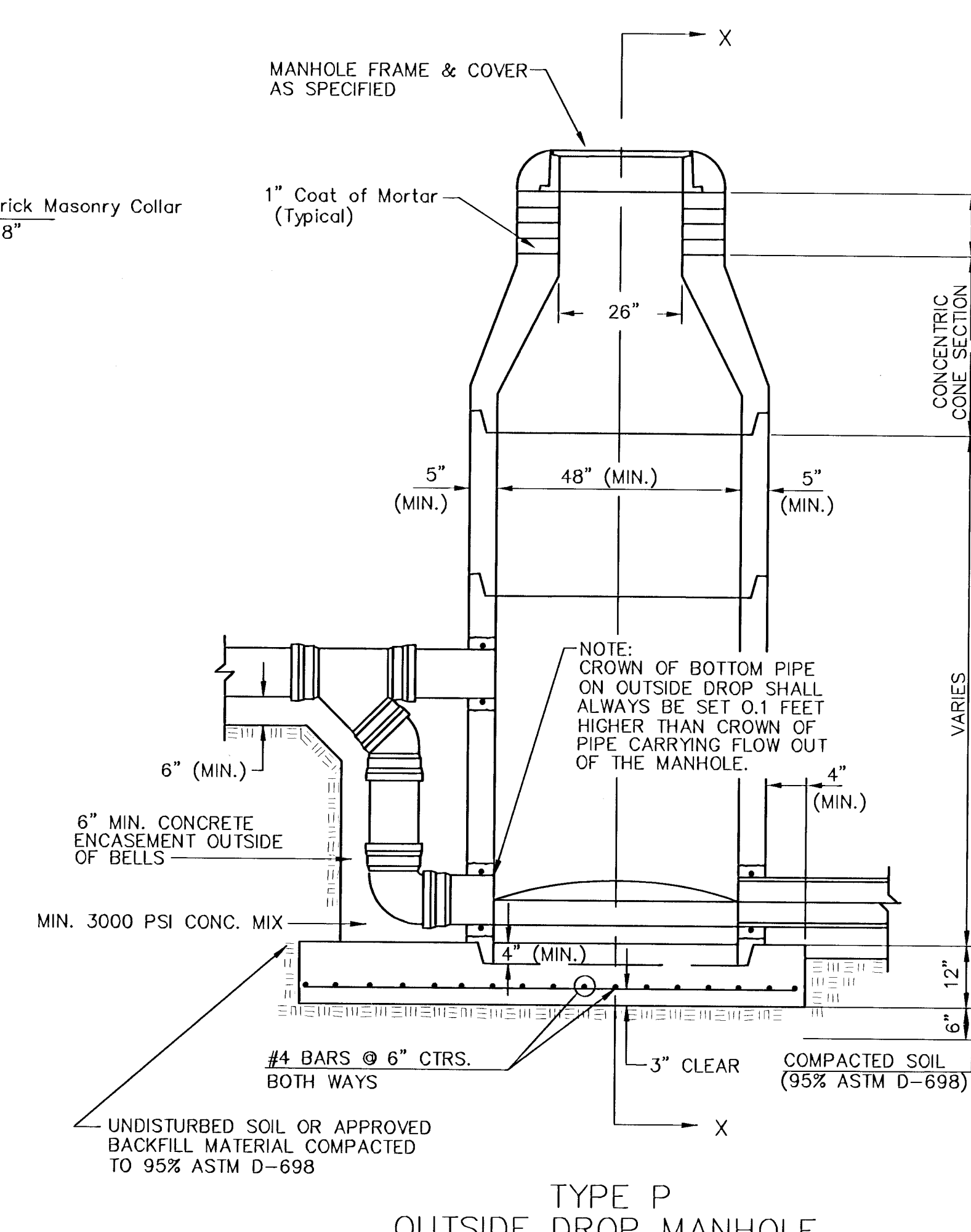
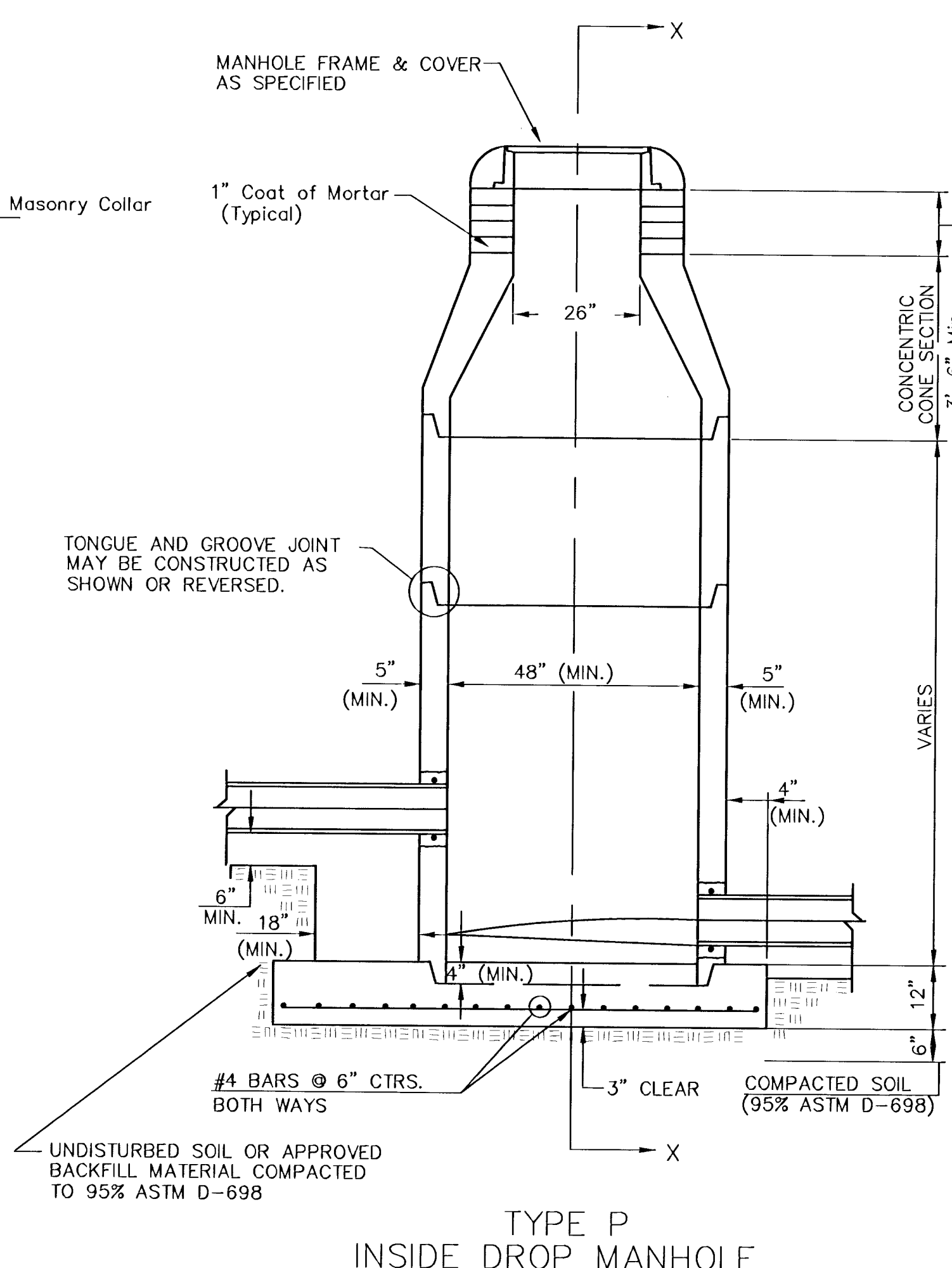
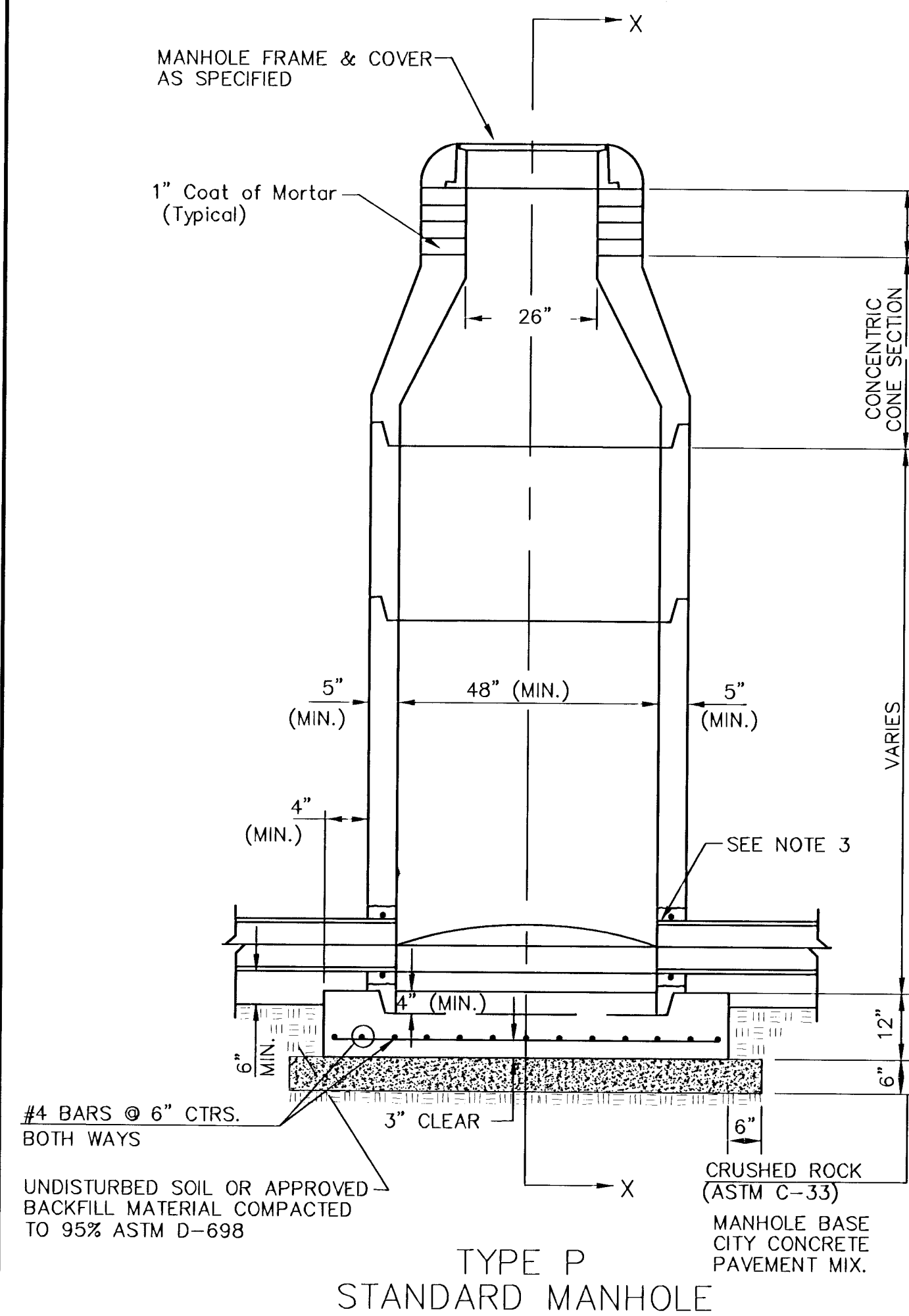


SEWER APPURTENANCES DETAILS



GENERAL NOTES

PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF-CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

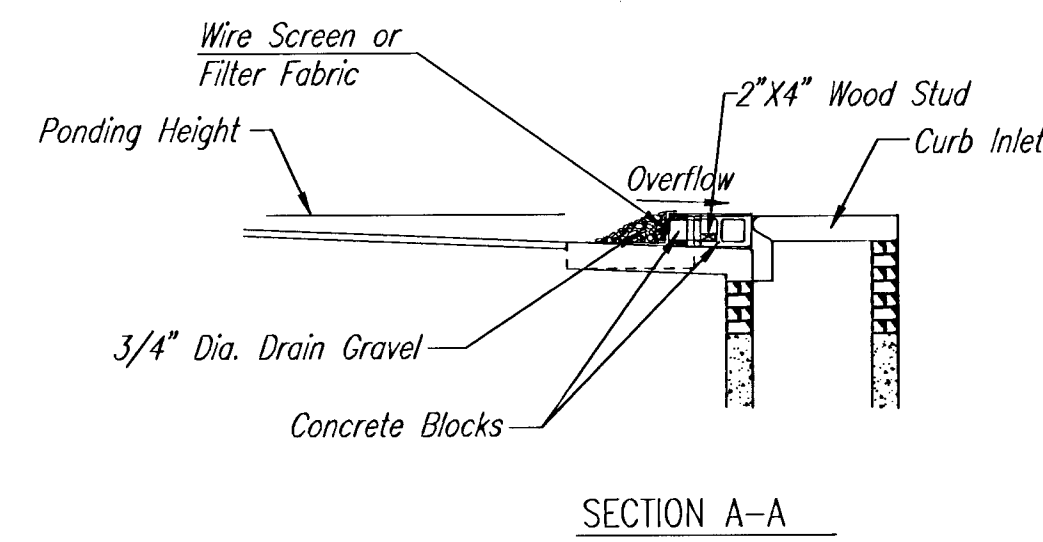
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
- A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
- CRUSHED ROCK CONFORMING TO ASTM C-33 WITH A GRADATION OF NO. 67 SHALL BE INSTALLED AT THE BASE OF THE MANHOLE TO A DEPTH OF NO LESS THAN 6", AND SHALL EXTEND NO LESS THAN 6" OUTSIDE THE DIAMETER OF THE CONCRETE FLOOR OF THE MANHOLE.
- WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
- THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.

<p>THE CITY OF WICHITA</p> <p>CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4551 (316) 268-4114 FAX</p>	STANDARD TYPE 'P' MANHOLES	
	M. E. LINDEBAK P.E. - CITY ENGINEER	
	PROJECT NUMBER 468-83325	OCA NO. 743886
	DATE MAR 96	SHEET 2 OF 12

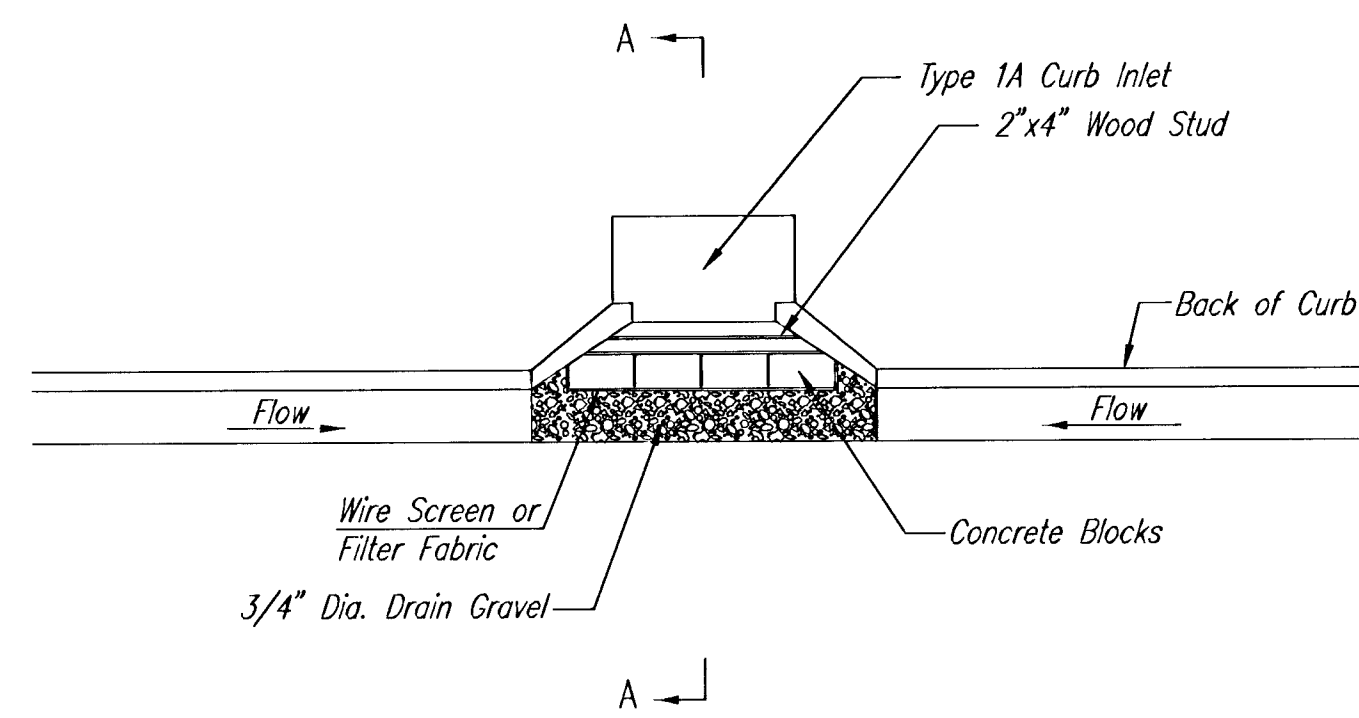
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SECTION A-A



CURB INLET GRAVEL FILTERS
(INLET PROTECTION-RESIDENTIAL STREETS ONLY)

NOTE: Other types of curb inlet protection may be approved by the city so long as equal protection is provided.

