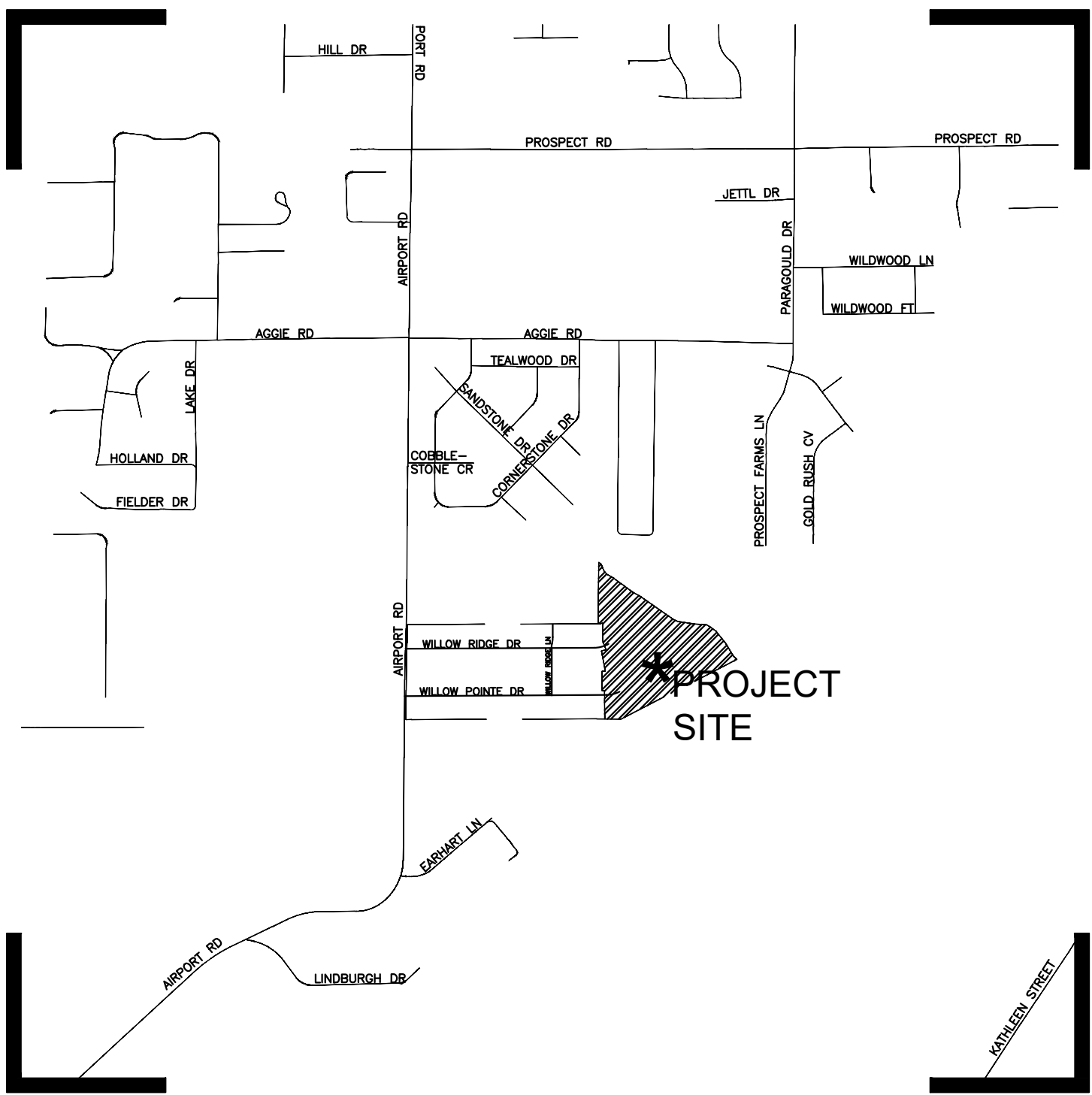


WILLOW POINTE SUBDIVISION

WILLOW POINTE PHASE IV - UTILITY PLANS JONESBORO, CRAIGHEAD COUNTY, ARKANSAS

LOCAL CONTACTS

CITY OF JONESBORO ENGINEERING DEPT.	870-932-2438
CITY OF JONESBORO PLANNING AND ZONING	870-932-0406
CITY, WATER, & LIGHT	870-935-5581
AT&T	1-800-464-7928
RITTER COMMUNICATIONS	870-336-3400
SUDDENLINK COMMUNICATIONS	870-935-3615
CENTER POINT ENERGY	870-972-6682



VICINITY MAP
SCALE: 1"=1000'

NAD83 Arkansas State Planes, North Zone, US Foot

INDEX OF SHEETS

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OV-1	KEY MAP
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SW-1	SEWER PLAN
GR-1	GRADING & DRAINAGE PLAN
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ST-1	STREET PLAN & PROFILE
DT-1	EROSION CONTROL DETAILS
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DT-4	STREET CONSTRUCTION DETAILS

WILLOW POINTE PHASE IV

COVER PAGE



REVISIONS		
DATE	BY	DESCRIPTION

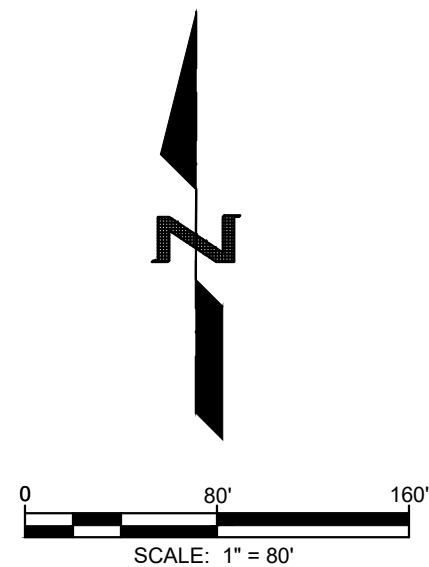
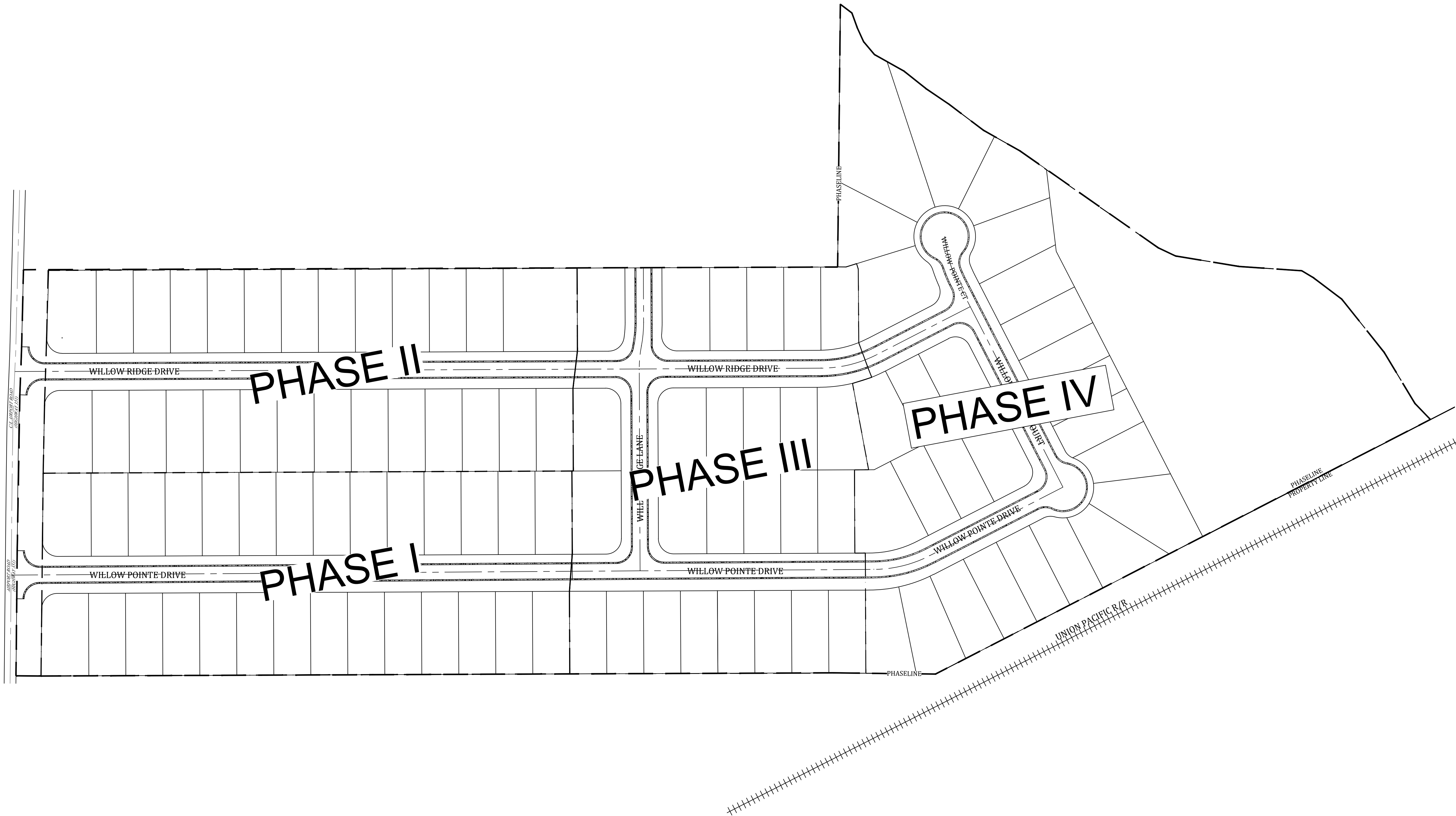
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DRAWN BY:	GMD
DATE:	11/30/2017
SCALE:	1"=77'

SHEET NUMBER:
C-1



1. BEARINGS ARE STATE PLANE GRID BEARINGS(NAD 83 DATUM)AS PER
GPS OBSERVATION ON SITE DURING SURVEY AND ARE TO BE USE TO DEFINE
THE GENERAL DIRECTION AND TRUE ANGLE AT THE INTERSECTION OF THE
PROPERTY AND LAND LINES.
2. PROPERTY IS SUBJECT TO UTILITY SERVICES AND UNDERGROUND
UTILITY LINES NOT LOCATED.

PLS # 1142



REVISIONS		
DATE	BY	DESCRIPTION

DRAWING INFO.	
DRAWN BY:	GMD
DATE:	5/1/2019
SCALE:	1"=80'

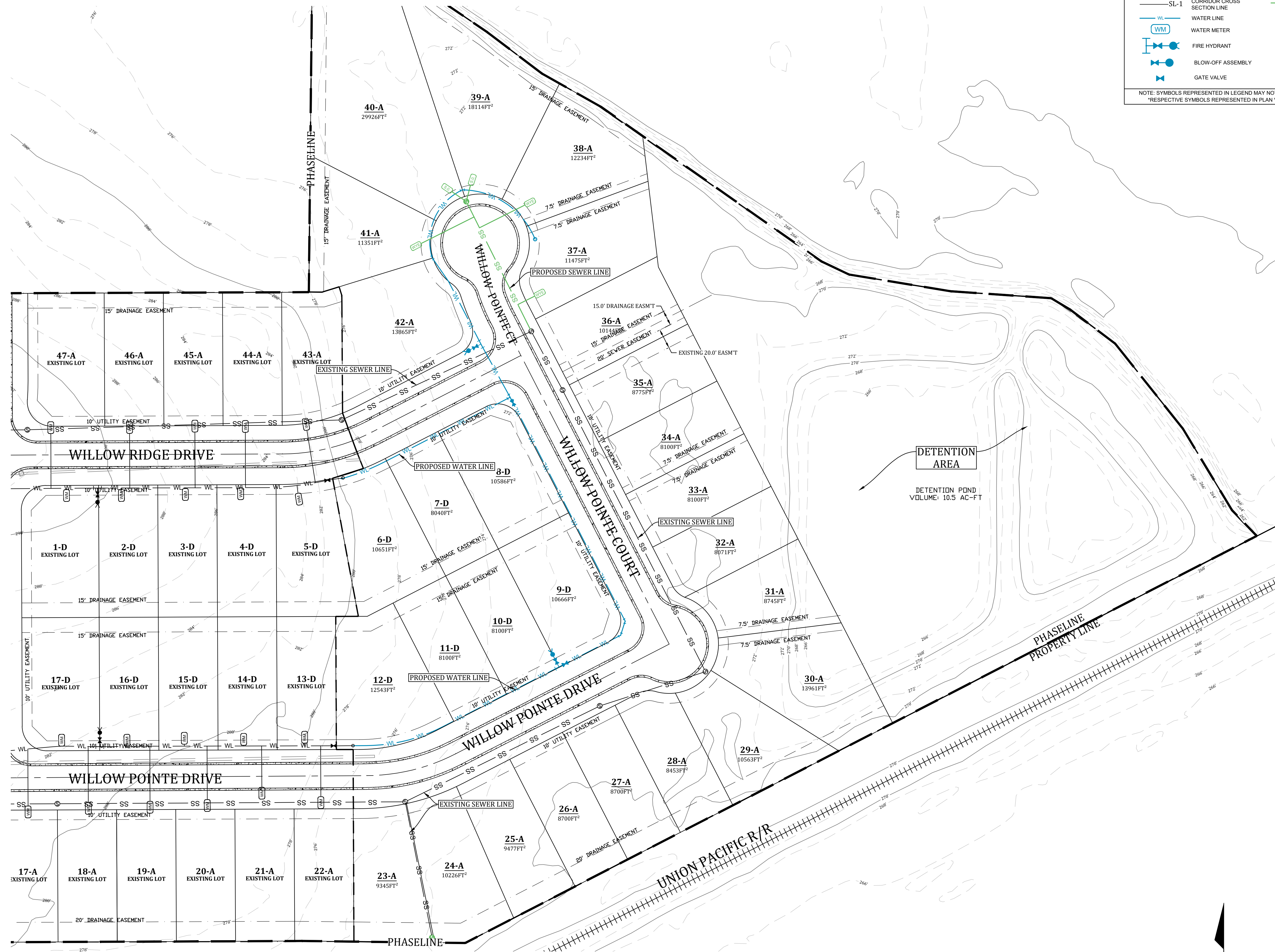
SHEET NUMBER:
OV-1

WILLOW POINTE PHASE IV

KEY MAP

MARK MORRIS

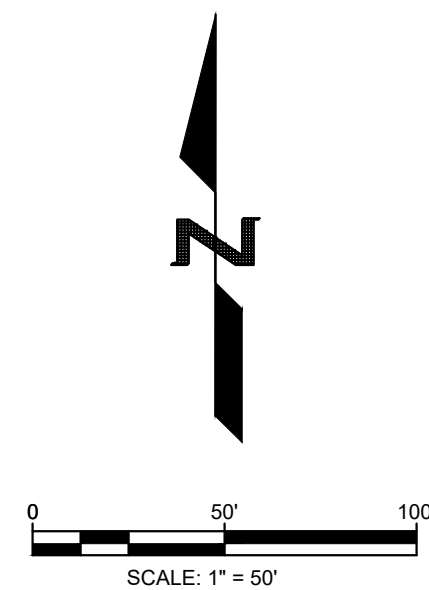
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PH: 1-870-919-7700
MARK.B.MORRIS@YAHOO.COM



