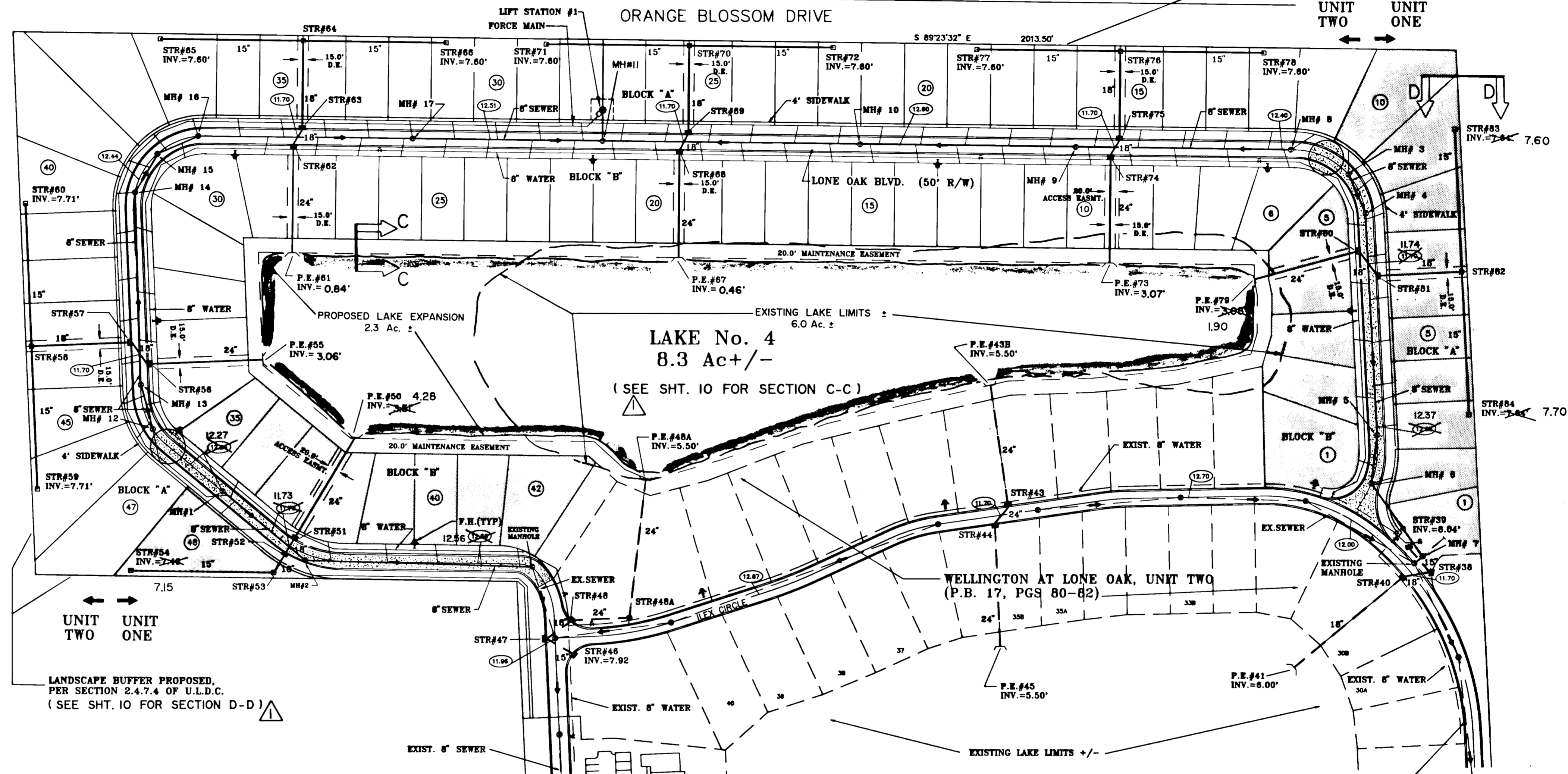
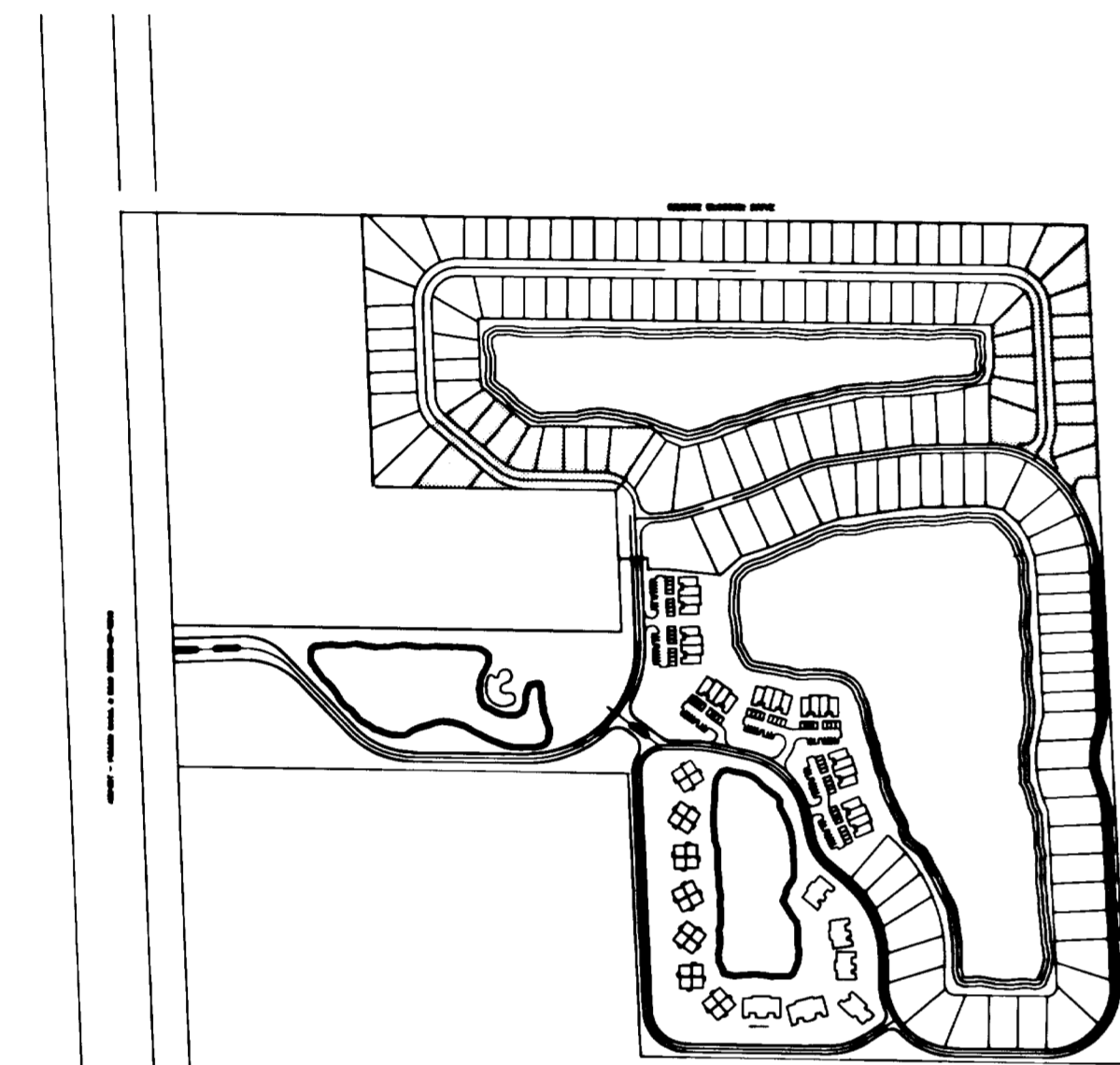


LEXINGTON AT LONE OAK

LONE OAK P.U.D. - MASTER PLAN

(SEE SHT. 10 FOR SECTION D-D) Δ
LANDSCAPE BUFFER PROPOSED
PER SECTION 2.4.7.4 OF U.L.D.C.



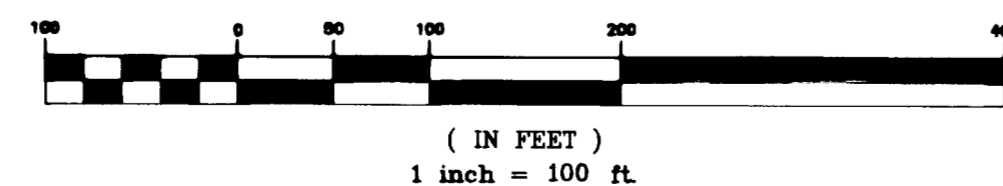
LANDSCAPE BUFFER PROPOSED,
PER SECTION 2.4.7.4 OF U.L.D.C.
(SEE SHT. 10 FOR SECTION D-D) Δ

LEGEND

- PHASE DELINEATION
- STORM DRAINAGE THROAT INLET
- STORM DRAINAGE GRATE INLET
- STORM DRAINAGE PIPE END/HEADWALL
- SANITARY SEWER MANHOLE WITH FLOW DIRECTION
- SANITARY SEWER LIFT STATION
- POTABLE WATER MAIN GATE VALVE
- POTABLE WATER FIRE HYDRANT
- POTABLE WATER BACTERIAL SAMPLE POINT
- LOT NUMBER
- ASPHALT PAVEMENT ROADWAY



GRAPHIC SCALE



RECORD DRAWINGS

DATE 9/9/93

THESE RECORD DRAWINGS SHOW THE WORK COMPLETED ON THE POTABLE WATER, SANITARY SEWER, STORM DRAINAGE AND ROADWAY SYSTEMS DURING CONSTRUCTION. THEY ARE BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

GENERAL NOTES

1. CONSTRUCTION TO BE IN COMPLIANCE WITH COLLIER COUNTY'S LAND DEVELOPMENT CODE; ORDINANCE # 91-102, AS AMENDED.
2. CONTRACTOR SHALL MAINTAIN A MINIMUM FINISH GRADE ELEVATION OF 11.70' NGVD ALONG THE PROPERTY LINE; SEE DETAIL.
3. UNLESS OTHERWISE NOTED, ALL PVC SANITARY SEWER LATERALS SHALL BE SLOPED AT 1/8" PER FOOT MINIMUM; SEE DETAILS ON SHEET 8 FOR ADDITIONAL REQUIREMENTS.
4. CONTRACTOR MAY NEED TO FIELD ADJUST THE RIM ELEVATIONS OF STORM DRAINAGE JUNCTION BOXES, SANITARY SEWER MANHOLES AND POTABLE WATER FACILITIES APPURTENANCES TO COINCIDE WITH FINISH GRADES IN OPEN AREAS.
5. WHERE CONTRACTOR CANNOT MATCH REQUIRED RADIUS TURNS ON WATER MAIN AND SANITARY SEWER FORCE MAIN BASED ON MANUFACTURERS RECOMMENDED JOINT DEFLECTION, THE CONTRACTOR SHALL INSTALL APPROPRIATE FITTINGS TO OBTAIN THE REQUIRED RADIUS TURN.
6. ALL WATER MAIN VERTICAL DROP DOWNS SHALL CONSIST OF MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS (4 REQUIRED) AND PROVIDE A MINIMUM OF 18" CLEARANCE BETWEEN THE WATER MAIN AND THE CONFLICTING UTILITY.
7. SANITARY SEWER LATERALS SHALL BE PLACED AT THE CENTER OF LOTS ON EASEMENT LINES; SEE DETAILS ON SHEET 8 FOR FURTHER REQUIREMENTS.
8. HOMEOWNERS ASSOC.: WALDEN OAKS OF NAPLES HOMEOWNERS ASSOC., INC. RECORDED IN COLLIER COUNTY PUBLIC RECORDS: O.R. BOOK 1331, PGS. 831-884.

NO.	DATE	DESCRIPTION	BY
4	9/9/93	REV. FOR RECORD DWGS.	RKL
1	3/93	REVISED PER P.P.R. NOTES	RKL

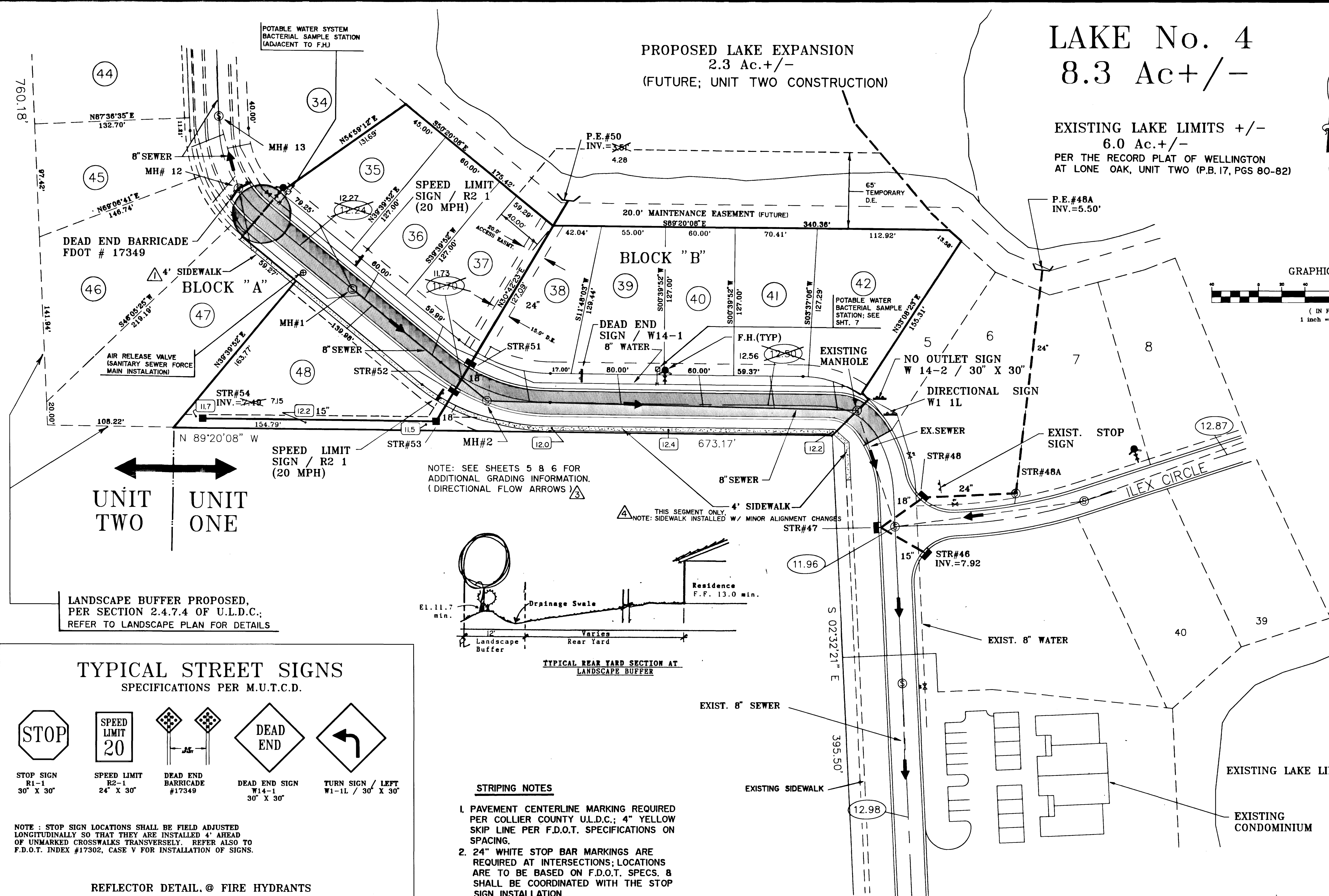
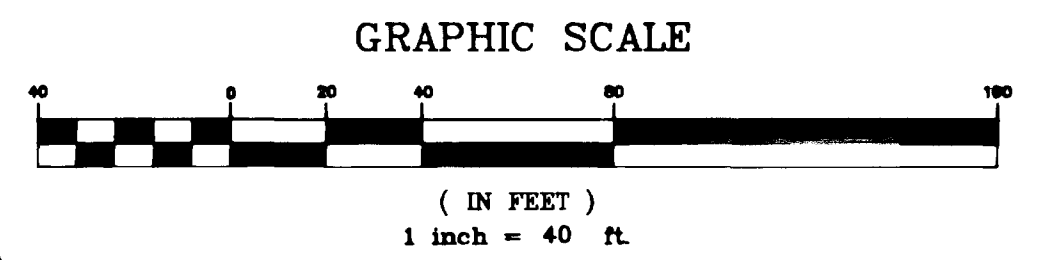
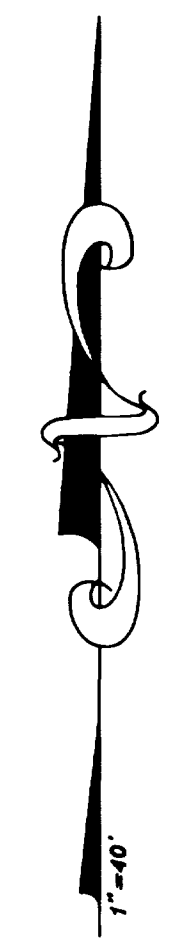
REVISIONS

DATE	NOV.'92	FOR	LONE OAK, LIMITED
DESIGNED BY	REKL	LONE OAK P.U.D. LEXINGTON AT LONE OAK, UNITS ONE & TWO MASTER SITE PLAN: POTABLE WATER, SANITARY SEWER, STORM DRAINAGE & ROADWAY CONSTRUCTION	
REVIEWED BY			
APPROVED BY			
SCALE	1"=100'	PROJECT NUMBER: 55	
LOCKHART ENGINEERING, INC.			
8732 LONE OAK BLVD.		NAPLES, FLORIDA 33942	
REC. TIME	1:48:25X	NOTED BY	55PSP.DWG
SHT. 2 OF 10		DRAWING NUMBER: D-77	

LAKE No. 4 8.3 Ac +/-

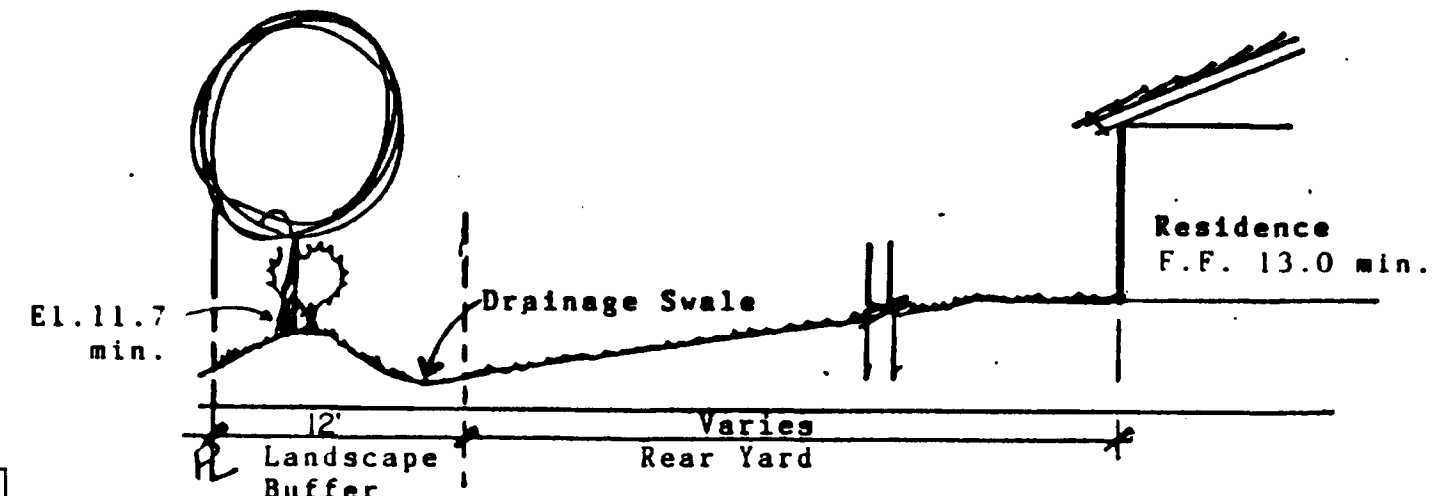
PROPOSED LAKE EXPANSION
2.3 Ac. +/-
(FUTURE; UNIT TWO CONSTRUCTION)

EXISTING LAKE LIMITS +/-
6.0 Ac. +/-
PER THE RECORD PLAT OF WELLINGTON
AT LONE OAK, UNIT TWO (P.B. 17, PGS 80-82)

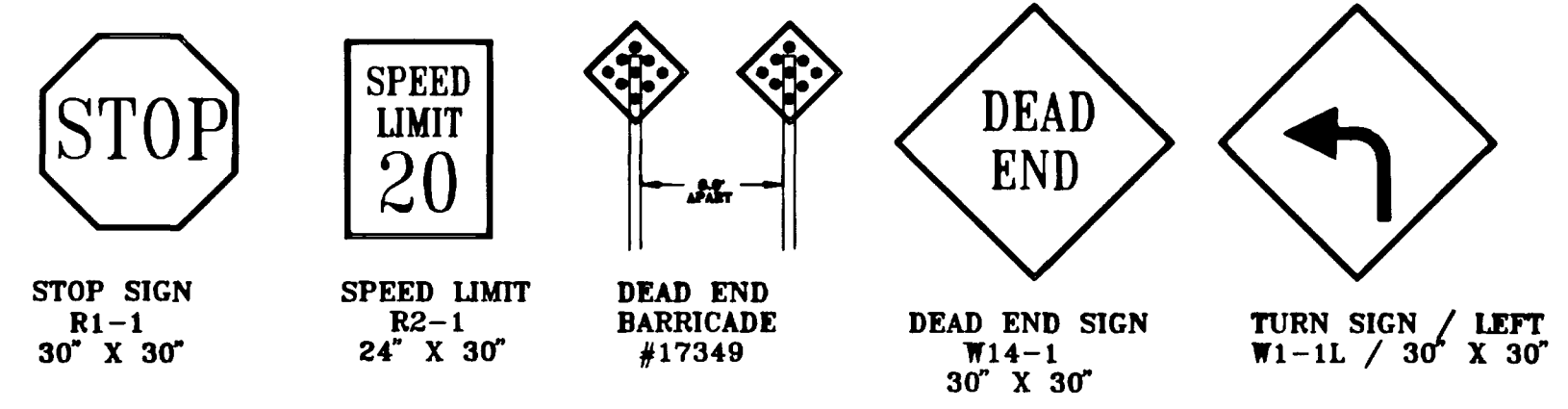


UNIT TWO UNIT ONE

LANDSCAPE BUFFER PROPOSED,
PER SECTION 2.4.7.4 OF U.L.D.C.;
REFER TO LANDSCAPE PLAN FOR DETAILS

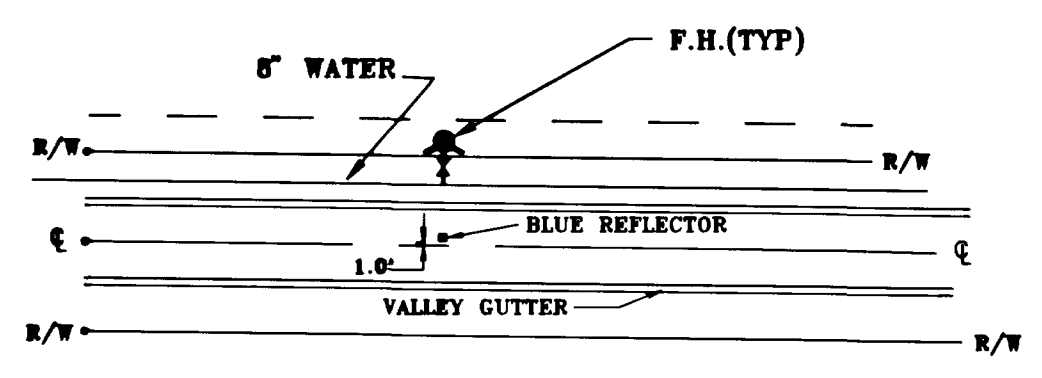


TYPICAL STREET SIGNS SPECIFICATIONS PER M.U.T.C.D.



NOTE: STOP SIGN LOCATIONS SHALL BE FIELD ADJUSTED LONGITUDINALLY SO THAT THEY ARE INSTALLED 4' AHEAD OF UNMARKED CROSSWALKS TRANSVERSELY. REFER ALSO TO F.D.O.T. INDEX #17302, CASE V FOR INSTALLATION OF SIGNS.