A gravel inlet filter shall be installed at sump locations on residential streets. This type of protection is not to be used on arterial or collector streets at any time that it would pose an undue traffic hazard.

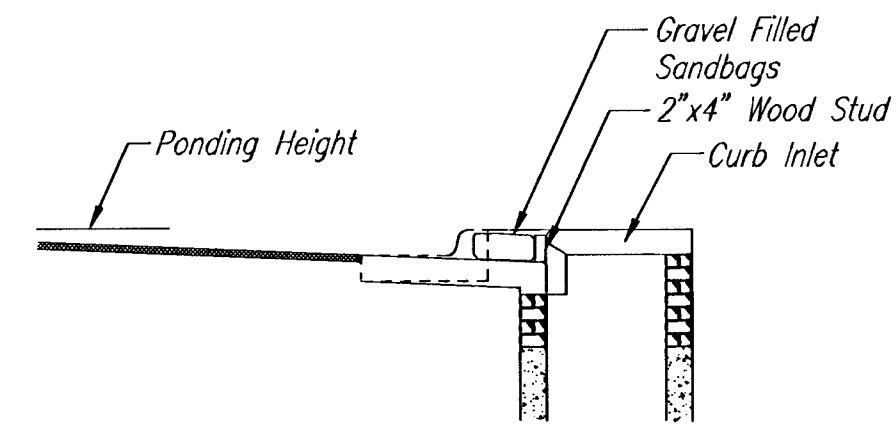
Instructions for Installing:

- STEP 1: Place concrete blocks around the inlet as shown on drawing. Insert 2x4 board as shown.
- STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
- STEP 3: Place 1" to 1-1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
- STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary. An alternative installation is the use of gravel bags supported by a 2"x4" board to prevent collapsing.

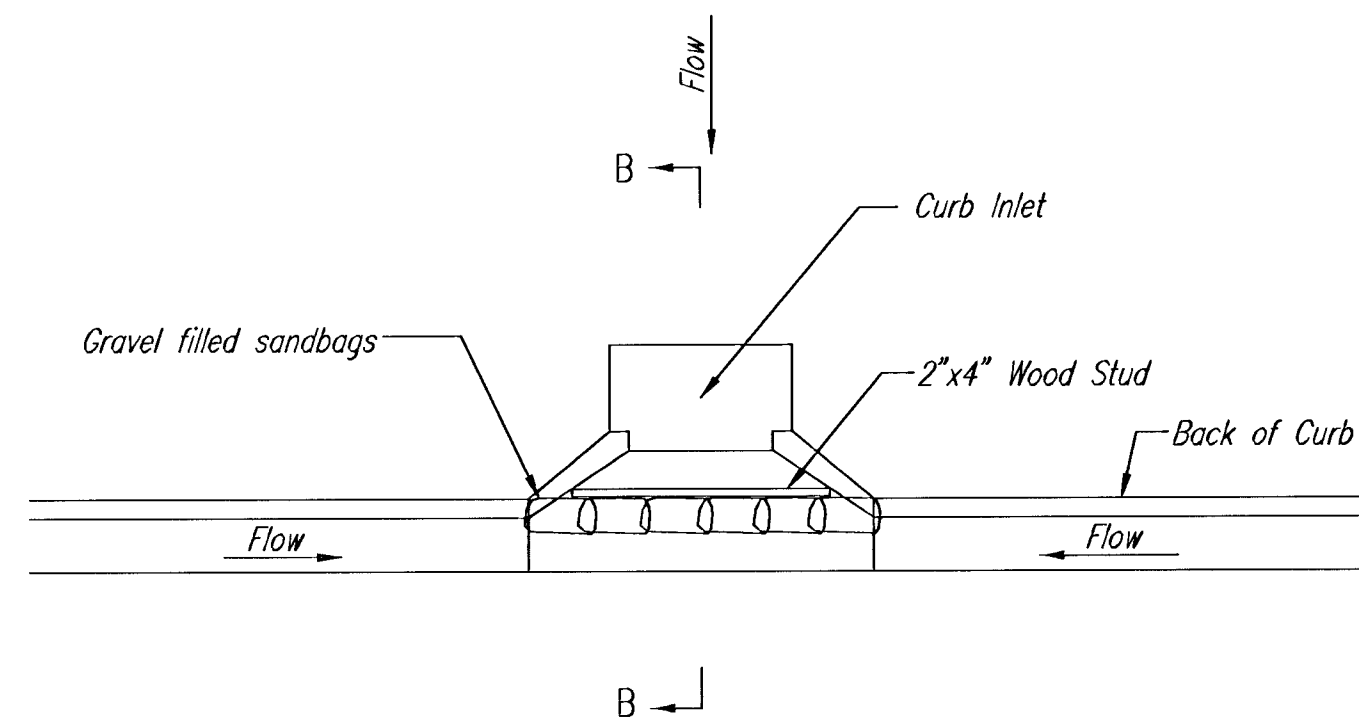
Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

Maintenance:

All curb inlet gravel filters shall be inspected and repaired after each runoff event. Sediment deposits are to be removed once material is within 8 cm (3 inches) of the top of any block. Periodically, the gravel shall be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets.

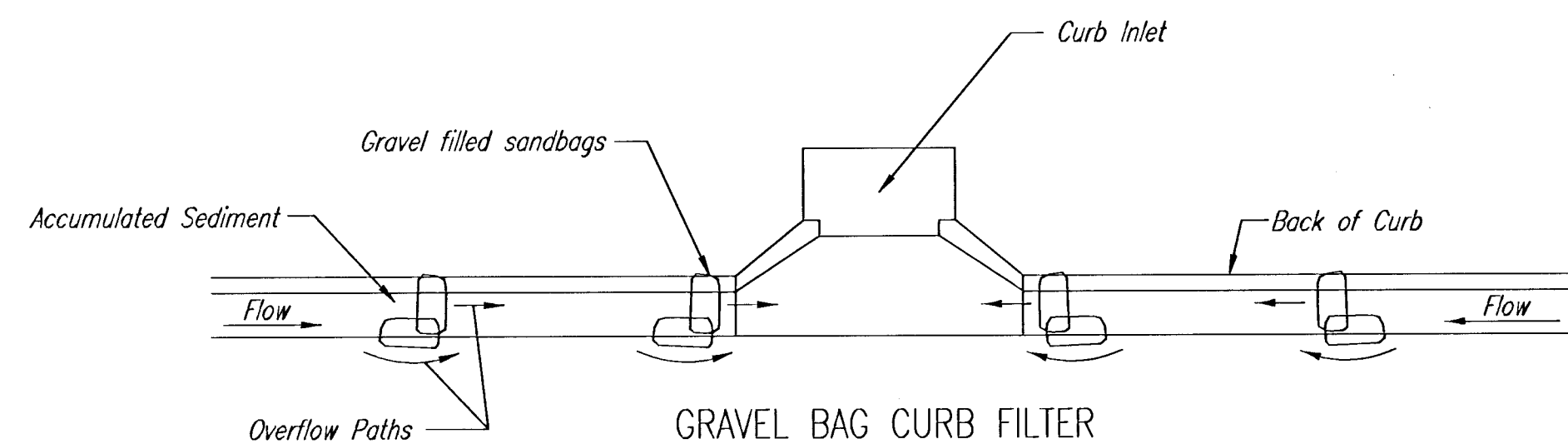


SECTION B-B



CURB INLET SANDBAG FILTERS
(INLET PROTECTION)

NOTE: Other types of curb inlet protection may be approved by the City so long as equal protection is provided.



GRAVEL BAG CURB FILTER
(INLET PROTECTION)

NOTE: Place two or more sets of bags in a manner that results in maximum support. The flow line bag must be lower than top of curb.

CURB SEDIMENT TRAPS

When inlets are located on streets having a grade (i.e., sump conditions do not exist), installing gravel (or sand) bags in the gutter flow line to create small sediment traps can be considered. Gravel bags are recommended over sand bags to allow for drainage.

If the spacing between bags becomes too large, little sediment may be trapped. Spacing of bags should be completed using the table or graph that illustrates placement distances based upon street slope. When installed in the gutter, bag tops must be lower than the sidewalk.

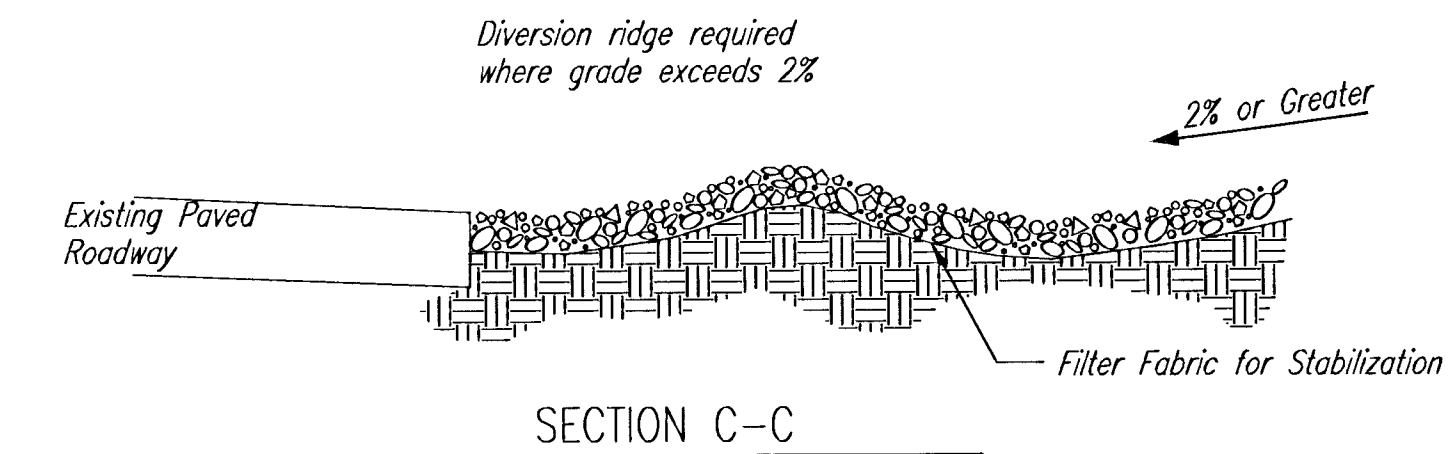
Spacing:

Gravel bags are to be placed according to street grades using the following table or graph that appears below.

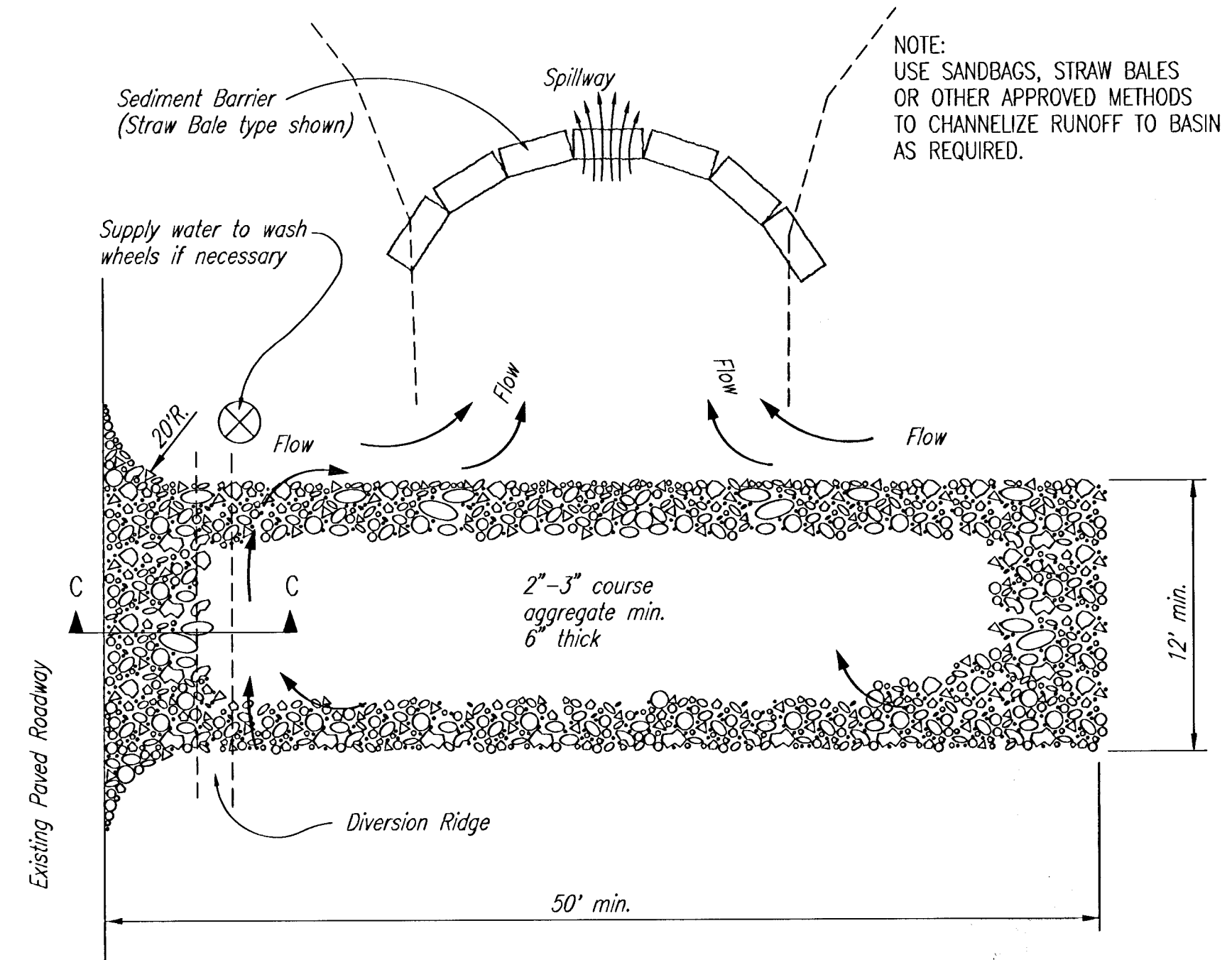
GRADE (%)	SPACING (FEET)
0.5	75
1.0	45
2.0	18
3.0	12
4.0	9
5.0	6

Maintenance:

Collected sediment shall be removed after every runoff event. Bags that are destroyed by vehicular traffic or through natural deterioration are to be immediately replaced.



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.