LEGEND

	CURB		STORM DRAIN INLET
	SIDEWALK		STORM DRAIN PIPE
	CORRIDOR CROSS SECTION LINE		SANITARY SEWER
	WATER LINE		SEWER MANHOLE
	WATER METER		SEWER WYE
	FIRE HYDRANT		SEWER STUB- OUT
	BLOW-OFF ASSEMBLY		EX. SEWER WYE
	GATE VALVE		EX. SEWER STUB- OUT

NOTE: SYMBOLS REPRESENTED IN LEGEND MAY NOT ALL BE INCLUDED ON THIS SHEET
RESPECTIVE SYMBOLS REPRESENTED IN PLAN VIEW ARE NOT TO SCALE



WILLOW POINTE PHASE IV

OVERALL UTILITY



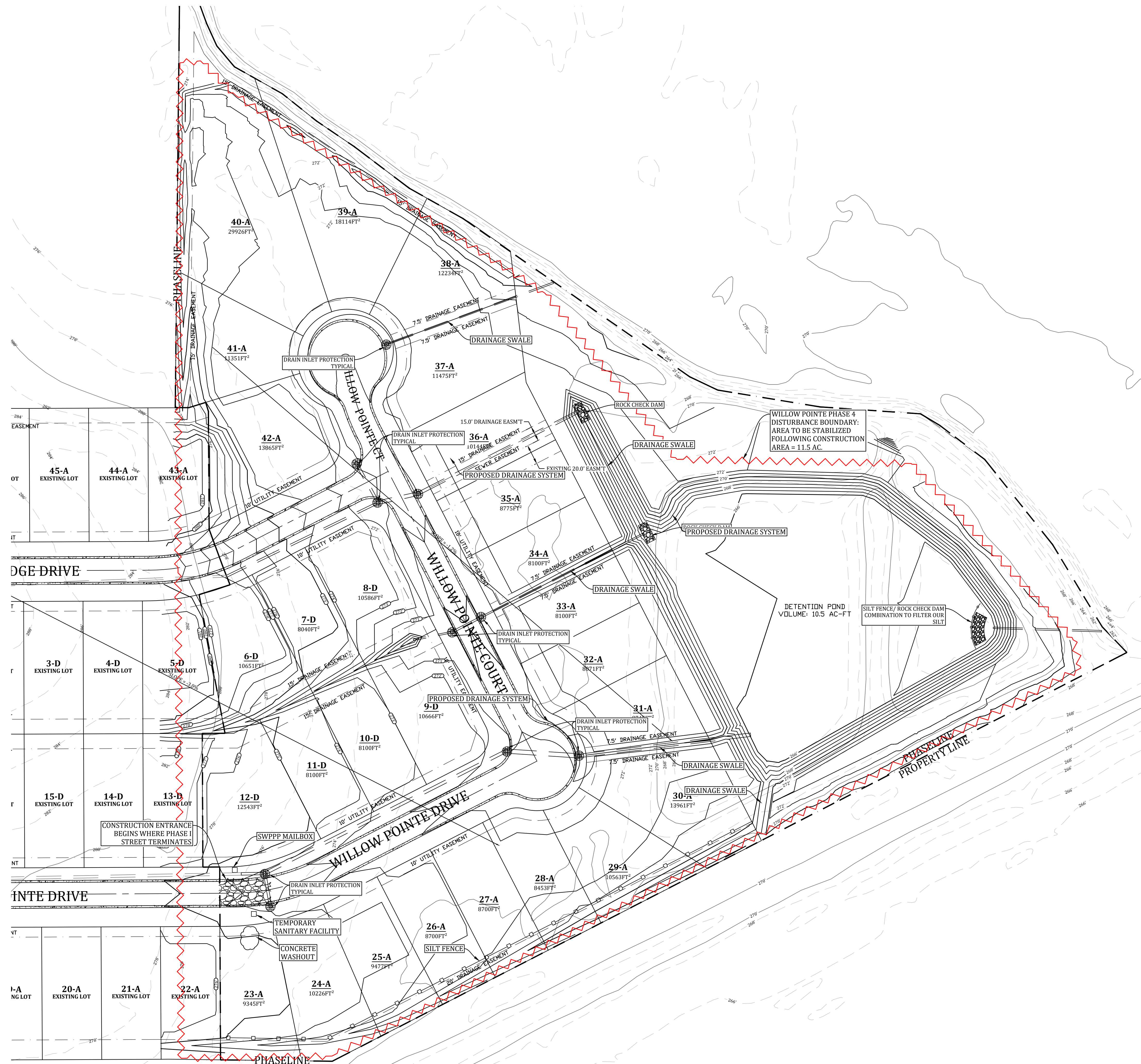
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DATE:	5/1/2019
SCALE:	1"=50'

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0V-2

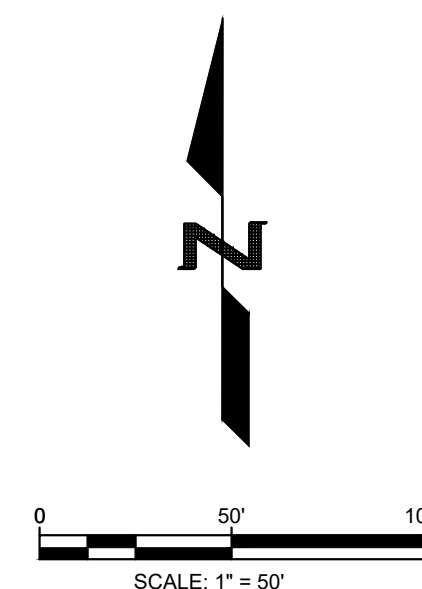
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MARK MORRIS



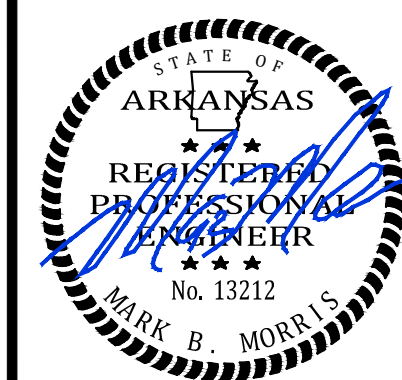
SWPPP NOTES:

- THIS SWPPP/DEMO PLAN IS TO ENSURE THAT THE PROPER MEASURES ARE TAKEN IN ORDER TO PREVENT ANY UNNECESSARY RUNOFF/ INFILTRATION TO ANY AND ALL EXISTING WATER WAYS. THE CONTROL MEASURES SPECIFIED IN THIS PLAN ARE TO BE PUT INTO PLACE BEFORE ANY DISTURBANCE ACTIVITIES TAKE PLACE, AND PROPER MAINTENANCE OF THESE CONTROL MEASURES IS REQUIRED.
- ALL CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INAPPROPRIATELY OR CORRECTLY, THE CONTROL MUST BE REPLACED OR MODIFIED FOR THE SITE SITUATIONS.
- INSPECTIONS WILL BE MADE WEEKLY; ALL OBSERVED DEFICIENCIES OF THE BEST MANAGEMENT PRACTICES (BMP's) WILL BE RECORDED AND REPAIRED AS SOON AS POSSIBLE.
- INSTALLATION AND IMPLEMENTATION OF A STONE CONSTRUCTION ENTRANCE/EXIT IS TO BE PLACED AS SPECIFIED ON THE PLANS; THIS IS TO AVOID DUST AND MUD TRACKING ON STREETS. ALL TRACKING MATERIALS ARE TO BE CLEANED OFF OF STREETS AS OFTEN AS NECESSARY.
- SEDIMENT SHALL BE REMOVED FROM ALL EROSION CONTROL DEVICES WHEN AT LEAST 50% CAPACITY HAS BEEN REACHED.
- CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL LOCAL, STATE, AND FEDERAL PERMITS RELATED TO ALL CLEARING/DEMOLITION ACTIVITIES.
- CONTRACTOR SHALL KEEP AN ORDERLY WORK SITE AND SHALL DISPOSE OF ALL CONSTRUCTION DEBRIS IN ACCORDANCE WITH ALL LOCAL, STATE, AND/OR FEDERAL REGULATIONS.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO EXISTING FACILITIES AND/OR ADJACENT PROPERTIES, AND SHALL BE RESPONSIBLE FOR DAMAGE THAT MAY OCCUR.
- A COPY OF THE SWPPP PERMIT/PLAN, EROSION CONTROL MAP AND DETAILS, AND ANY OTHER NECESSARY DOCUMENTS PERTAINING TO STORM WATER DRAINAGE IS TO BE PLACED ON SITE NEAR THE CONSTRUCTION ENTRANCE IN AN EASILY ACCESSIBLE LOCATION.