REFLECTOR DETAIL @ FIRE HYDRANTS



STRIPING NOTES

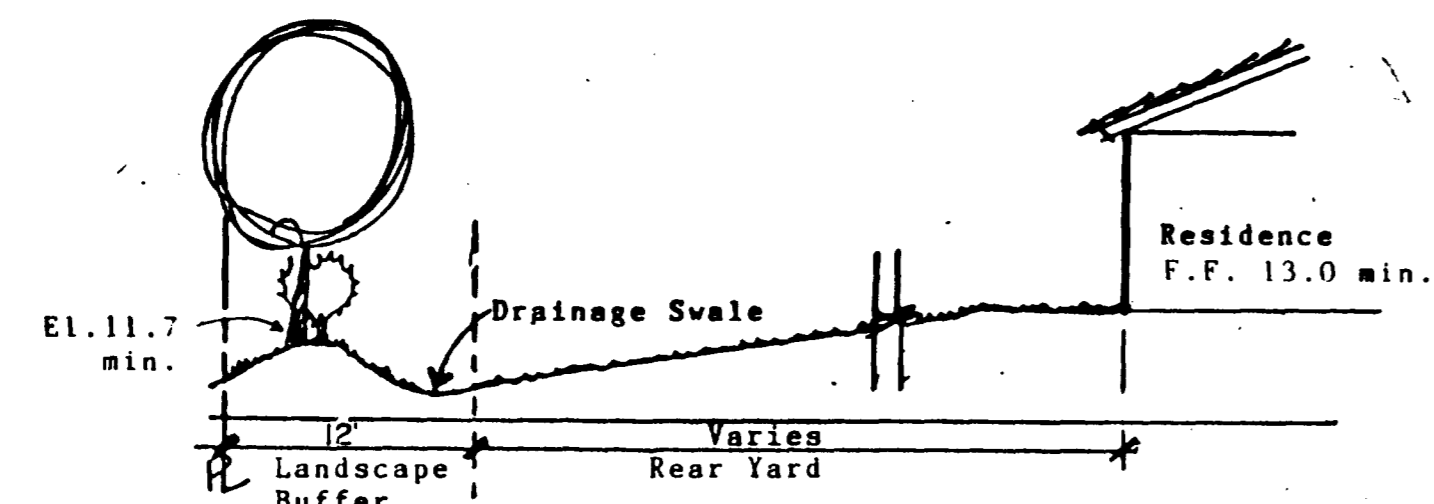
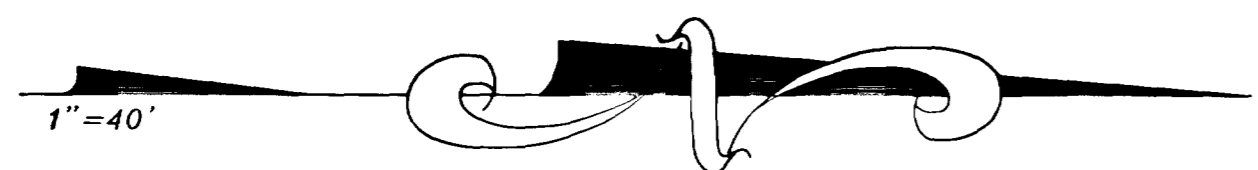
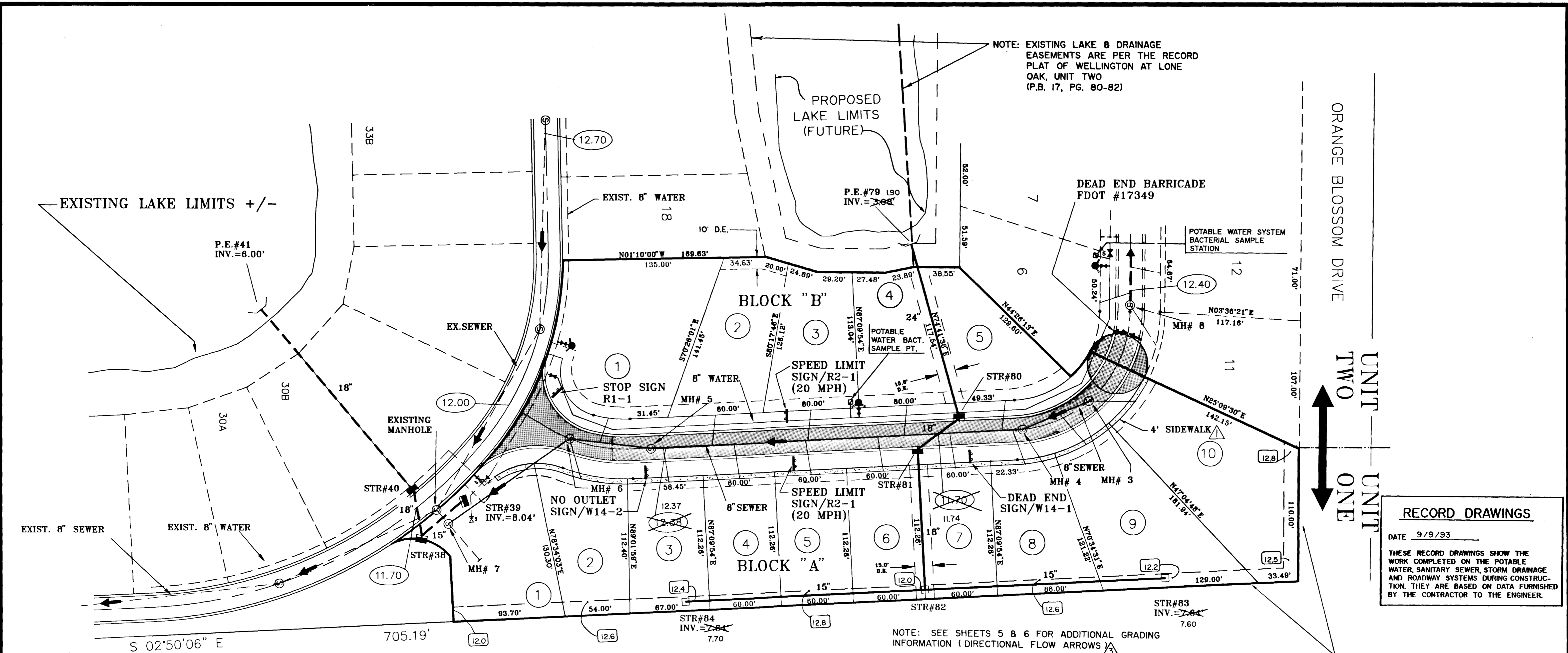
- PAVEMENT CENTERLINE MARKING REQUIRED PER COLLIER COUNTY U.L.D.C.; 4" YELLOW SKIP LINE PER F.D.O.T. SPECIFICATIONS ON SPACING.
- 24" WHITE STOP BAR MARKINGS ARE REQUIRED AT INTERSECTIONS; LOCATIONS ARE TO BE BASED ON F.D.O.T. SPECS. & SHALL BE COORDINATED WITH THE STOP SIGN INSTALLATION.

RECORD DRAWINGS

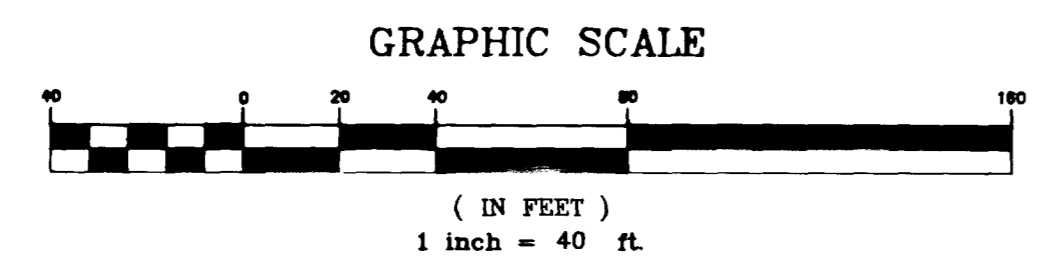
DATE 9/9/93
THESE RECORD DRAWINGS SHOW THE WORK COMPLETED ON THE POTABLE WATER, SANITARY SEWER, STORM DRAINAGE AND ROADWAY SYSTEMS DURING CONSTRUCTION. THEY ARE BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

- ▲ 9/9/93 REVISED FOR RECORD DWGS. RKL
- ▲ 5/5/93 REV. PER P.P.R. RKL
- ▲ 3/93 REVISED PER P.P.R. RKL

DATE	NOV. '92	FOR	LONE OAK, LIMITD							
DESIGNED BY	RKL	LEXINGTON AT LONE OAK, UNIT ONE WESTERLY PORTION GRADING PLAN & SIGNAGE PLAN/DETAILS								
REVIEWED BY										
APPROVED BY										
SCALE	1"=40'	LOCKHART ENGINEERING, INC.								
PROJECT NUMBER	55	8732 LONE OAK BLVD. NAPLES, FLORIDA 33942								
SEC	1	THP	49S	AKC	25K	REFERENCES	SSPSP.DWG	SHT. 3 OF 10	SCALE	D-77



TYPICAL REAR YARD SECTION AT LANDSCAPE BUFFER



TYPICAL STREET SIGNS

SPECIFICATIONS PER M.U.T.C.D.

STOP SIGN
R1-1
30" X 30"

SPEED LIMIT
R2-1
24" X 30"

DEAD END
BARRICADE
#17349

DEAD END SIGN
W14-1
30" X 30"

TURN SIGN / LEFT
W1-1L / 30" X 30"

NOTE: STOP SIGN LOCATIONS SHALL BE FIELD ADJUSTED LONGITUDINALLY SO THAT THEY ARE INSTALLED 4' AHEAD OF UNMARKED CROSSWALKS TRANSVERSELY. REFER ALSO TO F.D.O.T. INDEX #17302, CASE V FOR INSTALLATION OF SIGNS.

REFLECTOR DETAIL @ FIRE HYDRANTS

- #### STRIPING NOTES
- PAVEMENT CENTERLINE MARKING REQUIRED PER COLLIER COUNTY U.L.D.C.; 4" YELLOW SKIP LINE PER F.D.O.T. SPECIFICATIONS ON SPACING.
 - 24" WHITE STOP BAR MARKINGS ARE REQUIRED AT INTERSECTIONS; LOCATIONS ARE TO BE BASED ON F.D.O.T. SPECS. & SHALL BE COORDINATED WITH THE STOP SIGN INSTALLATION.

- #### REVISIONS
- 4 9/9/93 REV. FOR RECORD DWGS. RKL
 - 3 5/5/93 REV. PER P.P.R. RKL
 - 1 3/93 REVISED PER P.P.R.

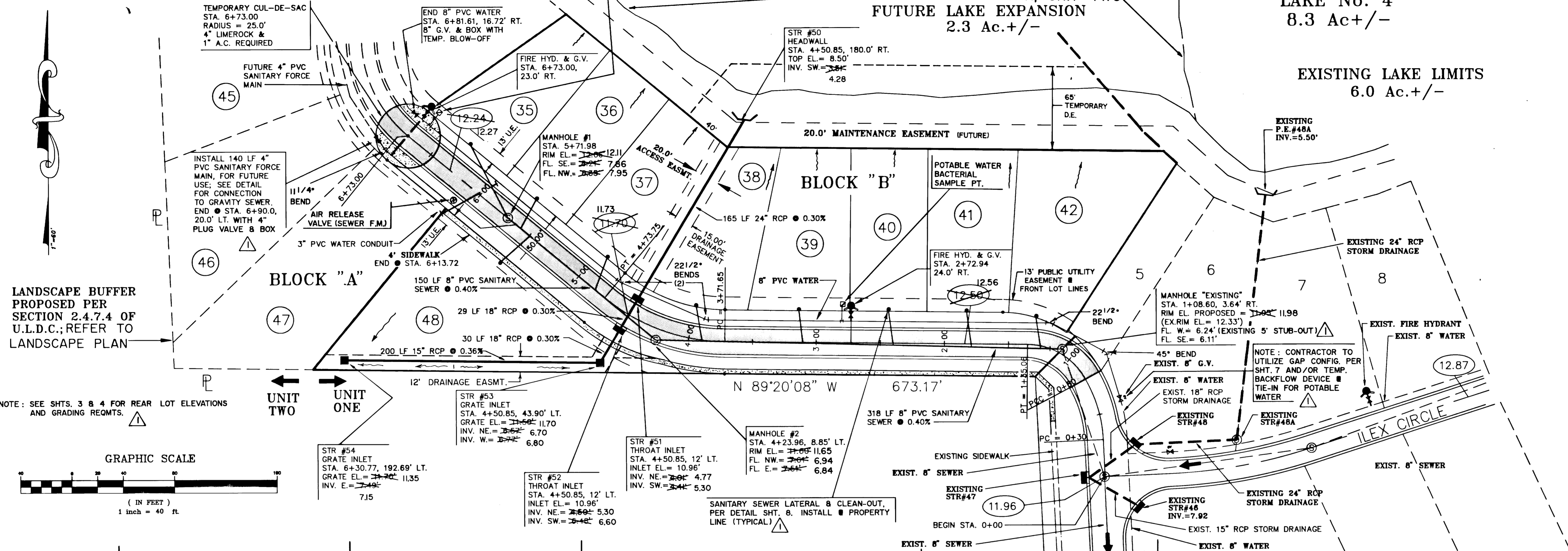
DATE	NOV.'92	BY	LONE OAK, LIMITD
DESIGNED BY	RKL	CHECKED BY	RKL
APPROVED BY			
SCALE	1"=40'	PROJECT NUMBER	55
LOCKHART ENGINEERING, INC.			
6732 LONE OAK BLVD.		NAPLES, FLORIDA 33942	
REC	TWP	AGE	REVISED
1	495	25K	53PSP.DWG
SHT. 4 OF 10			ORANGE COUNTY D-77

LAKE No. 4
8.3 Ac +/-
EXISTING LAKE LIMITS
6.0 Ac +/-

LEXINGTON AT LONE OAK, UNIT TWO
FUTURE LAKE EXPANSION
2.3 Ac +/-

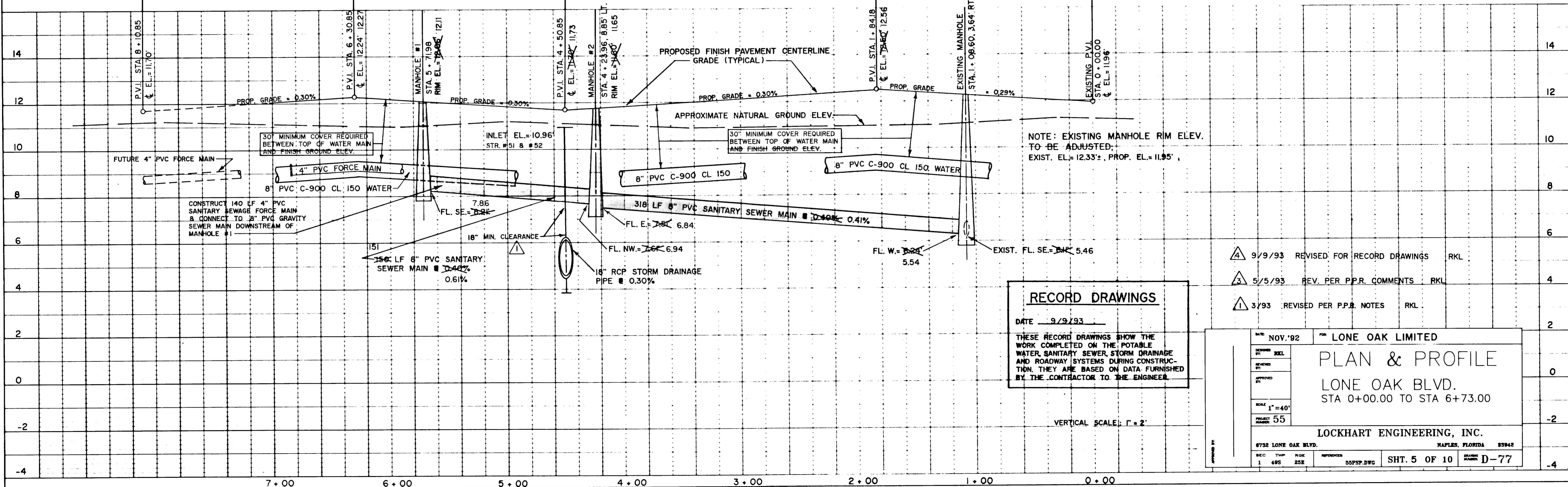
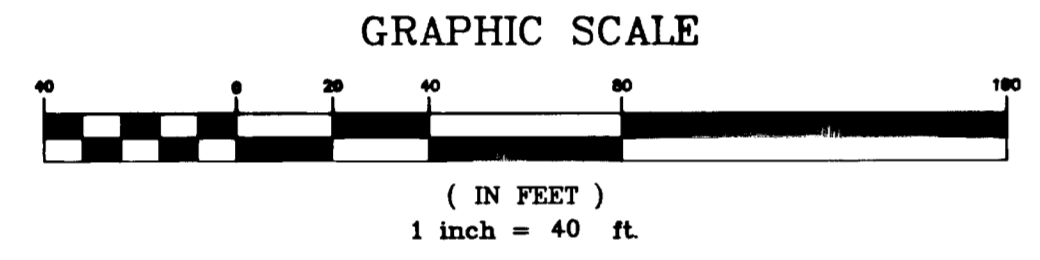
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LANDSCAPE BUFFER
PROPOSED PER
SECTION 2.4.7.4 OF
U.L.D.C.; REFER TO
LANDSCAPE PLAN

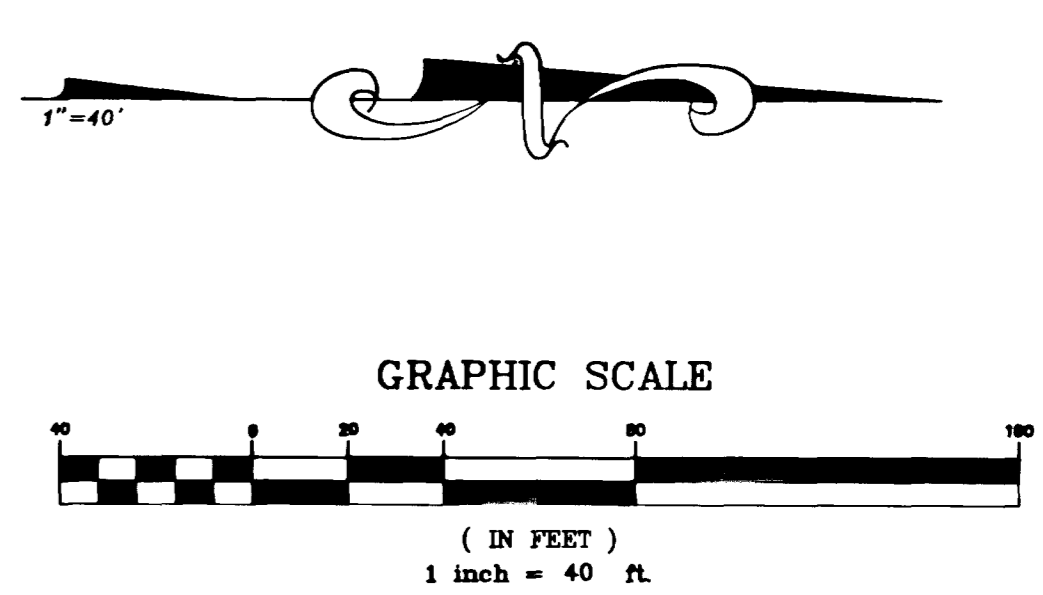
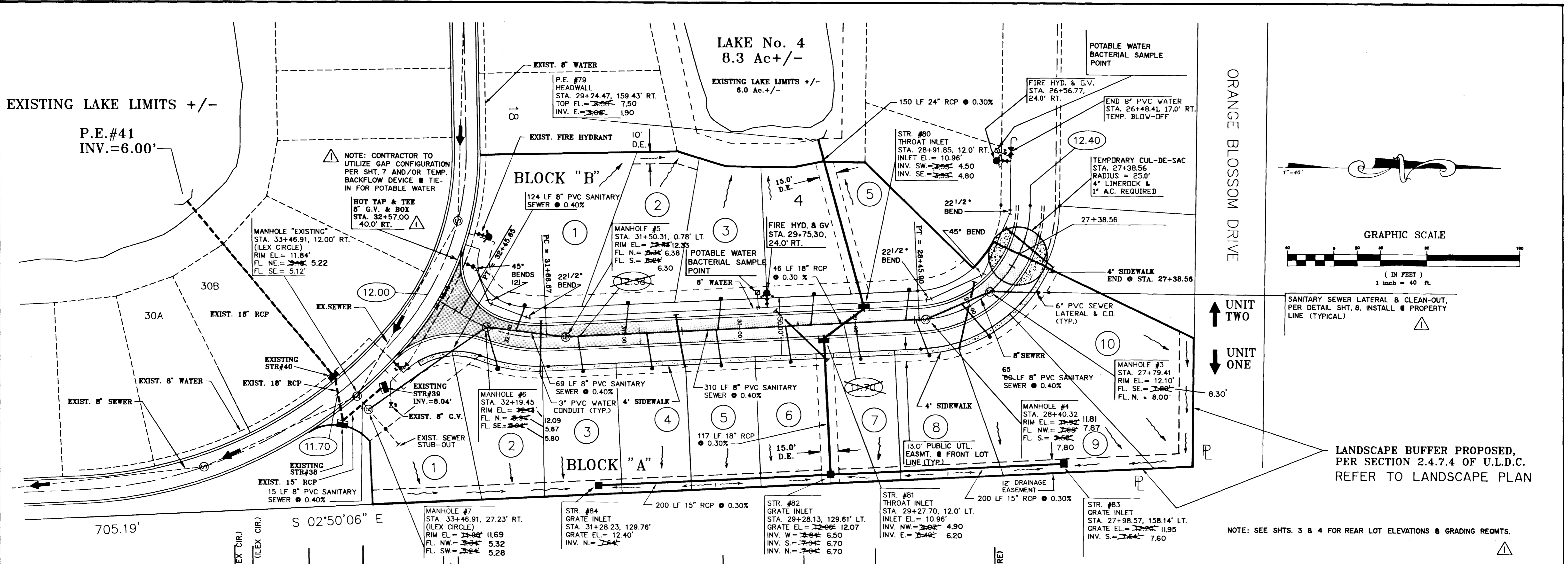
NOTE: SEE SHTS. 3 & 4 FOR REAR LOT ELEVATIONS AND GRADING REQMTS.



RECORD DRAWINGS
DATE 9/9/93
THESE RECORD DRAWINGS SHOW THE WORK COMPLETED ON THE POTABLE WATER, SANITARY SEWER, STORM DRAINAGE AND ROADWAY SYSTEMS DURING CONSTRUCTION. THEY ARE BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

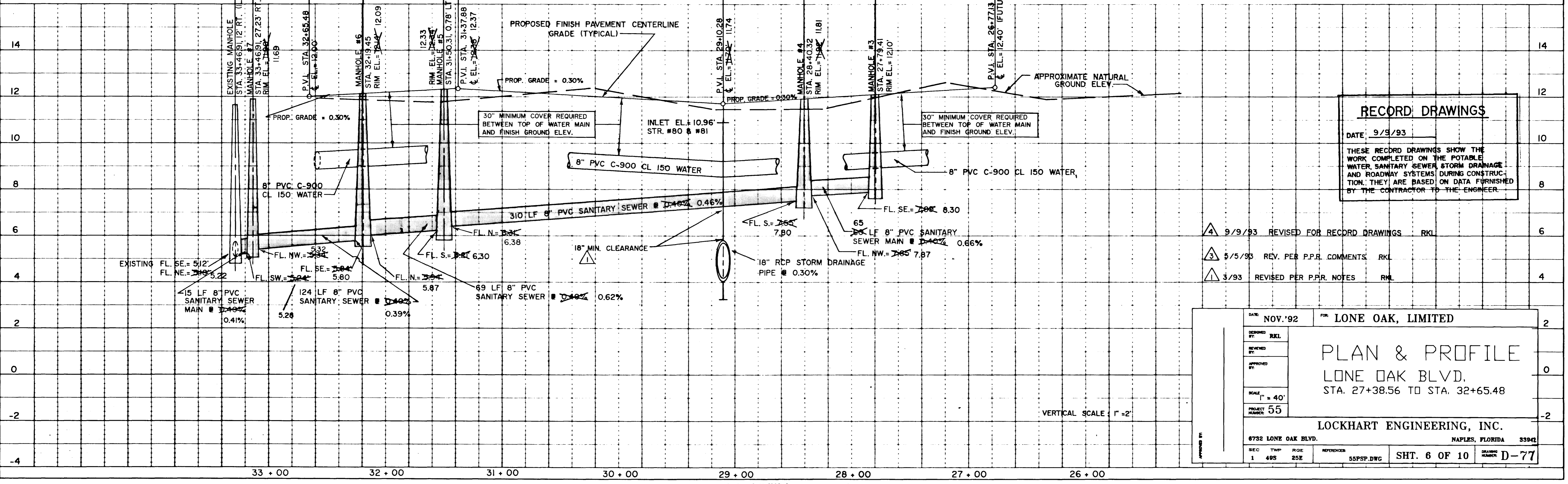
- 4 9/9/93 REVISED FOR RECORD DRAWINGS RKL
- 3 5/5/93 REV. PER P.P.R. COMMENTS RKL
- 1 3/93 REVISED PER P.P.R. NOTES RKL

DATE	NOV. '92	FOR	LONE OAK LIMITED
DESIGNED BY	RKL		
REVIEWED BY			
APPROVED BY			
SCALE	1"=40'		
PROJECT NO.	55		
PLAN & PROFILE			
LONE OAK BLVD.			
STA 0+00.00 TO STA 6+73.00			
LOCKHART ENGINEERING, INC.			
6732 LONE OAK BLVD.		NAPLES, FLORIDA 33942	
SEC	TYP	REV	APPROVED
1	495	258	SSPSP.DWG
			SHT. 5 OF 10
			D-77



DATE		
NO.		
REVISIONS		
DATE	BY	DESCRIPTION
PLAN		
NOTE BOOK		
NO.		