**SOIL EROSION
BMP DETAILS**

CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

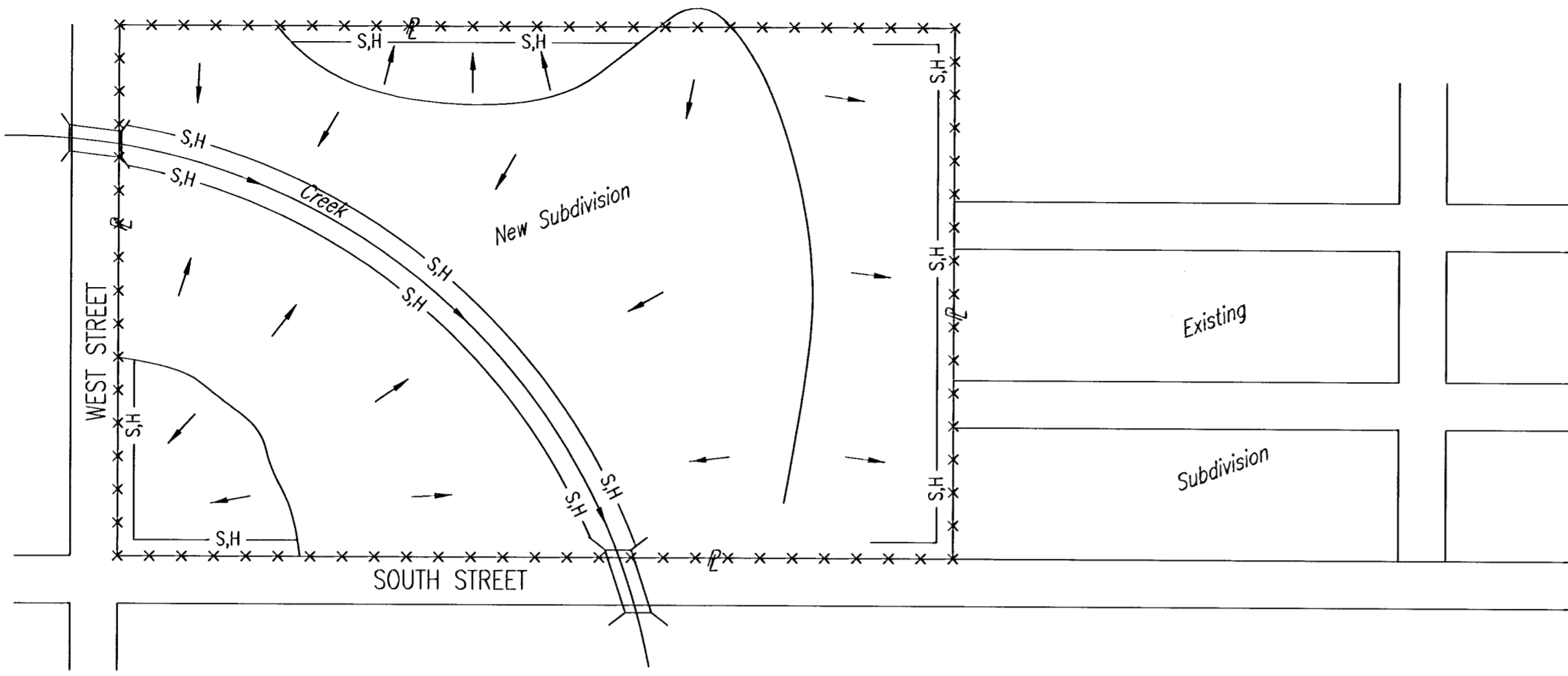
PROJECT NUMBER: 468-83325
OCA NO.: 743886

DATE: MAY 2001

SHEET 3 OF 12

PHASE 1 - INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)

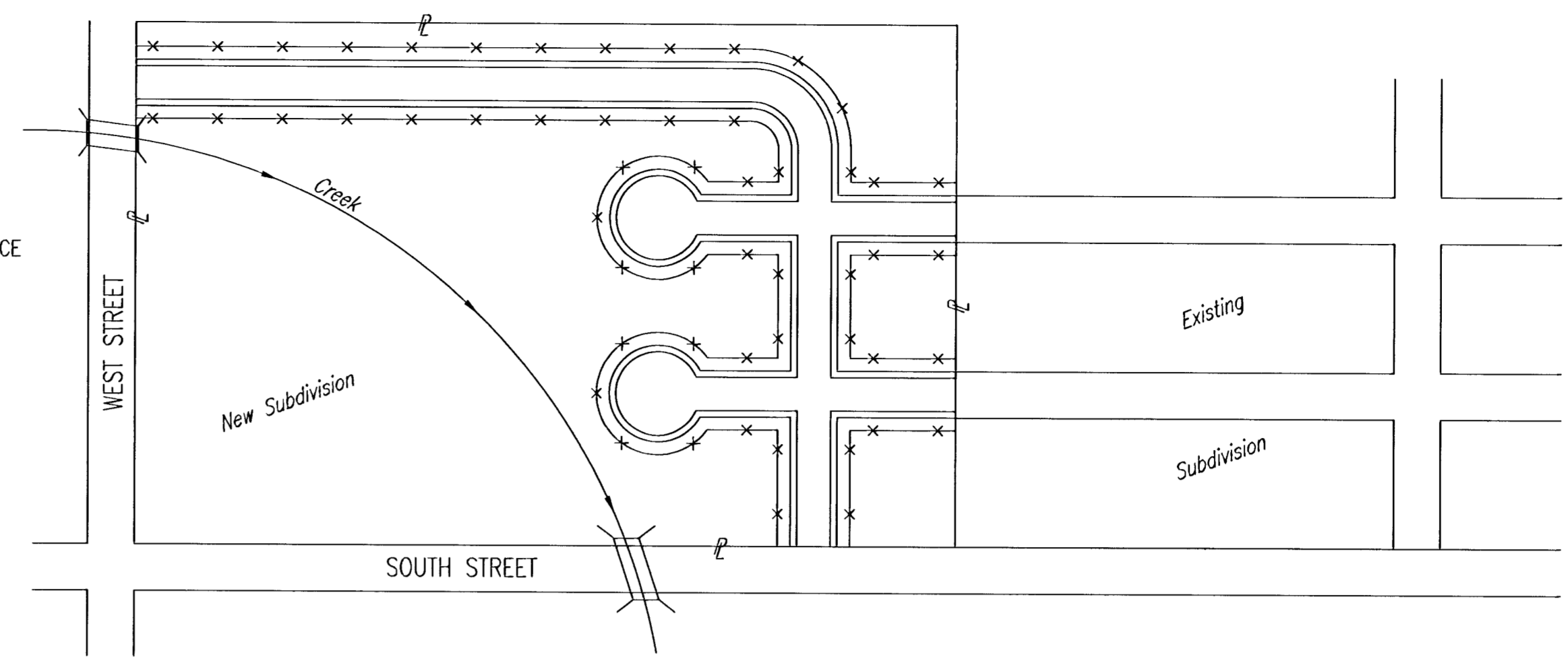
- LEGEND**
- DRAINAGE FLOW PATH
 - RIDGE LINES
 - × POINT OF COMPLIANCE
 - S.H- SILT FENCE OR HAY BALE BMP
 - DRAINAGEWAY FLOWLINE



- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
- HAYBALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE BMP'S WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
- SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR GUTTERLINES ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE BMP'S WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
- ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED AT THE END OF EACH WORK DAY.
- CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL BMP'S AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE BMP'S AT THEIR WORK LOCATIONS, AS NEEDED.
- UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
- THE SUBDIVISION DEVELOPER (OWNER) SHALL INSTALL AND MAINTAIN THE ON-SITE BMP'S.

PHASE 3 - STREET CONSTRUCTION

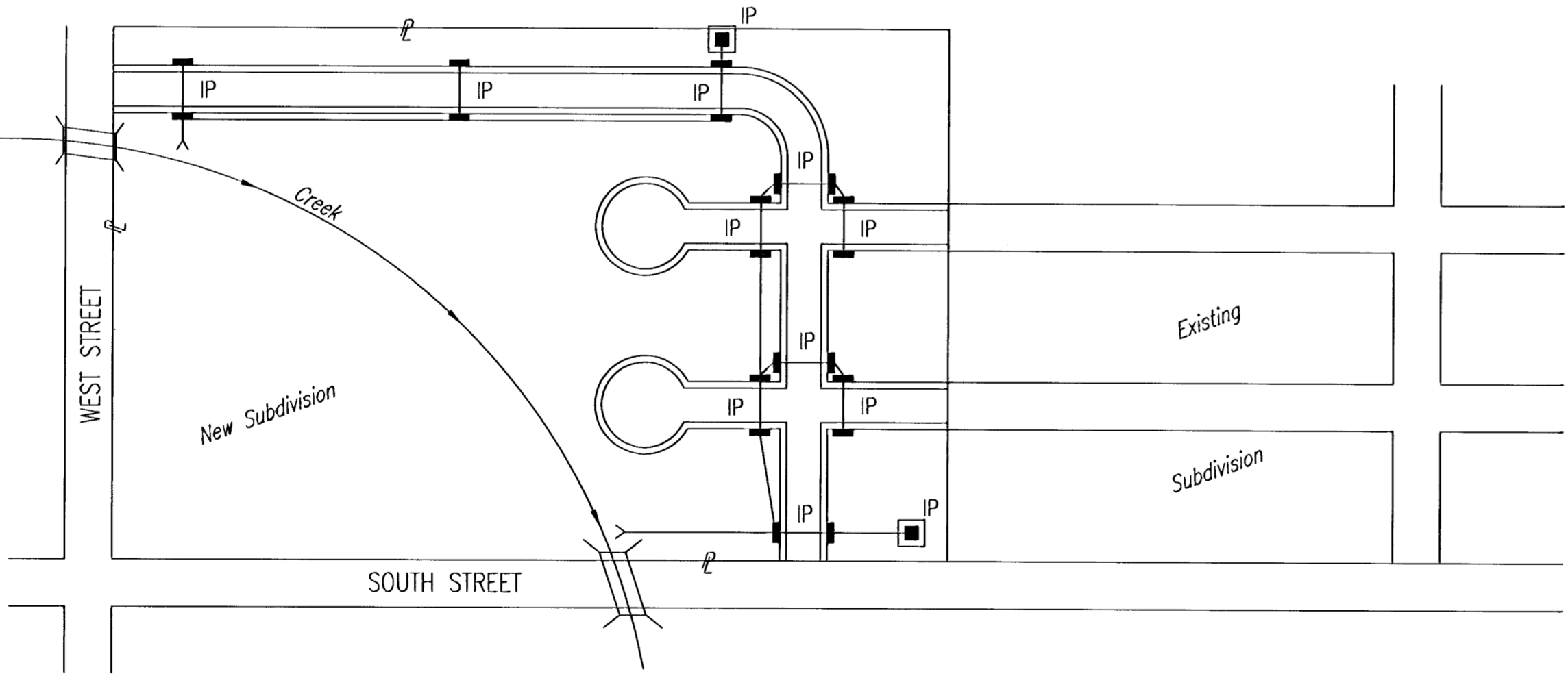
- LEGEND**
- == NEW STREETS
 - ×××× ADDITIONAL POINTS OF COMPLIANCE



- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL BMP'S INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
- CURB OPENING INLET PROTECTION:
 - SUMP AREAS - INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - NON-SUMP LOCATIONS - PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
- BMP'S WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), BMP'S WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
- SEE DETAIL THIS SHEET ON BACK OF CURB PROTECTION.
- THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAYBALE OR SILT FENCE BMP'S AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
- THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB BMP'S.
- THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB BMP'S IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

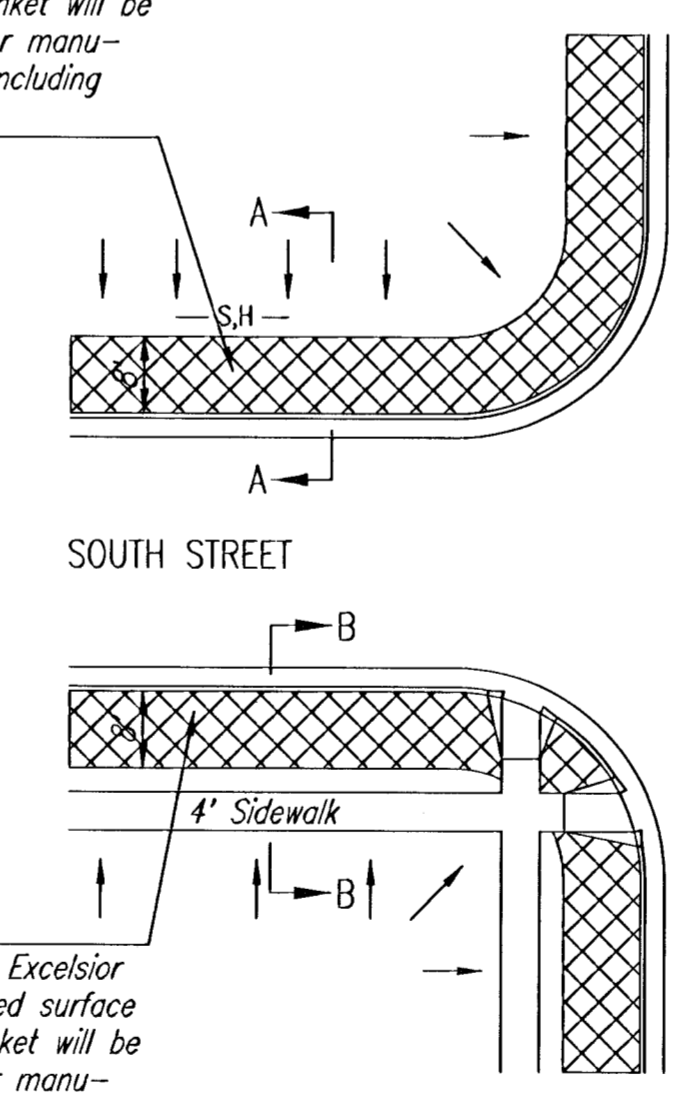
PHASE 2 - INSTALLATION OF STORM SEWER

- LEGEND**
- == PROPOSED NEW STREETS
 - CURB INLETS
 - AREA DRAINS
 - IP- INLET PROTECTION



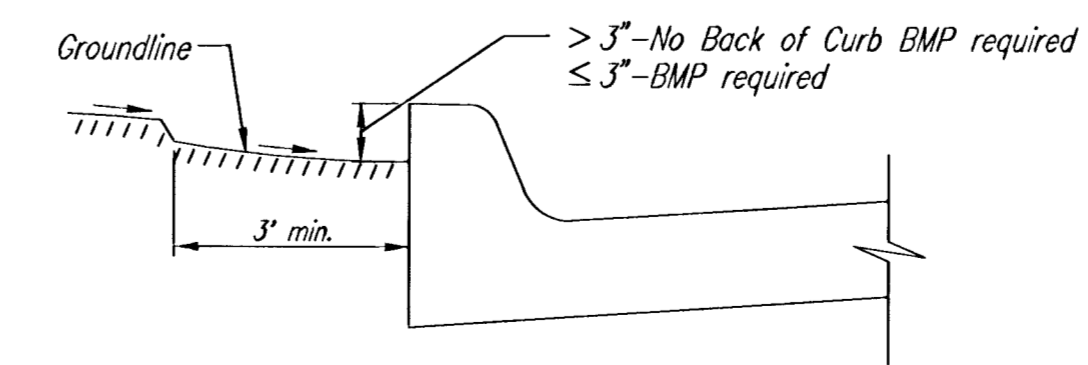
- DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL BMP'S REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
- AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
- AREA DRAINS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAYBALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
- CURB OPENING INLETS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION BMP'S MUST BE INSTALLED. SEE PHASE 3 - STREET CONSTRUCTION.
- THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE BMP'S. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION.
- THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE BMP'S ONCE INSTALLED.
- ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

BMP-Install 8' wide Curlex I Excelsior Blanket, or equal, on prepared surface back of curb. Edge of blanket will be at back of curb. Install per manufacturer's recommendation, including staples.



BMP-Install 8' wide Curlex I Excelsior Blanket, or equal, on prepared surface back of curb. Edge of blanket will be at back of curb. Install per manufacturer's recommendation, including staples.

BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL

GENERAL NOTES:

- THE INTENT OF ALL BEST MANAGEMENT PRACTICES (B.M.P.'S) IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, OR ANY OTHER DRAINAGE FEATURE.
- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF BMP'S WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- BMP'S SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON THE BMP DETAIL SHEETS.
- PERSONS DESTROYING BMP'S SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT BMP'S.
- THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 5 ACRES OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL BMP'S ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLAN.
- FOR SUBDIVISIONS SMALLER THAN 5 ACRES, SOIL EROSION BMP'S ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
- FAILURE TO USE AND MAINTAIN BMP'S IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
- THE APPLICATION OF BMP'S SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT BMP OTHER THAN THAT SHOWN. BMP'S, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
- A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.