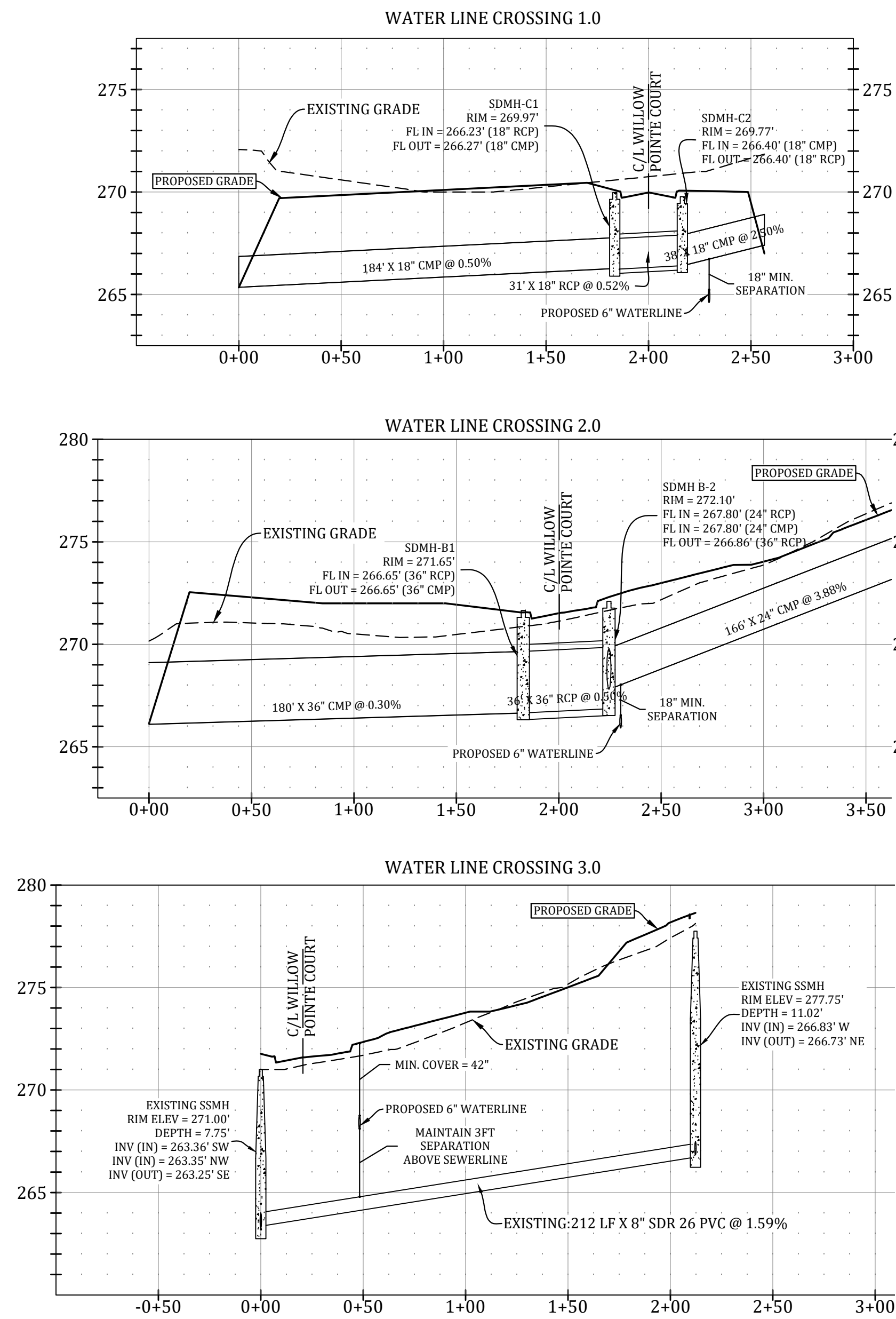


WILLOW POINTE PHASE IV

EROSION CONTROL PLAN

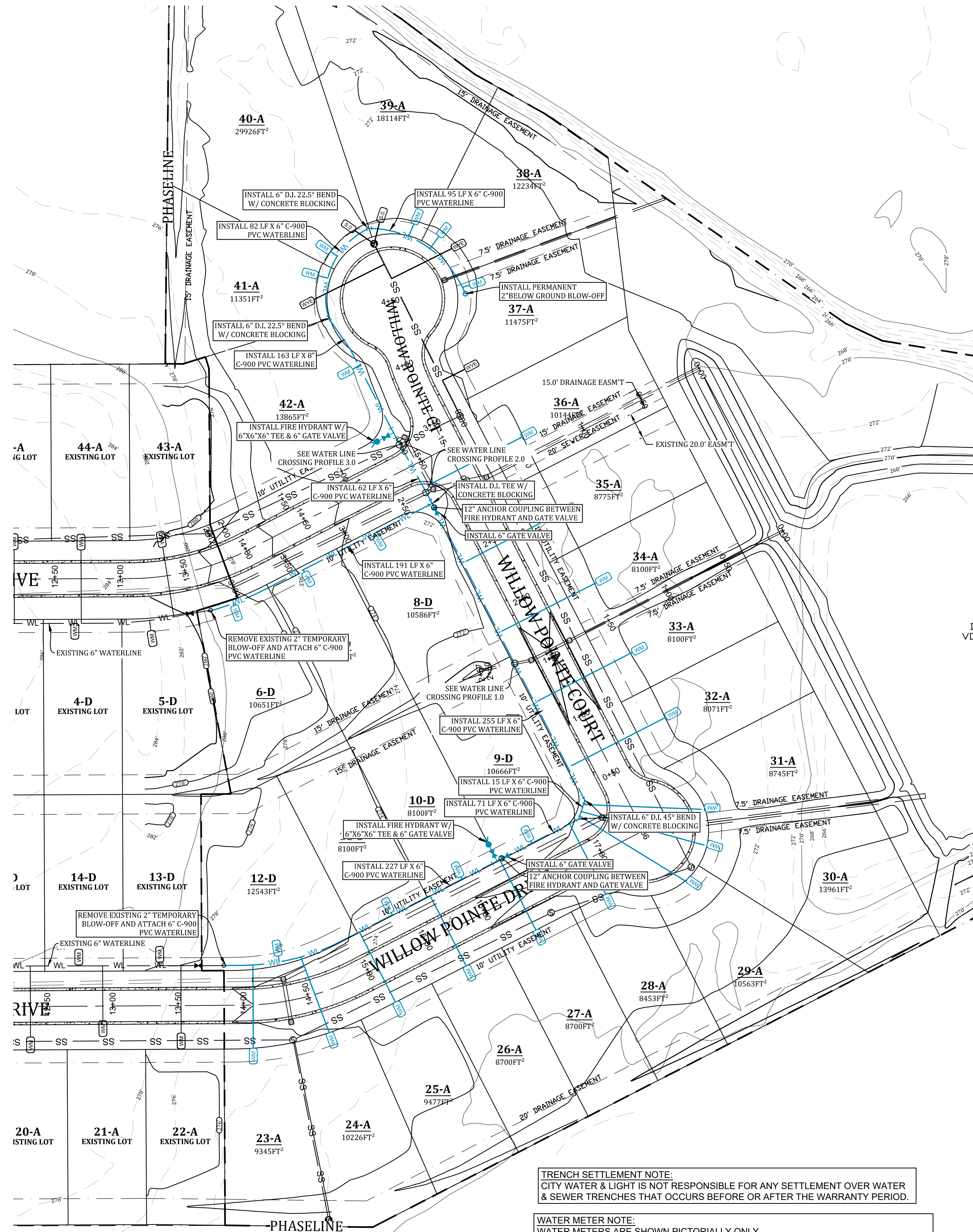


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DATE	BY	DESCRIPTION
DRAWING INFO.		
DRAWN BY:	GMD	
DATE:	5/1/2019	
SCALE:	1"=50'	
SHEET NUMBER:		
E-1		



OPERATING NOTE:

THE OPERATING ROUTINE SHALL INCLUDE NECESSARY PROTECTIVE MEASURES TO DETECT AND REMOVE OR DESTROY ANY CONTAMINANT OF CONCERN OR REGULATION THAT MIGHT ENTER THE DISTRIBUTION SYSTEM. EVERY PRECAUTION MUST BE TAKEN AGAINST THE POSSIBILITY OF SEWAGE CONTAMINATION OF THE WATER IN THE DISTRIBUTION SYSTEM. WATER MAINS AND SANITARY SEWERS SHALL BE CONSTRUCTED AS FAR APART AS PRACTICABLE, AND SHALL BE SEPARATED BY UNDISTURBED AND COMPACTED EARTH. A MINIMUM HORIZONTAL DISTANCE OF 10' SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINE OR OTHER SOURCES OF CONTAMINATION. WATER LINES AND SEWER SHALL NOT BE LAID IN THE SAME TRENCH EXCEPT OF THE WRITTEN APPROVAL OF THE ARKANSAS DEPARTMENT OF HEALTH. WATER MAINS NECESSARILY CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATERLINE WILL BE AT LEAST 18" ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN A WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST 10' EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18" OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENTS. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH. A MINIMUM HORIZONTAL DISTANCE OF 3' SHALL BE MAINTAINED BETWEEN WATER LINES AND OTHER UNDERGROUND UTILITIES OF A NON-SANITARY NATURE (GAS, ELECTRIC, ETC.), EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH AND HUMAN SERVICES.



TRENCH SETTLEMENT NOTE:

CITY WATER & LIGHT IS NOT RESPONSIBLE FOR ANY SETTLEMENT OVER WATER & SEWER TRENCHES THAT OCCURS BEFORE OR AFTER THE WARRANTY PERIOD.

WATER METER NOTE:

WATER METERS ARE SHOWN PICTORIALLY ONLY. WATER METERS SHALL BE LOCATED AT THE RIGHT OF WAY APPROXIMATELY AT THE CENTER OF THE LOT. THERE SHOULD BE A MINIMUM OF 10 FEET SEPARATION BETWEEN WATER METERS AND SANITARY SEWER SERVICES.

WATER CONNECTION NOTE:

CONTRACTOR SHALL NOT INITIATE TIE IN CONNECTION TO EXISTING WATER MAIN AFTER 3 P.M. DURING NORMAL WORKING DAYS OR ON FRIDAY AFTER 12 P.M., UNLESS APPROVED BY CITY WATER & LIGHT ENGINEERING DEPT. CONTRACTOR SHALL NOTIFY CWL INSPECTOR OF TENTATIVE TIME FRAME FOR CONNECTION 24 HOURS PRIOR TO ACTIVITY.

ALL SEWER WYES SHALL BE A MINIMUM OF 10' FOOT AWAY FROM PROPERTY CORNERS.

ELECTRICAL CONDUIT NOTE:

ALL ELECTRICAL CONDUIT SHALL HAVE A MINIMUM 48" OF COVER BELOW FINISHED GRADE.

NO TRANSFORMER, JUNCTION BOX, OR PULL BOX TO BE PLACED OVER WATER FITTINGS WITHOUT CITY WATER AND LIGHT APPROVAL.

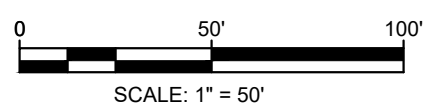
LEGEND	
	CURB
	SIDEWALK
	SL-1 CORRIDOR CROSS SECTION LINE
	WATER LINE
	WATER METER
	FIRE HYDRANT
	BLOW-OFF ASSEMBLY
	GATE VALVE
	STORM DRAIN INLET
	STORM DRAIN PIPE
	SANITARY SEWER
	SEWER MANHOLE
	SEWER WYE
	SEWER STUB-OUT
	EX. WYE
	EX. SEWER WYE
	EX. SEWER STUB-OUT

TOTAL WATERLINE QUANTITIES:
1161 LF - 6" C-900 PVC WATERLINE
13- 3/4" SHORT SERVICES
14- 3/4" LONG SERVICES

PRESSURES:
STATIC PRESSURE = 88 PSI
RESIDUAL PRESSURE = 78 PSI

WATER AND ELECTRIC NOTES:

- CONTRACTOR SHALL PROVIDE NECESSARY ELECTRICAL CONDUIT & PERMANENT MARKERS W/ GRAY PVC SCH 40 (2") & PVC SCH 40 (4") & 36" RAD ELBOWS FOR RISERS AND A STRING & MOUSE BLOWN IN THE CONDUIT. CONTRACTOR SHALL OBTAIN AN ELECTRICAL PLAN FROM CITY WATER & LIGHT AND INSTALL THE ELECTRICAL CONDUIT AS SPECIFIED BY CWL (CONTRACTOR SHALL OBTAIN CWL SPECIFICATIONS).
- CONTRACTOR SHALL PROVIDE 3/4" METER STOP, TAP, SERVICE LINE & METER BOX AS REQUIRED BY CWL & INSTALL AS REQUIRED BY CWL.
- CONTRACTOR SHALL PROVIDE ENGINEER W/ "AS-BUILT" DIMENSIONS FOR WYES, VALVES, TEES, BENDS, FIRE HYDRANTS, & WATER METERS.
- CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS FOR ALL SEWER, WATER, & ELECTRICAL LINE LATERALS & PROVIDE LABOR & MATERIAL TO BACKFILL ALL SEWER, WATER & ELECTRICAL STREET CUTS WITH SANDY MATERIAL (P.I. <10) TO TOP OF EXCAVATION & COMPACT FILL TO 95% COMPACTION & PROVIDE COMPACTION TESTS AT 2' INTERVALS. CONTRACTOR SHALL PROVIDE LABOR AND MATERIAL FOR ALL SEWER & WATER LINE MAINS THAT CROSS A STREET AND BACKFILL THEM WITH SANDY (P.I. <10) TO TOP OF EXCAVATION & COMPACT FILL TO 95% COMPACTION & PROVIDE MATERIAL COMPACTION TESTS AT 2' INTERVALS.
- A 12 GA SOLID TRACER WIRE SHALL BE INSTALLED WITH WATER LINE MAIN WHERE THERE SHALL BE A PERMANENT WATER LINE MARKER INSTALLED @ THE BEGINNING, THE END, AND 70' INTERVALS IN BETWEEN WHERE THE TRACER WIRE IS INSTALLED. THE TRACER WIRE SHALL BE INSTALLED ABOVE THE WATER LINE AND CONNECTED TO THE PERMANENT MARKERS IN A MANNER THAT WILL INSURE A CONTINUOUS CONNECTION OF THE TRACER LINE.
- CONTRACTOR SHALL CALL ARK ONE CALL FOR LOCATES PRIOR TO CONSTRUCTION.
- CWL SHALL PROVIDE FIRE HYDRANT, 6" D.I. GATE VALVE, VALVE BOX W/ LID, AND 6" BY LINE SIZE D.I. TEE. CONTRACTOR SHALL PROVIDE LABOR FOR INSTALLATION AND CONCRETE BLOCKING. (SEE DETAIL SHEET)
- CONTRACTOR SHALL NOTIFY ENGINEER TO DETERMINE ELEVATIONS FOR MANHOLE TOPS, WATERLINE ELEVATION WHERE IT CROSSES PROPOSED STORM DRAINS, WATER METER BOX ELEVATIONS, VALVE BOX ELEVATIONS, AND FIRE HYDRANT ELEVATIONS, AND WATER LINE LOCATION AROUND INLETS. WATER LINE SHALL BE INSTALLED AT AN ELEVATION WHERE HYDRANTS ARE LOCATED TO ENSURE HYDRANT WILL BE AT PROPER HEIGHT WHEN FINISHED GRADE HAS BEEN OBTAINED.
- CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH PLANS TO INSURE THE WATER LINE DEPTH OF INSTALLATION IS BELOW THE PROPOSED STORM DRAIN ELEVATION. CONTRACTOR WILL BE REQUIRED TO COME BACK AND LOWER WATER LINE (AT THE INTERFERENCE WITH THE STORM DRAIN INSTALLATION).
- IF CONTRACTOR CAN NOT INSURE WATER LINE INSTALLATION TO BE BELOW STORM DRAIN, THEN THE CONTRACTOR SHALL POSTPONE WATER LINE INSTALLATION UNTIL STORM DRAIN HAS BEEN INSTALLED.
- CONTRACTOR SHALL PROVIDE OWNER WITH ONE YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP.
- CONTRACTOR SHALL PROVIDE ENGINEER WITH LIEN RELEASES FOR MATERIALS AND LABOR, BACTERIAL SAMPLE RESULTS, AND MINIMUM 30 DAYS OF COMPLETION OF WORK.
- CONTRACTOR SHALL DRESS UP PROJECT AFTER INSTALLATION TO THE CONDITION IT AS PRIOR TO BEGINNING CONSTRUCTION. MOUND BACKFILL OVER TRENCHES 1' TO 2' TO ALLOW FOR SETTLING IN AREAS OUT OF THE STREET.
- CONTRACTOR SHALL REVIEW DETAIL SHEETS TO ENSURE PROPER INSTALLATION OF VALVES, FIRE HYDRANTS, CONCRETE BLOCKING, SERVICE LINES, MANHOLE INVERTS, AND DROP ASSEMBLIES.
- CONTRACTOR SHALL OBTAIN A CURRENT SET OF CWL SPECIFICATIONS AND REVIEW THEM. CWL SPECIFICATIONS ARE TO BE ADHERED TO AND MADE A PART OF THIS SET OF PLANS. CONTRACTOR SHALL USE CWL SPECIFICATIONS TO INCLUDE ITEMS NOT SHOWN OR REFERRED TO IN THIS SET OF PLANS. ALL STREET EXCAVATION MATERIAL SHALL BE DISPOSED OF BY CONTRACTOR TO THE ADJACENT LOTS OR AS DIRECTED BY OWNER.
- ALL STREET EXCAVATION MATERIAL SHALL BE DISPOSED OF BY CONTRACTOR ON THE ADJACENT LOTS OR AS DIRECTED BY OWNER.
- CONTRACTOR SHALL PLACE 8 MIL POLYWRAP OVER DUCTILE IRON FITTINGS PRIOR TO PLACING CONCRETE BLOCKING TO PREVENT CONCRETE FROM ENCASED BOLTS & NUTS.
- ALL WATER LINES 4" TO 12" DIAMETER SHALL BE AWWA C-200 PRESSURE CLASS 150 DR 18 ALL 2" AND 3" DIAMETER WATER LINES SHALL BE SDR 21 CLASS 200 (ASTM 2241). ALL SEWER LINES SHALL BE ASTM 2241 SDR-26.
- WATER LINE AND SANITARY SEWER LINE SHALL MAINTAIN 18" MINIMUM VERTICAL SEPARATION. WATER LINE AND STORM DRAIN SHALL MAINTAIN 36" MINIMUM HORIZONTAL SEPARATION TO PREVENT FREEZING. MAINTAIN 10' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER LINE.
- CONSTRUCTION SHALL BEGIN ONLY AFTER APPROVED PLANS FROM THE ARKANSAS DEPARTMENT OF HEALTH ARE SUBMITTED TO CWL, AND ALL NECESSARY FEES ARE PAID IN FULL. CONSTRUCTION BY CONTRACTORS SHALL THEN BEGIN. ONLY AFTER THE RIGHT OF WAY HAS BEEN CLEARED, THE ENTIRE SECTION STAKED, THE ELEVATIONS CAREFULLY CHECKED, AND A PRE-CONSTRUCTION MEETING HAS BEEN HELD, A POST CONSTRUCTION MEETING WILL BE HELD W/ CONTRACTOR PRESENT TO VERIFY ALL CONSTRUCTION IS ACCEPTABLE TO CWL PRIOR TO THE INSTALLATION OF ELECTRICAL WIRE.
- DEVELOPER MUST SHOW PROOF OF ADEQUATE INSURANCE COVERAGE, (ARKANSAS WORKERS COMPENSATION, \$1,000,000.00 MINIMUM GENERAL LIABILITY, AND \$1,000,000.00 MINIMUM AUTO LIABILITY) CONTRACTOR MUST HAVE A STATE CONTRACTORS LICENSE. CONTRACTOR MUST HAVE A COMPETENT PERSON AT THE JOB SITE AS DEFINED BY OSHA.
- FINAL CLEAN-UP OF THE SITE SHALL INCLUDE THE REMOVAL AND DISPOSAL OFF-SITE OF ALL CONSTRUCTION DEBRIS, AND SURPLUS MATERIALS.
- DURING CONSTRUCTION, WORK SHALL BE INSPECTED BY THE DEVELOPER'S CONSULTING ENGINEER FOR NECESSARY SAFETY PRACTICES, PROPER MATERIALS, AND WORKMANSHIP. CWL WILL PROVIDE RANDOM INSPECTIONS TO INSURE THAT THE PLANS APPROVED BY THE ARKANSAS DEPARTMENT OF HEALTH AND CWL ARE FOLLOWED CONCERNING WORKMANSHIP AND MATERIALS.
- IF SEWER AND WATER LINES HAVE NOT BEEN ACCEPTED BY CWL WITHIN 360 DAYS AFTER A MANHOLE TESTS, LOW PRESSURE AIR TESTS, HYDROSTATIC TESTS AND BACTERIAL TESTS, ALL TESTS WILL BE REQUIRED TO BE REPEATED AND RE-CERTIFIED.
- INSTALLATION OF DOMESTIC WATER METER TAPS ARE REQUIRED TO BE MADE DURING THE INSTALLATION OF THE NEW WATER MAINS.
- OBSTRUCTING DRAINAGE PIPES SHALL BE REMOVED. IF IN SOUND, UNDAMAGED CONDITION, THEY MAY BE CLEANED AND RE-INSTALLED. IF UNSOUND OR DAMAGED, THEY SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL. WHEN THE ANGLE BETWEEN CENTER LINES OF A DRAINAGE PIPE AND WATER MAIN WILL PERMIT, THE WATER MAIN MAY BE INSTALLED BY TUNNELING, PROVIDED THE DRAINAGE PIPE IS NOT DAMAGED AND THE WATER MAIN IS LAID PROPERLY. AS AN ALTERNATIVE IN THE CASE OF CORRUGATED METAL PIPE, A SECTION MAY BE CUT FROM THE DRAINAGE PIPE, AND RESTORATION ACCOMPLISHED WITH NEW PIPE AND COUPLING BANDS.
- CWL ENGINEERING DEPT. MUST APPROVE ANY WATER OR SEWER LINES THAT WILL BE INSTALLED CLOSER THAN 5' PARALLEL WITH EDGE OF PAVED STREET SURFACE.
- REPAIRS SHALL BE MADE IN ACCORDANCE WITH AWWA. IF VALVE IS CLOSED BY THE CONTRACTOR WITHOUT CWL'S KNOWLEDGE, THE NEW SECTION MUST BE TESTED FOR WATER QUALITY AND FLUSHED. THE CWL INSPECTOR WILL WITNESS ALL REPAIRS.
- WATER LINE FITTINGS SHALL BE CLASS 350 DUCTILE IRON OR CAST IRON.
- TRENCH DEPTH WILL BE SUCH AS TO ALLOW A MINIMUM COVER OF 42" OVER WATER MAIN.
- LEAKAGE TESTS SHALL BE MADE PRIOR TO STERILIZATION OPERATIONS. THE TEST PERIOD SHALL BE TWO (2) HOURS. TEST PRESSURE SHALL BE 1.5 TIMES THE CALCULATED WORKING PRESSURE OF THE MAIN, BUT NOT LESS THAN 100 PSI. THE LINE WILL NOT BE ACCEPTED UNLESS OR UNTIL THE TOTAL IS LESS THAN THAT SPECIFIED IN AWWA C-600-93 FOR DUCTILE IRON AND AWWA C-606-94 FOR PVC PIPE.
- ALL WATER LINES SHALL BE STERILIZED IN ACCORDANCE WITH AWWA C-661-94. ANY NEW CONSTRUCTION OR REPAIRED WATER MAIN MUST BE THOROUGHLY CLEANED, FLUSHED, DISINFECTED AND TESTED FOR BACTERIOLOGICAL QUALITY BEFORE IT CAN BE PLACED IN SERVICE. FOLLOWING A CONTACT PERIOD OF NOT LESS THAN 24 HOURS, THE CHLORINATED WATER SHALL BE FLUSHED FROM THE SYSTEM, AND THE SYSTEM FILLED WITH WATER OF NORMAL CHLORINE CONTENT. SAMPLES OF WATER THEN SHALL BE TAKEN ON TWO CONSECUTIVE DAYS FROM THE LINES AND DELIVERED TO THE CWL - LABORATORY FOR BACTERIAL ANALYSIS. THIS PROCESS SHALL BE CONTINUED UNTIL THE SAMPLES SHOW THE WATER IS SAFE FOR DOMESTIC REQUIREMENTS. FLUSHING DEVICES SHOULD BE SIZED TO PROVIDE FLOWS WHICH WILL GIVE A VELOCITY OF AT LEAST 2.5 FEET PER SECOND IN THE WATER MAIN BEING FLUSHED. NO FLUSHING DEVICE SHALL BE DIRECTLY CONNECTED TO ANY SEWER. IF THE LINE HAS SET FOR A ONE MONTH OR LONGER BEFORE FINAL ACCEPTANCE, IT SHALL BE RESTERILIZED, FLUSHED, AND BACTERIAL TESTED.
- THE DEVELOPER AND ENGINEER ARE RESPONSIBLE FOR METER BOX LOCATIONS. ANY CONFLICTS THAT REQUIRE PLASTIC BOX(S) TO BE CHANGED OUT TO CONCRETE BOX(S) WILL BE AT THE EXPENSE OF THE DEVELOPER AND/OR CONTRACTOR.
- IF UNSAFE PRACTICES ARE DISCOVERED BY CWL DURING INSPECTIONS OF WORKMANSHIP AND MATERIALS, CWL WILL NOTIFY OSHA. THIS PROCEDURE IN NO WAY OBLIGATES CWL FOR THE RESPONSIBILITY OF THE CONTRACTOR'S SAFETY PRACTICES.



811

Know what's below.
Call before you dig.

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WILLOW POINTE PHASE IV

WATER PLAN



REVISIONS		
DATE	BY	DESCRIPTION

DRAWING INFO.		
DRAWN BY:	GMD	
DATE:	5/1/2019	
SCALE:	1"=7'	

SHEET NUMBER:

WT-1



LEGEND

CURB

SIDEWALK

SL-1

CORRIDOR CROSS SECTION LINE

WL

WATER LINE

WM

WATER METER

FIRE HYDRANT

BLOW-OFF ASSEMBLY

GATE VALVE

SS

STORM DRAIN PIPE

SS

SANITARY SEWER

S

SEWER MANHOLE

WYE

SEWER WYE

S.O.

SEWER STUB-OUT

EX.WYE

EX. SEWER WYE

EX.S.O.

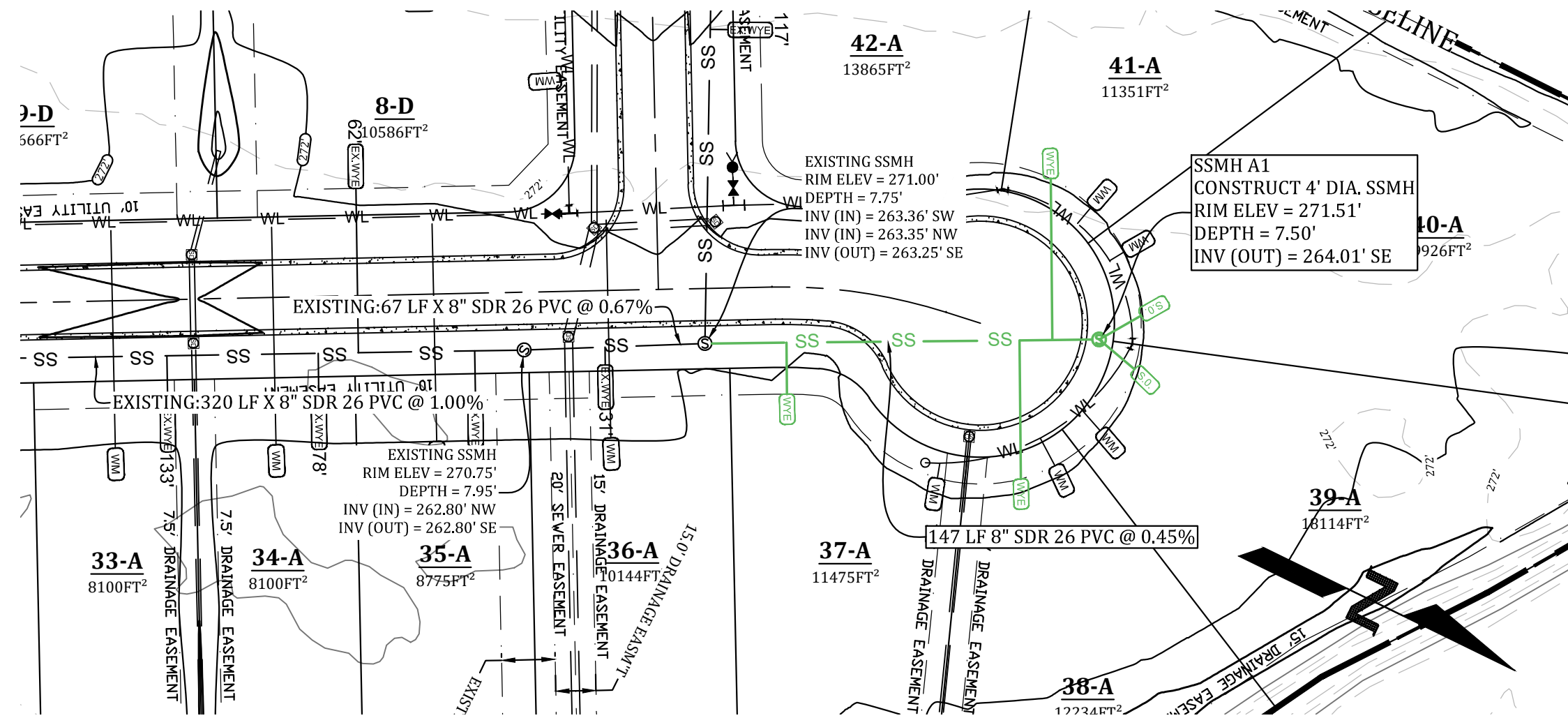
EX. SEWER STUB-OUT

SD

STORM DRAIN INLET

NOTE: SYMBOLS REPRESENTED IN LEGEND MAY NOT ALL BE INCLUDED ON THIS SHEET
RESPECTIVE SYMBOLS REPRESENTED IN PLAN VIEW ARE NOT TO SCALE

TOTAL SEWERLINE QUANTITIES:
147 LF - 8" SDR 26 PVC
1- SHORT LATERALS
2- LONG LATERALS
2- SHORT STUB-OUTS
0- LONG STUB-OUT
NOTE: ALL EXISTING WYES NEEDED FOR LONG SERVICES TO BE EXTENDED ACROSS THE PROPOSED STREETS AS ILLUSTRATED



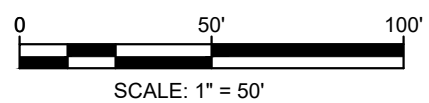
SANITARY SEWER NOTES:

- CONTRACTOR SHALL PROVIDE WYES OR STUBOUTS FOR EACH LOT. THEY SHALL BE PLACED ON THE LOW ELEVATION SIDE OF LOT OR IN THE CENTER OF THE LOT IF THE ELEVATION IS FLAT.
- CONTRACTOR SHALL PROVIDE ENGINEER W/ "AS-BUILT" DIMENSIONS FOR WYES, VALVES, TEES, BENDS, FIRE HYDRANTS, & WATER METERS.
- CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS FOR ALL SEWER, WATER, & ELECTRICAL LINE LATERALS & PROVIDE LABOR & MATERIAL TO BACKFILL ALL SEWER, WATER & ELECTRICAL STREET CUTS WITH SANDY MATERIAL (P.I. <15) TO TOP OF EXCAVATION & COMPACT FILL TO 95% COMPACTION & PROVIDE COMPACTION TESTS AT 2' INTERVALS. CONTRACTOR SHALL PROVIDE LABOR AND MATERIAL FOR ALL SEWER & WATER LINE MAINS THAT CROSS A STREET AND BACKFILL THEM WITH SANDY (P.I. <15) TO TOP OF EXCAVATION & COMPACT FILL TO 95% COMPACTION & PROVIDE MATERIAL COMPACTION TESTS AT 2' INTERVALS.
- CONTRACTOR SHALL CALL ARK ONE CALL FOR LOCATES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY ENGINEER TO DETERMINE ELEVATIONS FOR MANHOLE TOPS, WATERLINE ELEVATION WHERE IT CROSSES PROPOSED STORM DRAINS, WATER METER BOX ELEVATIONS, VALVE BOX ELEVATIONS, AND FIRE HYDRANT ELEVATIONS, AND WATER LINE LOCATION AROUND INLETS. WATER LINE SHALL BE INSTALLED AT AN ELEVATION WHERE HYDRANTS ARE LOCATED TO ENSURE HYDRANT WILL BE AT PROPER HEIGHT WHEN FINISHED GRADE HAS BEEN OBTAINED.
- CONTRACTOR SHALL PROVIDE OWNER WITH ONE YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP.
- CONTRACTOR SHALL PROVIDE ENGINEER WITH LIEN RELEASES FOR MATERIALS AND LABOR; BACTERIAL SAMPLE RESULTS; AND MODEL & YEAR OF WATER LINE VALVES WITHIN 30 DAYS OF COMPLETION OF WORK.
- CONTRACTOR SHALL DRESS UP PROJECT AFTER INSTALLATION TO THE CONDITION IT AS PRIOR TO BEGINNING CONSTRUCTION. MOUND BACKFILL OVER TRENCHES 1' TO 2' TO ALLOW FOR SETTLING IN AREAS OUT OF THE STREET.
- ALL STREET EXCAVATION MATERIAL SHALL BE DISPOSED OF BY CONTRACTOR ON THE ADJACENT LOTS OR AS DIRECTED BY OWNER.
- CONTRACTOR SHALL REVIEW DETAIL SHEETS TO ENSURE PROPER INSTALLATION OF VALVES, FIRE HYDRANTS, CONCRETE BLOCKING, SERVICE LINES, MANHOLE INVERTS, AND DROP ASSEMBLIES.
- ALL SEWER LINES SHALL BE ASTM 2241 SDR-26.
- WATER LINE AND SANITARY SEWER LINE SHALL MAINTAIN 18" MINIMUM SEPARATION. WATER LINE AND STORM DRAIN SHALL MAINTAIN 36" MINIMUM SEPARATION TO PREVENT FREEZING. MAINTAIN 10" HORIZONTAL SEPARATION BETWEEN SEWER AND WATER LINE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18" OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASUREMENT REQUIREMENTS.
- CONSTRUCTION SHALL BEGIN ONLY AFTER APPROVED PLANS FROM THE ARKANSAS DEPARTMENT OF HEALTH ARE SUBMITTED TO CWL, AND ALL NECESSARY FEES ARE PAID IN FULL. CONSTRUCTION BY CONTRACTORS SHALL THEN BEGIN ONLY AFTER THE RIGHT OF WAY HAS BEEN CLEARED, THE ENTIRE SECTION STAKED, THE ELEVATIONS CAREFULLY CHECKED, AND A PRE-CONSTRUCTION MEETING HAS BEEN HELD. A POST CONSTRUCTION MEETING WILL BE HELD W/ CONTRACTOR PRESENT TO VERIFY ALL CONSTRUCTION IS ACCEPTABLE TO CWL PRIOR TO THE INSTALLATION OF ELECTRICAL WIRE.
- DEVELOPER MUST SHOW PROOF OF ADEQUATE INSURANCE COVERAGE (ARKANSAS WORKER'S COMPENSATION, \$1,000,000.00 MINIMUM GENERAL LIABILITY, AND \$1,000,000.00 MINIMUM AUTO LIABILITY.) CONTRACTOR MUST HAVE A STATE CONTRACTORS LICENSE. CONTRACTOR MUST HAVE A COMPETENT PERSON AT THE JOB SITE AS DEFINED BY OSHA.
- DURING CONSTRUCTION, WORK SHALL BE INSPECTED BY THE DEVELOPER'S CONSULTING ENGINEER FOR NECESSARY SAFETY PRACTICES, PROPER MATERIALS, AND WORKMANSHIP. CWL WILL PROVIDE RANDOM INSPECTIONS TO INSURE THAT THE PLANS APPROVED BY THE ARKANSAS DEPARTMENT OF HEALTH AND CWL ARE FOLLOWED CONCERNING WORKMANSHIP AND MATERIALS.
- IF SEWER AND WATER LINES HAVE NOT BEEN ACCEPTED BY CWL WITHIN 360 DAYS AFTER MANDREL TESTS, LOW PRESSURE AIR TESTS, HYDROSTATIC TESTS AND BACTERIAL TESTS, ALL TESTS WILL BE REQUIRED TO BE REPEATED AND RE-CERTIFIED.
- CWL ENGINEERING DEPT. MUST APPROVE ANY WATER OR SEWER LINES THAT WILL BE INSTALLED CLOSER THAN 5' PARALLEL WITH EDGE OF PAVED STREET SURFACE.
- REPAIRS SHALL BE MADE IN ACCORDANCE WITH AWWA.
- ALL SEWER WYES & STUBOUTS SHALL BE EXTENDED ACROSS STREETS TO THE APPROPRIATE LOT LINES. CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL LOTS HAVE A SEWER SERVICE.

TRENCH SETTLEMENT NOTE:
CITY WATER & LIGHT IS NOT RESPONSIBLE FOR ANY SETTLEMENT OVER WATER & SEWER TRENCHES THAT OCCURS BEFORE OR AFTER THE WARRANTY PERIOD.

ALL SEWER WYES SHALL BE A MINIMUM OF 10' FOOT AWAY FROM PROPERTY CORNERS.

NOTE: IF UNSAFE PRACTICES ARE DISCOVERED BY CWL DURING OUR INSPECTIONS OF WORKMANSHIP AND MATERIALS, CWL WILL NOTIFY THE OSHA. THIS NO WAY OBLIGATES CWL FOR THE RESPONSIBILITY OF THE CONTRACTORS SAFETY PRACTICES.



WILLOW POINTE PHASE IV

SEWER PLAN



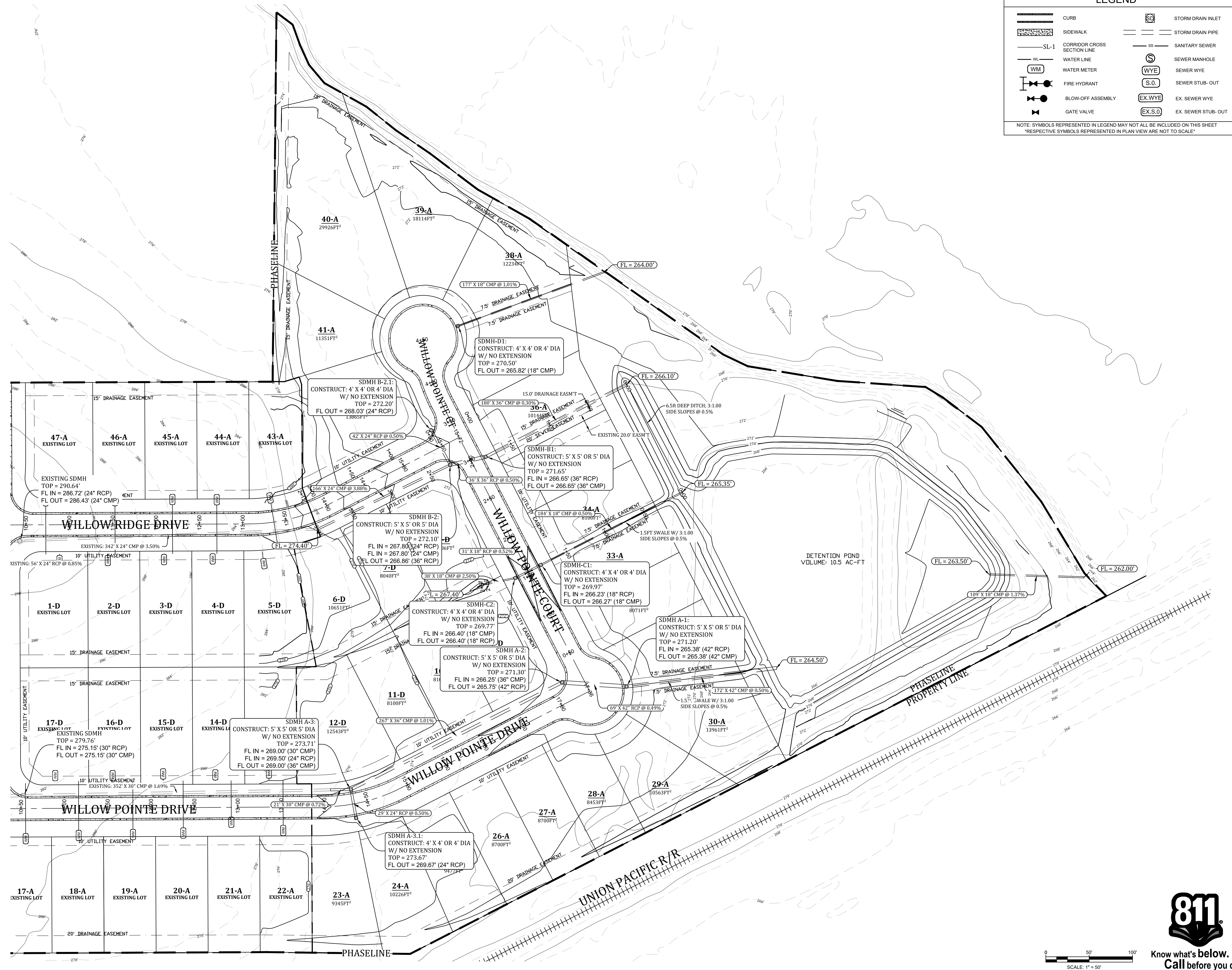
REVISIONS		
DATE	BY	DESCRIPTION

DRAWING INFO.		
DRAWN BY:	GMD	
DATE:	5/1/2019	
SCALE:	1"=77'	