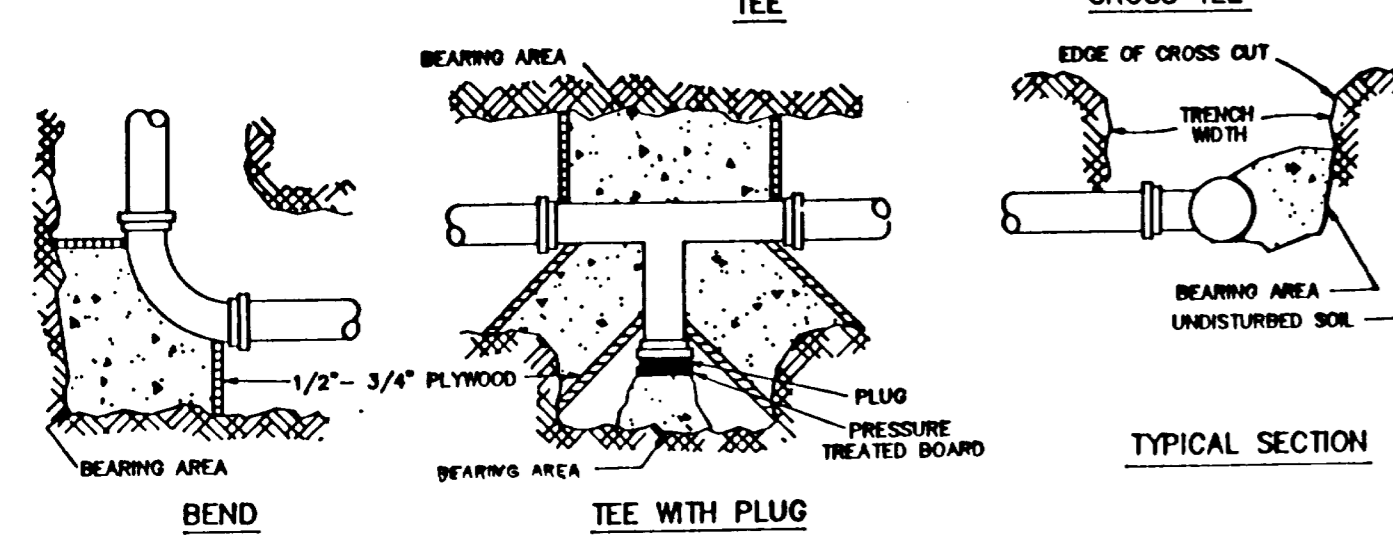
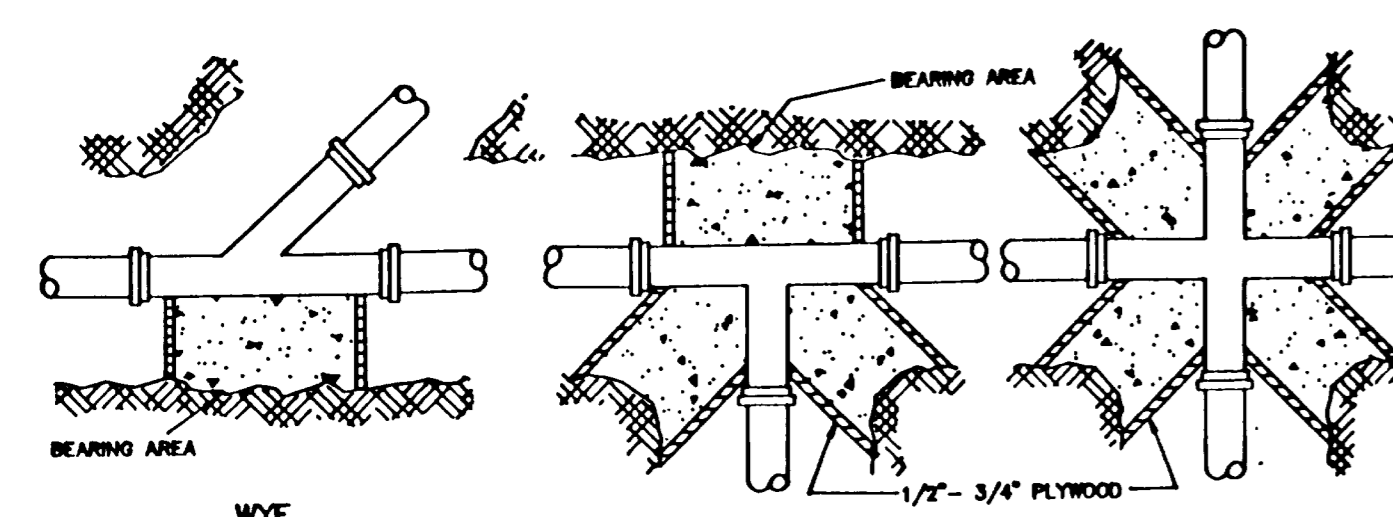
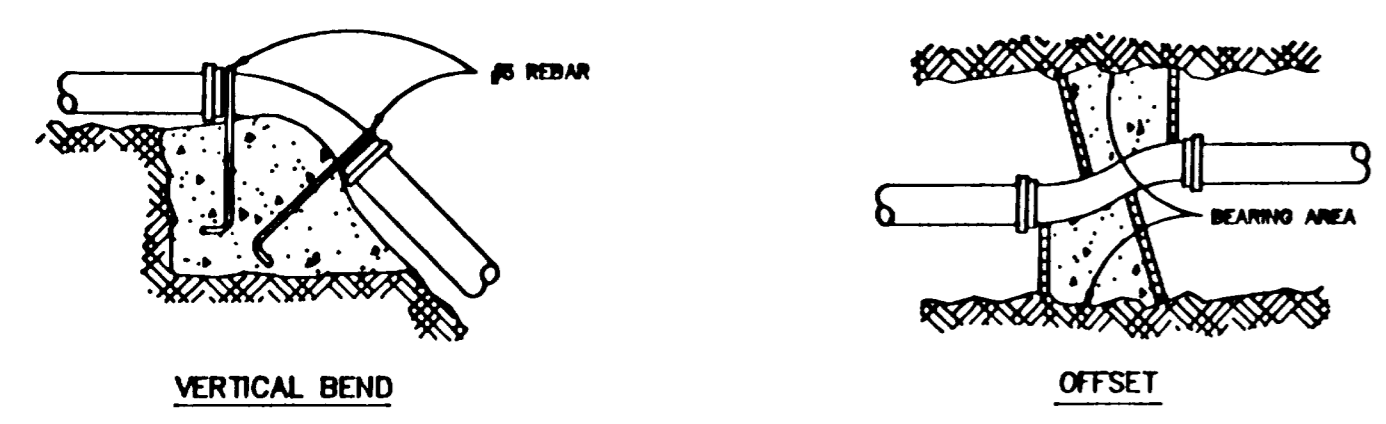
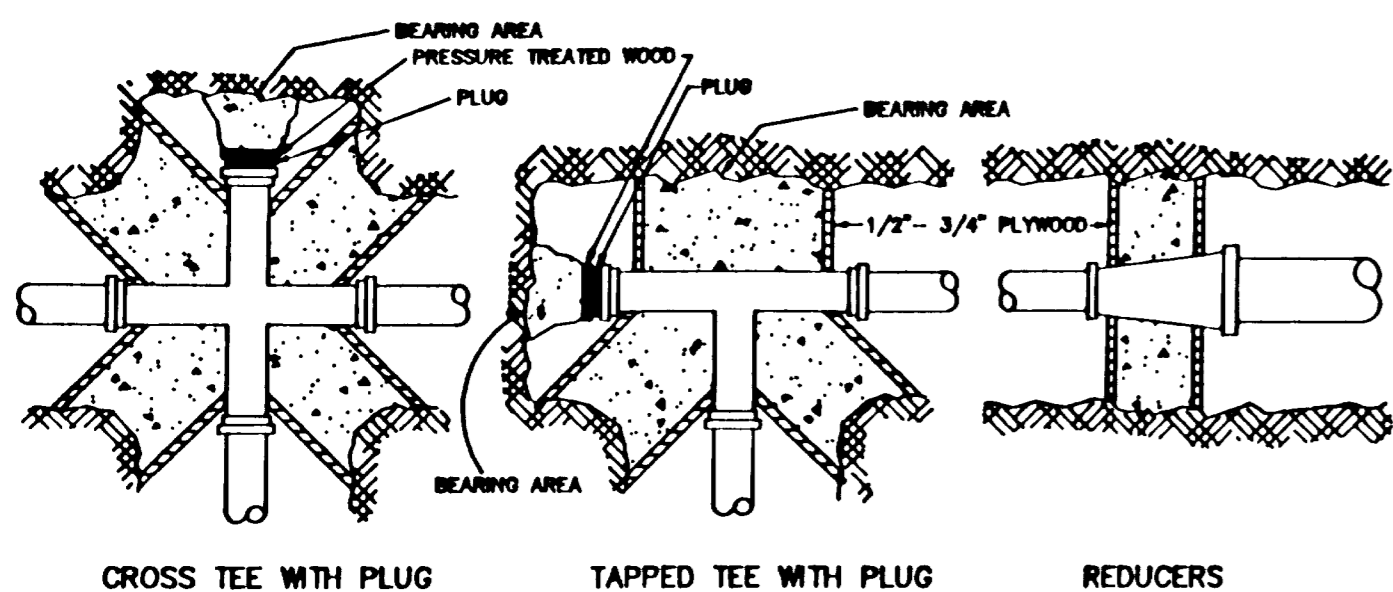
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REVISIONS		
DATE	BY	DESCRIPTION
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NOTE BOOK		
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RECORD DRAWINGS
 DATE: 9/9/93
 THESE RECORD DRAWINGS SHOW THE WORK COMPLETED ON THE POTABLE WATER, SANITARY SEWER, STORM DRAINAGE AND ROADWAY SYSTEMS DURING CONSTRUCTION. THEY ARE BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

- 4 9/9/93 REVISED FOR RECORD DRAWINGS RKL
- 3 5/5/93 REV. PER P.P.R. COMMENTS RKL
- 1 3/93 REVISED PER P.P.R. NOTES RKL

DATE	NOV. 92	FOR	LONE OAK, LIMITED
DESIGNED BY	RKL		
REVIEWED BY			
APPROVED BY			
SCALE	1" = 40'		
PROJECT NUMBER	55		
PLAN & PROFILE			
LONE OAK BLVD.			
STA. 27+38.56 TO STA. 32+65.48			
LOCKHART ENGINEERING, INC.			
8732 LONE OAK BLVD.	NAPLES, FLORIDA	33942	
SEC 1	TWP 49S	ROE 25E	REVISIONS 55PSP.DWG
			SHT. 6 OF 10
			DRAWING NUMBER D-77

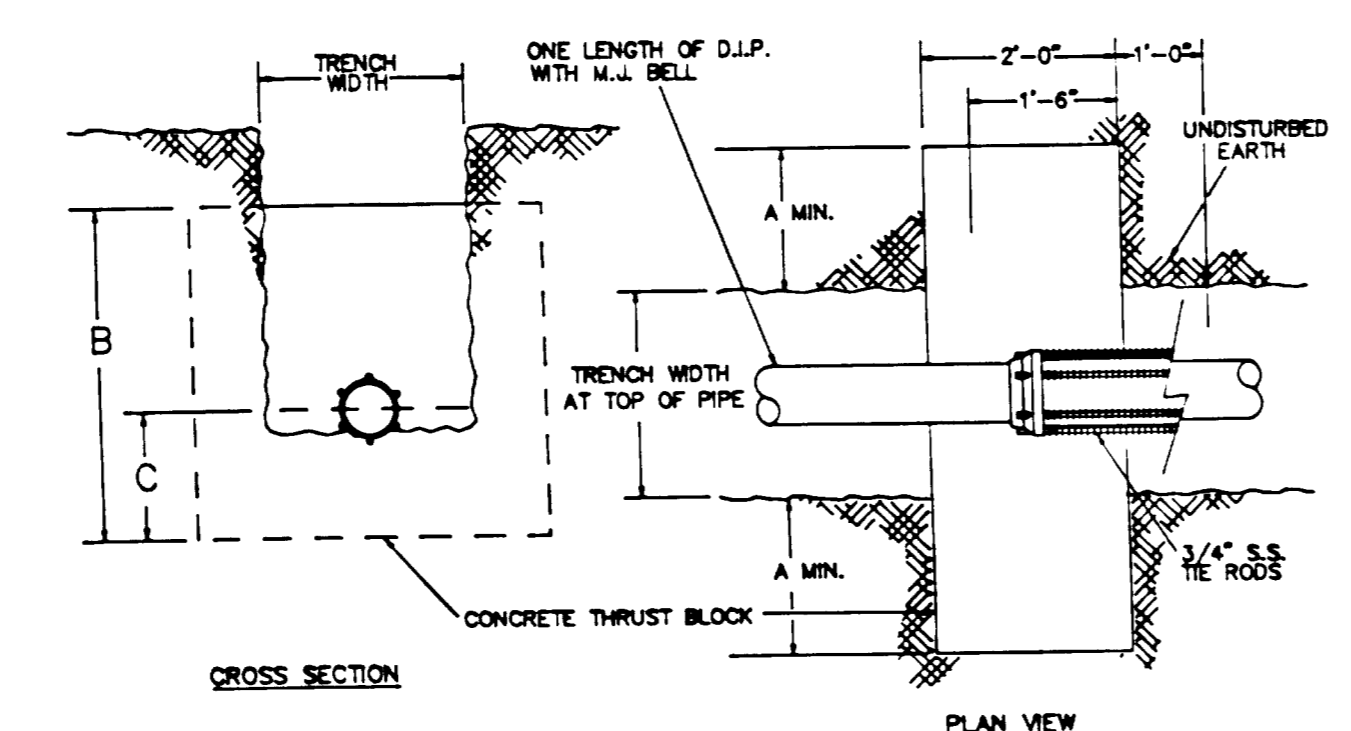


MINIMUM BEARING AREAS IN SQUARE FEET FOR THRUST BLOCKS

PIPE SIZE	TEES	BEND	22 1/2" VALVES & PLUGS
4"	1	1	1
6"	3	4	2
8"	5	7	4
10"	8	12	6
12"	12	16	9
16"	16	20	12
20"	24	20	17
24"	34	34	24

- NOTES:
- ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH.
 - PLACE BOARD IN FRONT OF ALL PLUGS BEFORE PEAKING THRUST BLOCKS.
 - POUR THRUST BLOCKS AGAINST UNDISTURBED SOIL WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LEISTE SOIL AND EXTEND THRUST BLOCKS TO UNDISTURBED SOIL.
 - IN BACK FILLING, ANY HICK ENCOUNTERED SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIAL.
 - BACK FILL MATERIAL SHALL NOT INCLUDE ROCK OR REBAR.
 - THRUST BLOCK AREAS BASED ON SOIL BEARING LOAD OF 2000 P.S.F. AND LINE PRESSURE OF 150 P.S.I.

THRUST BLOCKS



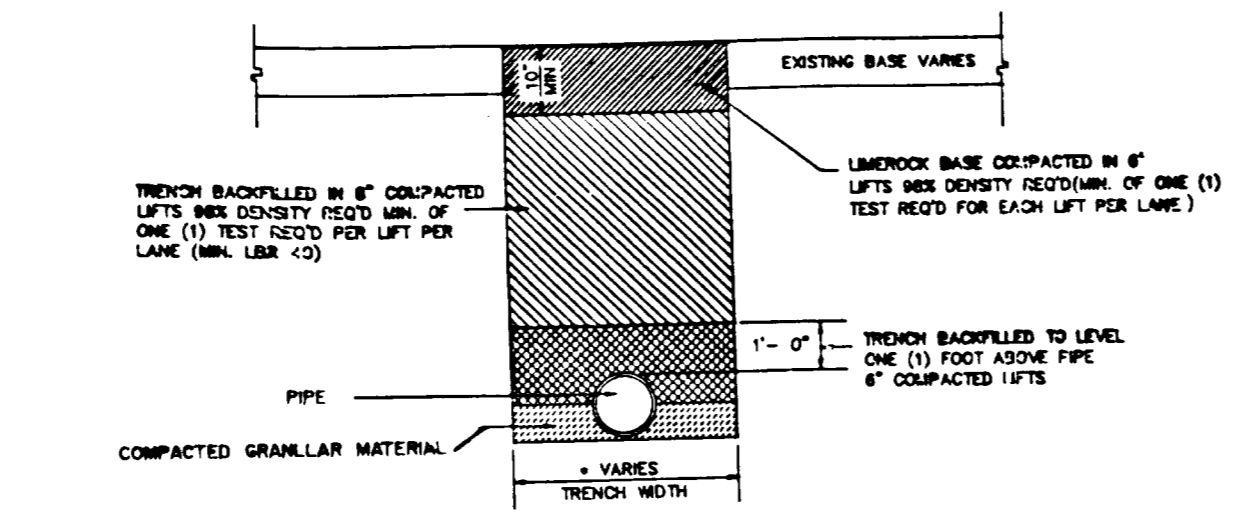
MINIMUM DIMENSIONS

PIPE DIAMETER	A	B	C
4"	9"	36"	18"
6"	12"	36"	18"
8"	12"	36"	18"
10"	12"	36"	18"
12"	12"	36"	18"
16"	18"	48"	24"

DESIGN ENGINEER SHALL VERIFY ABOVE DIMENSIONS AND THE NUMBER OF THE RODS.

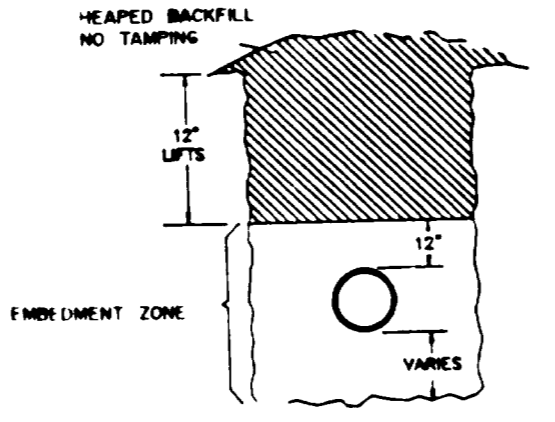
THRUST BLOCK DETAIL FOR LINE TERMINUS

TERMINUS THRUST BLOCK

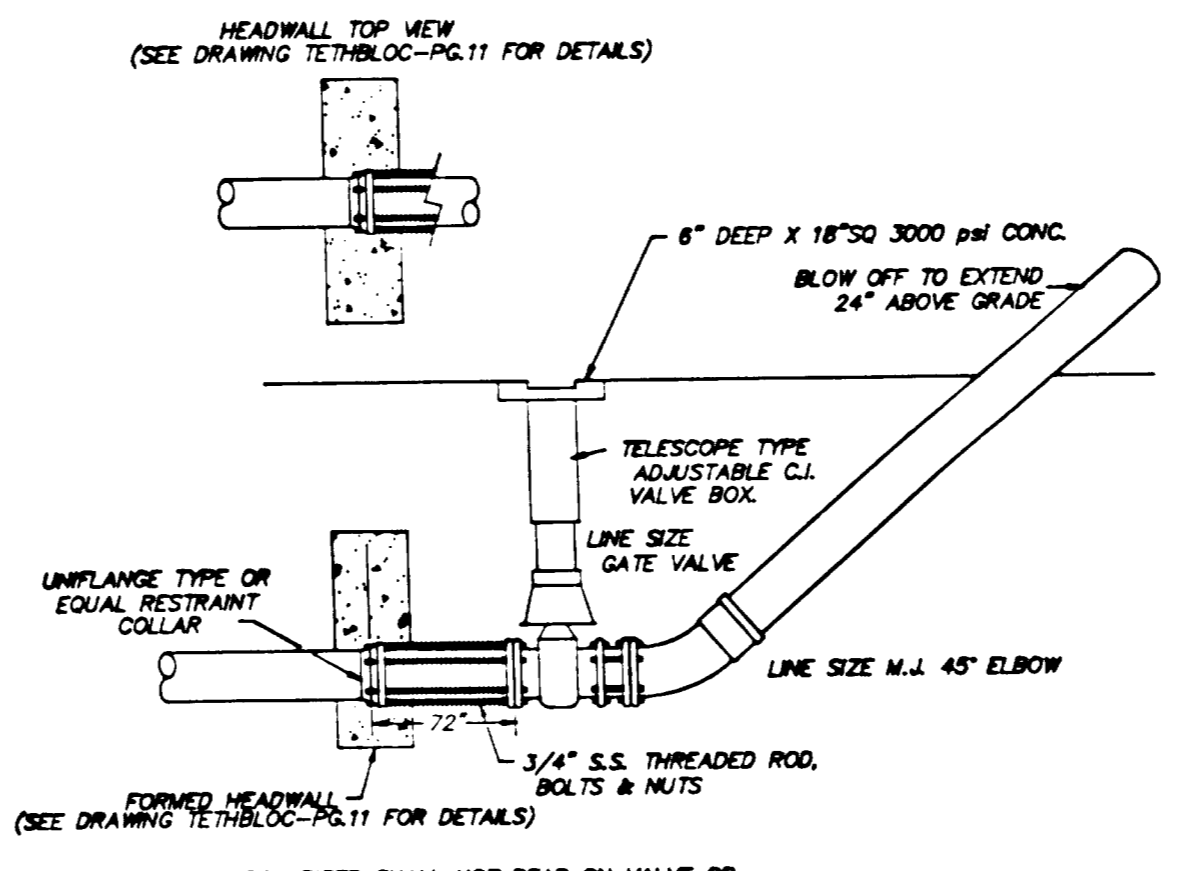


- NOTES:
- 1) ALL PROCTOR AND DENSITY TESTS SHALL BE TAKEN BY A CERTIFIED LABORATORY.
 - 2) ALL TESTS SHALL BE COMPLETED AND MEET MINIMUM DENSITY REQUIREMENTS PRIOR TO ADDITIONAL BACK-FILLING.

LIMEROCK ROAD

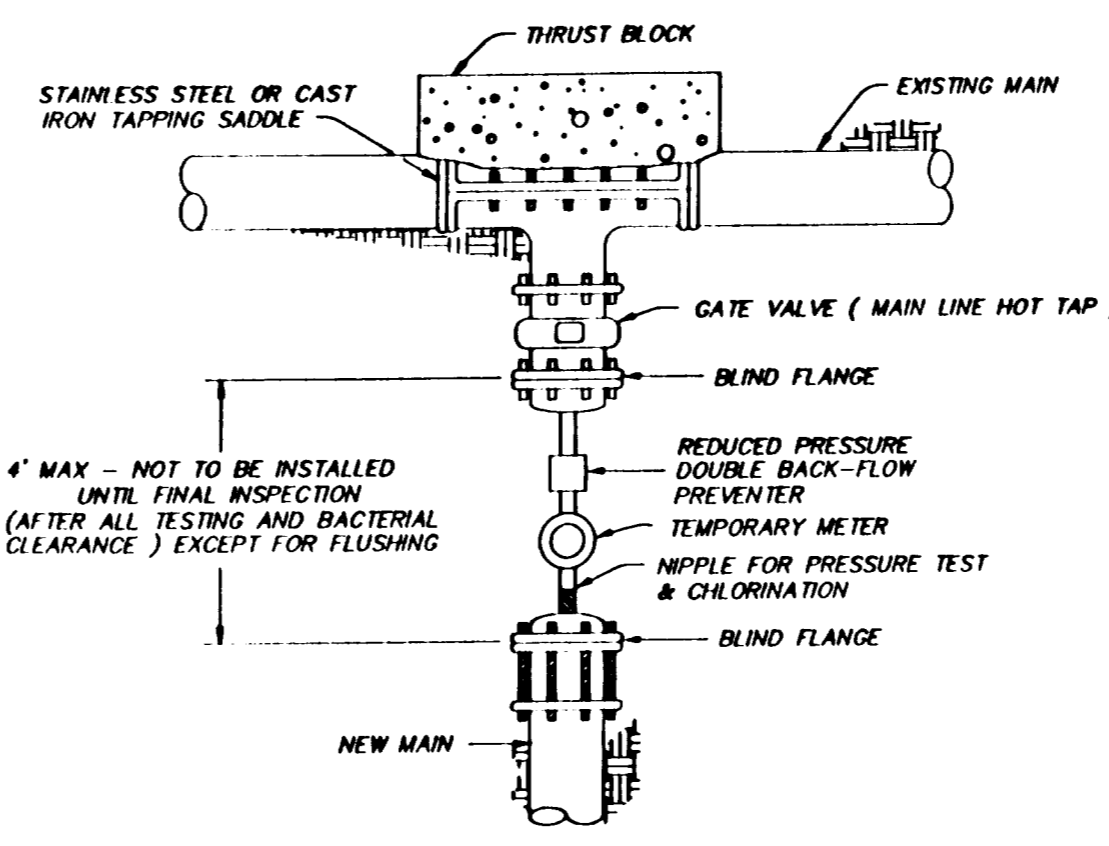


BACKFILL - LIMEROCK ROAD & OPEN TERRAIN



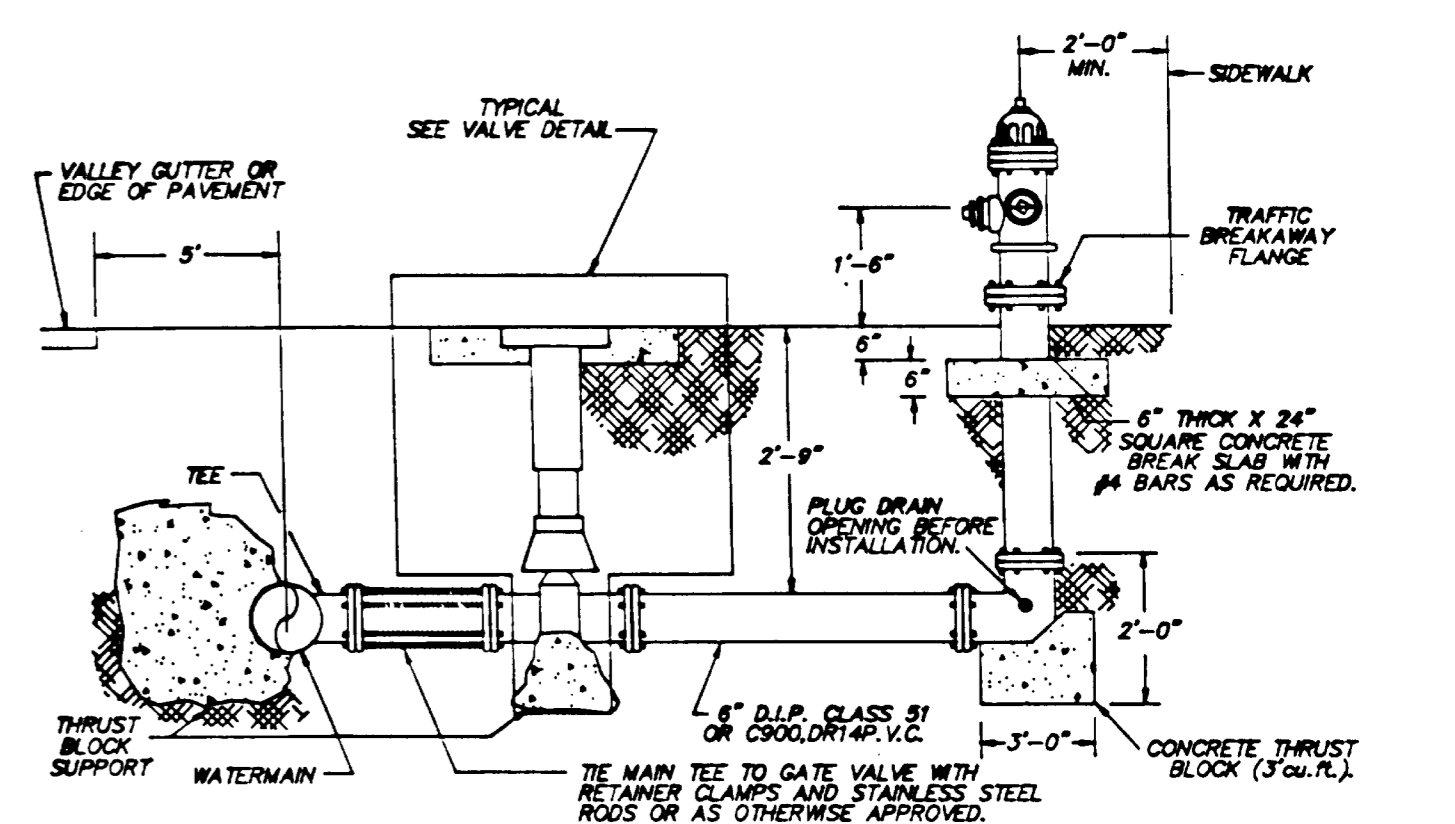
- NOTE: VALVE BOX RISER SHALL NOT BEAR ON VALVE OR PIPE.
- NOTE: TEMPORARY BLOW-OFF TO REMAIN IN PLACE UNTIL DISTRIBUTION SYSTEM HAS BEEN FLUSHED. AFTER CLEARANCE IS OBTAINED REFER TO FIRE HYDRANT DETAIL FOR FINAL CONFIGURATION.