**SOIL EROSION BMP'S
SUBDIVISION
DEVELOPMENT
PROCESS**

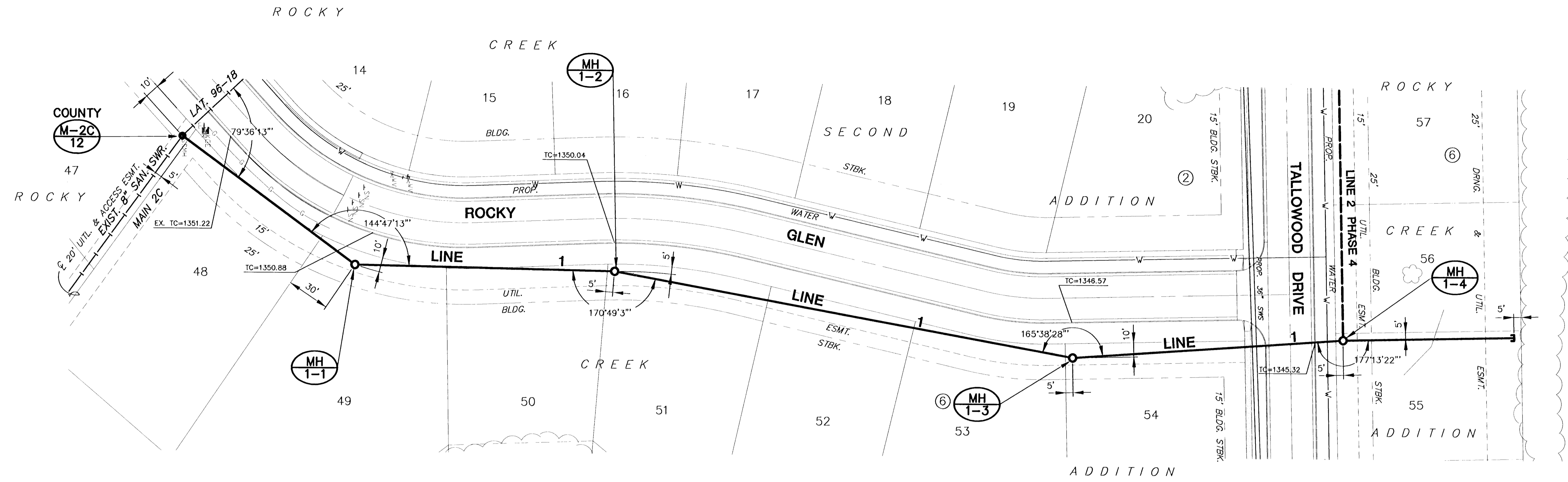
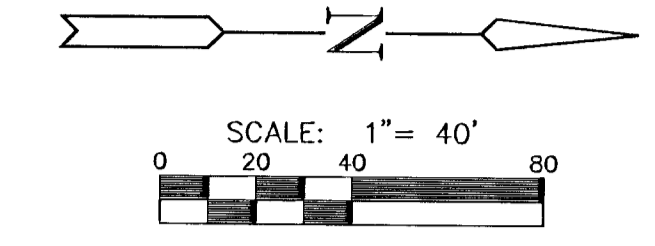
CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

PROJECT NUMBER 468-83199	QA NO. 743886
DATE MAY 2001	SHEET 4 OF 12

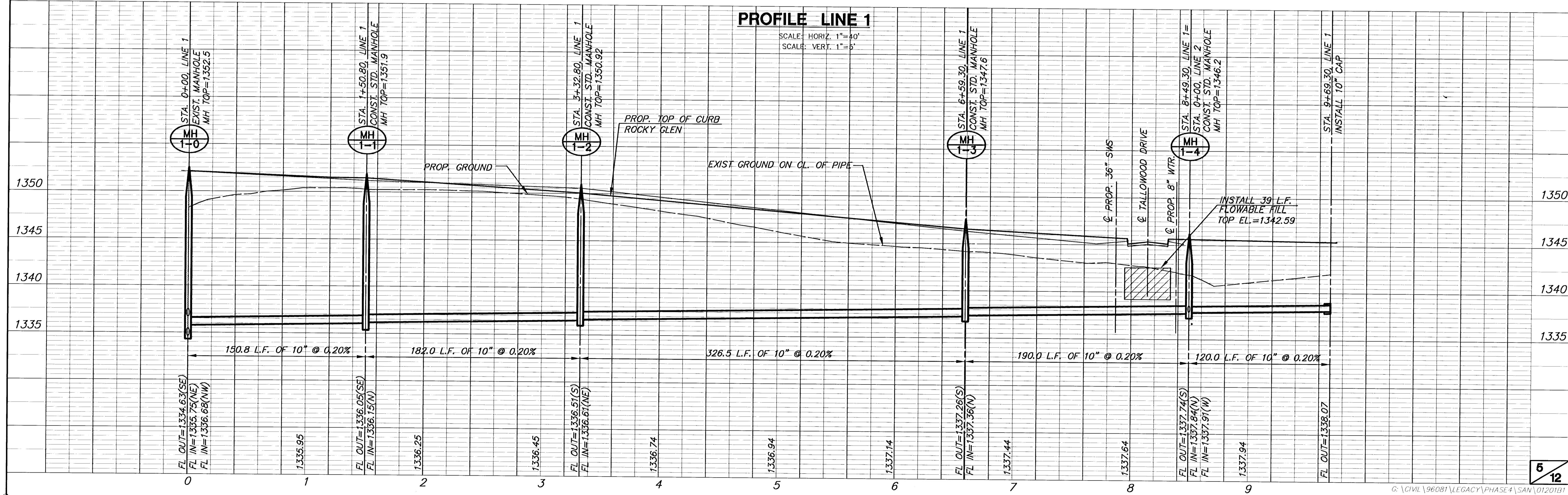
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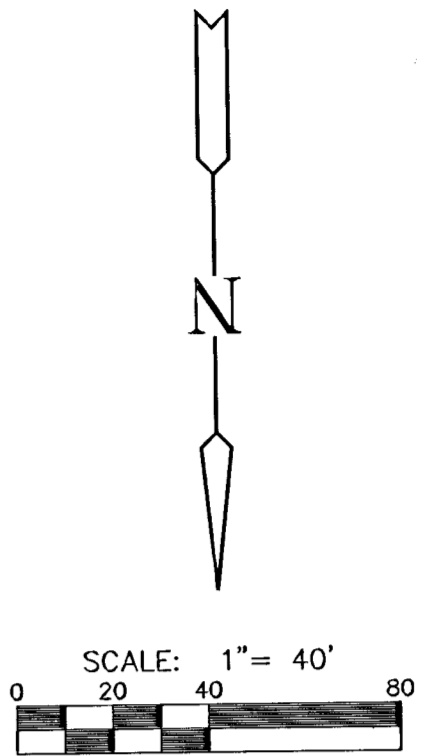
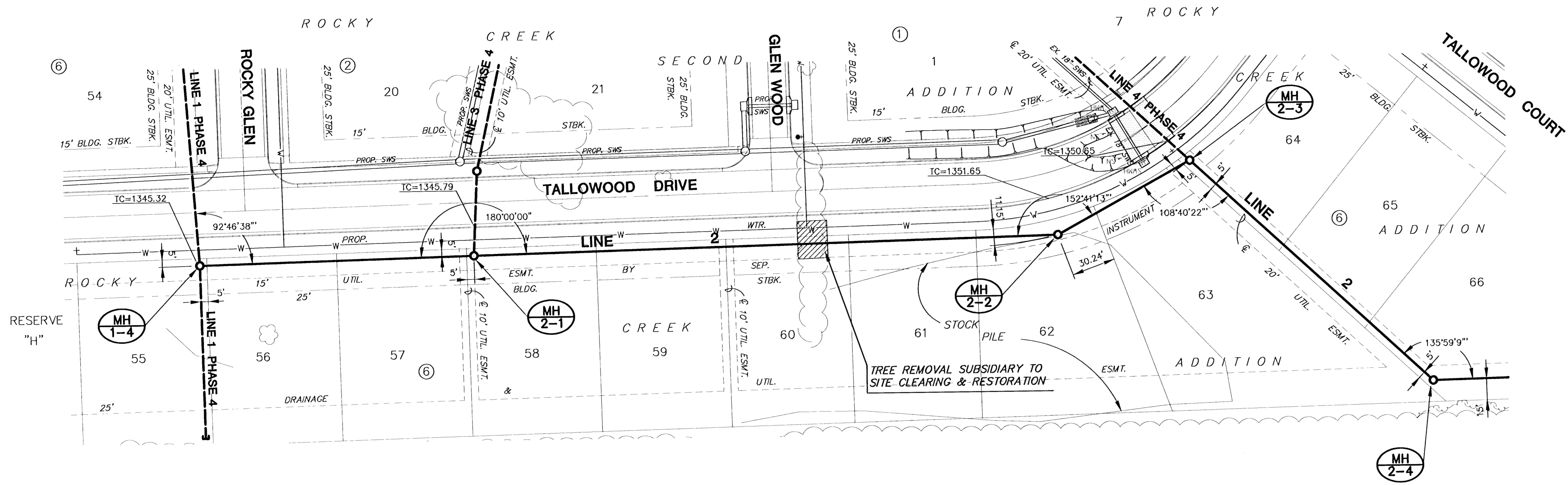
**ROCKY CREEK ADDITION
SANITARY SEWER PLANS
LINE 1**



PLAN LINE 1
SCALE: 1"=40'



PROFILE LINE 1
SCALE: HORIZ. 1"=40'
SCALE: VERT. 1"=5'

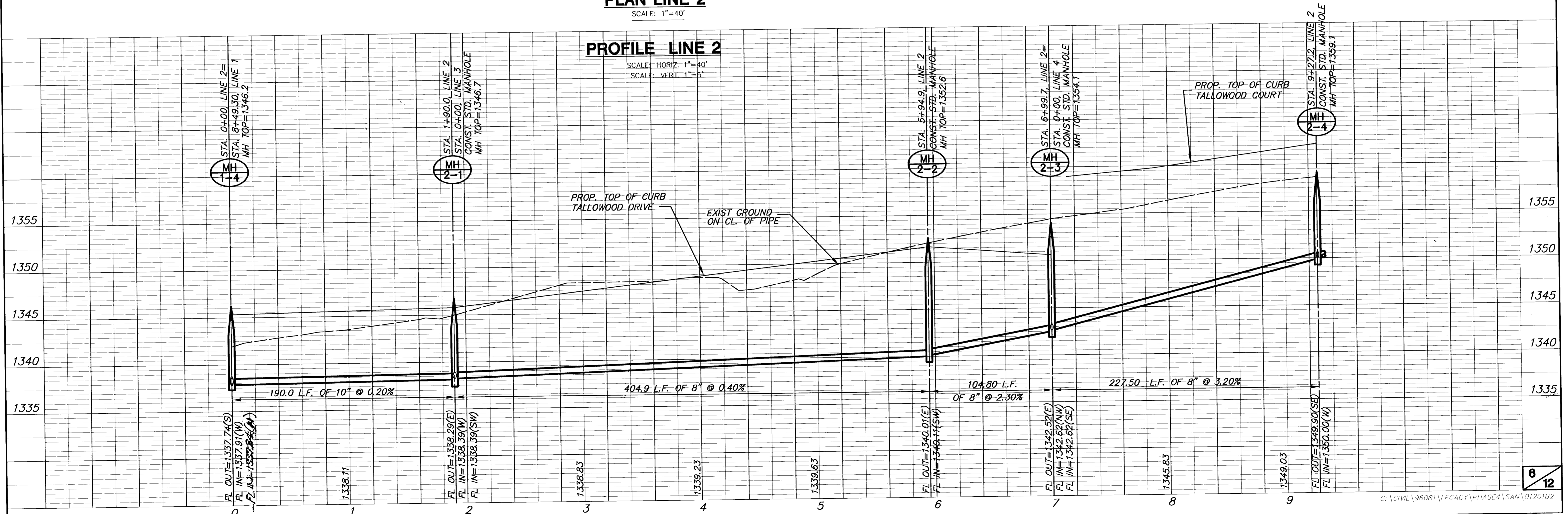


PLAN LINE 2

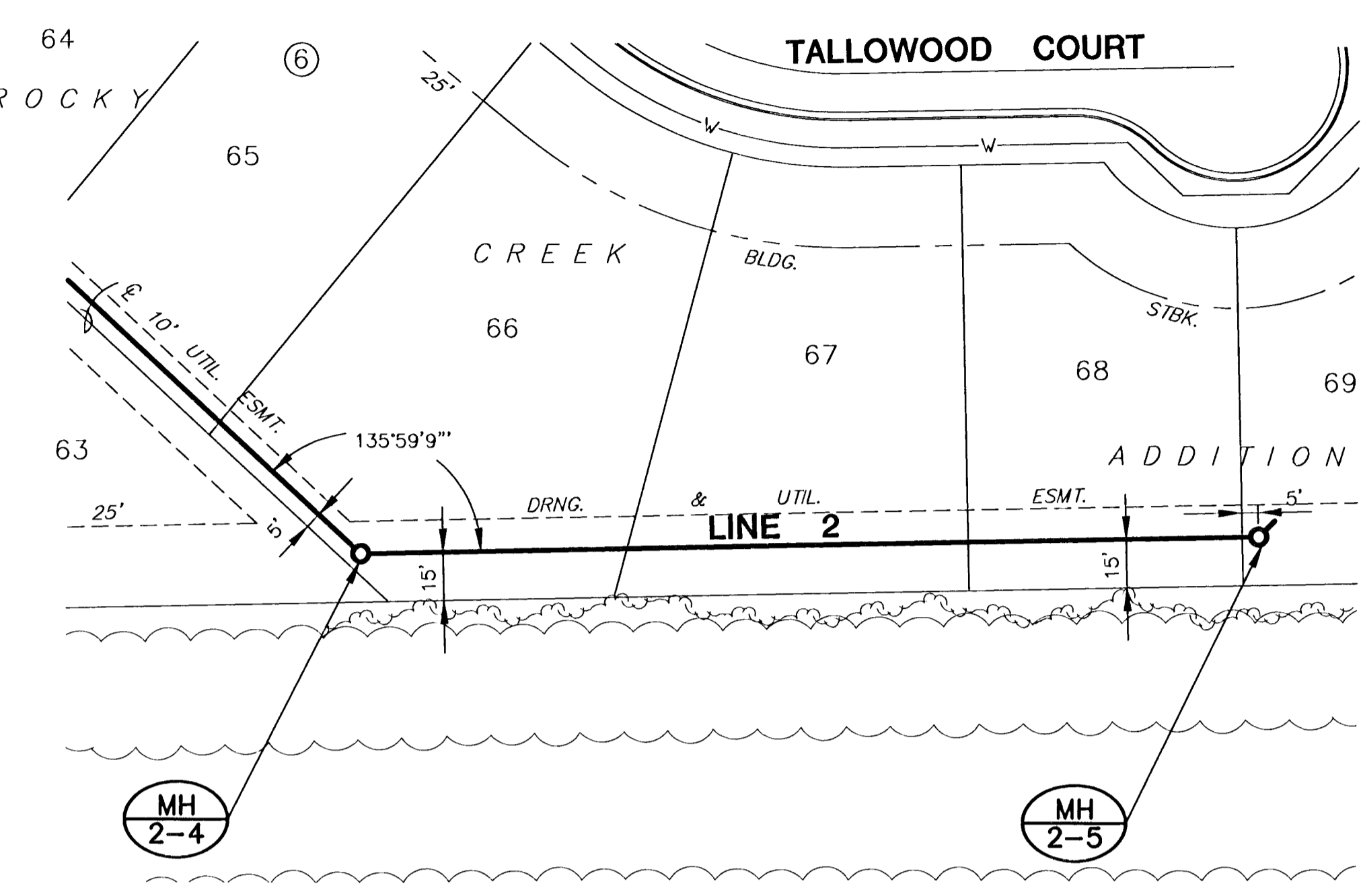
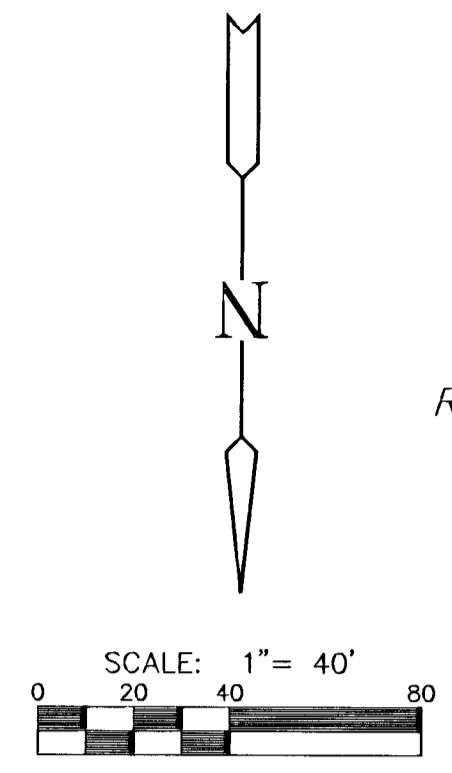
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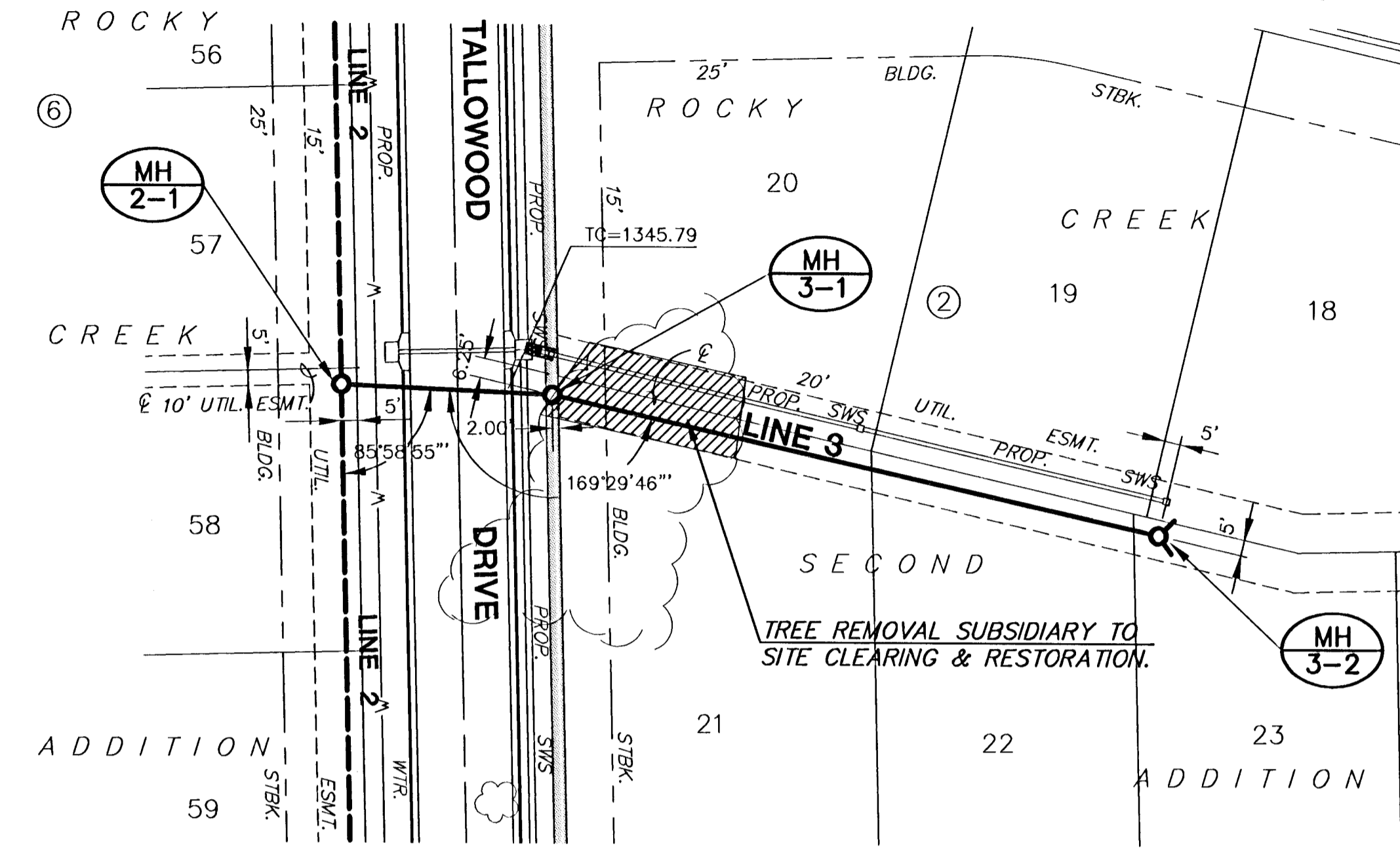
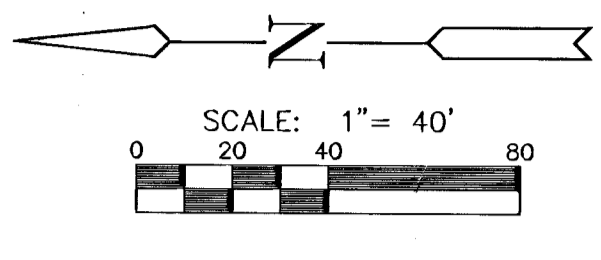
SCALE: HORIZ. 1"=40'
SCALE: VERT. 1"=5'