SHEET NUMBER:
SW-1

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MARK MORRIS



WILLOW POINTE PHASE IV

GRADING & DRAINAGE



REVISIONS		
DATE	BY	DESCRIPTION

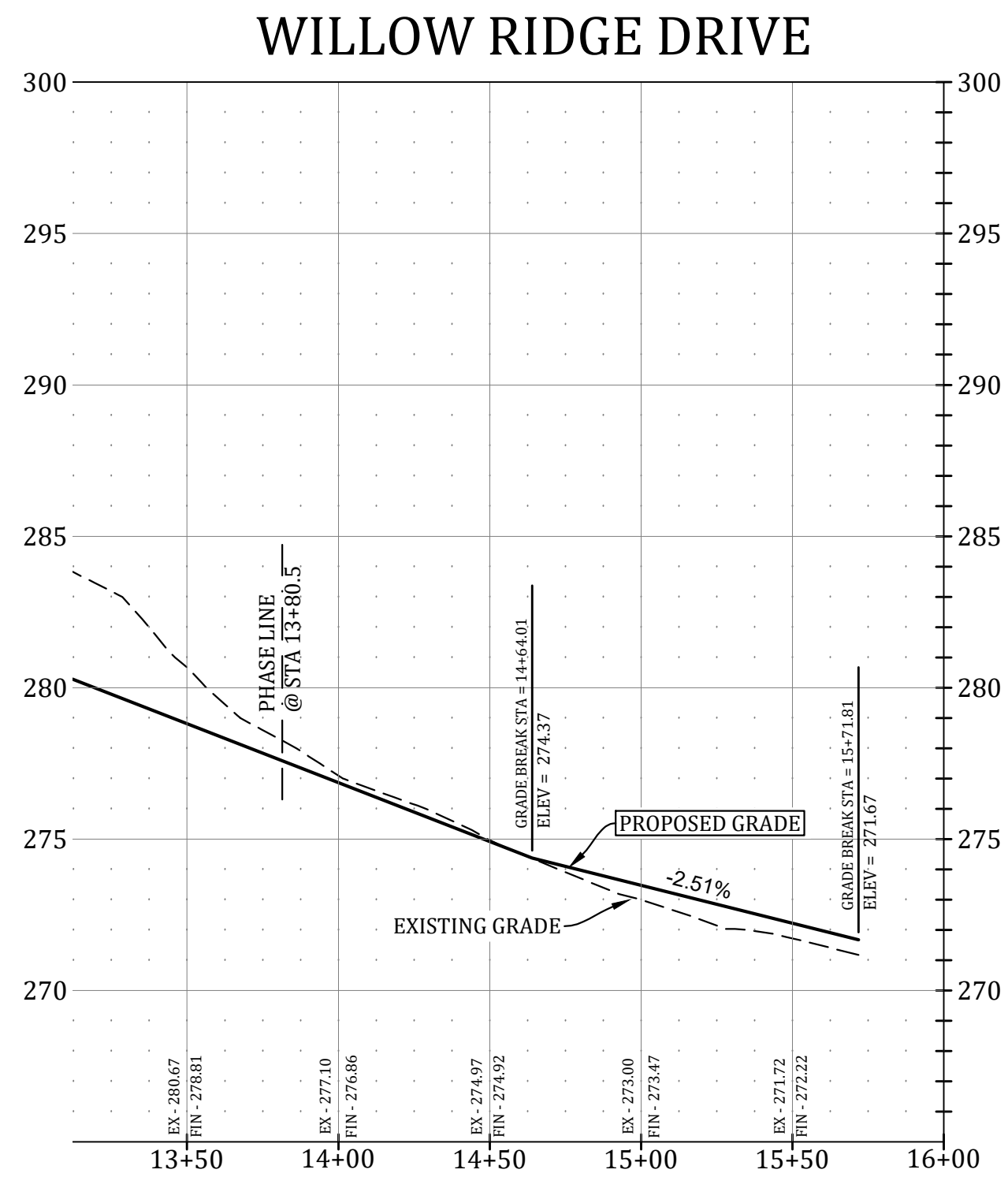
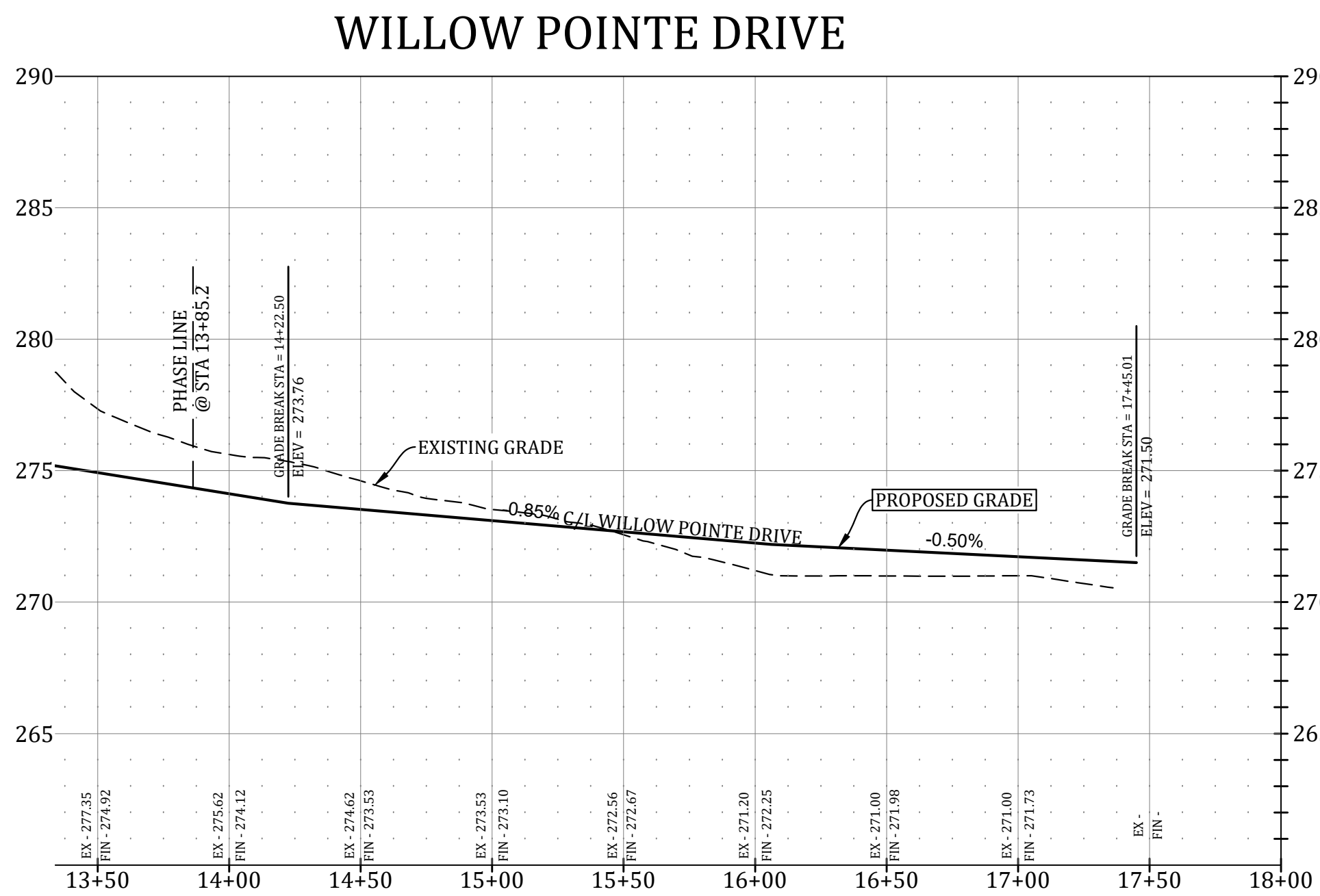
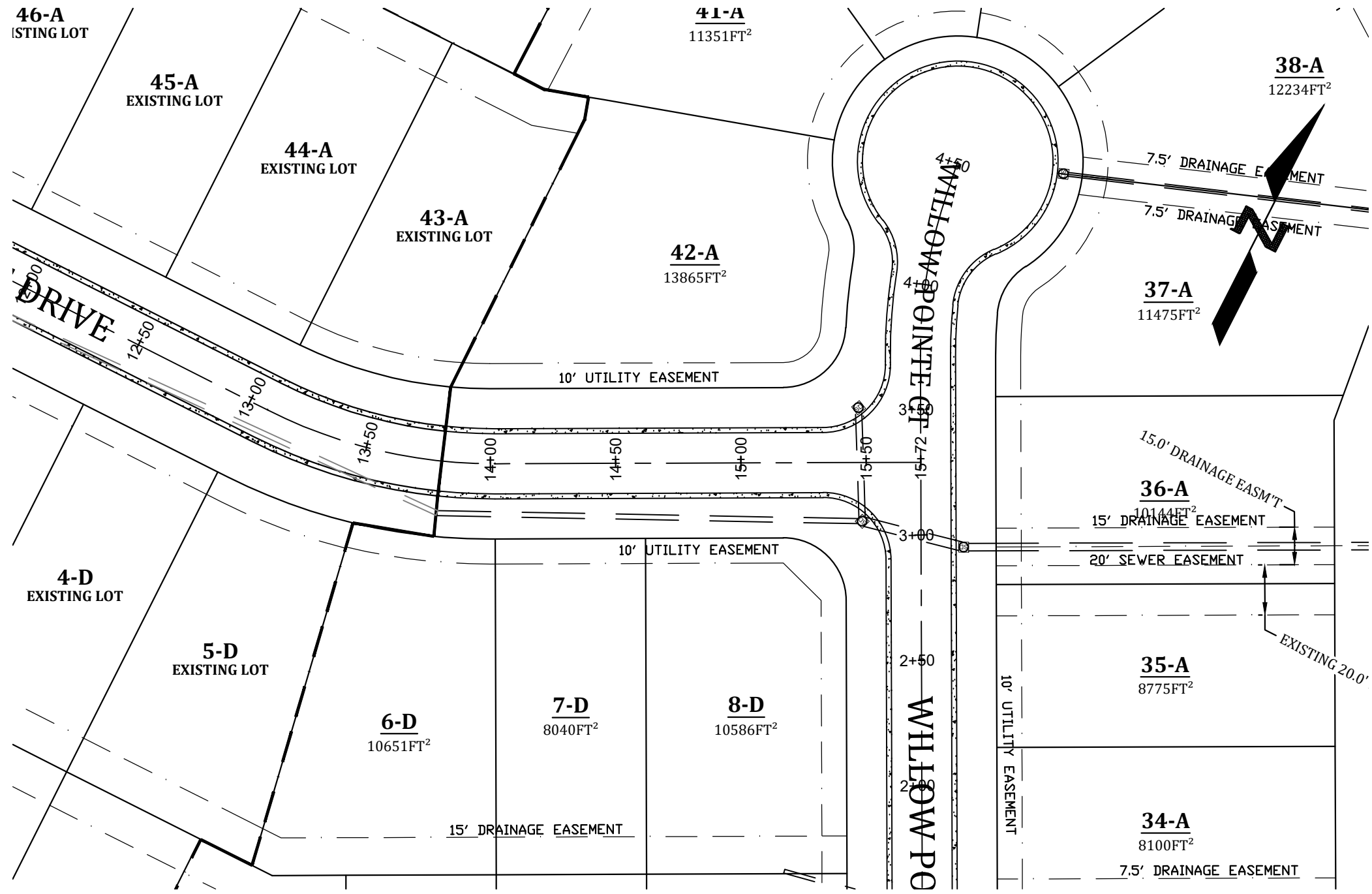
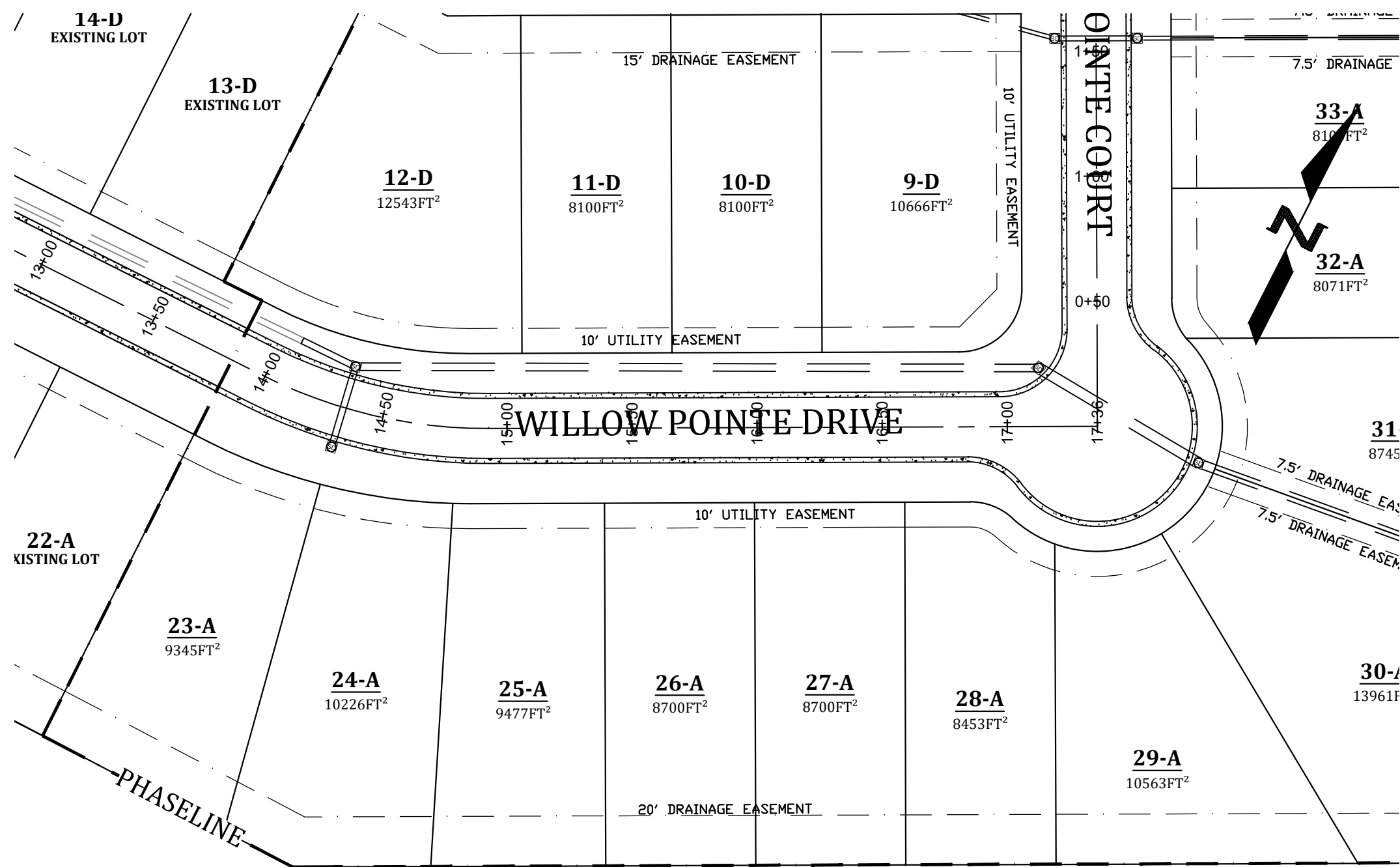
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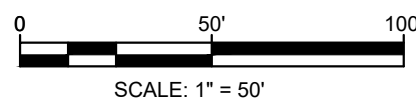
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0 50' 100'
SCALE: 1" = 50'



VERTICAL SCALE 1:5
HORIZONTAL SCALE 1:50



LEGEND			
	CURB		STORM DRAIN INLET
	SIDEWALK		STORM DRAIN PIPE
	CORRIDOR CROSS SECTION LINE		SANITARY SEWER
	WATER LINE		SEWER MANHOLE
	WATER METER		SEWER WYE
	FIRE HYDRANT		SEWER STUB-OUT
	BLOW-OFF ASSEMBLY		EX. SEWER WYE
	GATE VALVE		EX. SEWER STUB-OUT
NOTE: SYMBOLS REPRESENTED IN LEGEND MAY NOT ALL BE INCLUDED ON THIS SHEET RESPECTIVE SYMBOLS REPRESENTED IN PLAN VIEW ARE NOT TO SCALE			