TEMPORARY BLOW OFF



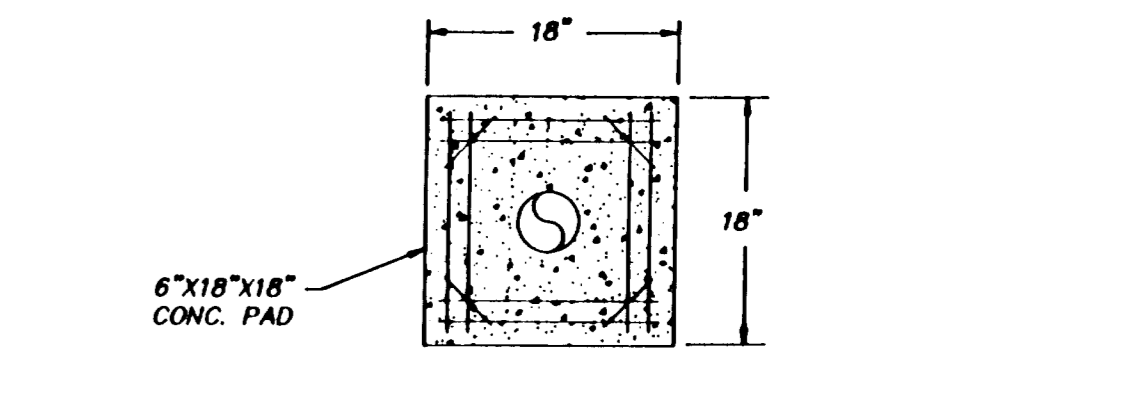
- NOTE:
1. FINAL CONNECTION TO BE WITNESSED BY COLLIER COUNTY UTILITIES DIVISION.
 2. BLIND FLANGES TO BE PROPERLY RESTRAINED.
 3. INSTALL JUMPER TAP SYSTEM FOR TEMPORARY METER DOWNSTREAM OF BLIND FLANGE FOR CONSTRUCTION WATER AFTER SYSTEM HAS BEEN SATISFACTORILY CLEARED.
 4. 6" TO 12" TAPPING SADDLE MAY BE EITHER STAINLESS STEEL OR C.I. AT ENGINEERING OPTION ALL TAPPING SADDLES OVER 12" SHALL BE C.I.

CONNECTION TO EXISTING WATER MAIN

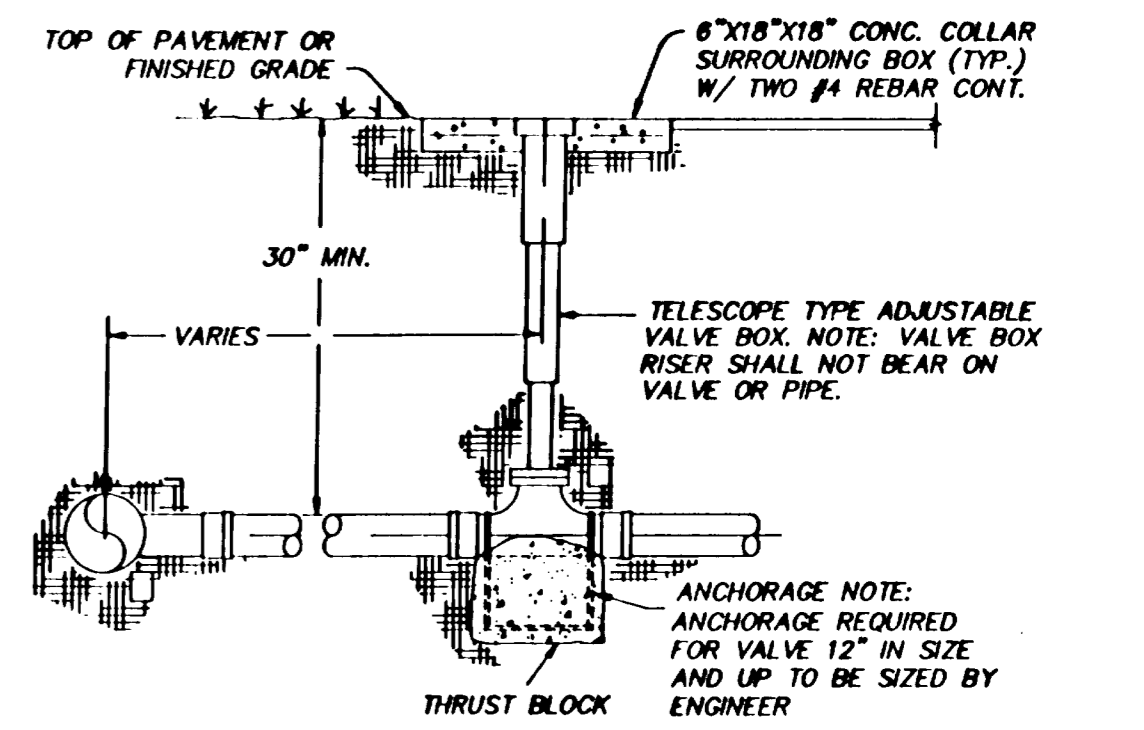


- NOTES:
- HYDRANT MUST BE CURRENT YEAR MANUFACTURE AND ALL BE CAST ON BARREL AS TO YEAR OF MANUFACTURE. ALL EXISTING MAINS WHERE FIRE HYDRANTS ARE TO BE INSTALLED SHALL BE NOT TAPPED.
 - 6" TO 12" TAPPING SADDLE MAY BE EITHER STAINLESS STEEL OR C.I. AT ENGINEER OPTION. ALL TAPPING SADDLES OVER 12" SHALL BE C.I.

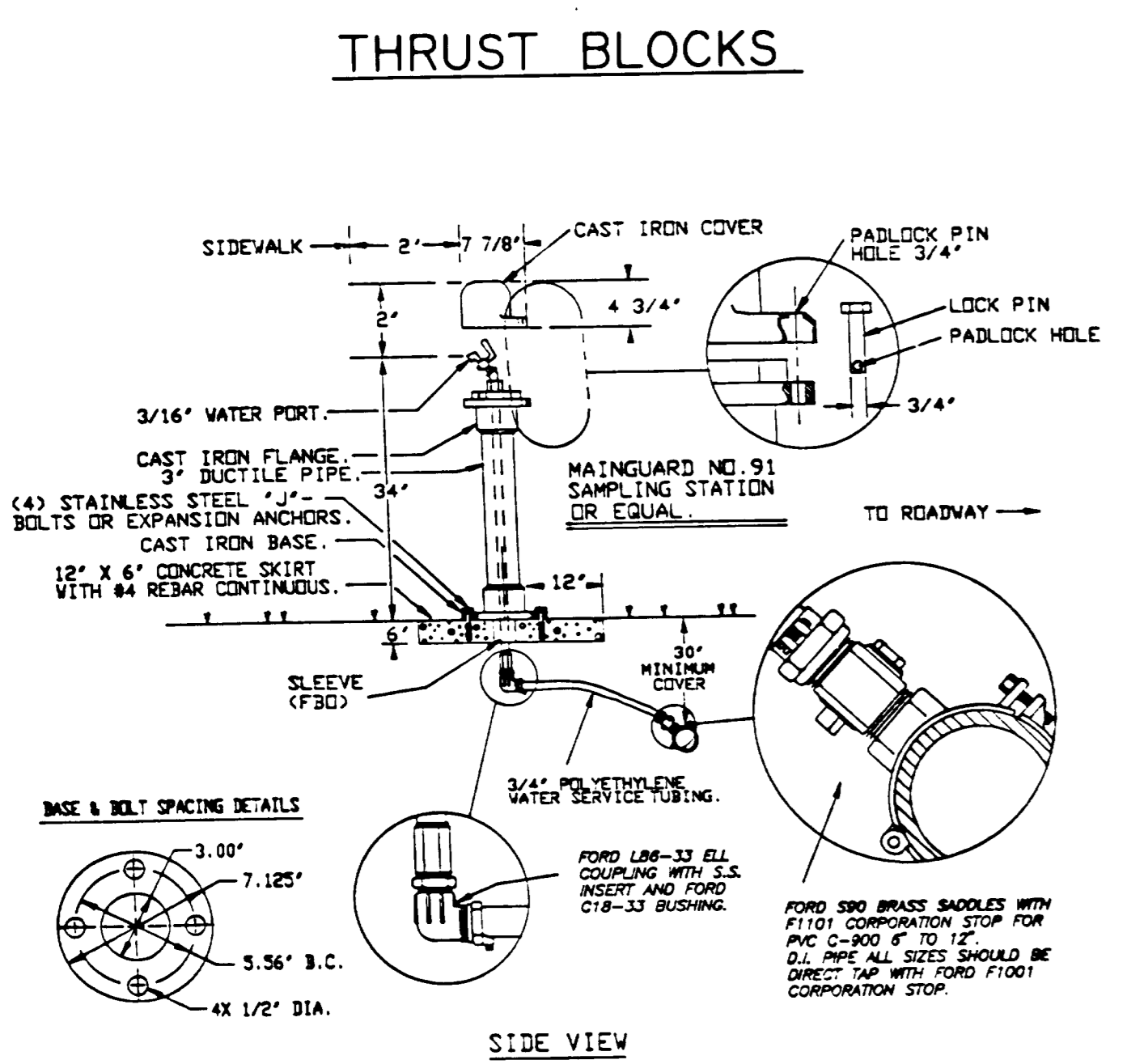
HYDRANT - DETAIL



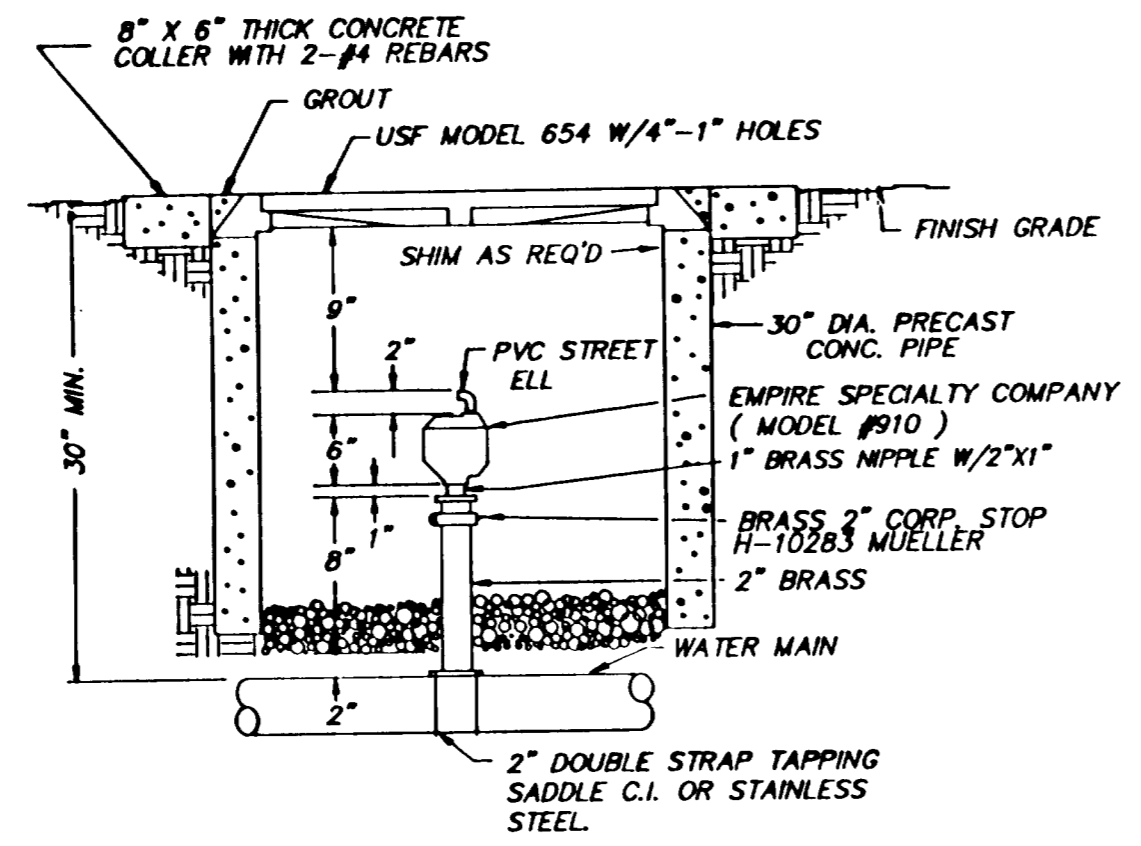
REINFORCEMENT



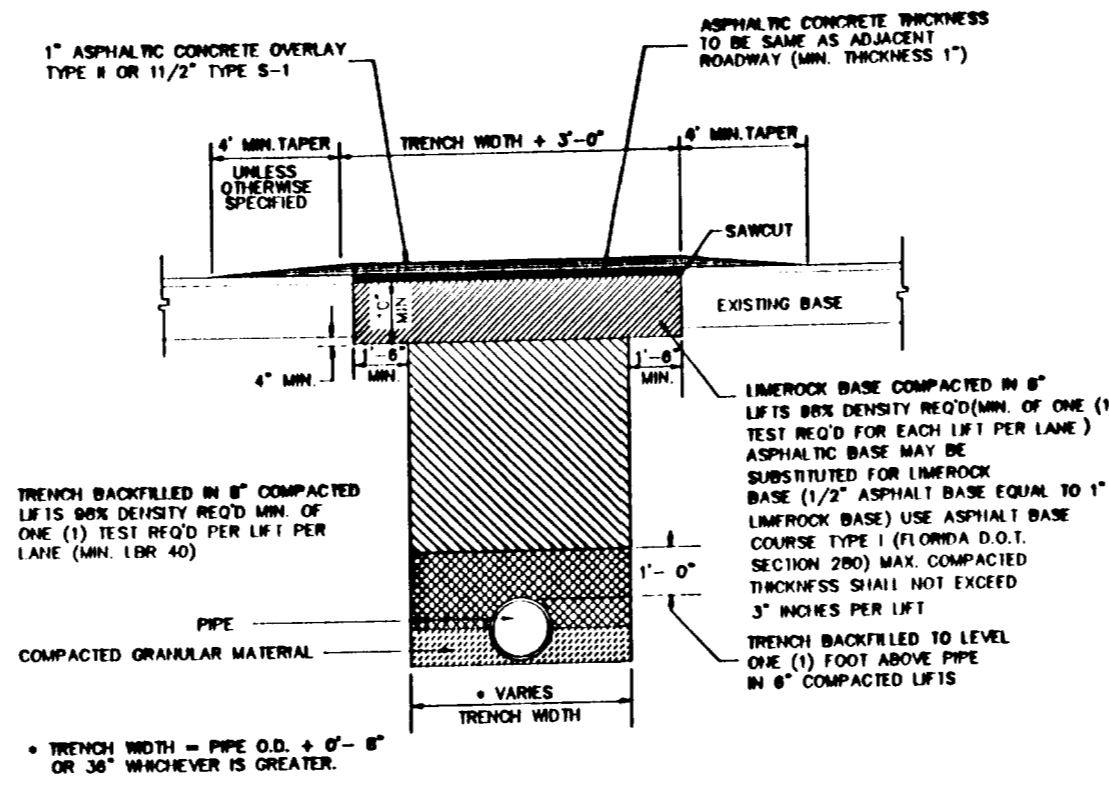
TYPICAL VALVE



PERMANENT BACTERIAL SAMPLE STATION

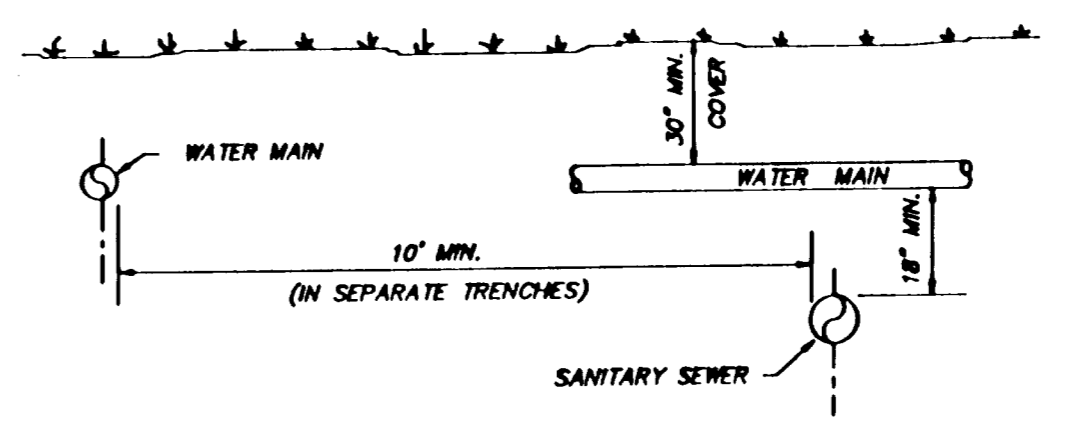


AIR RELEASE VALVE (POTABLE WATER)



- NOTE:
- 1) ALL PROCTOR AND DENSITY TESTS SHALL BE TAKEN BY A CERTIFIED LABORATORY.
 - 2) ALL TESTS SHALL BE COMPLETED AND MEET MINIMUM DENSITY REQUIREMENTS PRIOR TO ADDITIONAL BACK-FILLING.
 - 3) ORDINANCE 83-11 REQUIRES A R.O.W. PERMIT FOR ALL WORK WITHIN PUBLIC ROADS. THE R.O.W. PERMIT REQUIREMENTS SHALL SUPERSEDE THIS DETAIL.

BACKFILL - PAVED ROADS



CROSS OVER DETAIL

- NOTES:
- SANITARY SEWER LINES OR FORCE MAINS SHALL BE SEPARATED FROM WATER MAINS BY A MINIMUM CLEAR VERTICAL CLEARANCE OF 18" AND A HORIZONTAL DISTANCE OF 10'-0".
 - ALL CROSSING WITH VERTICAL CLEARANCE LESS THAN 18" SHALL BE MADE USING THICKNESS CLASS 200 ANNA C-800 P.V.C. OR DUCTILE IRON, CLASS 31 PIPE FOR DISTANCE OF 10' EACH SIDE OF THE CROSSING AND SEWER SHALL BE ENCASED.
 - 18" CLEAR DISTANCE SHALL NOT BE REDUCED IN CASES WHERE WATER MAIN CROSSES UNDER SEWER LINE.
 - VERTICAL CLEARANCE LESS THAN 12" SHALL NOT BE ALLOWED. SEE SECTION 11.12.

RECORD DRAWINGS

DATE 9/9/93

THESE RECORD DRAWINGS SHOW THE WORK COMPLETED ON THE POTABLE WATER, SANITARY SEWER, STORM DRAINAGE AND ROADWAY SYSTEMS DURING CONSTRUCTION. THEY ARE BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

DATE: OCT. 92 FOR: LONE OAK LIMITED

DESIGNED BY: _____

REVIEWED BY: _____

APPROVED BY: _____

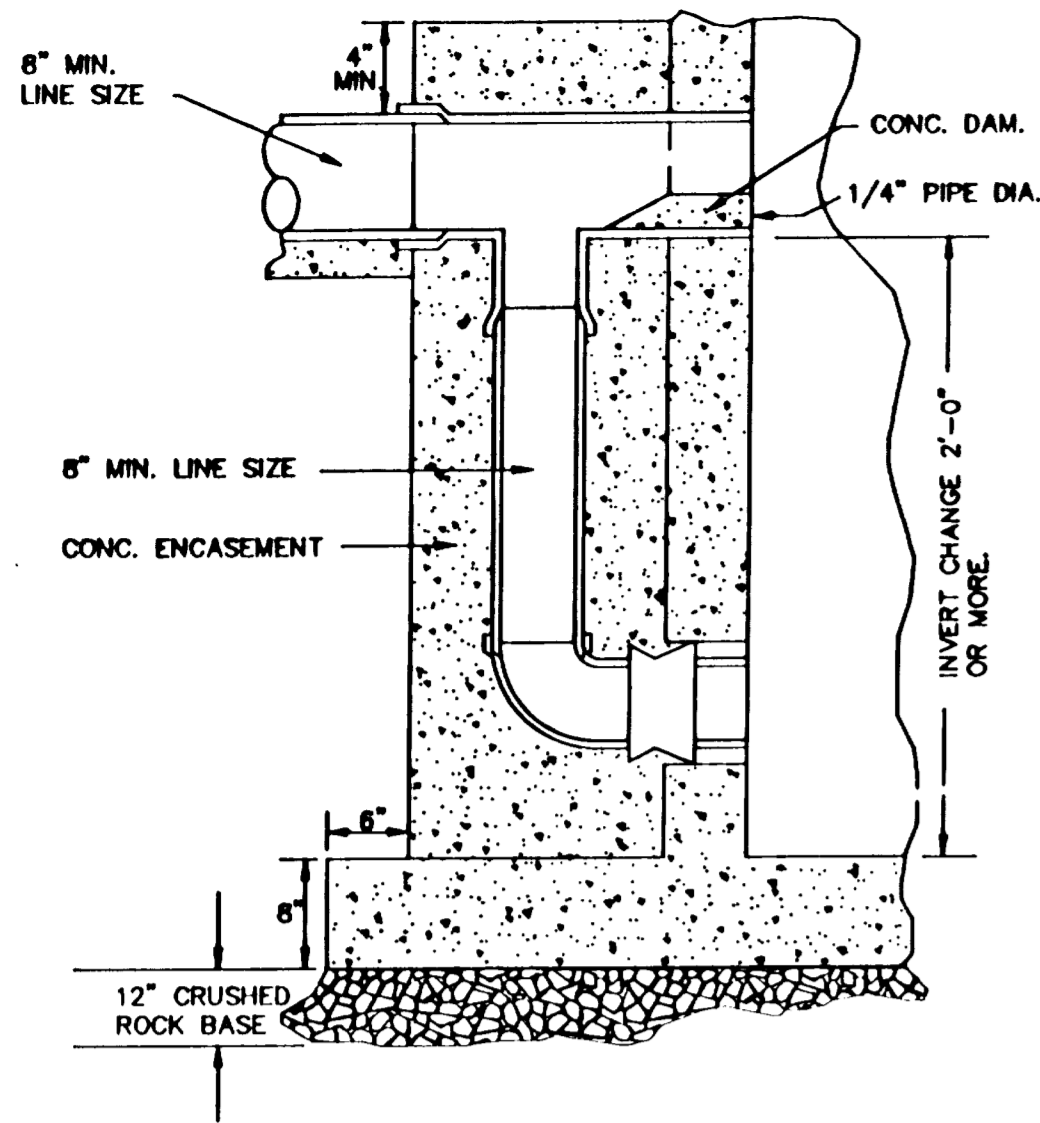
SCALE: N.T.S.