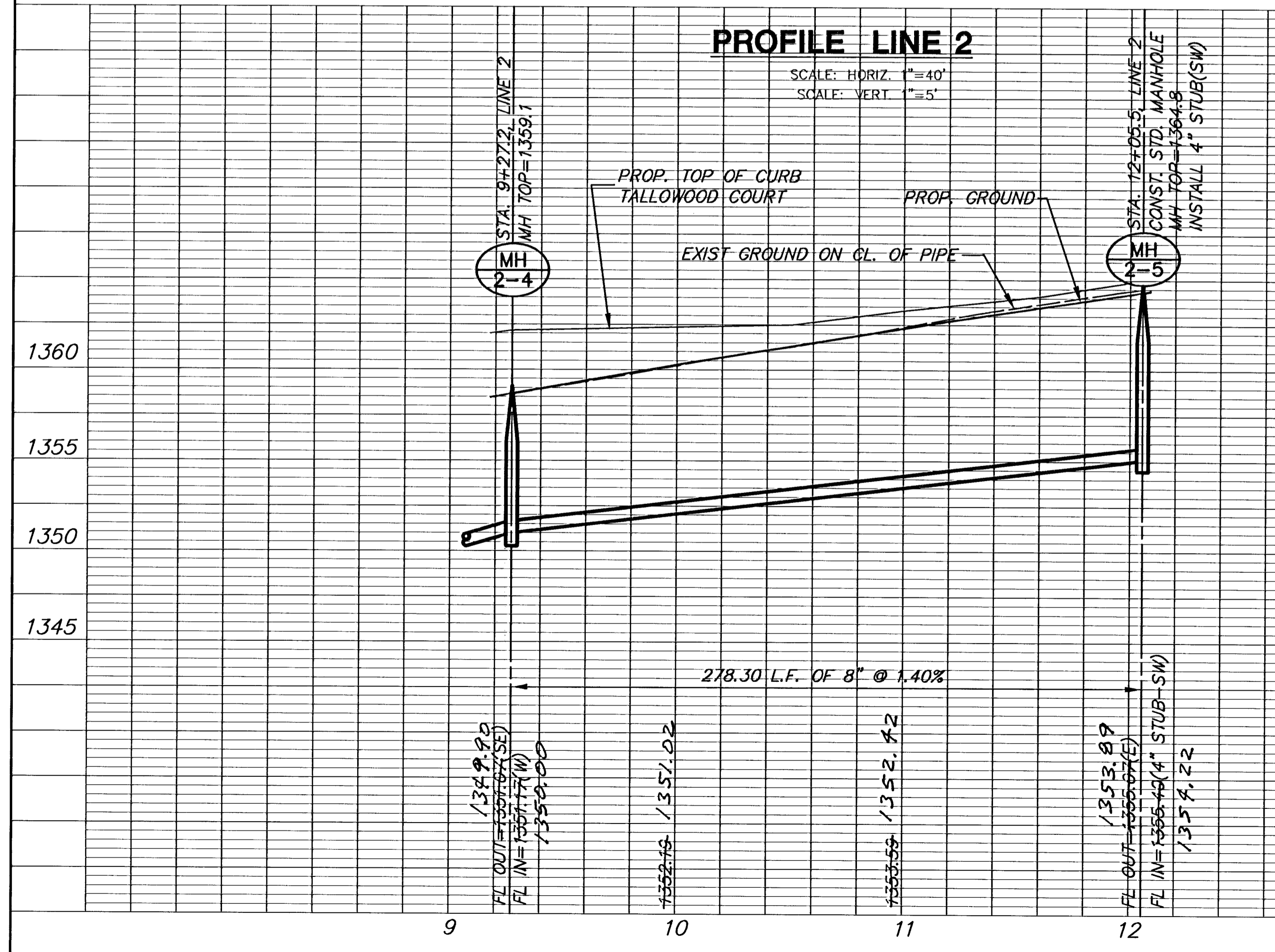
**ROCKY CREEK ADDITION
SANITARY SEWER PLANS
LINE 2 & LINE 3**



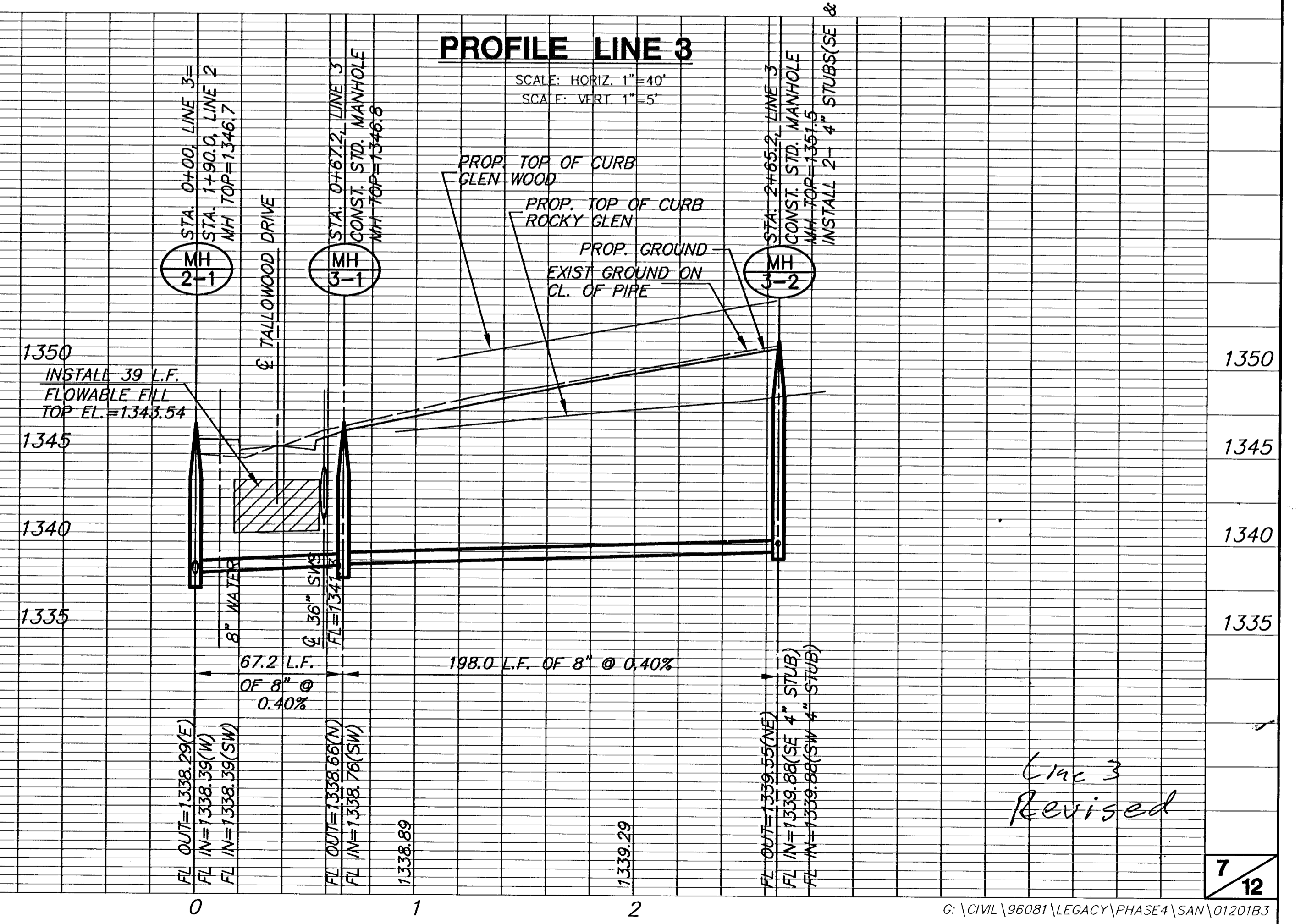
PLAN LINE 2
SCALE: 1"=40'



PLAN LINE 3
SCALE: 1"=40'

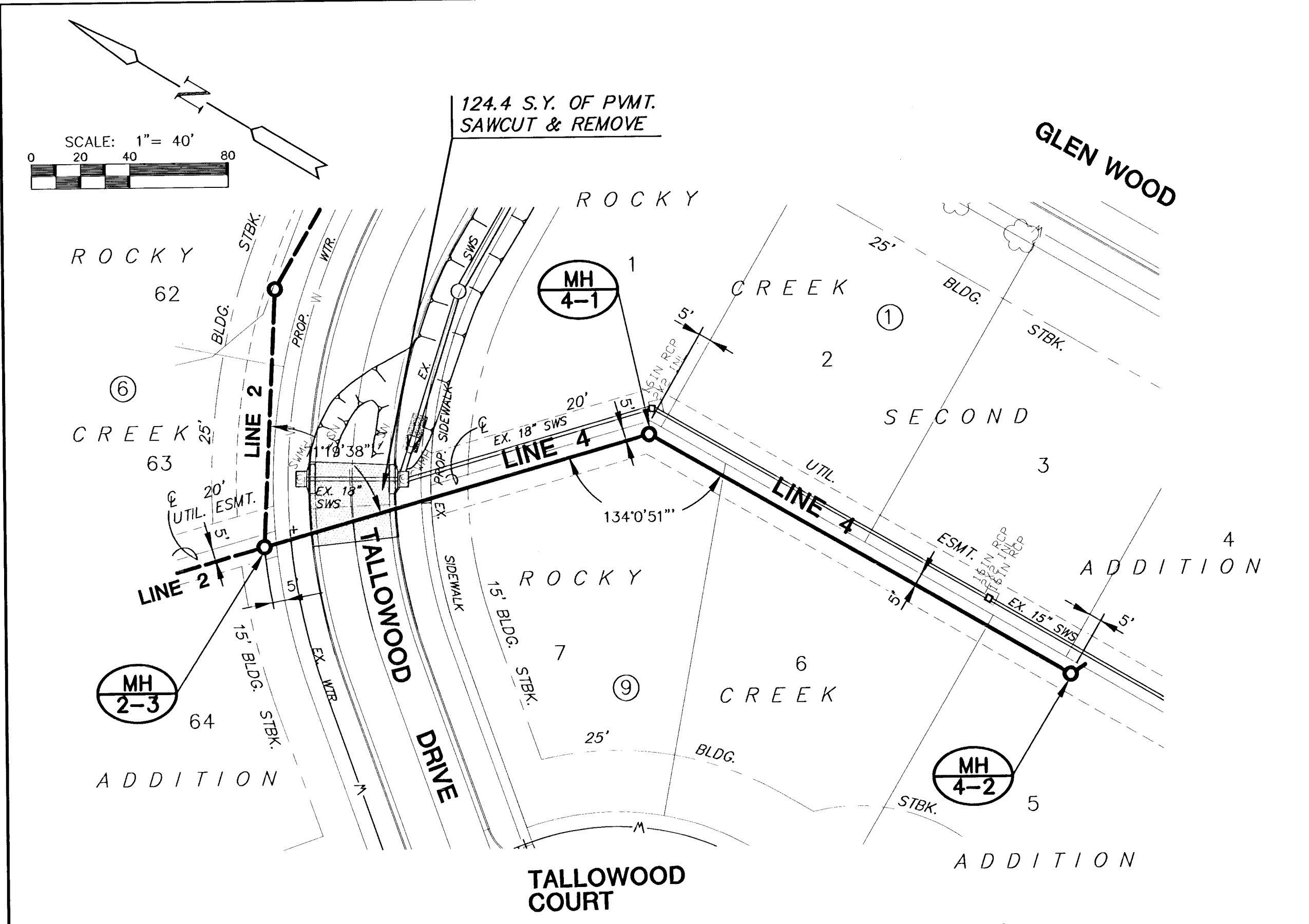


PROFILE LINE 2
SCALE: HORIZ. 1"=40'
SCALE: VERT. 1"=5'

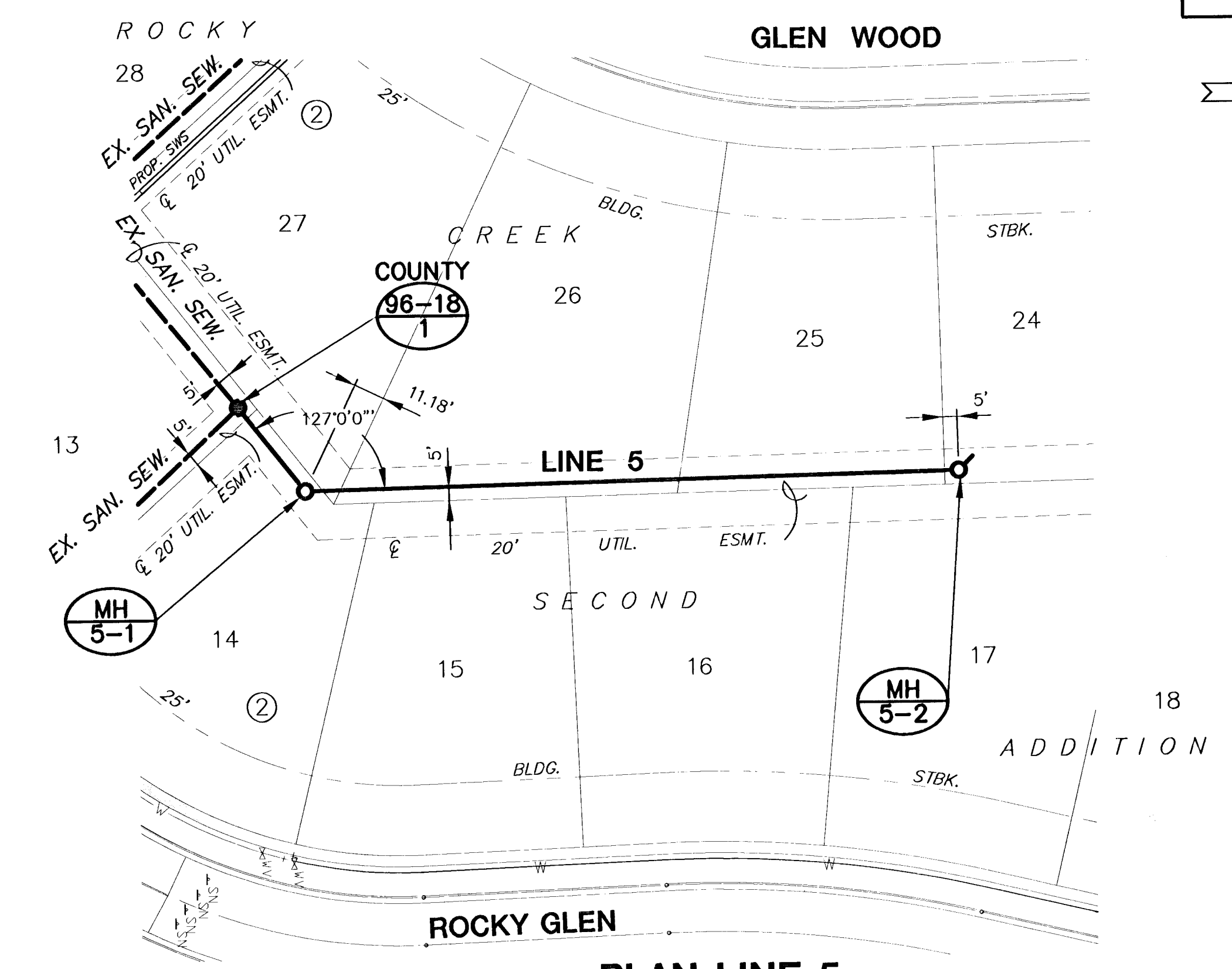


PROFILE LINE 3
SCALE: HORIZ. 1"=40'
SCALE: VERT. 1"=5'