WILLOW POINTE PHASE IV

STREET PLAN & PROFILE



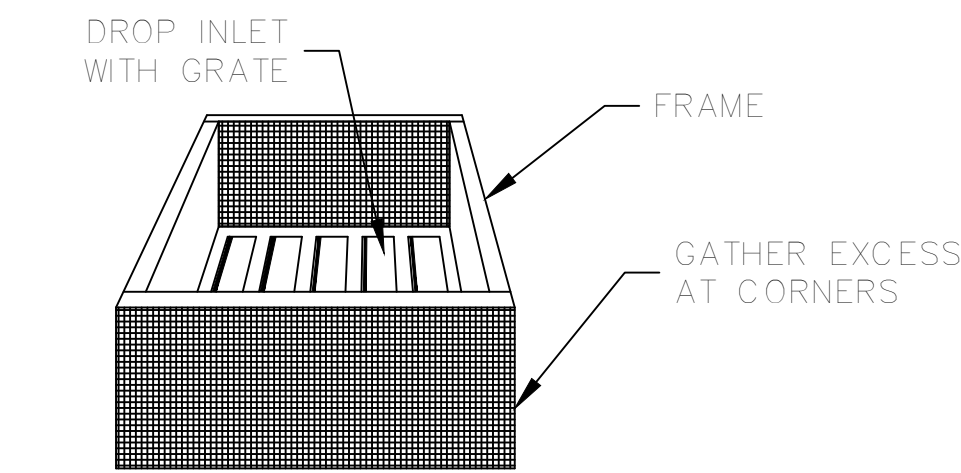
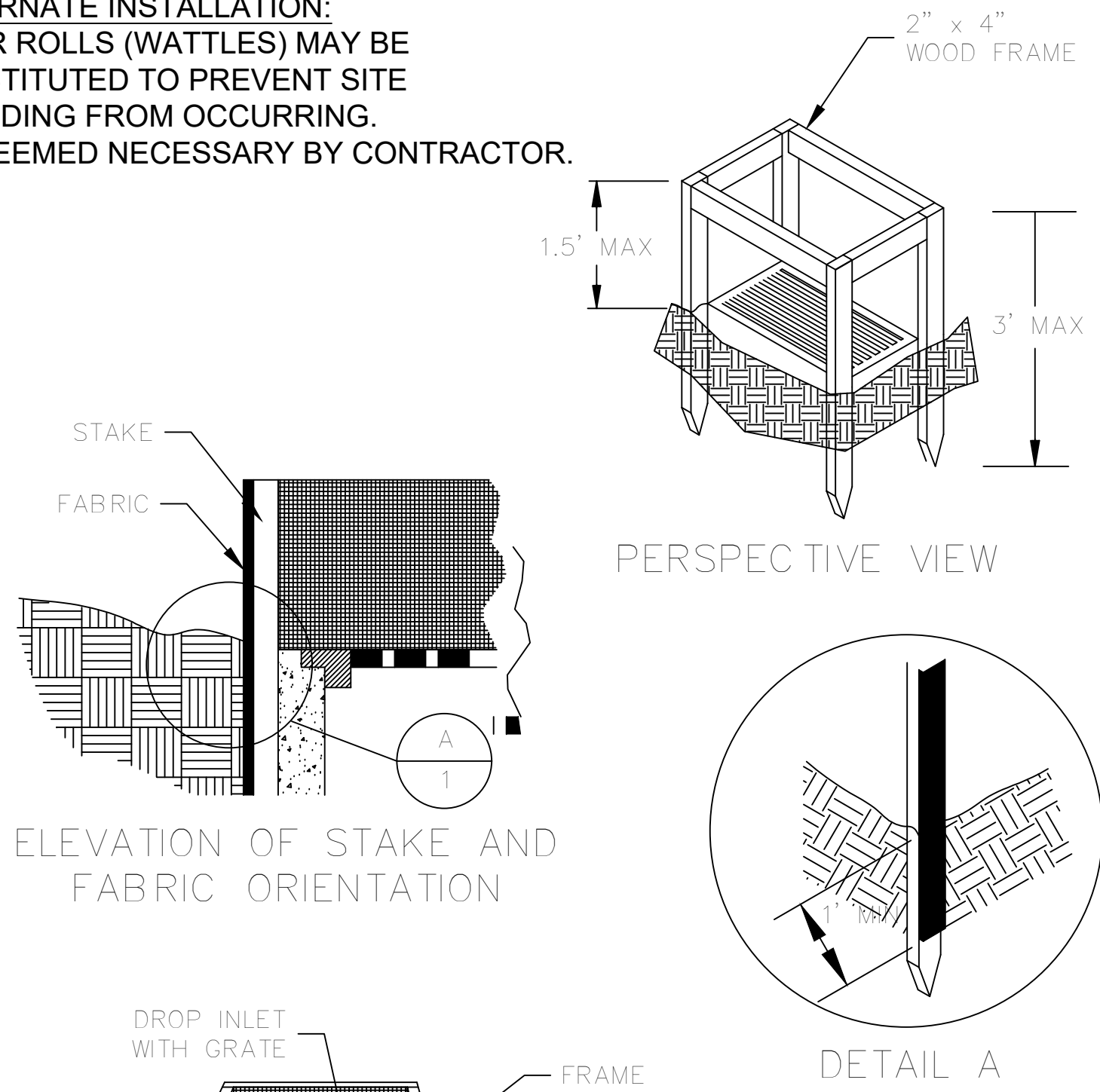
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DATE	BY	DESCRIPTION

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DATE:	5/1/2019
SCALE:	1"=50'

SHEET NUMBER:
ST-1

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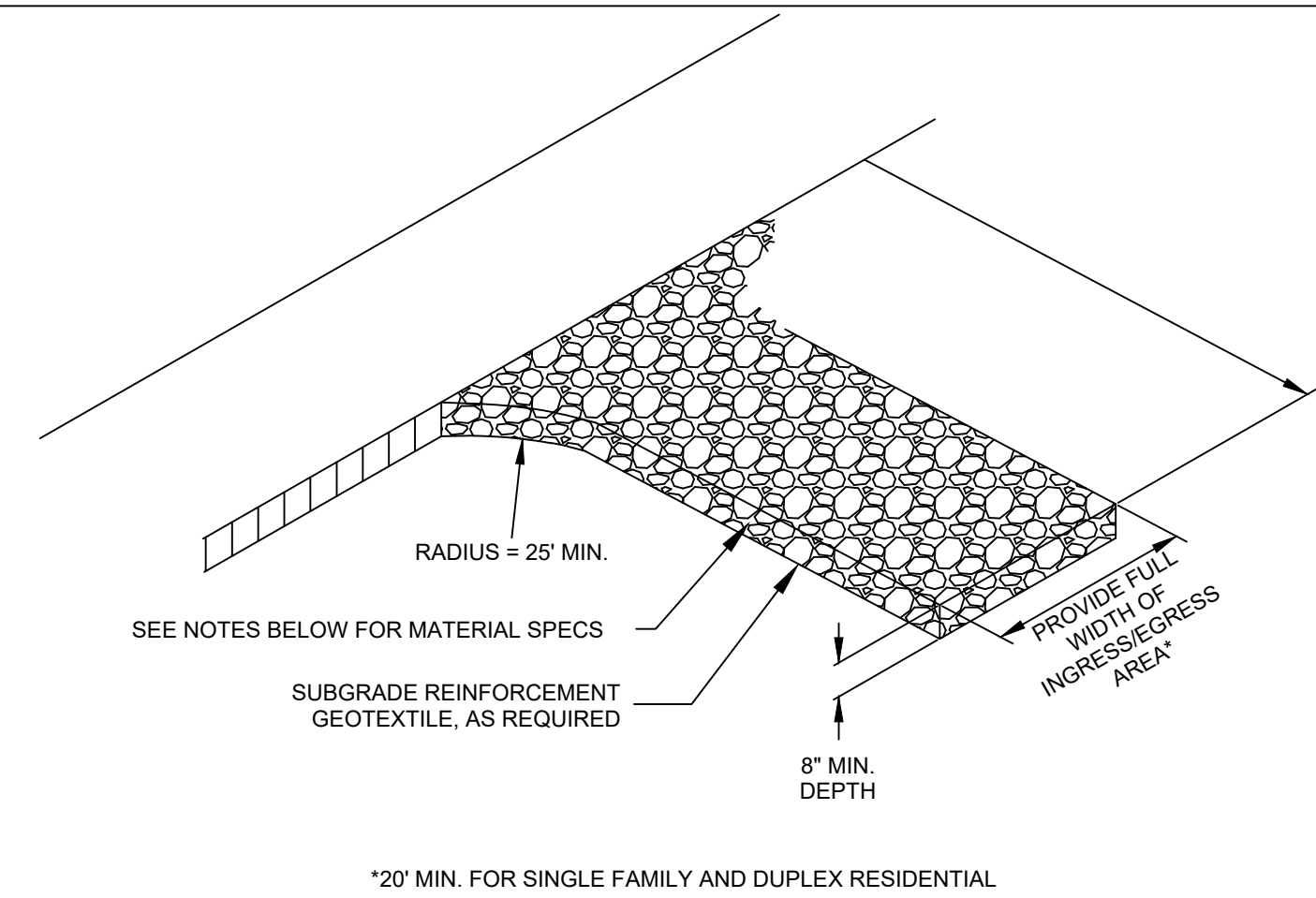
ALTERNATE INSTALLATION:
FIBER ROLLS (WATTLES) MAY BE
SUBSTITUTED TO PREVENT SITE
FLOODING FROM OCCURRING.
AS DEEMED NECESSARY BY CONTRACTOR.



PERSPECTIVE VIEW

FILTER FABRIC INLET PROTECTION

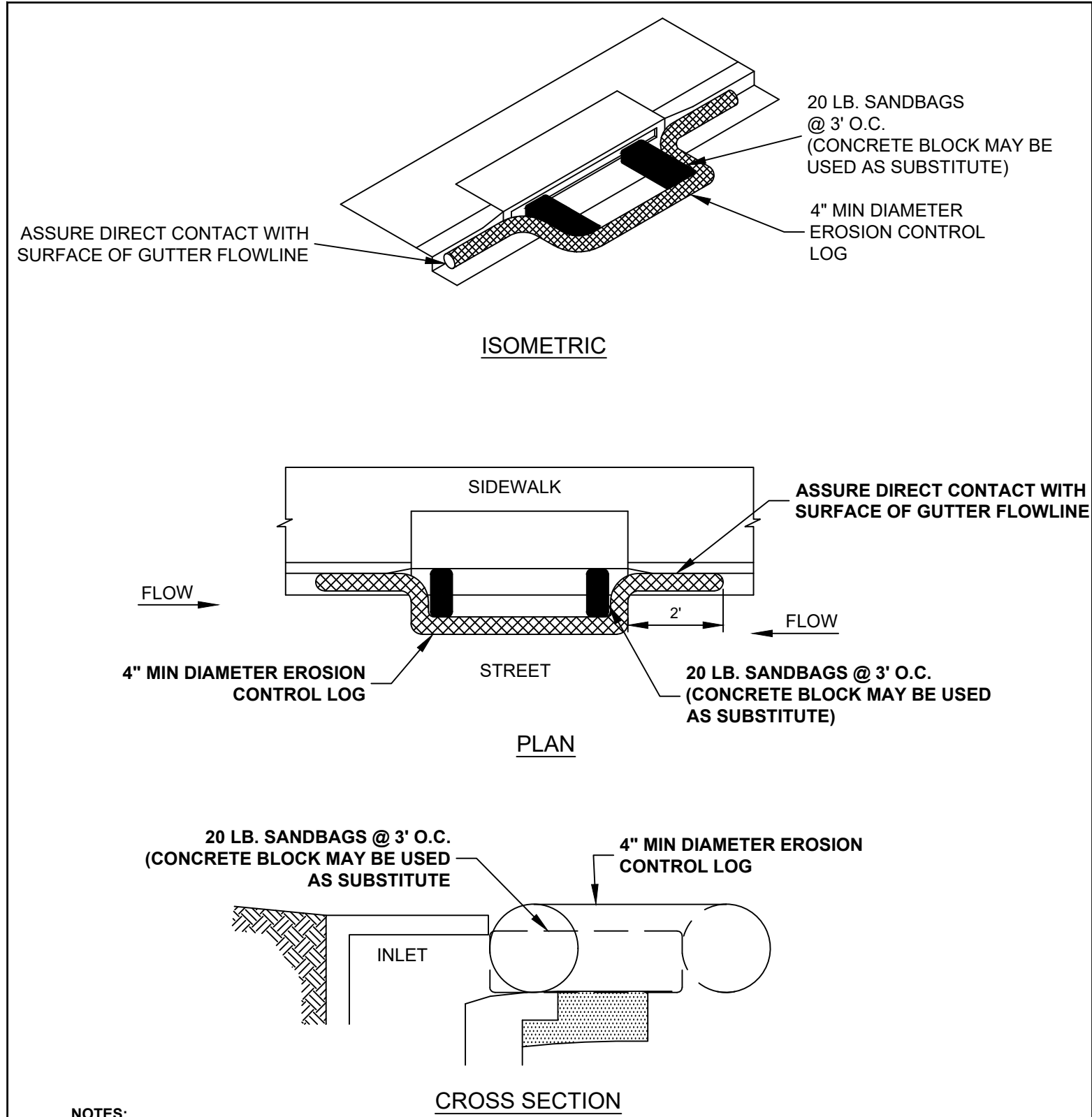
NOT TO SCALE



- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT 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.
 4. WHERE RUNOFF CONTAINING SEDIMENT-LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
 5. DIMENSIONS:
SINGLE FAMILY AND DUPLEX
20' LONG BY 20' WIDE, 8" DEEP OF 3/4" MINUS CLEAN ROCK.
COMMERCIAL
50' LONG BY 20' WIDE, 3-6" DEEP CLEAN ROCK. GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