PROJECT NUMBER: 55

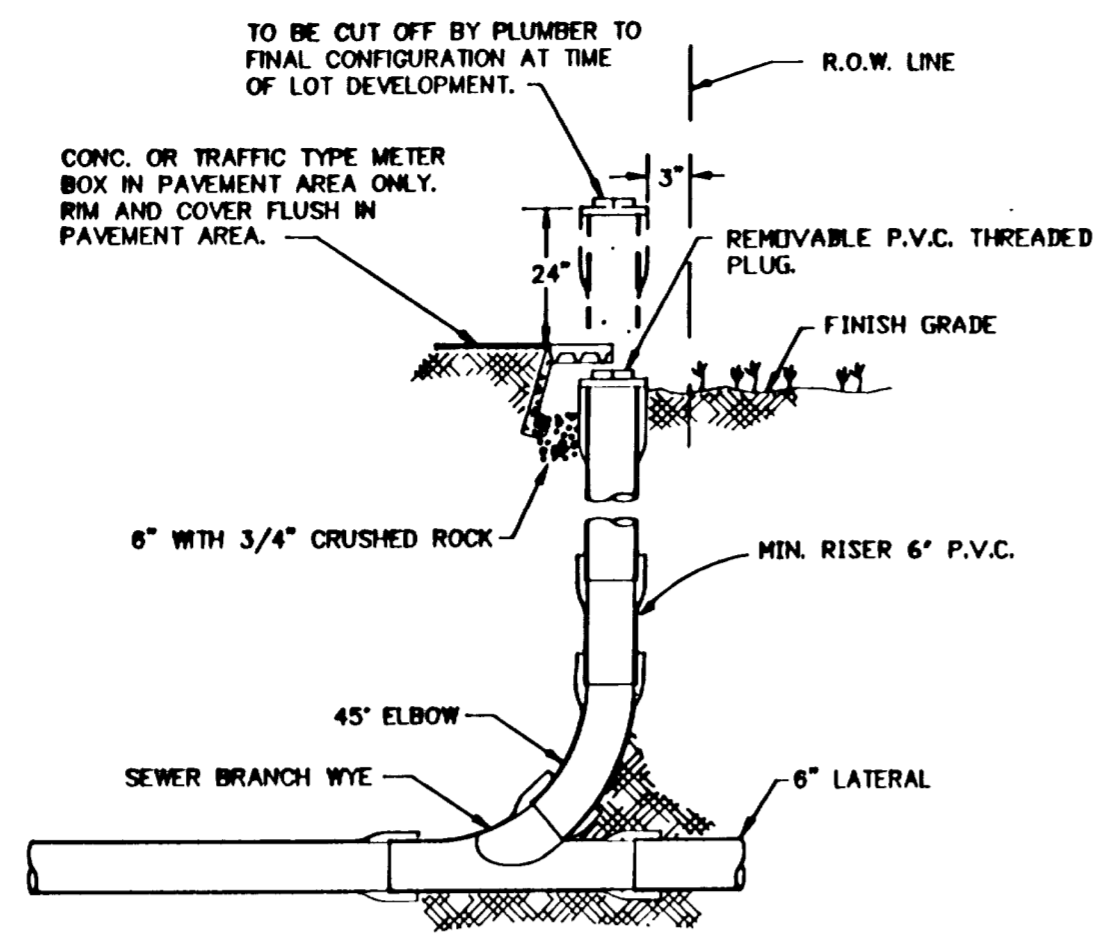
LOCKHART ENGINEERING, INC.
6732 LONE OAK BLVD. NAPLES, FLORIDA 33942

SEC. TYP. RGE. REFERENCED: _____

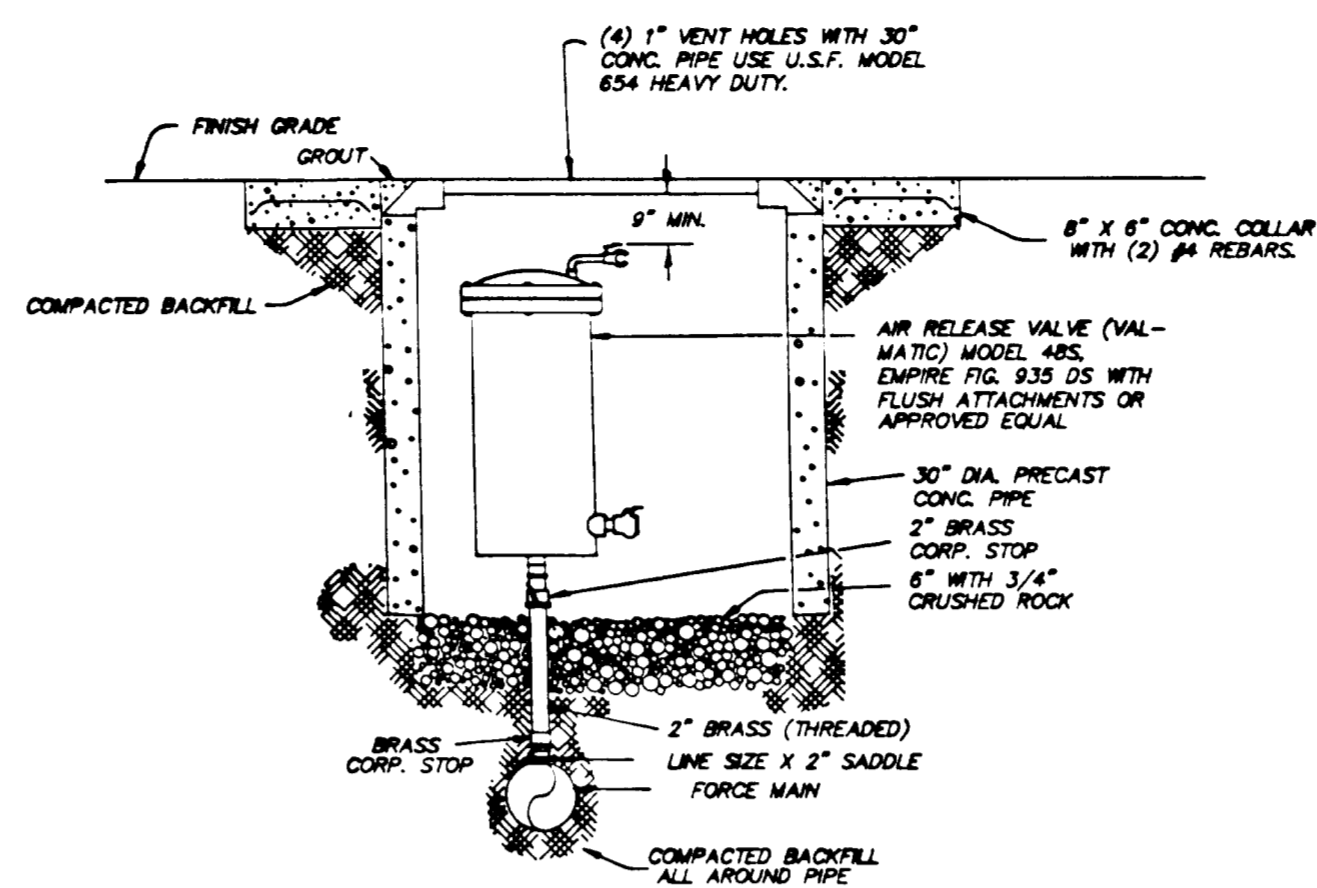
SHT. 7 OF 10 DRAWING NUMBER: D-77



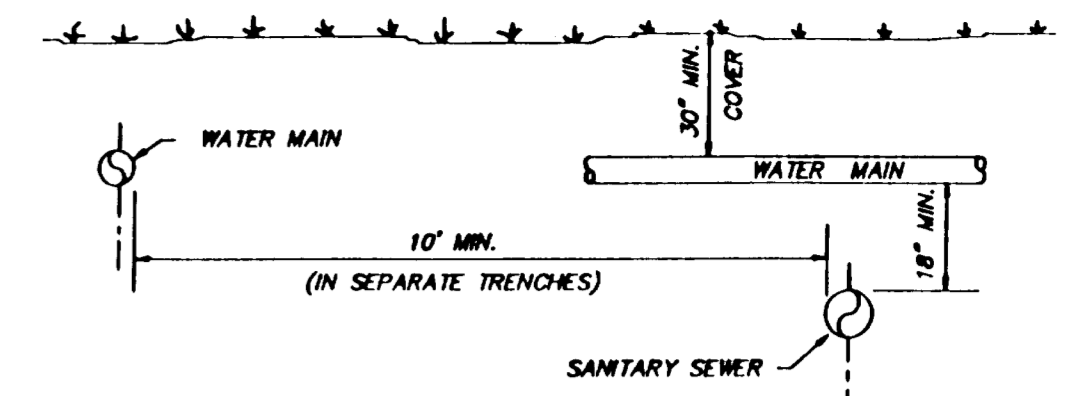
DROP MANHOLE



PROPERTY LINE CLEANOUT DETAIL



AIR RELEASE VALVE

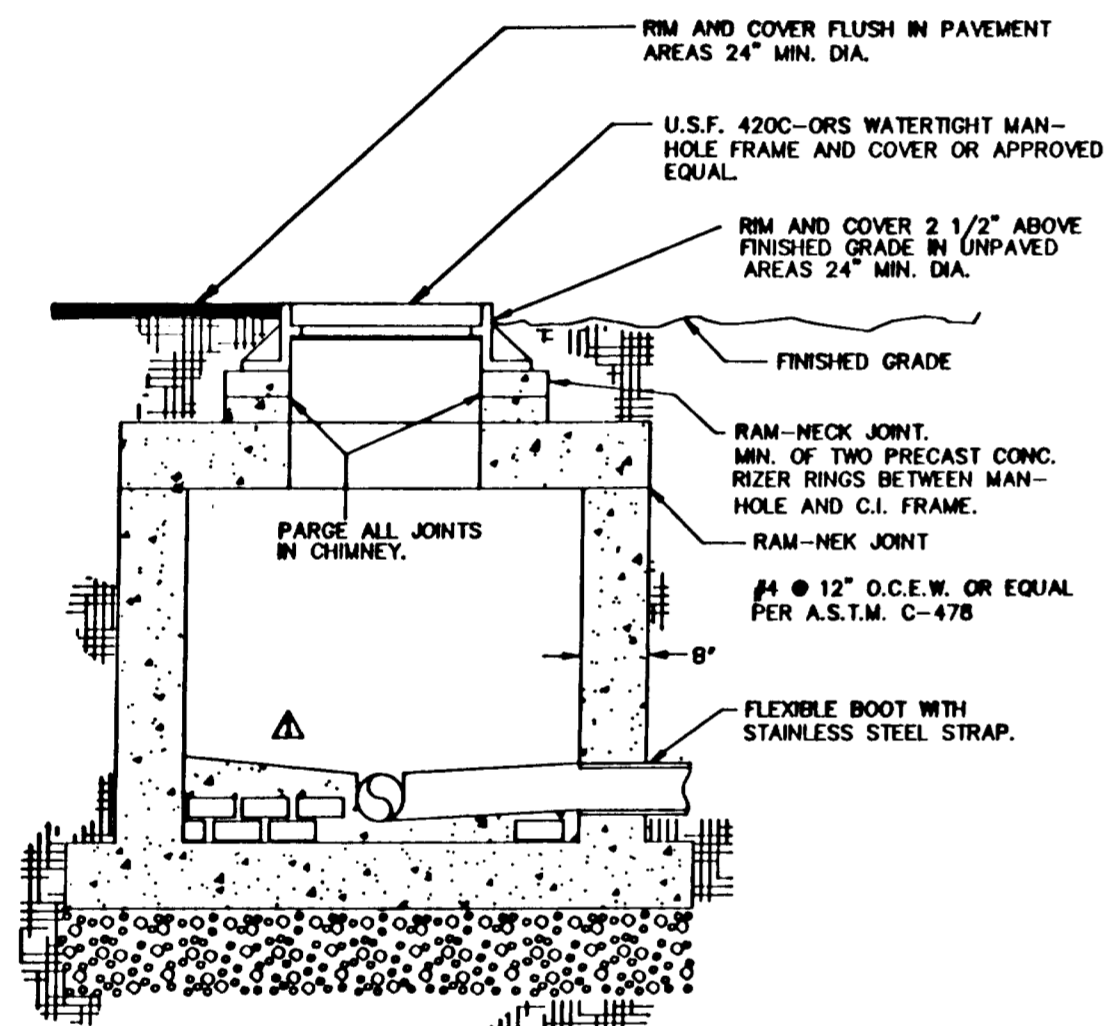


UTILITY CROSS OVER DETAIL

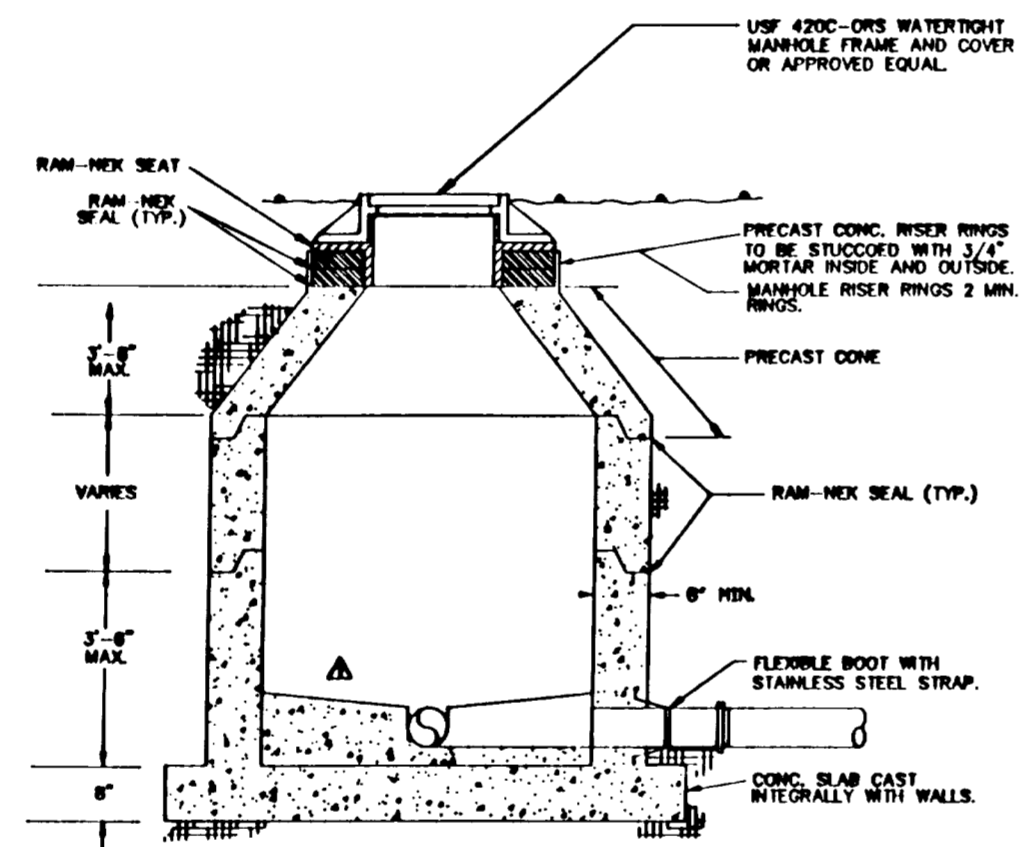
NOTES:
 SANITARY SEWER LINES OR FORCE MAINS SHALL BE SEPARATED FROM WATER MAINS BY A MINIMUM CLEAR VERTICAL DISTANCE OF 18" AND A HORIZONTAL DISTANCE OF 10'-0". ALL CROSSING WITH VERTICAL CLEARANCE LESS THAN 18" SHALL BE MADE USING THICKNESS CLASS 300 ANPA C-900 P.V.C. OR DUCTILE IRON, CLASS 51 PIPE FOR DISTANCE OF 10' EACH SIDE OF THE CROSSING AND SEWER SHALL BE CONCRETE ENCASED. 18" CLEAR DISTANCE SHALL NOT BE REDUCED IN CASES WHERE WATER MAIN CROSSES UNDER SEWER LINE. VERTICAL CLEARANCE LESS THAN 12" SHALL NOT BE ALLOWED.

GENERAL CONSTRUCTION NOTES

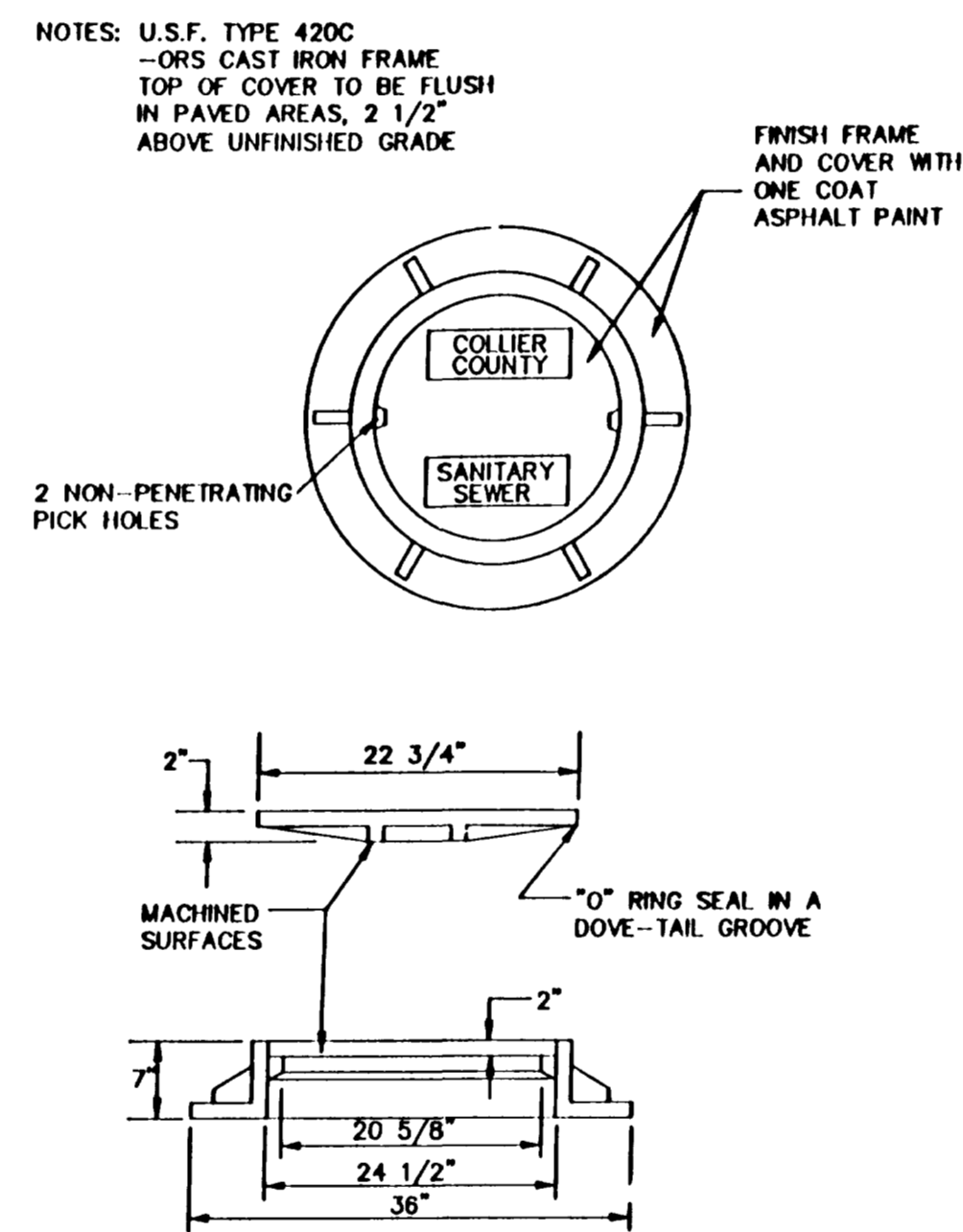
- CONTRACTOR IS REQUIRED TO OBTAIN WRITTEN APPROVAL FROM THE ENGINEER FOR ANY DEVIATION FROM THE DRAWINGS OR SPECIFICATIONS.
- ALL CONCRETE, EXCEPT AS NOTED, SHALL BE TYPE II PORTLAND CEMENT AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI IN 28 DAYS.
- CONCRETE SHALL BE VIBRATED FOLLOWING PLACEMENT TO PREVENT THE FORMATION OF HONEYCOMB, FORCE OUT AIR POCKETS AND WORK MIXTURE AROUND REINFORCING STEEL.
- BOTTOM SLAB AND WALL OF MANHOLE SHALL BE POURED MONOLITHICALLY.
- ALL FLOW LINE CHANNELS, MANHOLE CHANNEL BOTTOMS, SHALL BE CLAY BRICK AND HAVE A MINIMUM OF 2" OF POURED CONCRETE OR 2" GROUTED FINISH. ALL FLOW LINES SHALL BE CONNECTED WITH SMOOTH TRANSITION CHANNELS.
- STEEL SHALL BE INTERMEDIATE GRADE NEW BILLET STOCK WITH DEFORMATIONS CONFORMING TO A.S.T.M. A-305-53-7, LATEST REVISION AND A-15-54T.
- REINFORCING STEEL SHALL BE CLEAN AND FREE FROM LOOSE SCALE, RUST, DIRT AND OIL AND SHALL BE PLACED ACCORDING TO THE A.C.I. MANUAL OF DETAILING. ALL BARS SHALL BE LAPPED 24 DIAMETERS UNLESS NOTED OTHERWISE.
- ALL STEEL TO BE 3" CLEAR UNLESS NOTED OTHERWISE. SPACING DIMENSIONS ARE FROM CENTER TO CENTER OF BARS.
- EACH MANHOLE SHALL HAVE A CAST IRON FRAME WITH MATCHING COVER AS SHOWN ON DETAILS.
- ALL MANHOLE JOINTS, BETWEEN FRAME AND CONCRETE COLLAR AND TONGUE AND GROOVE OF MULTI-PIECE UNITS, SHALL HAVE "RAM-NEK" BITUMASTIC TYPE JOINT SEALING MATERIAL.
- ALL SURFACES OF MANHOLES SHALL BE DOUBLE COATED WITH APPROVED EPOXY TAR SEALER.
- FURNISH FLEXIBLE RUBBER SLEEVE WITH STAINLESS STEEL CLAMP TO PROVIDE A LEAKPROOF JOINT BETWEEN THE CONCRETE MANHOLE AND PVC PIPE SURFACE.
- ALL SANITARY SEWER LINES OR FORCE MAINS SHALL BE SEPARATED FROM WATER MAINS BY A MINIMUM VERTICAL DISTANCE OF 18 INCHES AND A HORIZONTAL DISTANCE OF 10 FEET. WHEN THIS REQUIREMENT CANNOT BE MET, THE SANITARY SEWER LINES SHALL BE: (a) CONCRETE ENCASED; OR (b) CHANGED TO CLASS 51 DUCTILE IRON PIPE FOR A MINIMUM DISTANCE OF 10 FEET EACH SIDE OF THE CROSSING SHOWN ON THE PLANS. A MINIMUM OF 12 INCHES OF VERTICAL CLEARANCE MUST BE PROVIDED.