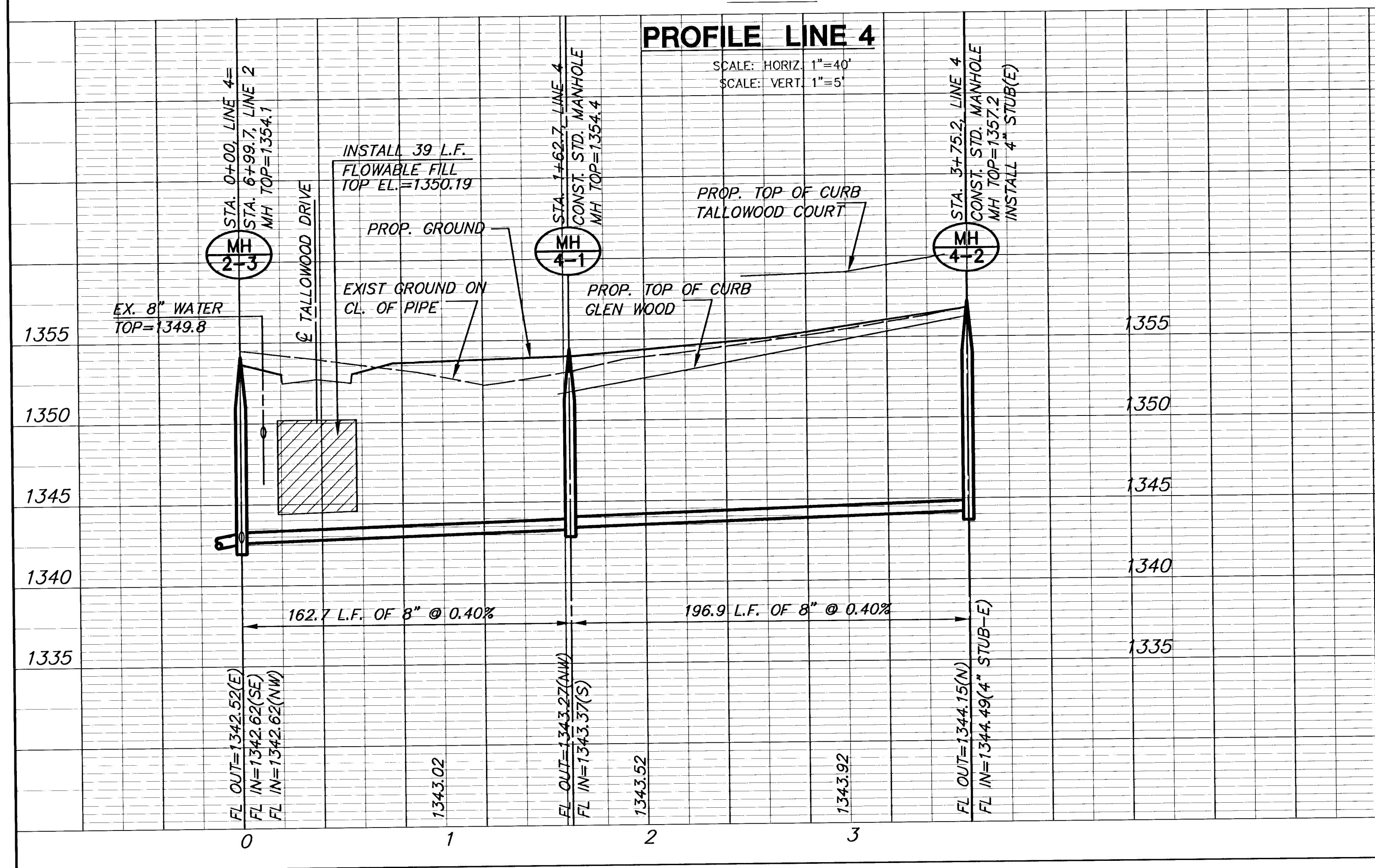
**ROCKY CREEK ADDITION
SANITARY SEWER PLANS
LINE 4 & LINE 5**



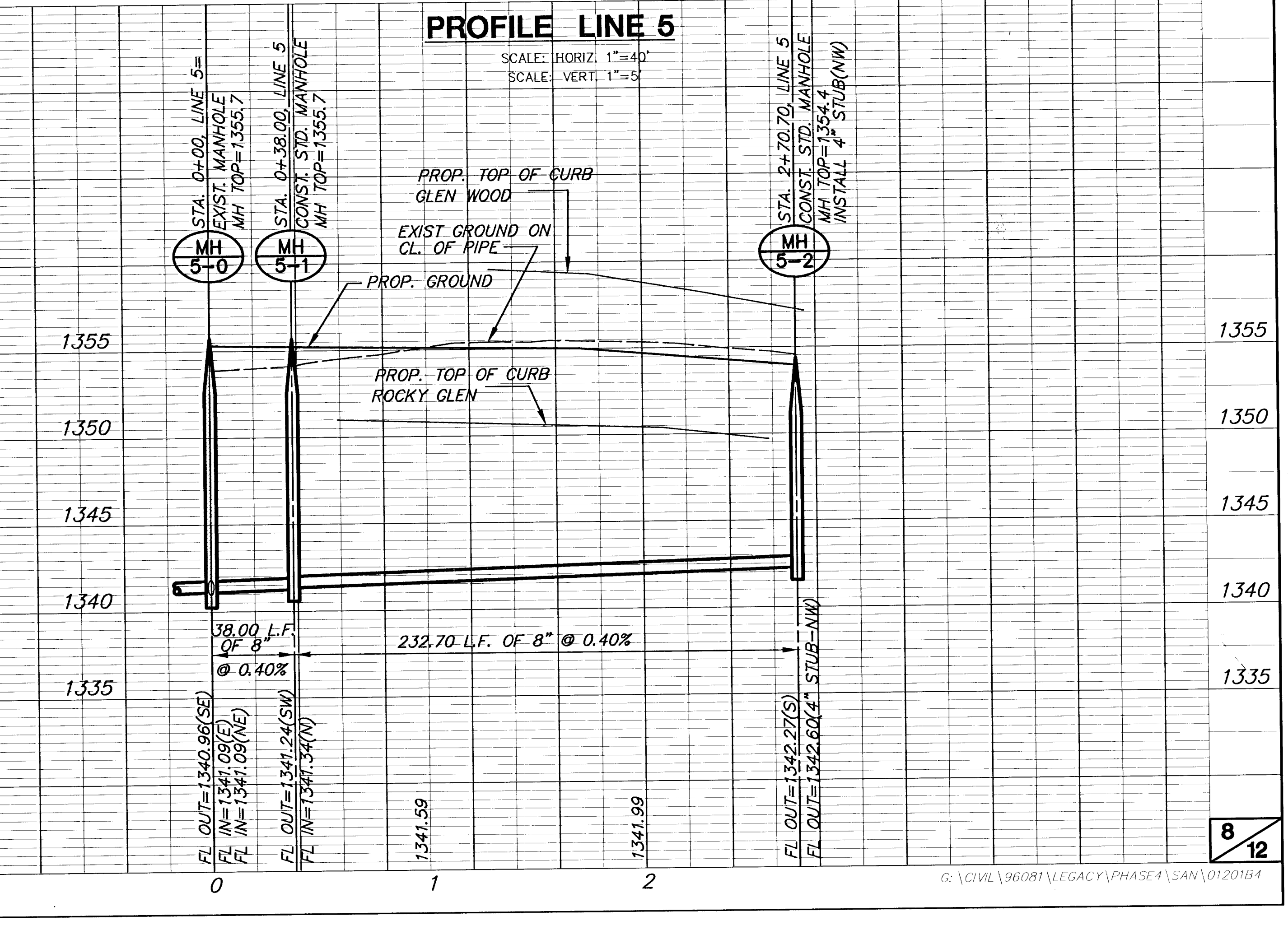
PLAN LINE 4
SCALE: 1"=40'



PLAN LINE 5
SCALE: 1"=40'



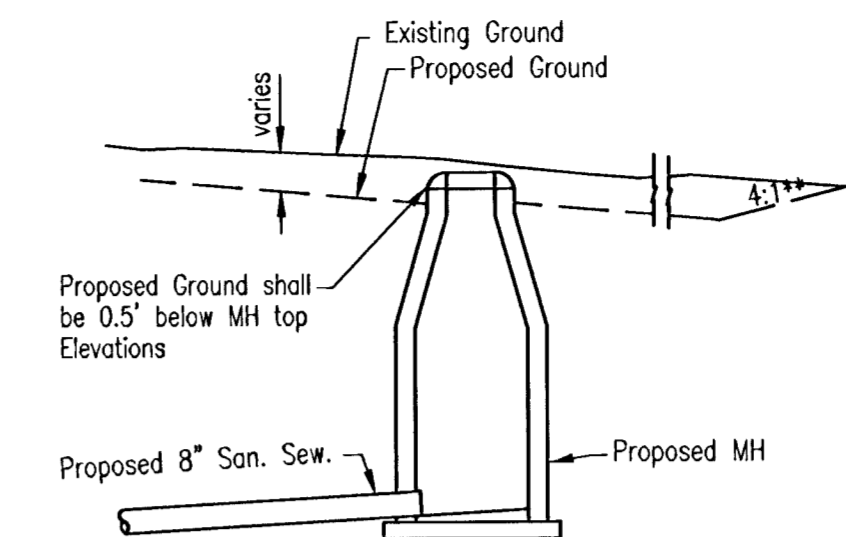
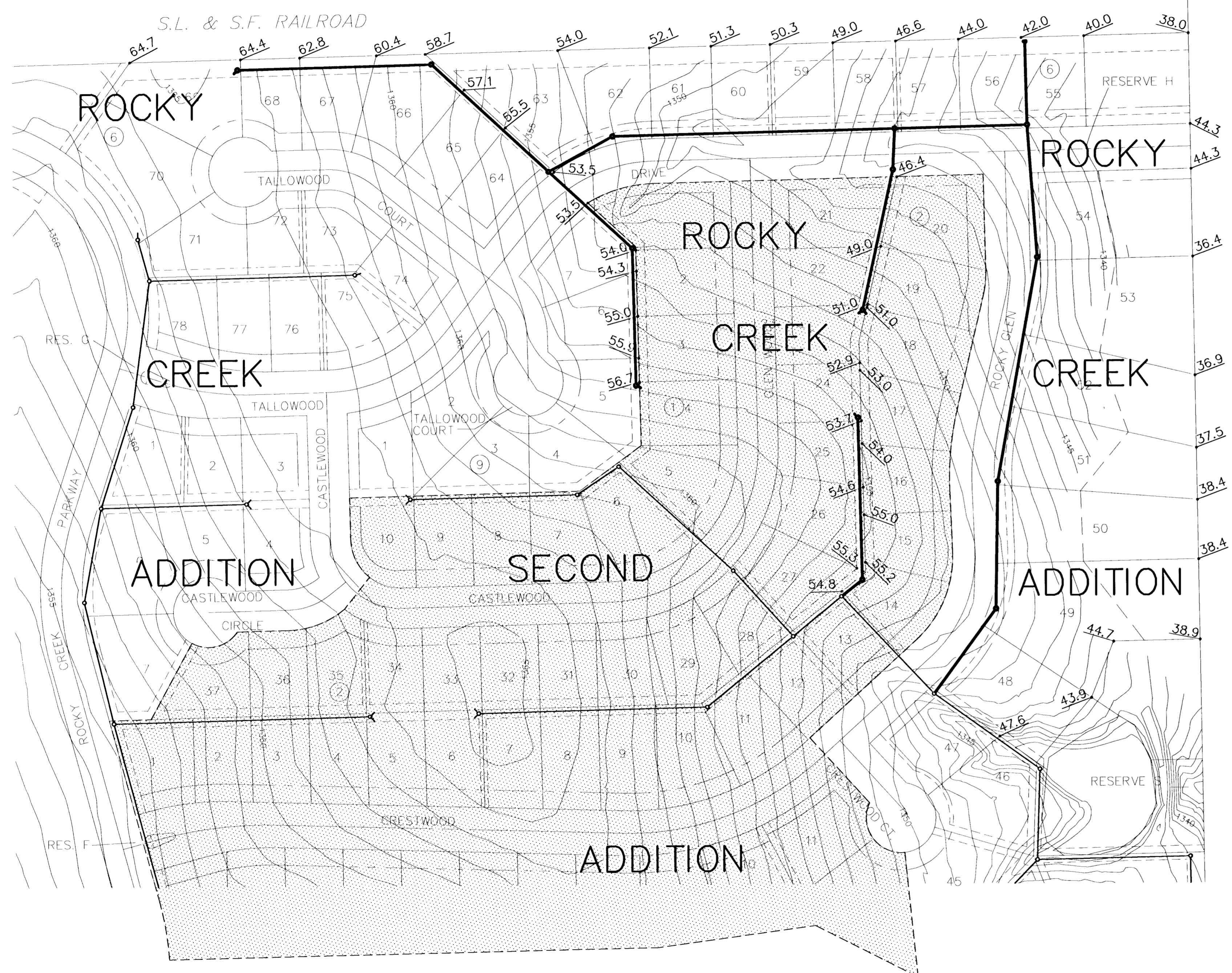
PROFILE LINE 4
SCALE: HORIZ. 1"=40'
SCALE: VERT. 1"=5'



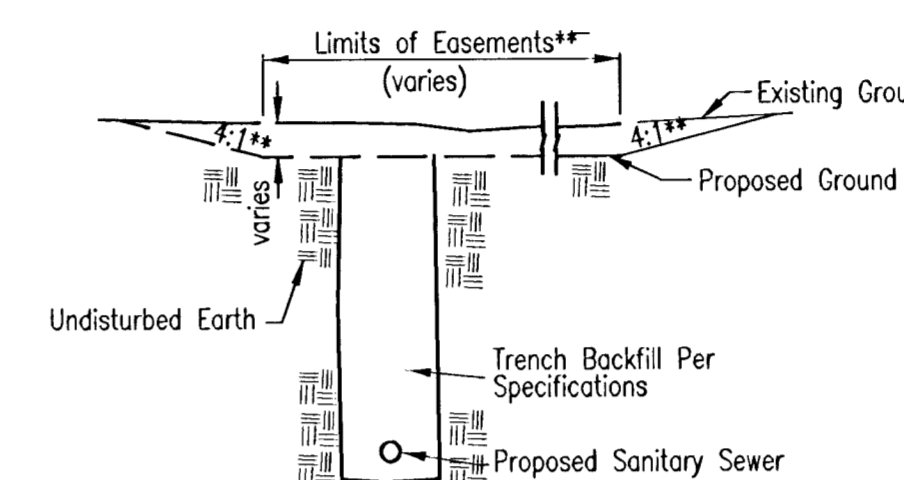
PROFILE LINE 5
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SCALE: VERT. 1"=5'

UNPLATTED MI-59-1

UNPLATTED MI-58

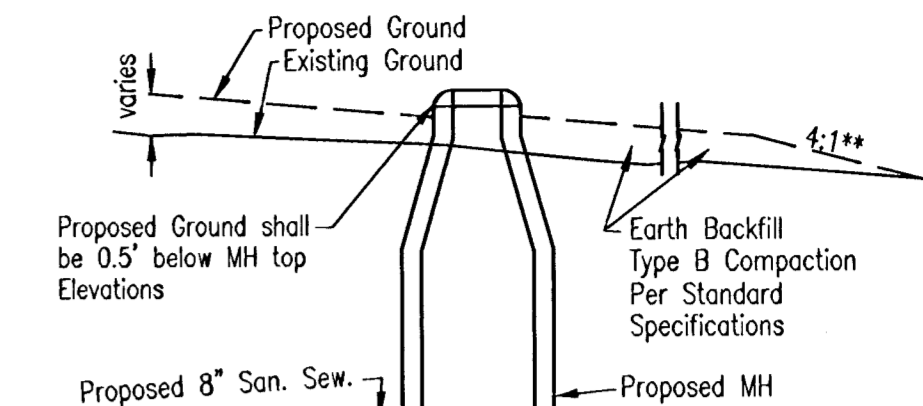


TYPICAL PROFILE

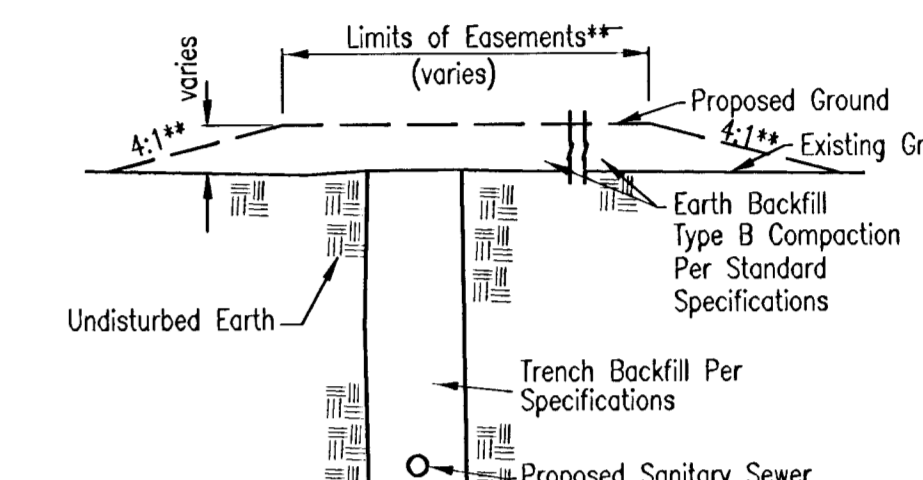


TYPICAL SECTION

"CUT" SITUATIONS



TYPICAL PROFILE



TYPICAL SECTION

"FILL" SITUATIONS

EASEMENT GRADING DETAILS

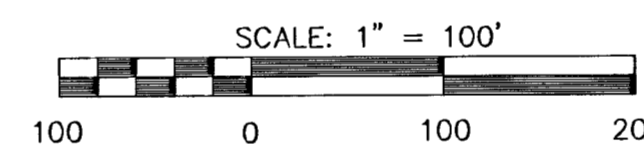
= AREAS TO BE GRADED

H.P. = HIGH POINT
M.E. = MATCH EXISTING

**Graded widths and slopes may vary as approved by the Engineer to minimize conflict with existing trees.

Easement Grading will be bid on a lump sum basis for grading the easements to the profile and elevations shown on the Easement Grading Plan (this sheet). Approximate quantities of earthwork for easement grading are shown below. These approximate quantities are given for information only. The Contractor should verify the quantities when preparing the proposal.

Cut 0 C.Y. (Approximate)
Fill 0 C.Y. (Approximate)



LEGEND

- = ROCKY CREEK ADDITION
- = ROCKY CREEK SECOND ADDITION

UNPLATTED



**ROCKY CREEK ADDITON
THE LEGACY PHASE 4**
PROJECT NAME

EASEMENT GRADING & DETAILS
SHEET TITLE

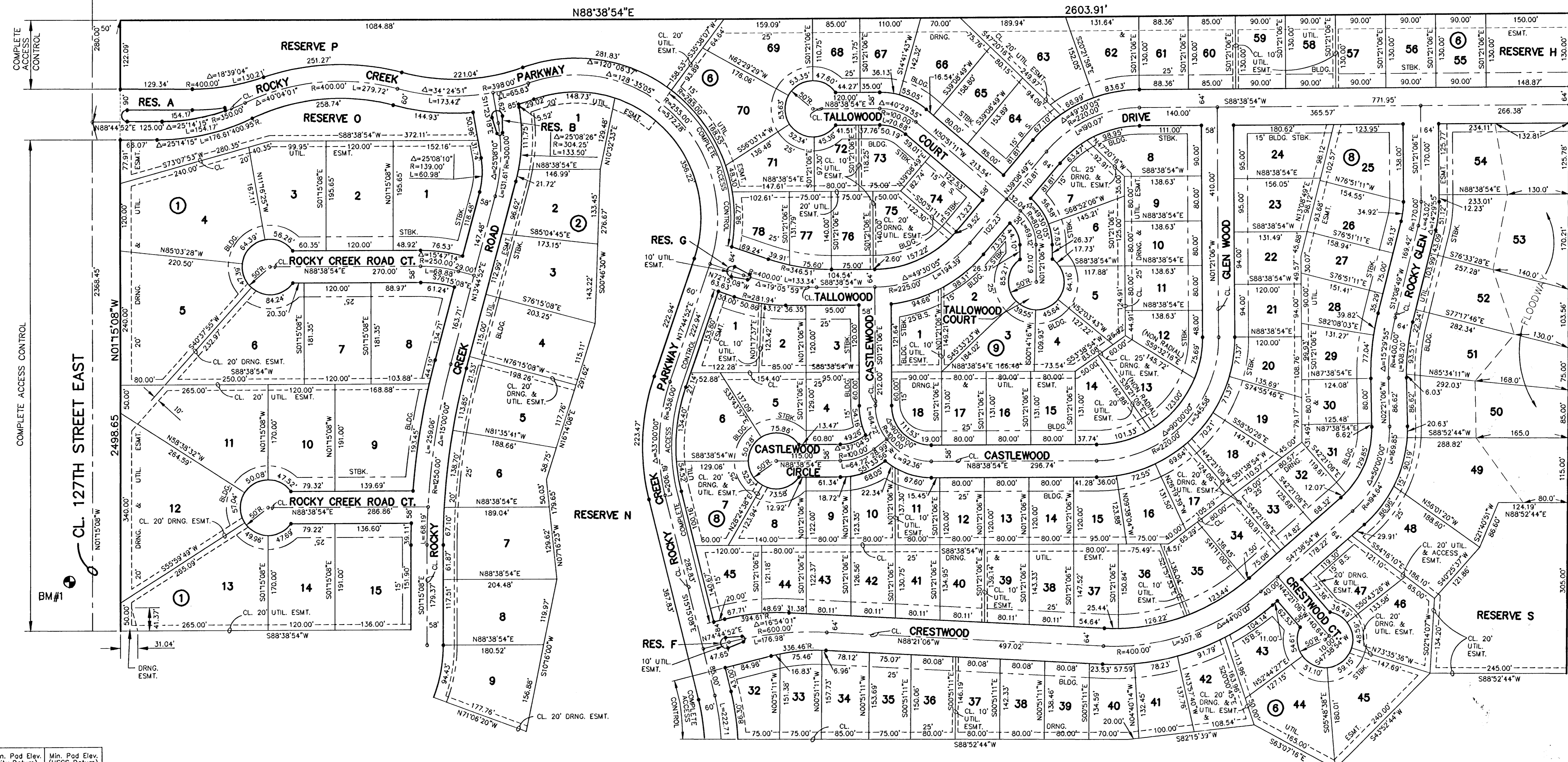
JTC DESIGN BY. DM DRAWN BY. JTC CHECKED BY.

SEPTEMBER 2001 01201GRD 8A/ 12
DATE JOB NO. SHEET OF

N.W. COR. S.W. 1/4 SEC.11. TWP.27 R.2E.

N.E. COR. S.W. 1/4 SEC.11. TWP.27 R.2E.

S.L. & S.F. R.R.

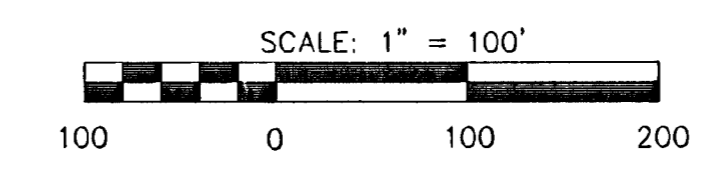


Lot	Block	Min. Pad Elev. (City Datum)	Min. Pad Elev. (USGS Datum)
49	6	151.6	1339.0
50	6	152.6	1340.0
51	6	153.6	1341.0
52	6	154.6	1342.0
53	6	155.6	1343.0
54	6	156.6	1344.0
55	6	156.6	1344.0
56	6	156.6	1344.0

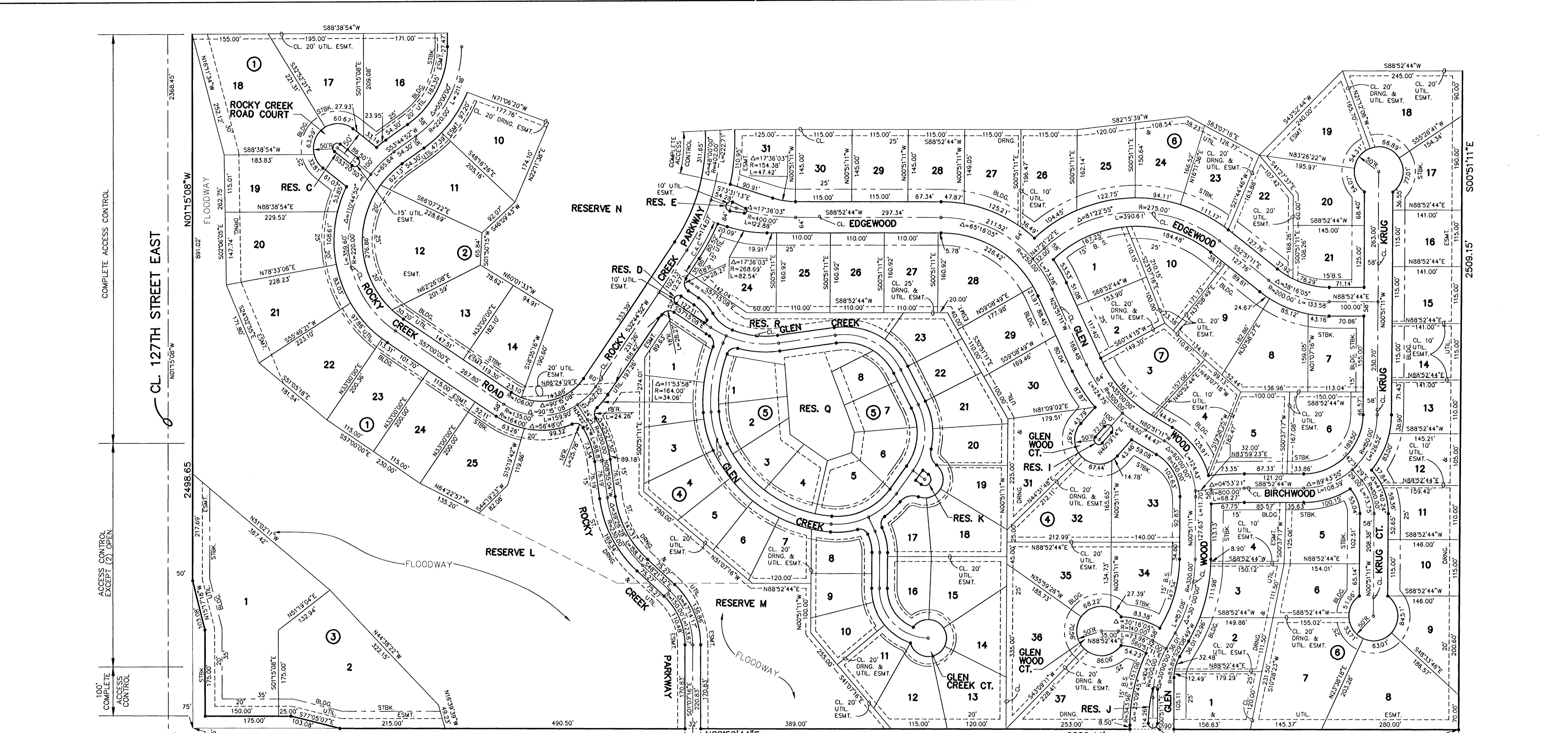
BENCHMARKS
 BM#1 "□" CUT N. END W. HANDRAIL OF BRIDGE
 NO. 837N1495
 ELEV. = 1347.82

FINAL PLAT
ROCKY CREEK ADDITION
 AN ADDITION TO SEDGWICK COUNTY, KANSAS

SEE SHEET 4/4 FOR RESERVE ISLAND DETAILS
 MINIMUM PAD ELEVATION = MINIMUM OPENING



LEGEND
 • = I.P.
 B.S. = BUILDING SETBACK



S.W. COR. S.W. 1/4 SEC.11.
TWP.27 R.2E.

S.E. COR. S.W. 1/4 SEC.11.
TWP.27 R.2E.

Lot	Block	Min. Pad Elev. (City Datum)	Min. Pad Elev. (USGS Datum)
18	1	159.6	1347.0
19	1	158.6	1346.0
20	1	157.6	1345.0
21	1	156.6	1344.0
22	1	155.6	1343.0
23	1	154.6	1342.0
24	1	154.6	1342.0
25	1	154.6	1342.0
1	3	154.6	1347.0
2	3	154.6	1347.0

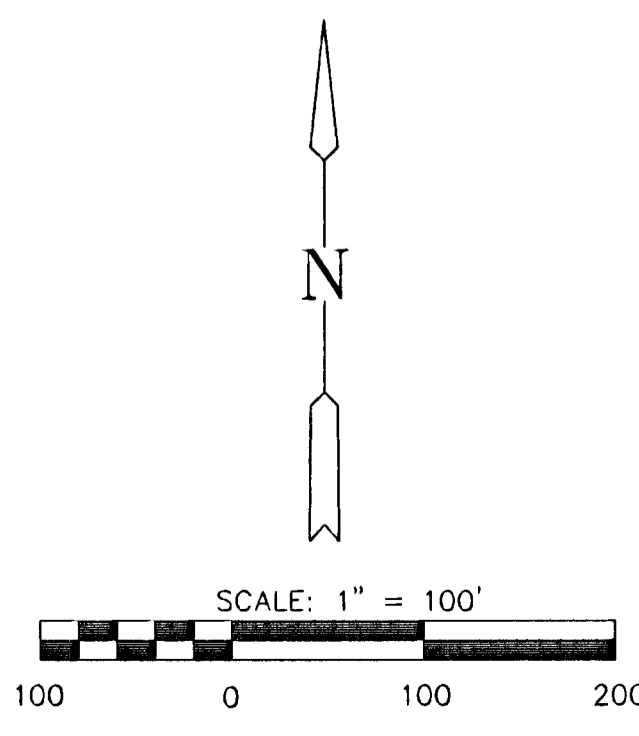
Lot	Block	Min. Pad Elev. (City Datum)	Min. Pad Elev. (USGS Datum)
6	4	154.6	1342.0
7	4	154.6	1342.0
8	4	154.6	1342.0
9	4	154.6	1342.0
10	4	154.6	1342.0
11	4	154.6	1342.0
12	4	154.6	1342.0
13	4	154.6	1342.0
14	4	154.6	1342.0
15	4	154.6	1342.0
16	4	154.6	1342.0
35	4	154.6	1342.0
36	4	154.6	1342.0
37	4	154.6	1342.0

FINAL PLAT

ROCKY CREEK ADDITION

AN ADDITION TO SEDGWICK COUNTY, KANSAS

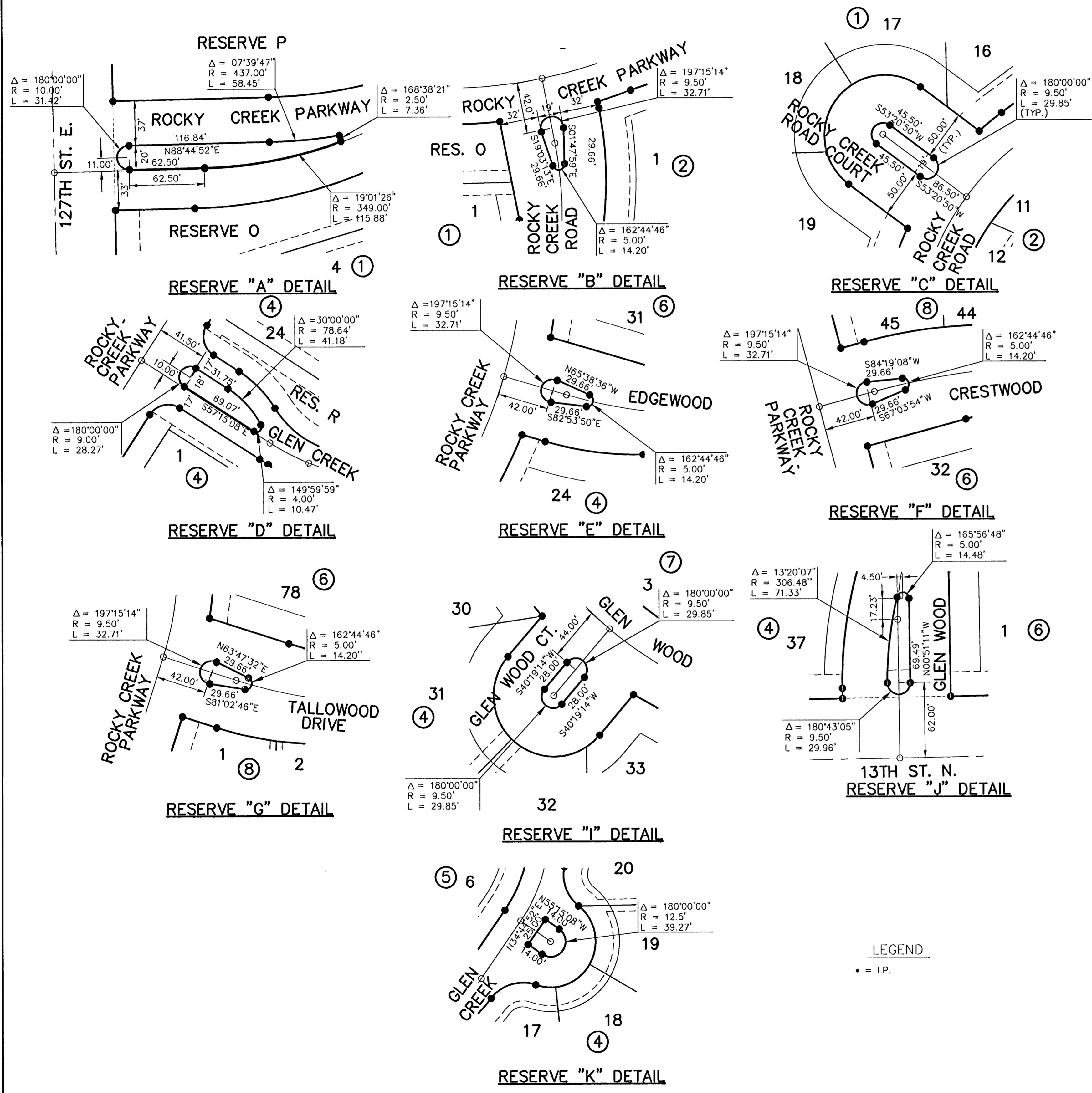
SEE SHEET 4/4 FOR RESERVE ISLAND DETAILS
MINIMUM PAD ELEVATION = MINIMUM OPENING



LEGEND
 • = I.P.
 B.S. = BUILDING SETBACK

G:\CT\1156081\PROJ\FINAL\PLT\6081_F2.DWG

FINAL PLAT ROCKY CREEK ADDITION AN ADDITION TO SEDGWICK COUNTY, KANSAS



I, Kenneth H. Bengtson, a Civil Engineer and Registered Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "ROCKY CREEK ADDITION", an addition to, Sedgwick County, Kansas, into lots, blocks, streets, and reserves the same being accurately set forth in the accompanying plat and described herein:

The Southwest Quarter of Section 11, Township 27 South, Range 2 East of the 6th P.M., Sedgwick County, Kansas, except the Right-of-Way of the St. Louis and San Francisco Railroad and that portion dedicated as street Right-of-Way.