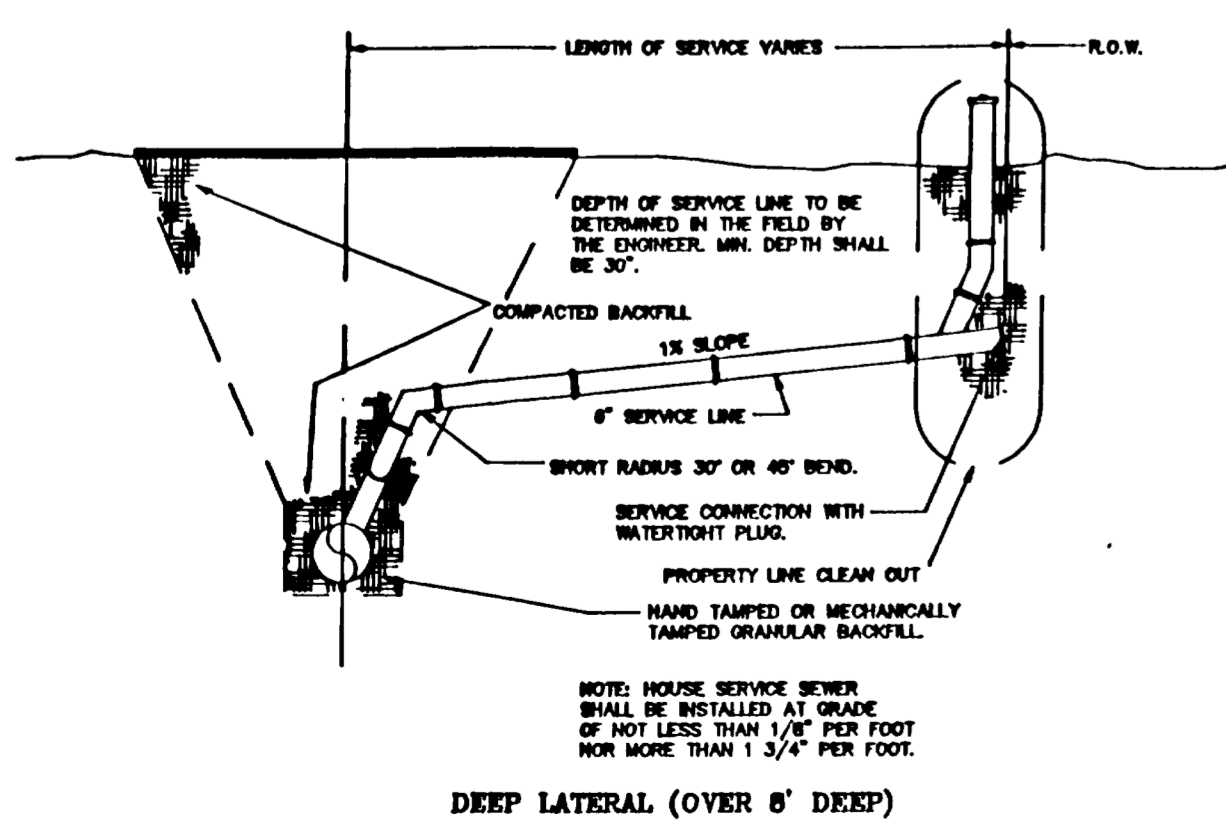
STANDARD PRE-CAST MANHOLE



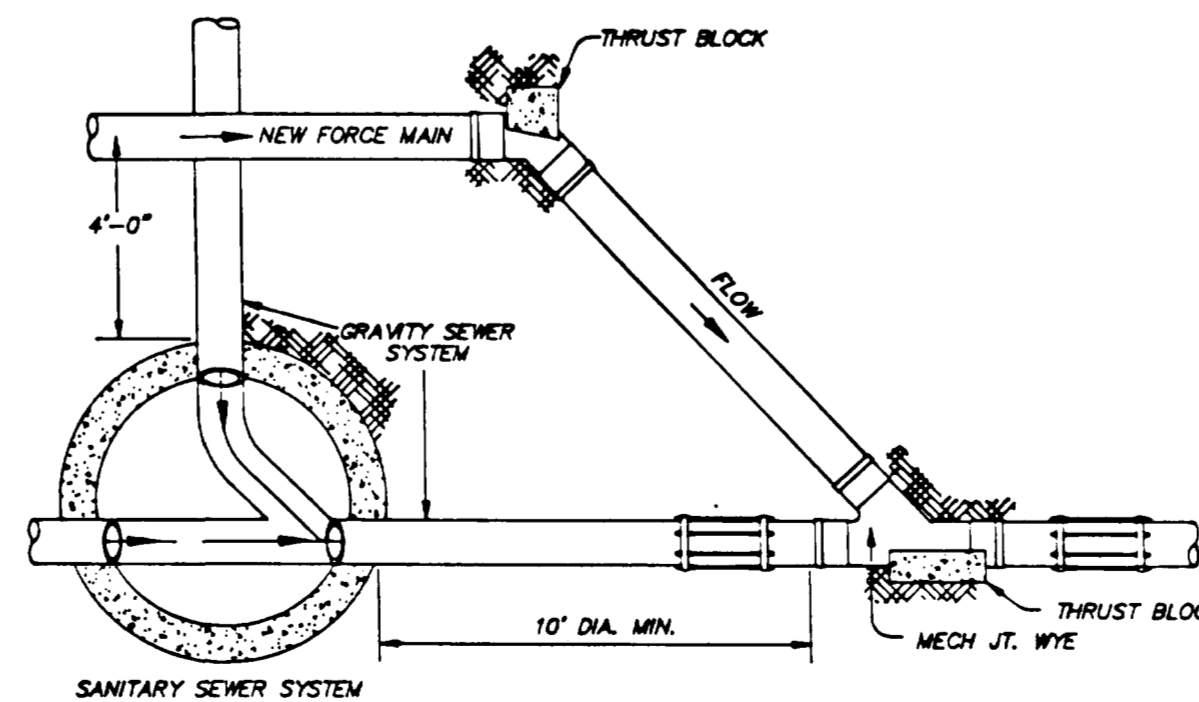
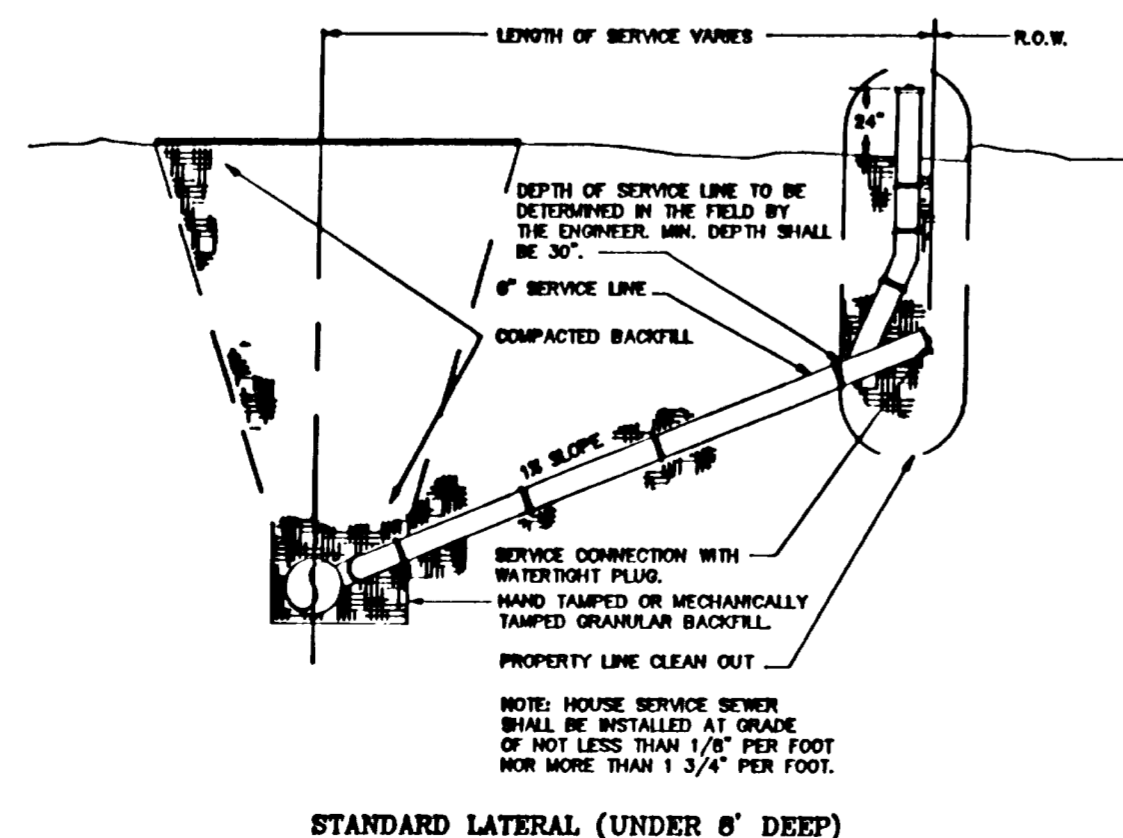
SHALLOW PRE-CAST MANHOLE



STANDARD MANHOLE COVER DETAIL



SEWER LATERALS



FORCE MAIN CONNECTION

RECORD DRAWINGS

DATE 9/9/93
 THESE RECORD DRAWINGS SHOW THE WORK COMPLETED ON THE POTABLE WATER, SANITARY SEWER, STORM DRAINAGE AND ROADWAY SYSTEMS DURING CONSTRUCTION. THEY ARE BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

DATE:	OCT. 92	FOR:	LONE OAK LIMITED
DESIGNED BY:		REVIEWED BY:	
APPROVED BY:		SCALE:	N.T.S.
PROJECT NUMBER:	55	PROJECT NAME:	SANITARY SEWER DETAILS
LOCKHART ENGINEERING, INC.		6732 LONE OAK BLVD. NAPLES, FLORIDA 33942	
SEC. TYP.	NO.	REVISED	DATE

STANDARD THROAT INLET TABLE #1					
TYPE	A *	B *	STRUCTURE NUMBERS		TOTAL No.
I 32" THROAT MINIMUM	MINIMUM = 32" OR ENTERING PIPE O.D. + 6"	MINIMUM = 32" OR ENTERING PIPE O.D. + 6"			
II 36" THROAT MINIMUM	MINIMUM = 32" OR ENTERING PIPE O.D. + 6"	MINIMUM = 36" OR ENTERING PIPE O.D. + 6"	#51 & #52	#80 & #81	4
III 48" THROAT MINIMUM	MINIMUM = 32" OR ENTERING PIPE O.D. + 6"	MINIMUM = 48" OR ENTERING PIPE O.D. + 6"			
IV 60" THROAT MINIMUM	MINIMUM = 32" OR ENTERING PIPE O.D. + 6"	MINIMUM = 60" OR ENTERING PIPE O.D. + 6"			
	* WHICHEVER IS GREATER	* WHICHEVER IS GREATER			

SINK CONSTRUCTION

WHEN INLET FUNCTIONS AS A "SINK" TYPE (LOCATED IN PAVEMENT LOW POINTS), THE VALLEY GUTTER FLOW LINE SHALL LOWER ONE INCH PER THREE FEET AND SHALL TRANSITION AS SHOWN ON THE RIGHT OF SECTION B-B AND IN THE PLAN VIEW.

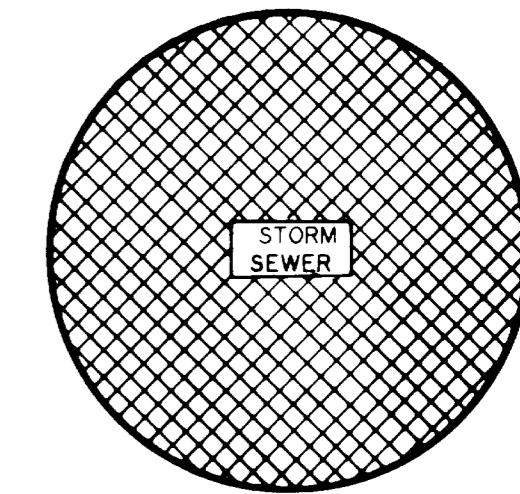
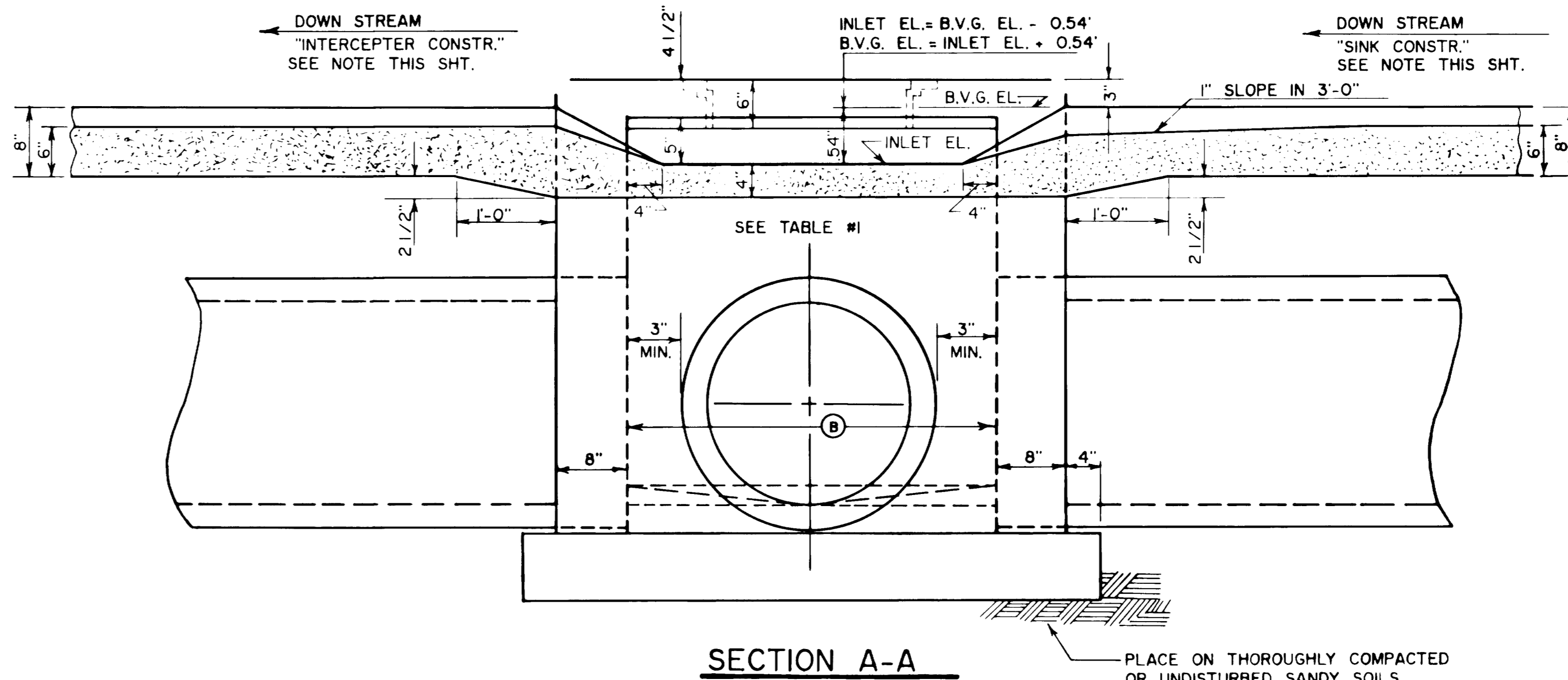
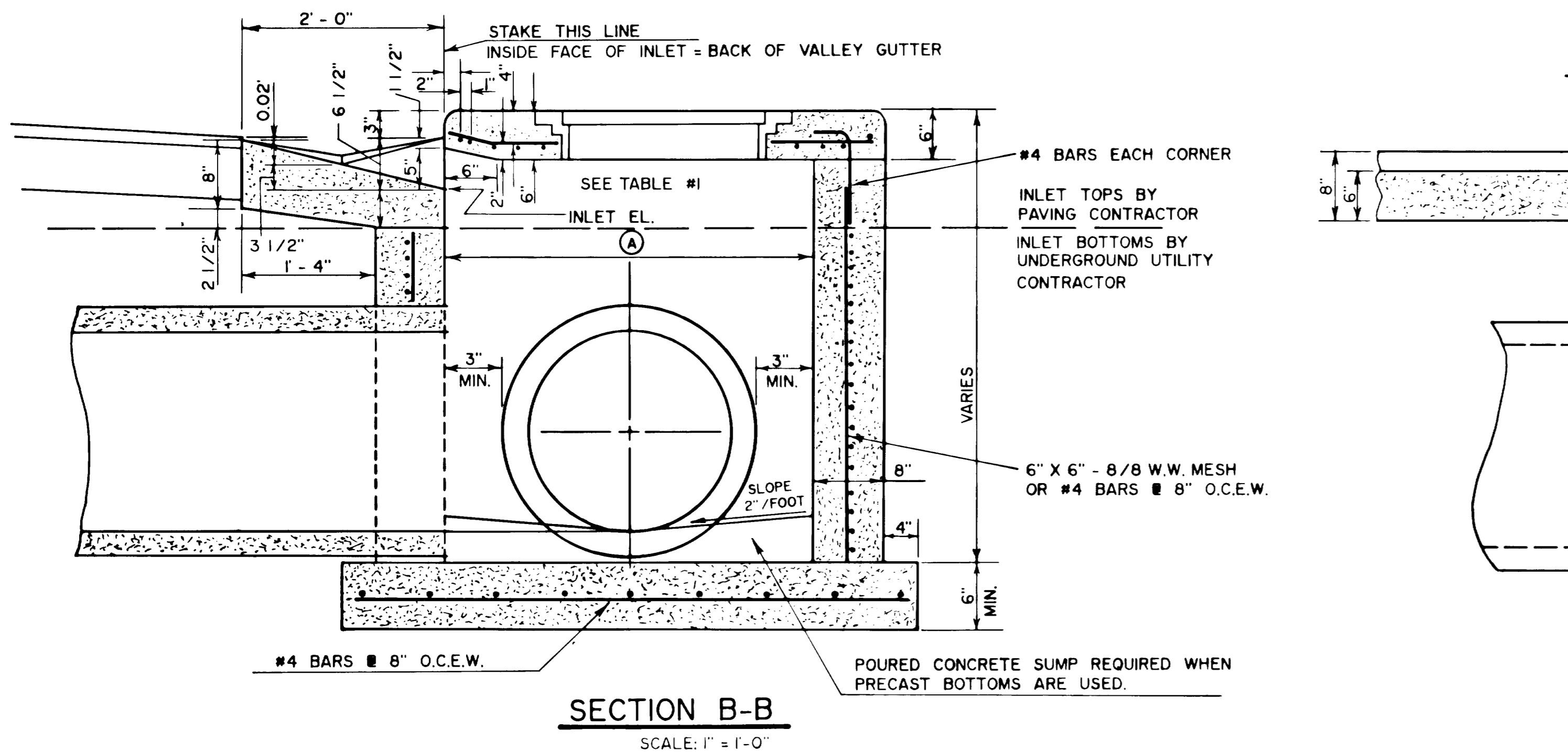
NOTE: STRUCTURE AND VALLEY GUTTER ARE SYMMETRICAL ABOUT THE STRUCTURE CENTERLINE

INTERCEPTOR CONSTRUCTION

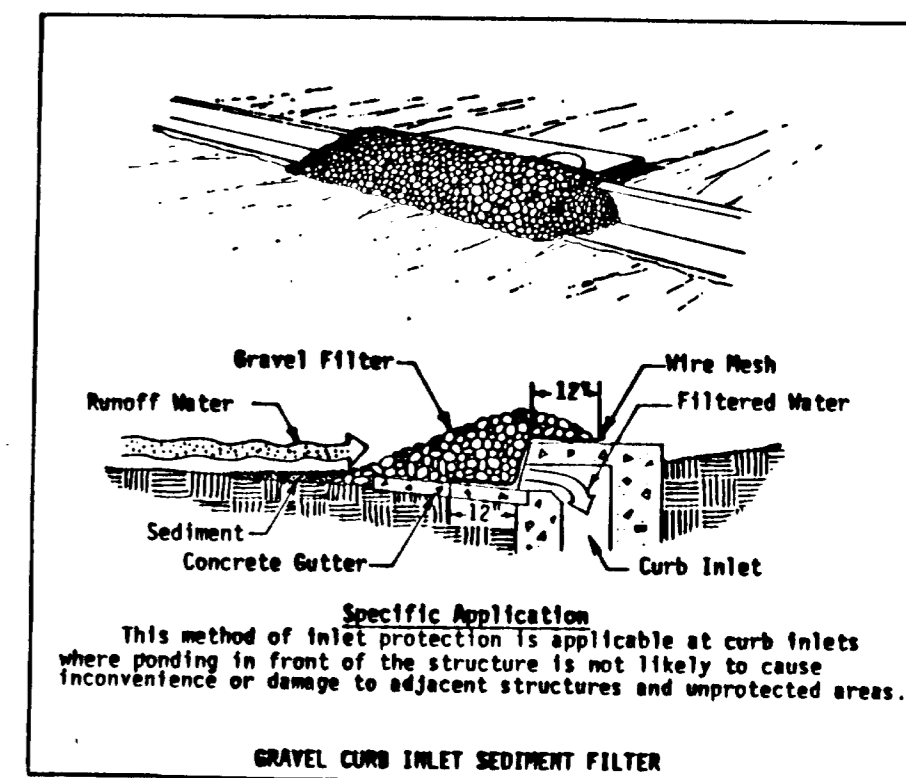
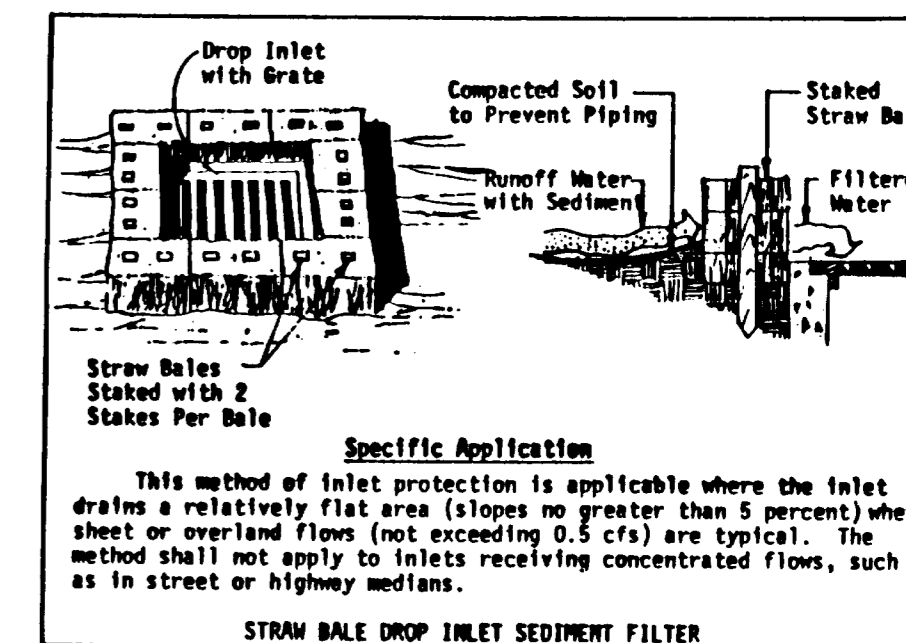
WHEN INLET FUNCTIONS AS AN INTERCEPTOR TYPE (LOCATED BETWEEN PAVEMENT LOW POINT AND HIGH POINT), THE DOWNSTREAM PART OF THE VALLEY GUTTER SHALL BE CONSTRUCTED AS SHOWN ON THE LEFT OF SECTION B-B AND IN THE PLAN VIEW.

NOTES:

- 1.) INLET TOPS SHALL BE FORMED AND CAST IN-PLACE; PRECAST INLET TOPS WILL NOT BE ACCEPTED. ALL FORMS AND STEEL PLACEMENT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT.
- 2.) ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 P.S.I. IN 28 DAYS; CLASS II CONCRETE REQUIRED PER FLORIDA D.O.T. SECTION 345, LATEST EDITION.