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this _____ day of _____, 1996.

Kenneth H. Bengtson, P.E., R.L.S. #922
Mid-Kansas Engineering Consultants, Inc.
411 North Webb Road
Wichita, KS 67206

Know all men by these presents that we the undersigned property owners of the land as above set forth in the Civil Engineer's and Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into lots, blocks, streets, and reserves the same to be known as "ROCKY CREEK ADDITION", an addition to Sedgwick County, Kansas. The streets are dedicated to and for the use of public. Easements for the construction and maintenance of public utilities and drainage, are hereby granted to the public. Reserves A through K inclusive, O, P, and R are platted for lighting, landscaping, berming, open space, irrigation, and entry monuments. Reserves L and M are platted for floodway purposes. Reserves N, Q, and S are platted for construction and maintenance of public drainage, landscape, open space, and irrigation. The Reserves shall be owned and maintained by the homeowners association. The floodways shall be the responsibility of the owners until such time as the appropriate governing body exercising jurisdiction elects to assume the responsibility for the maintenance and improvement of the drainage, provided further, that no structure shall be constructed on or within said floodway, nor shall any fill, change of grade, creation of channel or other work be carried on without the permission of the appropriate Engineer. All abutters right of access to or from 127th Street over and across the West line of ROCKY CREEK ADDITION, are hereby granted to the appropriate governing body, provided however Lot 1, Block 3 shall have access to 127th Street East of two locations as determined by the appropriate Engineer. All abutters right of access to or from 13th Street North over and across the South line of ROCKY CREEK ADDITION, are hereby granted to the appropriate governing body, provide however Lots 1 & 2, Block 3 shall have access to 13th Street North at two locations (one each), as determined by the appropriate Engineer. All abutters right of access to or from Rocky Creek Parkway over and across the West line of lines of Lots 24, Block 4, Lots 31, 32, 70, 71, and 78, Block 6, and Lots 1, 6, 7, & 45, Block 8. Minimum pads are as indicated on the accompanying plat.

The access easement on Lots 46, 47 & 48 Block 6 is hereby granted to and for the use of the public, and shall not be obstructed.

Arthur A. Krug, Marital Trust, as to undivided 0.2332977 Interest.
Arthur A. Krug, Q-Tip Trust, as to undivided 0.3027653 Interest.
Arthur A. Krug, Family Trust, as to undivided 0.463937 Interest.

Thomas L. Drake, Trustee

BE IT REMEMBERED, that on this _____ day of _____, 1996, before me the undersigned, a Notary Public in and for the County and State aforesaid, came, Thomas L. Drake, Trustee for Arthur A. Krug Marital Trust, Arthur A. Krug Q-Tip Trust, and Arthur A. Krug, Family Trust, to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Notary Public _____

My appointment expires: _____

LEGEND
• = I.P.

Ritchie Development Corporation
Ritchie Associates, Inc.

Kevin M. Mullens, President

BE IT REMEMBERED, that on this _____ day of _____, 1996, before me the undersigned, a Notary Public in and for the County and State aforesaid, came Kevin M. Mullens, President of Ritchie Development Corporation and Ritchie Associates, Inc., to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Notary Public _____

My appointment expires: _____

This plat of "ROCK CREEK ADDITION", has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this _____ day of _____, 1996.

WICHITA-SEDGWICK COUNTY METROPOLITAN PLANNING COMMISSION

Susan Osborne-Howes, Chairman

Marvin S. Krout, Secretary

This plat approved and all dedications shown thereon, if any, accepted by the Board of County Commissioners of Sedgwick County, Kansas, this _____ day of _____, 1996.

Thomas G. Winters, Chairman

Melody C. Miller, Chair Pro Tem

Paul W. Hancock, Commissioner

Betsy Gwin, Commissioner

Mark F. Schroeder, Commissioner

Susan E. Crockett-Spoon, County Clerk

STATE OF KANSAS)

) ss:

SEDGWICK COUNTY)

This is to certify that this instrument was filed for record in the Register of Deeds office this _____ day of _____, 1996.

Pat Kettler, Register of Deeds

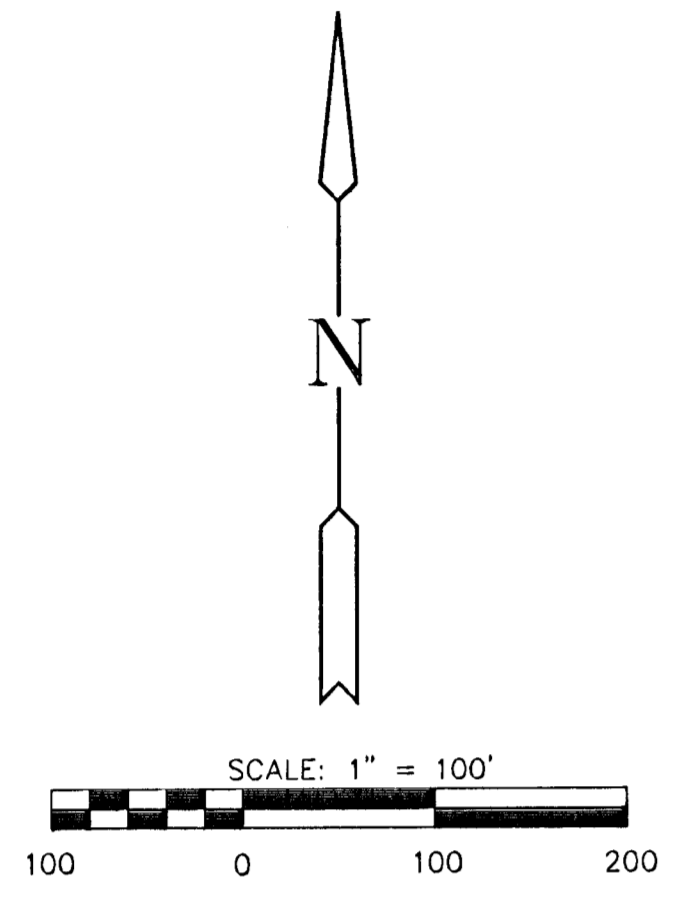
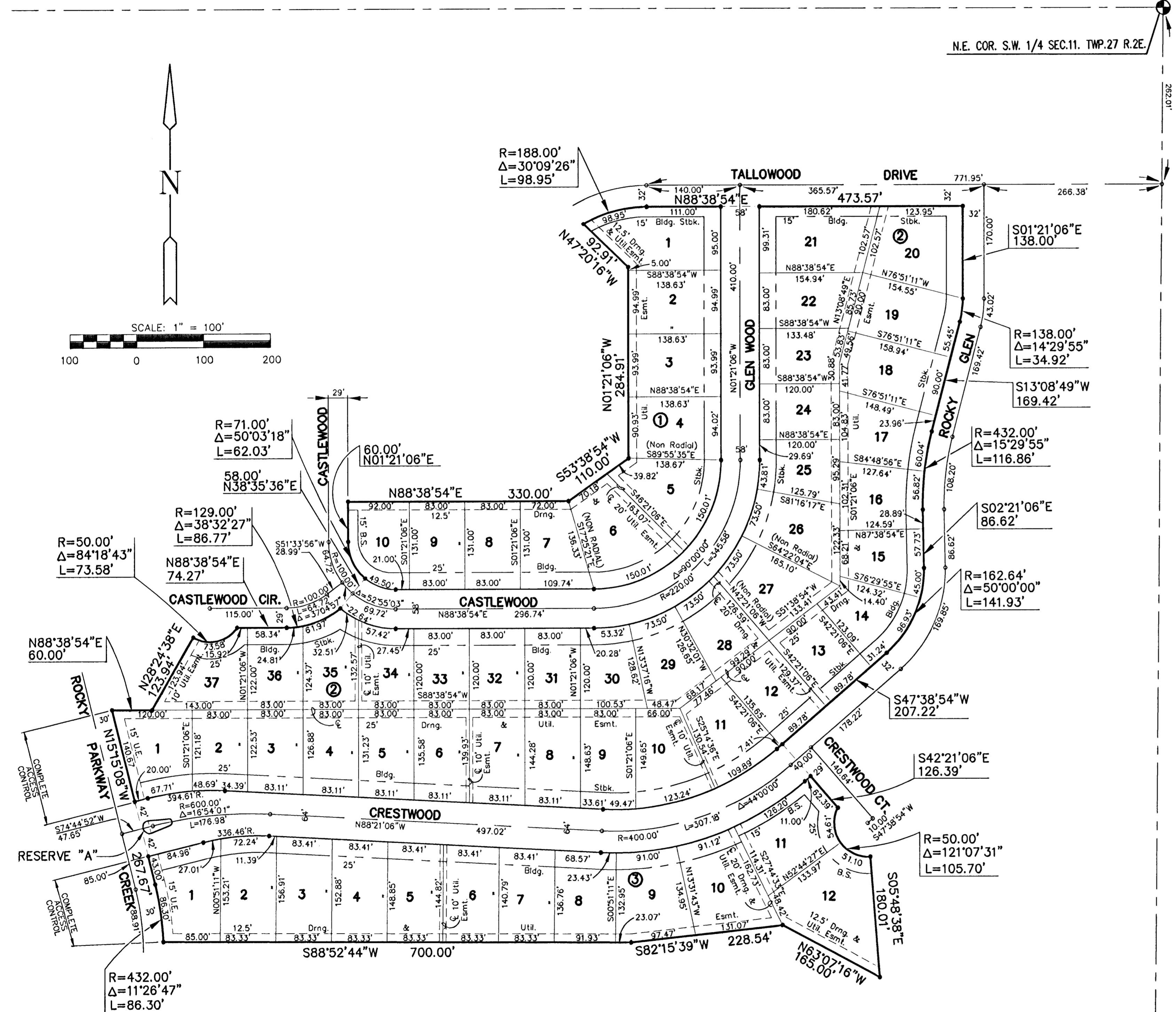
Ed Reso, Deputy

FINAL PLAT

ROCKY CREEK SECOND ADDITION

AN ADDITION TO SEDGWICK COUNTY, KANSAS

N.E. COR. S.W. 1/4 SEC. 11, TWP. 27 R. 2E.



LEGEND

• = I.P.

B.S. = BUILDING SETBACK

I, Gregory J. Allison, a Civil Engineer and Registered Land Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "ROCKY CREEK SECOND ADDITION", an addition to Sedgwick County, Kansas, into lots, blocks, streets, and reserves the same being accurately set forth in the accompanying plat and described herein:

Replat of Lots 32-44 Block 6, Lots 8-45 Block 8, Lots 8-18 Block 9, and Reserve "F" "ROCKY CREEK ADDITION" an addition to Sedgwick County, Kansas.

All lots, blocks, streets, easements, reserves, access control, and building setback located within the above described tract are hereby vacated by virtue of K.S.A. 512(b)

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this _____ day of _____, 1997.

Gregory J. Allison, P.E., R.L.S. # 1257
Mid-Kansas Engineering Consultants, Inc.
411 North Webb Road
Wichita, KS 67206

Know all men by these presents that we the undersigned property owners of the land as above set forth in the Civil Engineer's and Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into lots, blocks, streets, and reserves the same to be known as "ROCKY CREEK SECOND ADDITION", an addition to Sedgwick County, Kansas. The streets are dedicated to and for the use of public. Easements for the construction and maintenance of public utilities and drainage, are hereby granted to the public. Reserve A is platted for lighting, landscaping, open space, irrigation, and entry monuments. The Reserve shall be owned and maintained by the homeowners association. All abutters right of access to or from Rocky Creek Parkway over and across the West line of lines of Lot 1, Block 3, Lot 1, Block 2, are hereby granted to the public.

Ritchie Development Corporation
Ritchie Associates, Inc.

Kevin M. Mullen, President

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

BE IT REMEMBERED, that on this _____ day of _____, 1997, before me the undersigned, a Notary Public in and for the County and State aforesaid, came Kevin M. Mullen, President of Ritchie Development Corporation and Ritchie Associates, Inc., to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Notary Public _____
My appointment expires: _____

We, the Intrust Bank, N.A., mortgagees on the above described property, do hereby consent to the plat of "ROCKY CREEK SECOND ADDITION".
INTRUST BANK, N.A.

By: _____

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

BE IT REMEMBERED, that on this _____ day of _____, 1997, before me the undersigned, a Notary Public in and for the County and State aforesaid, came _____ to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

Notary Public _____
My appointment expires: _____

This plat of "ROCKY CREEK ADDITION", has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this _____ day of _____, 1997.

WICHITA-SEDGWICK COUNTY METROPOLITAN PLANNING COMMISSION

_____, Chairman
John C. Frye

_____, Secretary
Marvin S. Krout

This plat approved and all dedications shown thereon, if any, accepted by the Board of County Commissioners of Sedgwick County, Kansas, this _____ day of _____, 1997.

_____, Chairman
Thomas G. Winters

_____, Chair Pro Tem
Paul W. Hancock

_____, Commissioner
Betsy Gwin

_____, Commissioner
Melody C. Miller

_____, Commissioner
Mark F. Schroeder

_____, County Clerk
James Alford

Entered on transfer record this _____ day of _____, 1997.

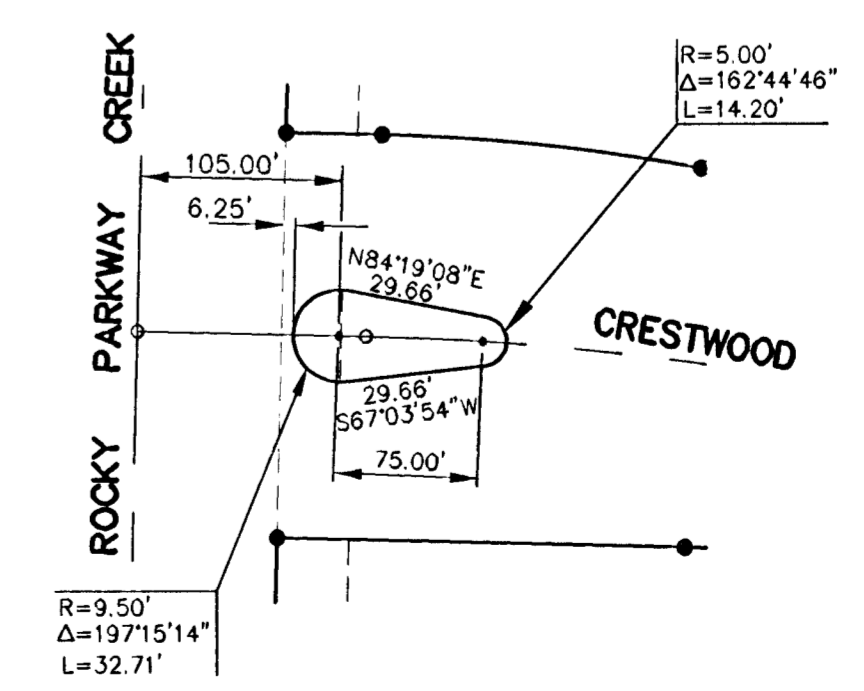
Attest: _____, County Clerk
James Alford

STATE OF KANSAS)
) ss:
SEDGWICK COUNTY)

This is to certify that this instrument was filed for record in the Register of Deeds office this _____ day of _____, 1997.

_____, Register of Deeds
Larry Consolver

_____, Deputy
Michael D. Hurtt



RESERVE "A"