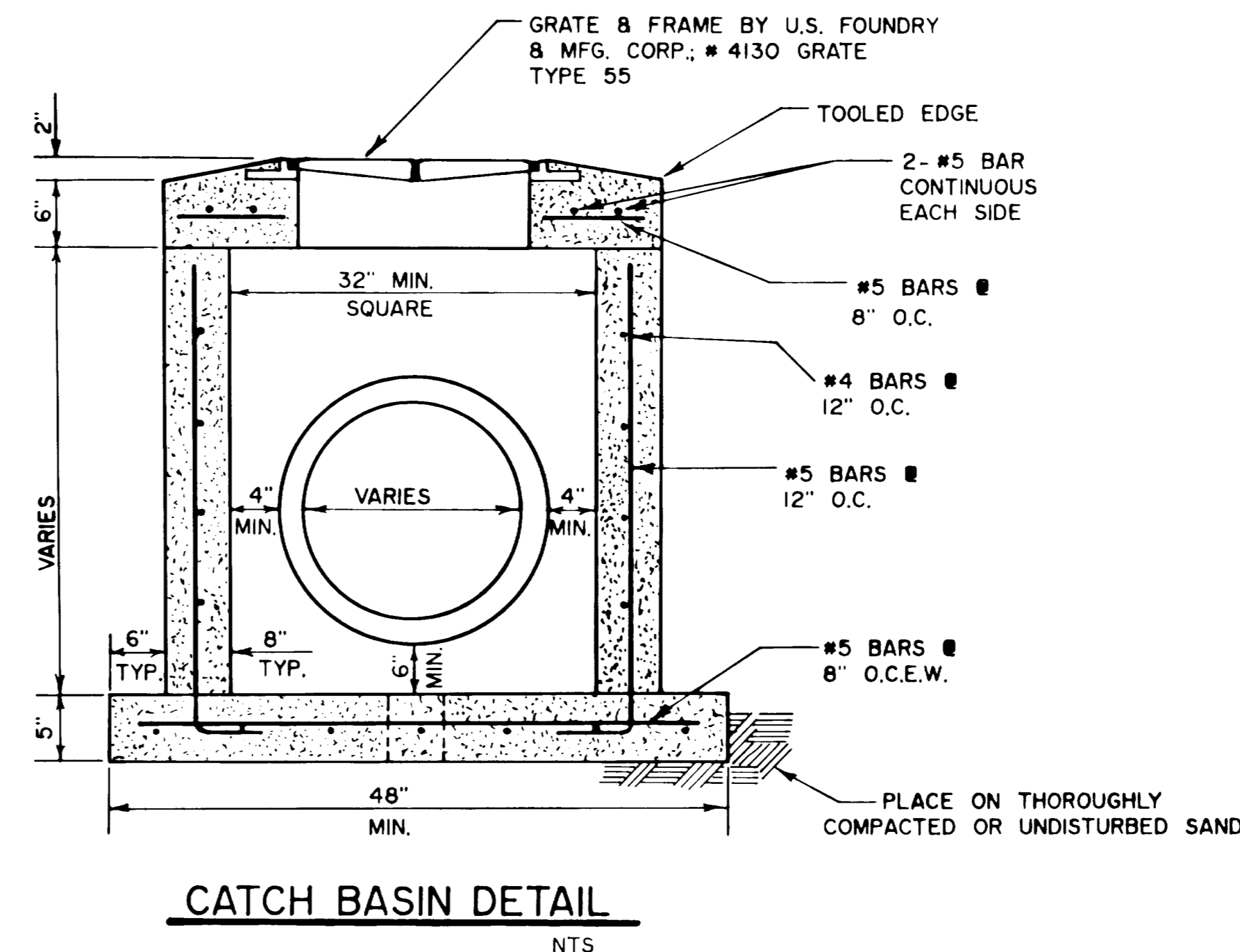
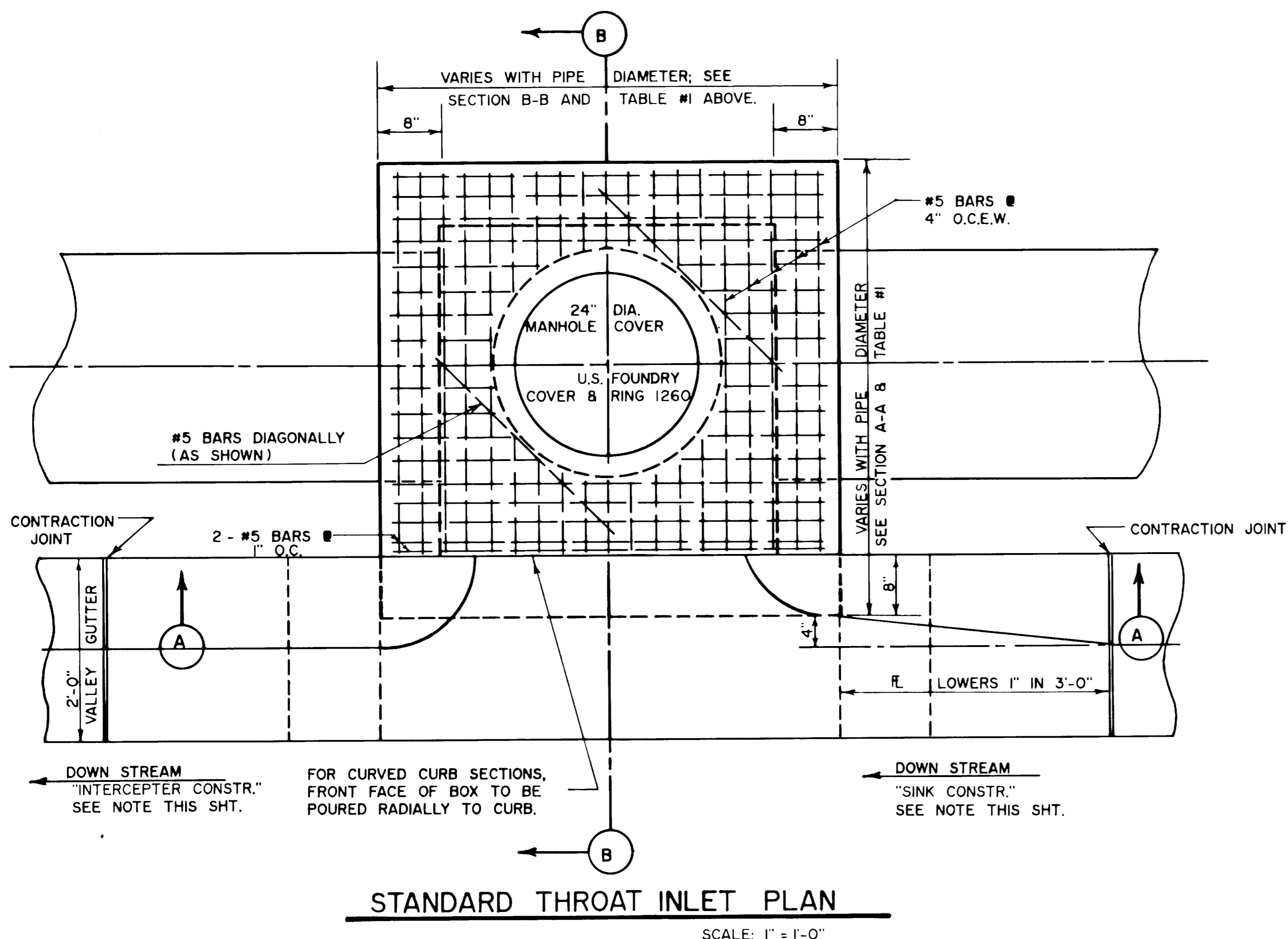
MANHOLE COVER



RECORD DRAWINGS

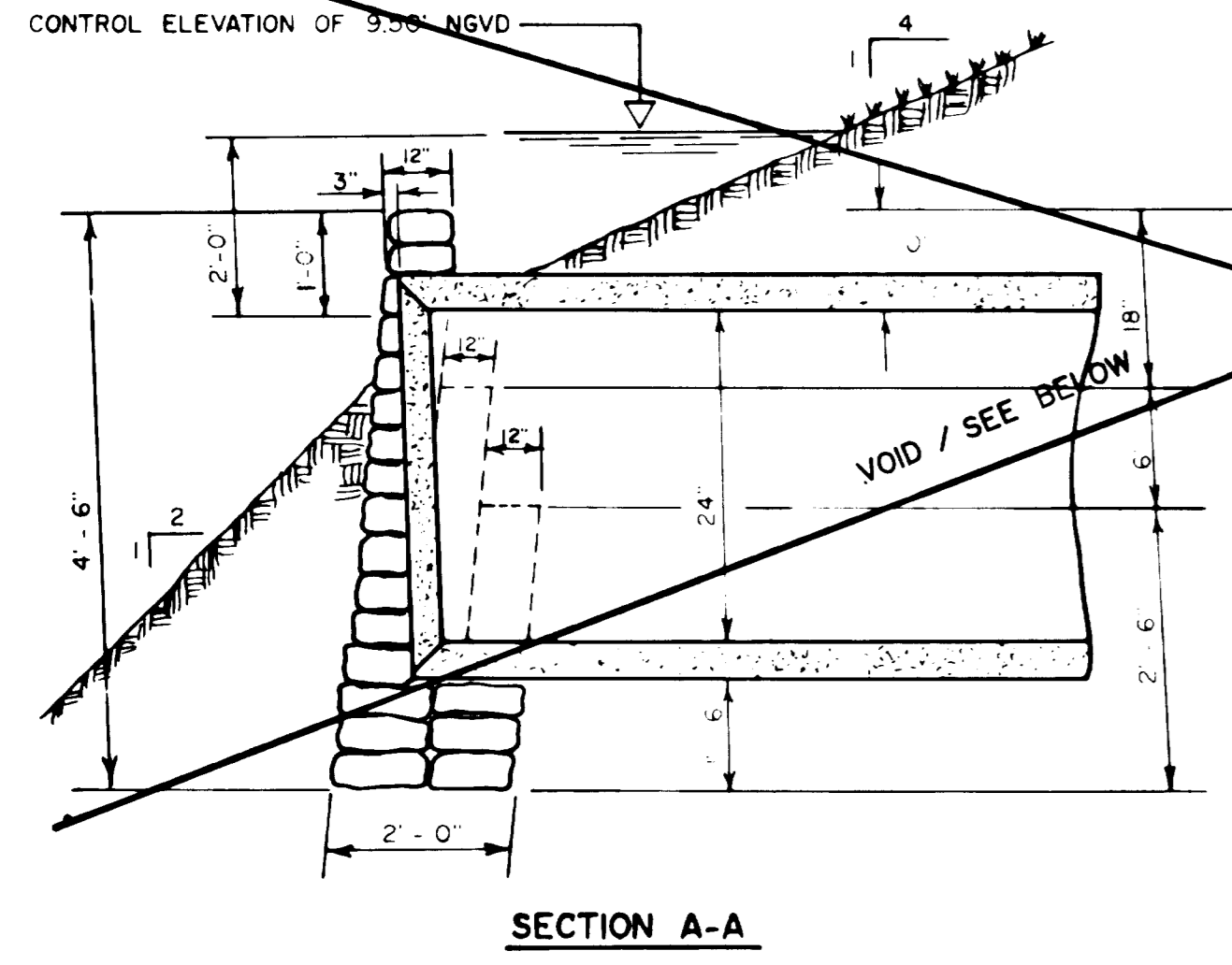
DATE 9/9/93

THESE RECORD DRAWINGS SHOW THE WORK COMPLETED ON THE POTABLE WATER, SANITARY SEWER, STORM DRAINAGE AND ROADWAY SYSTEMS DURING CONSTRUCTION. THEY ARE BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

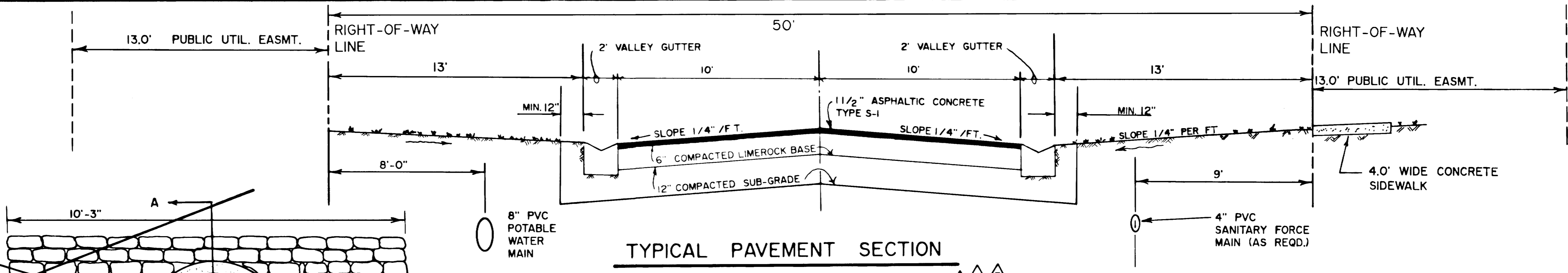


DATE: NOV.92	FOR: LONE OAK LIMITED
DESIGNED BY: RKL	LONE OAK P.U.D.
REVIEWED BY: RKL	LEXINGTON AT LONE OAK, UNIT ONE
APPROVED BY:	THROAT INLETS & CATCH BASIN DETAILS
SCALE: AS NOTED	
PROJECT NUMBER: 55	
LOCKHART ENGINEERING, INC.	
6732 LONE OAK BLVD.	NAPLES, FLORIDA 33942
SECTION TWP RGE REFERENCES: I 49S 25E	SHT. 9 OF 10 DRAWING NUMBER: D-77

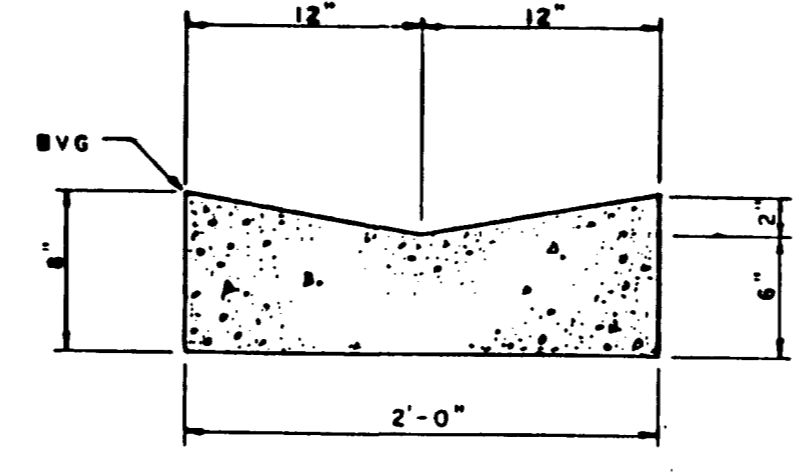
NOTE: SAND CEMENT HEADWALLS TO MEET REQUIREMENTS OF F.D.O.T. INDEX #258



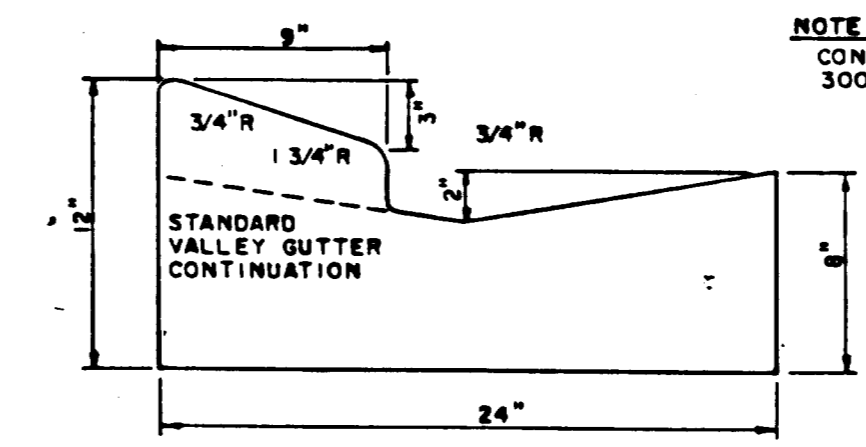
SAND CEMENT HEADWALL DETAIL
NTS



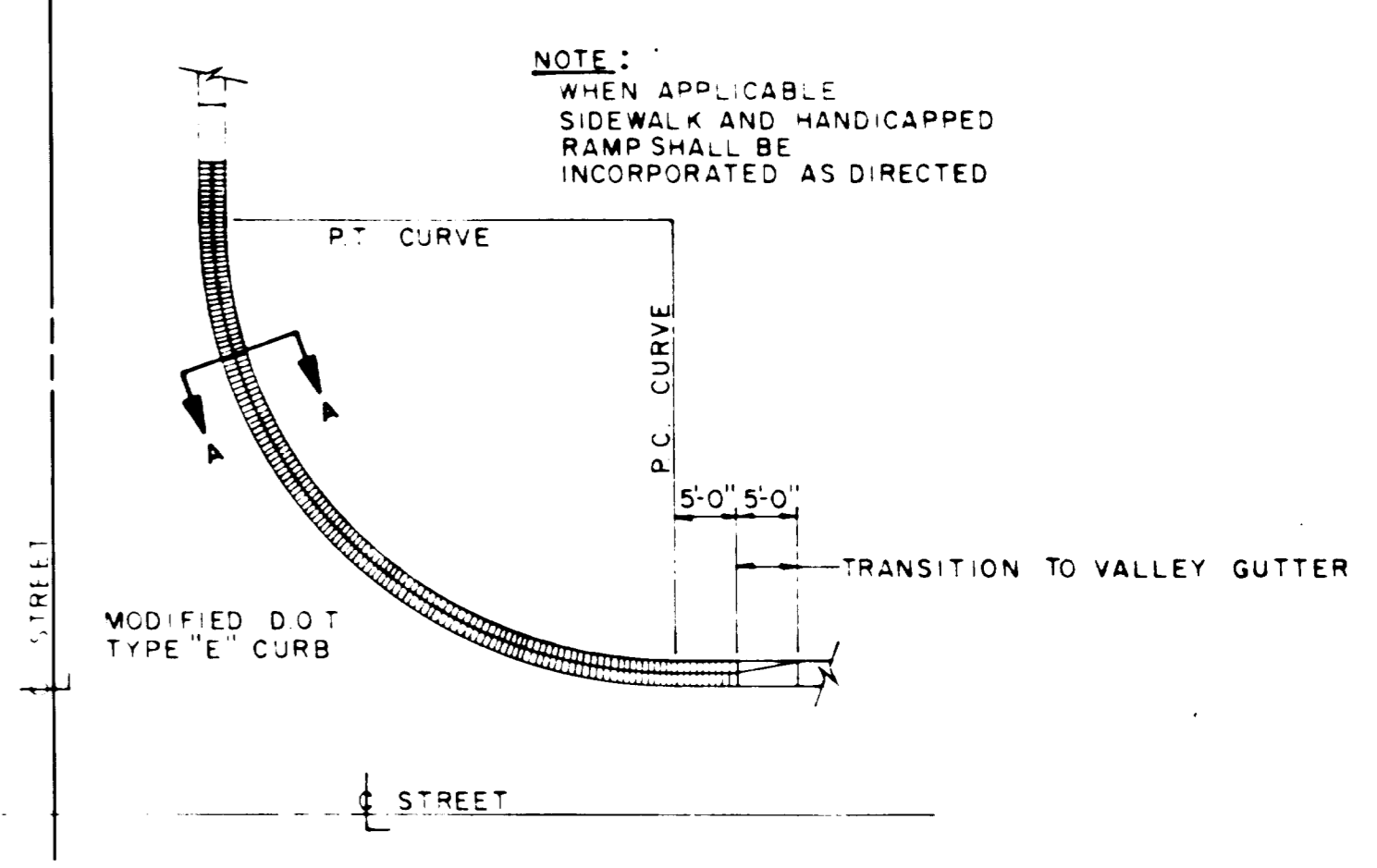
TYPICAL PAVEMENT SECTION



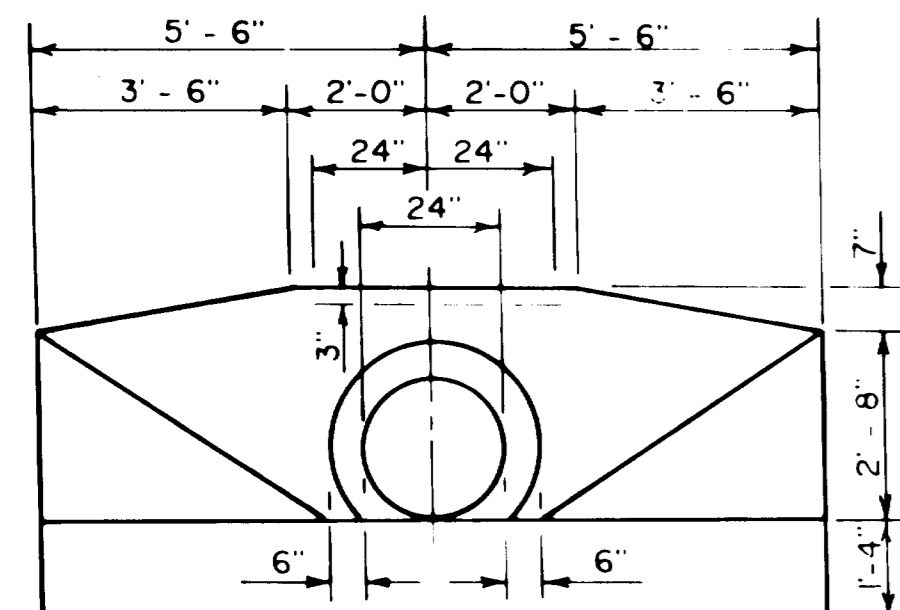
VALLEY GUTTER
NO SCALE



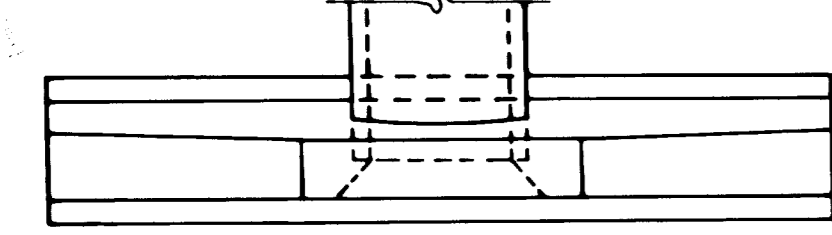
SECTION A-A
MODIFIED D.O.T. TYPE "E" CURB AND GUTTER



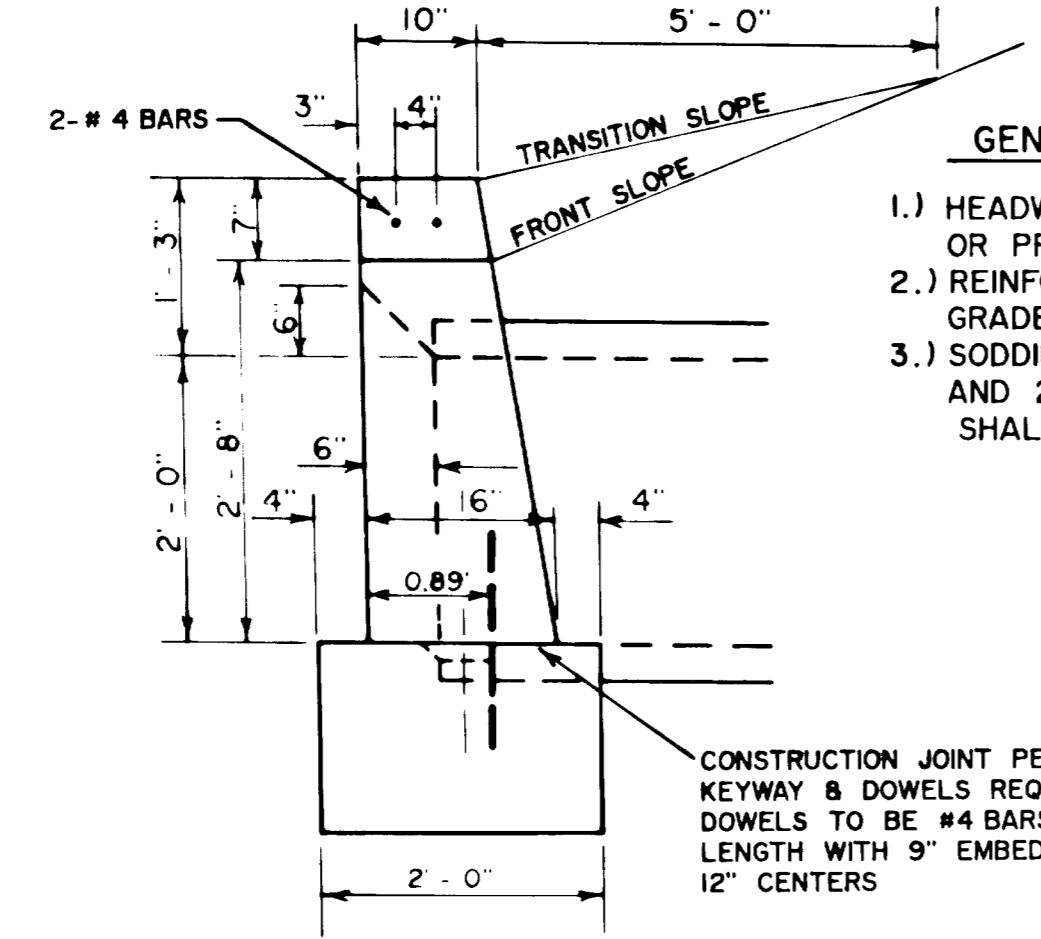
VALLEY GUTTER TRANSITION TO CURB SECTION
(AROUND RADIUS AT INTERSECTIONS)



FRONT VIEW



TOP VIEW

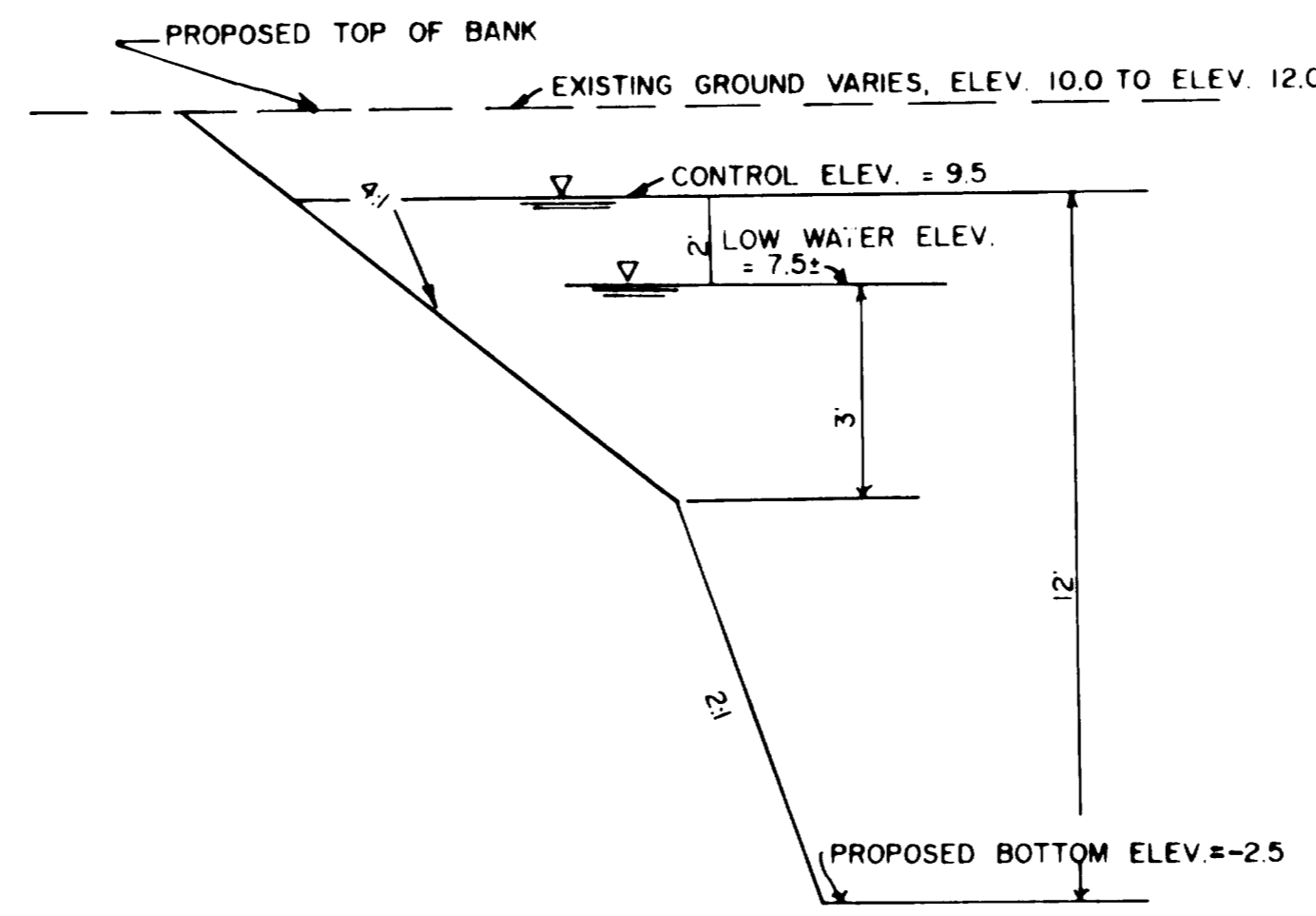


END VIEW

- GENERAL NOTES
- 1.) HEADWALLS MAY BE CAST IN PLACE OR PRECAST CONCRETE.
 - 2.) REINFORCING STEEL SHALL BE GRADES 40 OR 60.
 - 3.) SODDING REQUIRED AROUND HEADWALL AND 20' OUTSIDE; ALL SLOPED AREAS SHALL ALSO BE SODDED.

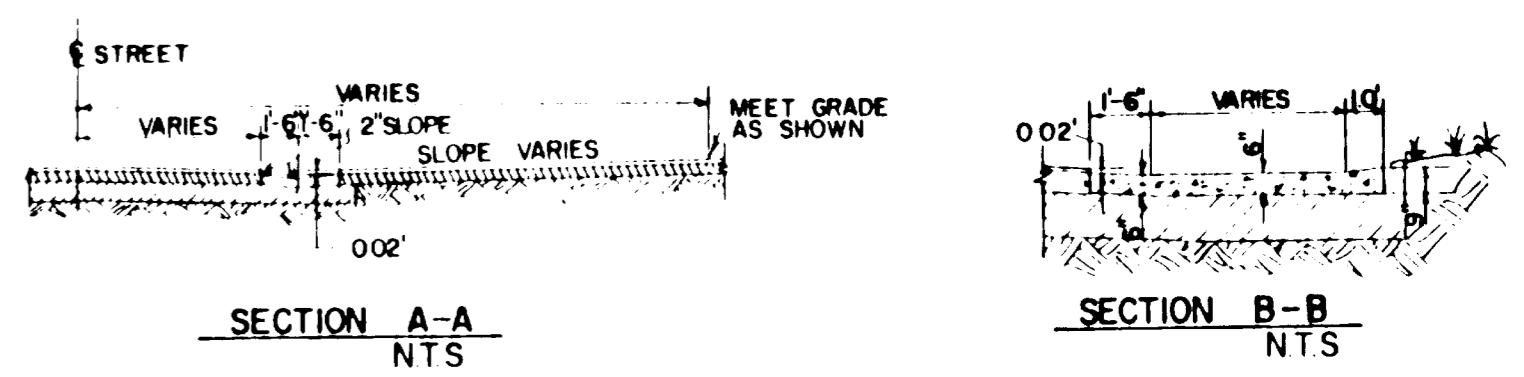
CONSTRUCTION JOINT PERMITTED, KEYWAY & DOWELS REQUIRED; DOWELS TO BE #4 BARS 18" IN LENGTH WITH 9" EMBEDMENT @ 12" CENTERS

STRAIGHT CONCRETE HEADWALL



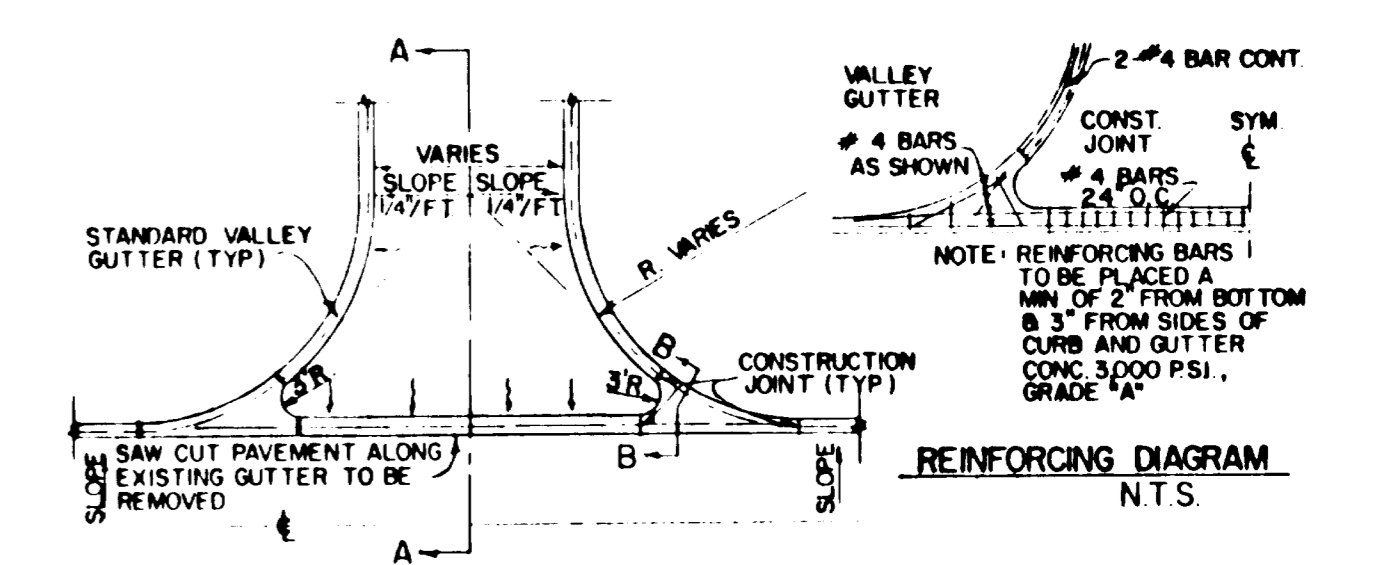
SECTION C-C
NTS

TYPICAL LAKE SECTION



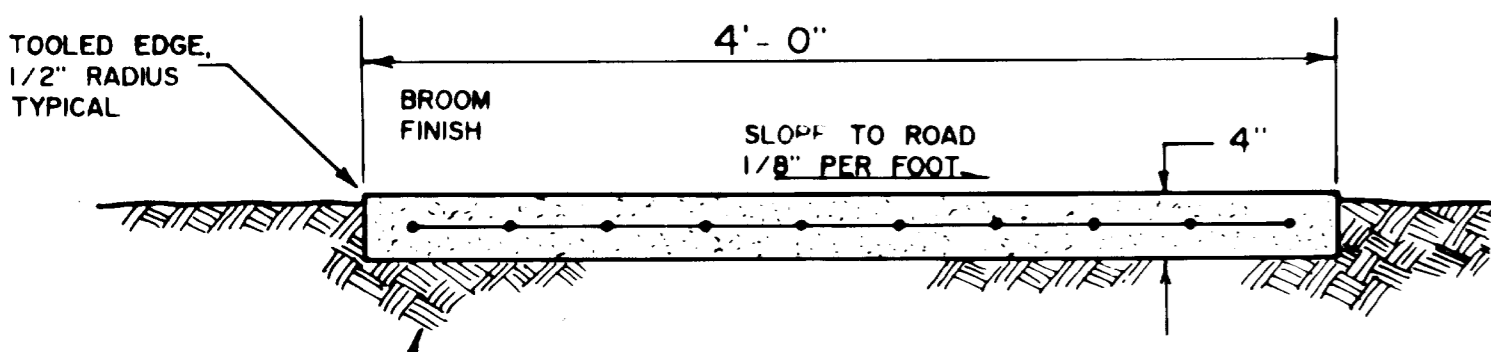
SECTION A-A
NTS

SECTION B-B
NTS



PLAN VIEW

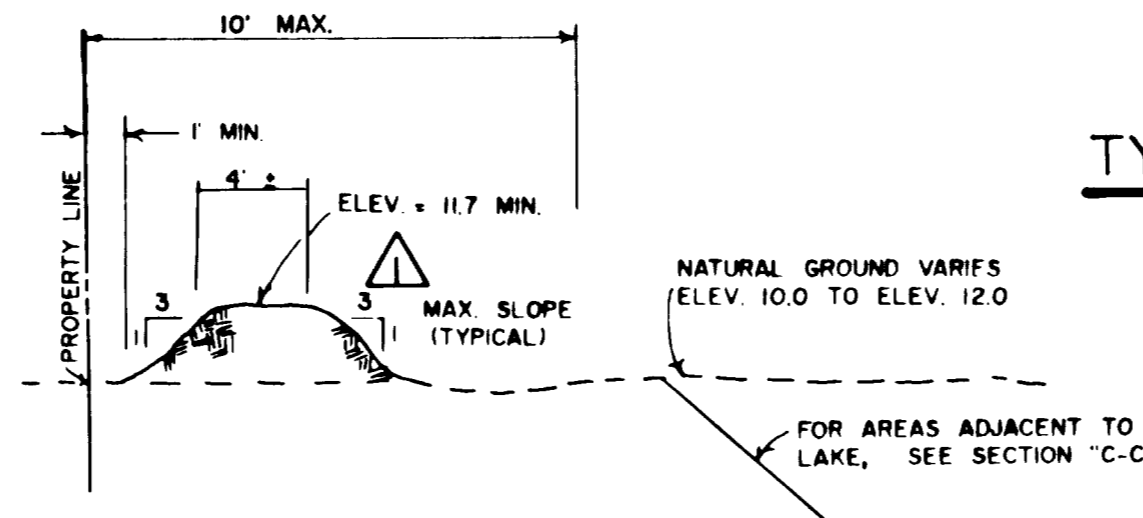
STANDARD VALLEY GUTTER CROSSING DETAIL



REINFORCED CONCRETE SIDEWALK DETAIL

NOTES:

- 1) CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS. REINFORCING SHALL BE #4 BARS 18" IN LENGTH WITH 9" EMBEDMENT @ 10"/10 WELDED WIRE MESH.
- 2) SUBGRADE SHALL BE SAND, COMPACTED TO A FIRM EVEN SURFACE, TRUE TO GRADE AND CROSS-SECTION, AND BE MOIST.
- 3) SIDEWALK SHALL HAVE CONTRACTION JOINTS AT 5' INTERVALS AND AN EXPANSION JOINT EVERY 35'.



SECTION D-D
NTS

- NOTES:
- 1) MINIMUM BERM ELEVATION = 11.7 (INGVD)
 - 2) HORIZONTAL ALIGNMENT AND SIDE SLOPES MAY VARY DEPENDING UPON APPROVED FINAL LANDSCAPE DESIGN AND EXISTING VEGETATION.
 - 3) BERM SHALL TERMINATE AT PROPOSED ROADWAYS OR NATURAL GROUND AT ELEVATION 11.7
 - 4) MAXIMUM BERM HEIGHT SHALL BE 2.0 FEET

PERIMETER BERM DETAIL

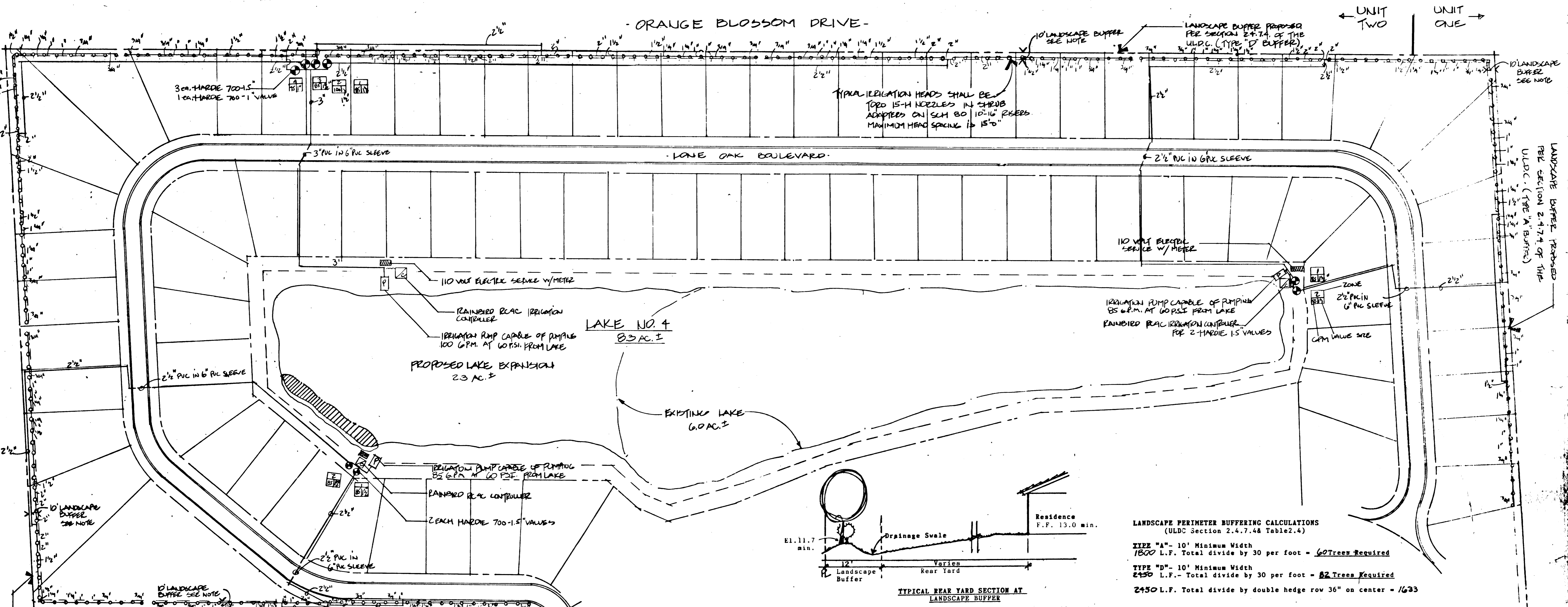
RECORD DRAWINGS

DATE 9/9/93

THESE RECORD DRAWINGS SHOW THE WORK COMPLETED ON THE POTABLE WATER, SANITARY SEWER, STORM DRAINAGE AND ROADWAY SYSTEMS DURING CONSTRUCTION. THEY ARE BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

- REVISIONS
- 9/9/93 REV. FOR RECORD DWGS. RKL
 - 5/5/93 REV. PER P.P.R. COMMENTS RKL
 - 4/13/93 REV. #2 PER P.P.R. RKL
 - 3/93 REVISED PER P.P.R. COMMENTS RKL

DATE	NOV. '92	FOR	LONE OAK LIMITED
DESIGNED BY	RKL	LONE OAK P.U.D.	
REVIEWED BY	RKL	LEXINGTON AT LONE OAK, UNIT ONE	
APPROVED BY		PAVING, DRAINAGE & MISC. DETAILS	
SCALE	AS NOTED	MISC. PVMT. DETAILS / HEADWALL DETAILS / PERIMETER BERM & LAKE EXCAV. DETAILS	
PROJECT NUMBER	65	LOCKHART ENGINEERING, INC.	
SECTION	TWP	RGE	REFERENCES
1	49S	25E	
SHT. 10 OF 10			DRAWING NUMBER D-77



LANDSCAPE BUFFER PROPOSED PER SECTION 2.4.7.4 OF THE U.L.D.C. (TYPE 'A' BUFFER)

TYPICAL LAKE LITTORAL ZONE PLANTING

Wetland Plantings in Littoral Zone

The lake littoral zone will be planted using species chosen from the list provided. Herbaceous and shrub species will be planted on staggered 3-foot centers while tree and shrub species will be planted on roughly 10-foot centers and grouped in clusters. All herbaceous material will be minimum 1 gallon pot stock or bare-root stock and tree and shrub species will be a minimum 18" in height.

Lake littoral zones will be planted at the beginning of the first wet season (growing season) following the completion of lake construction and final grading activities.

LITTORAL ZONE CALCULATIONS

TOTAL PROPOSED LAKE PERIMETER LENGTH	1,260 LF
REQUIRED LENGTH OF LITTORAL ZONE PLANTINGS	126 LF
PROVIDED LENGTH OF LITTORAL ZONE PLANTINGS	130 LF
PROVIDED AREA OF LITTORAL ZONE PLANTING	1,820 SF

WETLAND SPECIES PLANTING LIST (C)

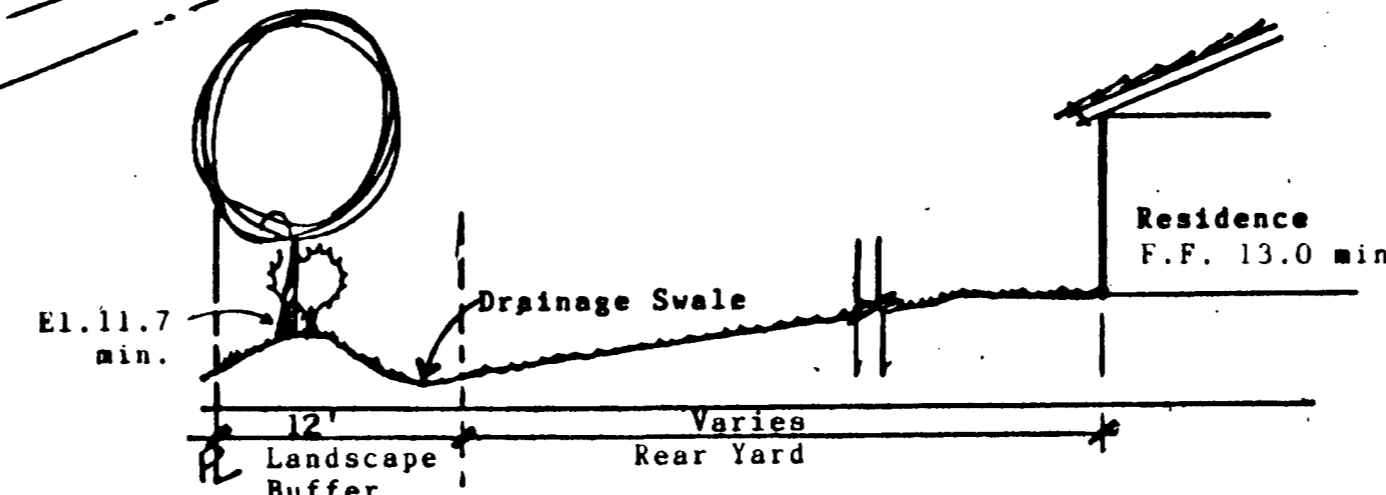
ZONE 1 SPECIES: 1.0' above to 0.5' below lake control elevation, transitional margins

- Herbaceous Species**
- Jointgrass (*Paspalum vaginatum*)
 - Wiregrass (*Andropogon scoparius*)
 - Arrow Arum (*Peltandra virginica*)
 - Maidencane (*Panicum hamiltonianum*)
 - Soft Rush (*Juncus effusus*)
 - Blue Flag Iris (*Iris hexagona*)
 - Golden Canna (*Canna flaccida*)
 - Snow Cordgrass (*Spartina bakeri*)
 - Swamp Lily (*Lilium americanum*)
 - Smartweed (*Polygonum spp.*)
 - Lizard's Tail (*Sagittaria arifolia*)
 - Cinnamon Fern (*Cheilanthes cinnamomea*)
 - Swamp Fern (*Blachium serrulatum*)
 - Royal Fern (*Osmunda regalis*)
 - Spider Lily (*Hymenocallis palmeri*)
 - Giant Bulrush (*Scirpus californicus*)
- Trees and Shrubs**
- Red Maple (*Acer rubrum*)
 - Cypress (*Taxodium distichum*, *T. ascendens*)
 - Swamp Black Gum (*Nyssa sylvatica* var. *bilfara*)
 - Sweet Gum (*Liquidambar styraciflua*)
 - Florida Elm (*Ulmus americana floridana*)
 - Laurel Oak (*Quercus laurifolia*)
 - Popash (*Eragrostis caroliniana*)
 - Willow (*Salix caroliniana*)
 - Wax Myrtle (*Myrica caribaea*)
 - Dahoon Holly (*Ilex cassina*)
 - Bullet Bush (*Casipouita occidentalis*)
 - Myrsine (*Myrsine guianensis*)
 - Pond Apple (*Annona glabra*)
 - Elderberry (*Sambucus canadensis*)

- ZONE 2 SPECIES: 0.5' to 2.0' below lake control elevation
- Pickersweed (*Potamogeton nodosus*)
 - Common Arrowhead (*Sagittaria latifolia*)
 - Coastal Arrowhead (*Sagittaria arifolia*)
 - Soft-stem Bulrush (*Scirpus californicus*, *S. validus*)
 - Spike Rush (*Eleocharis spp.*)
 - Wild Rice (*Zizania aquatica*)
 - Fire Flag (*Ichnusa tenuifolia*)
 - Sawgrass (*Cladium americanum*)
 - Eel Grass (*Vallisneria spiralis*)

- (C) Planted species may deviate from those listed depending upon site conditions and availability of stock.

TYPICAL REAR YARD SECTION AT LANDSCAPE BUFFER



LANDSCAPE PERIMETER BUFFERING CALCULATIONS
(ULDC Section 2.4.7.4 & Table 2.4)

- TYPE "A"** - 10' Minimum Width
1800 L.F. Total divide by 30 per foot = **60 Trees Required**
- TYPE "D"** - 10' Minimum Width
2450 L.F. Total divide by 30 per foot = **82 Trees Required**
- 2450 L.F. Total divide by double hedge row 36" on center = **1633**

LANDSCAPE BUFFERS PLANTING NOTES

The landscape planting buffers will be planted using species from the list provided. Shrubs will be planted in double rows with staggered 36" on center spacings. All shrubs shall be a minimum of 28" in height and be from 3 gallon minimum size containers at time of planting, and be maintained so as to attain a height of 36" after one year from date of planting.

Fifty percent of the required trees shall be a minimum of 10' in height at time of planting with 1 3/4" caliper, and the remaining required trees shall be at least 8' in height with a 1 1/2" caliper. Three palms shall be grouped to equal one tree with no more than 30% of the required trees being palms. All required trees shall have a mature height of 15' and spread of 20' minimum.

At least 75% of the trees and 50% of the shrubs required shall be native Southern Florida species.

All plant species shall be Florida No. 1 or better, as set out in "GRADES AND Standards for Nursery Plants", Part I, and II, Dept. of Agriculture, State of Florida.

NOTE: PALMS SHALL NOT EXCEED 30% OF TREES REQUIRED.

BOTANICAL NAME	COMMON NAME
<i>Acacia farnesiana</i>	Sweet acacia
<i>Acer rubrum</i>	Red Maple
<i>Bauhinia</i> spp.	Hong Kong Orchid
<i>Callistemon</i> spp.	Bottle Brush
<i>Chrysophyllum oliviforme</i>	Satin leaf
<i>Mangifera indica</i>	Mango
<i>Holly</i> spp.	Holly spp.
<i>Scaevola taccada</i>	Seaside Hibiscus
<i>Lycium latifolium</i>	Wild Tamarind
<i>Magnolia grandiflora</i>	Southern Magnolia
<i>Podocarpus gracillaris</i>	Weeping Podocarpus
<i>Pinus elliotii</i>	Slash Pine
<i>Quercus</i> spp.	Oak
<i>Syzygium mahagoni</i>	Mahogany
<i>Taxarindus indica</i>	Tamarind
<i>Arecastrum comansoffianum</i>	Queen Palm
<i>Roystonea elata</i>	Royal Palm
<i>Sabal palmetto</i>	Cabbage Palm
<i>Coccothrinax malayana</i>	Coconut Palm
<i>Artibeus eschscholtzii</i>	Mulberry
<i>Callicarpa americana</i>	Beauty Berry
<i>Coccoloba uvifera</i>	Seagrape
<i>Conocarpus</i> spp.	Butterwood
<i>Elaeagnus pungens</i>	Silverthorn
<i>Eugenia</i> spp.	Eugenia
<i>Ficus</i> spp.	Fig
<i>Hamelia patens</i>	Firebush
<i>Hibiscus</i> spp.	Hibiscus
<i>Jasminum</i> spp.	Jasmine
<i>Ligustrum</i> spp.	Privet
<i>Myrsine floridana</i>	Myrsine
<i>Myrica caribaea</i>	Wax Myrtle
<i>Photinia serrulata</i>	Chinese Photinia
<i>Podocarpus</i> spp.	Yew
<i>Severinia buxifolia</i>	Boxthorn
<i>Viburnum</i> spp.	Crepe Myrtle
<i>Loganostroma</i> spp.	

* NATIVE SPECIES

PREPARED FOR: **LOU OAK LIMITED**

DATE: 1-11-93

SCALE: 1"=10'

FILE NO: 101

SCALE: 1"=10'

LANDSCAPE PLAN
LEXINGTON AT LOU OAK
UNITS ONE & TWO

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