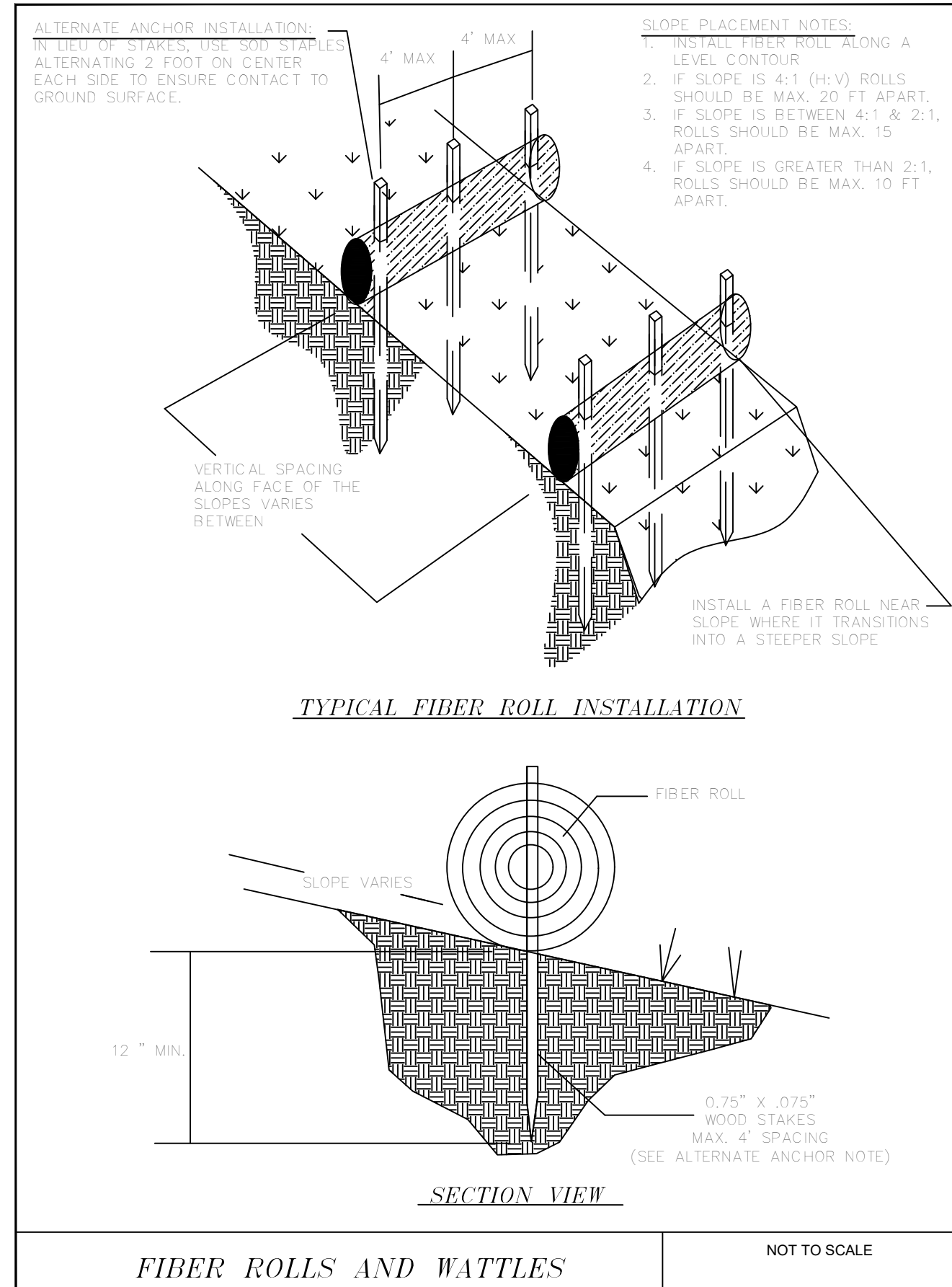
NOT TO SCALE



- NOTES:
1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
 2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 50% CAPACITY.
 3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
 4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

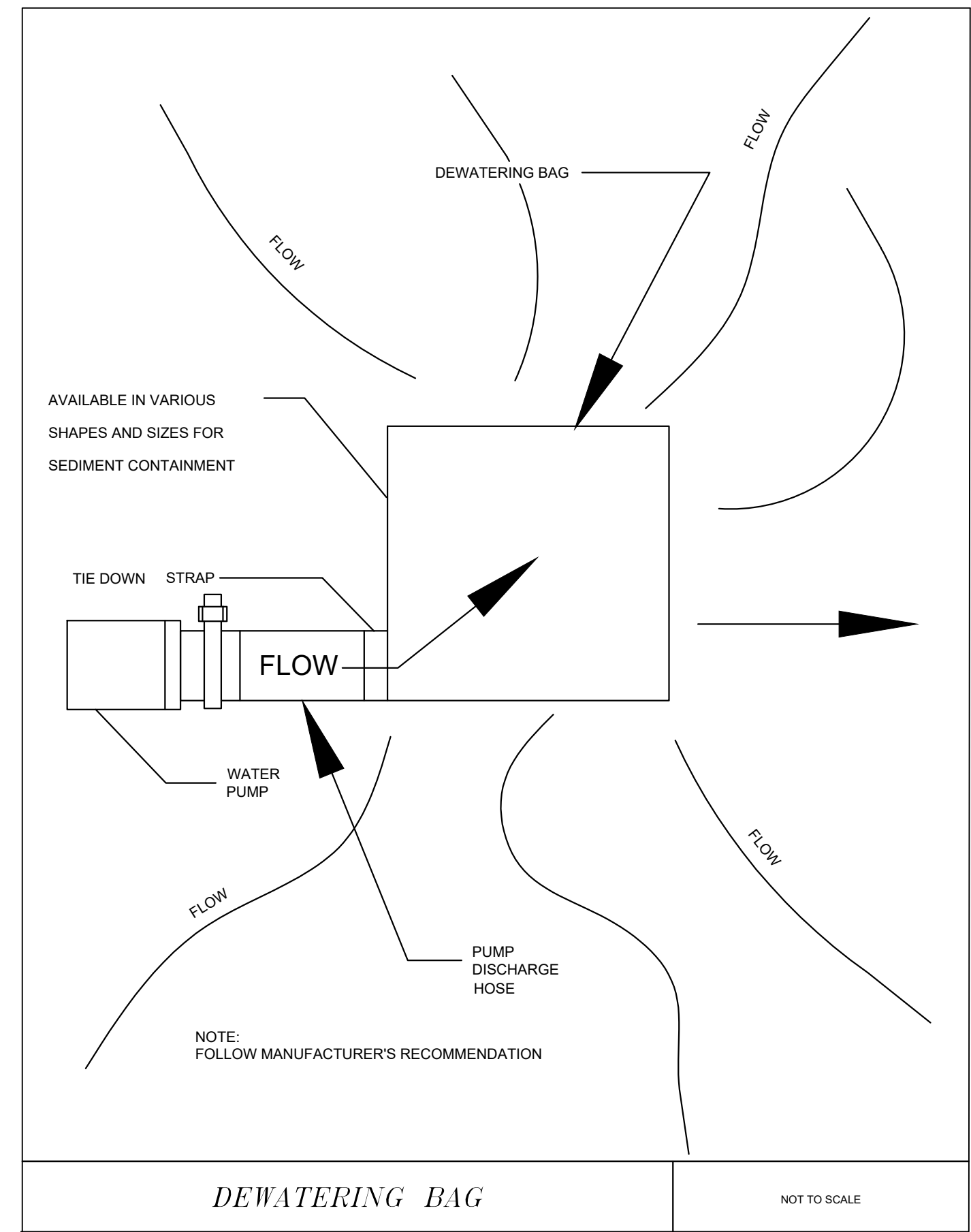
FIBER ROLL (WATTLE) CURB INLET PROTECTION

NOT TO SCALE



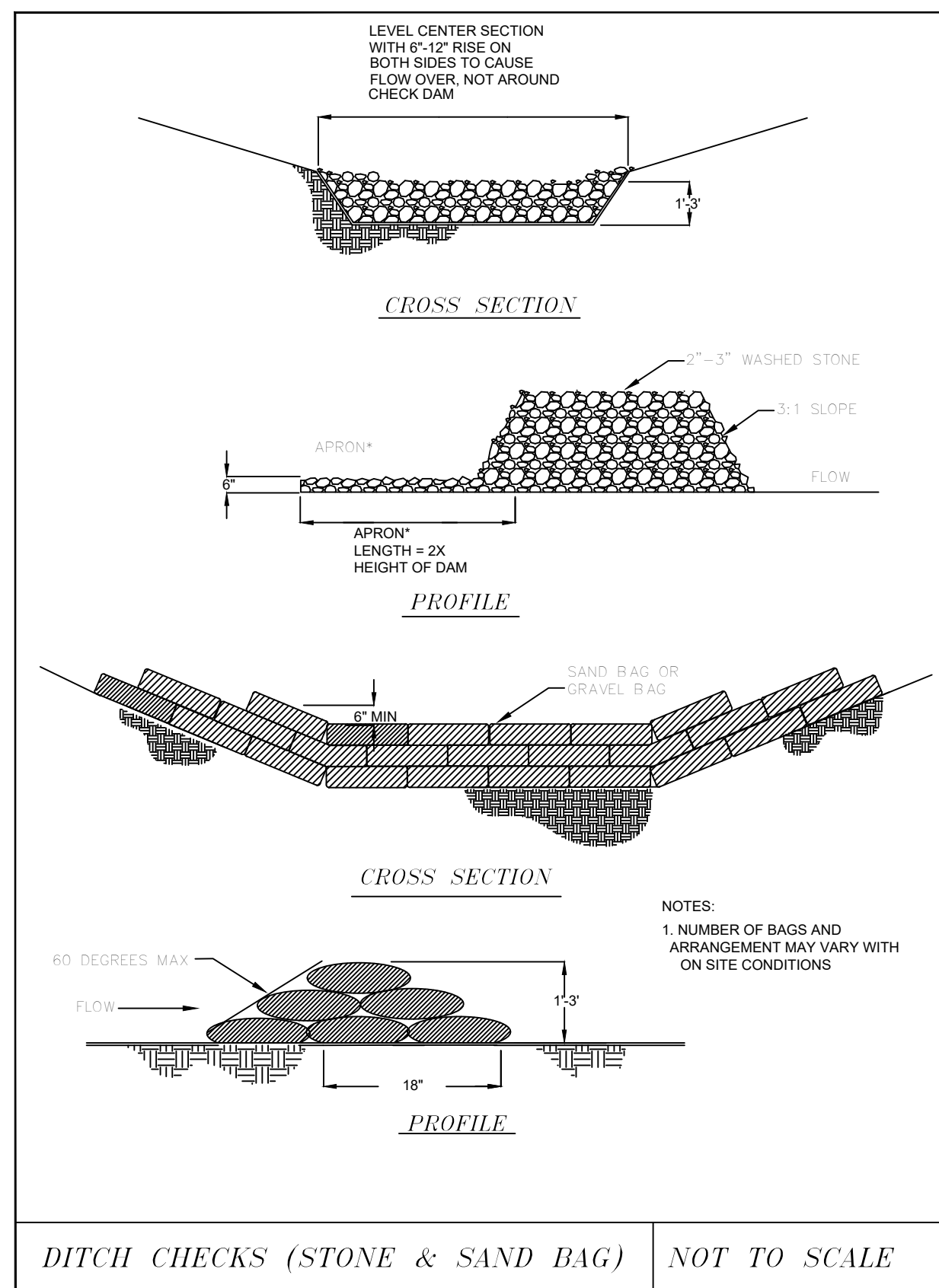
FIBER ROLLS AND WATTLES

NOT TO SCALE



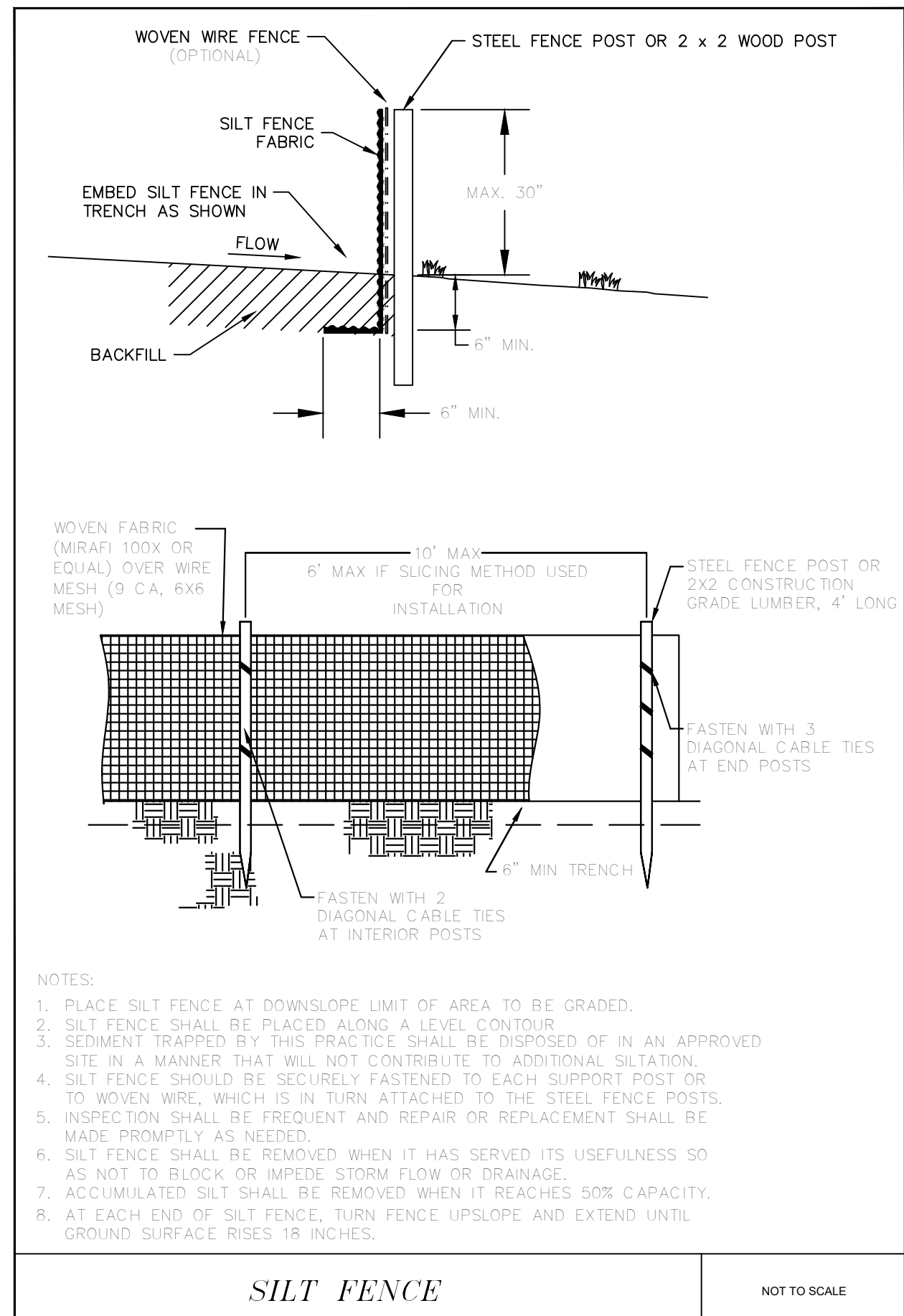
DEWATERING BAG

NOT TO SCALE



DITCH CHECKS (STONE & SAND BAG)

NOT TO SCALE



SILT FENCE

NOT TO SCALE

WILLOW POINTE PHASE IV

EROSION CONTROL DETAILS



REVISIONS		
DATE	BY	DESCRIPTION

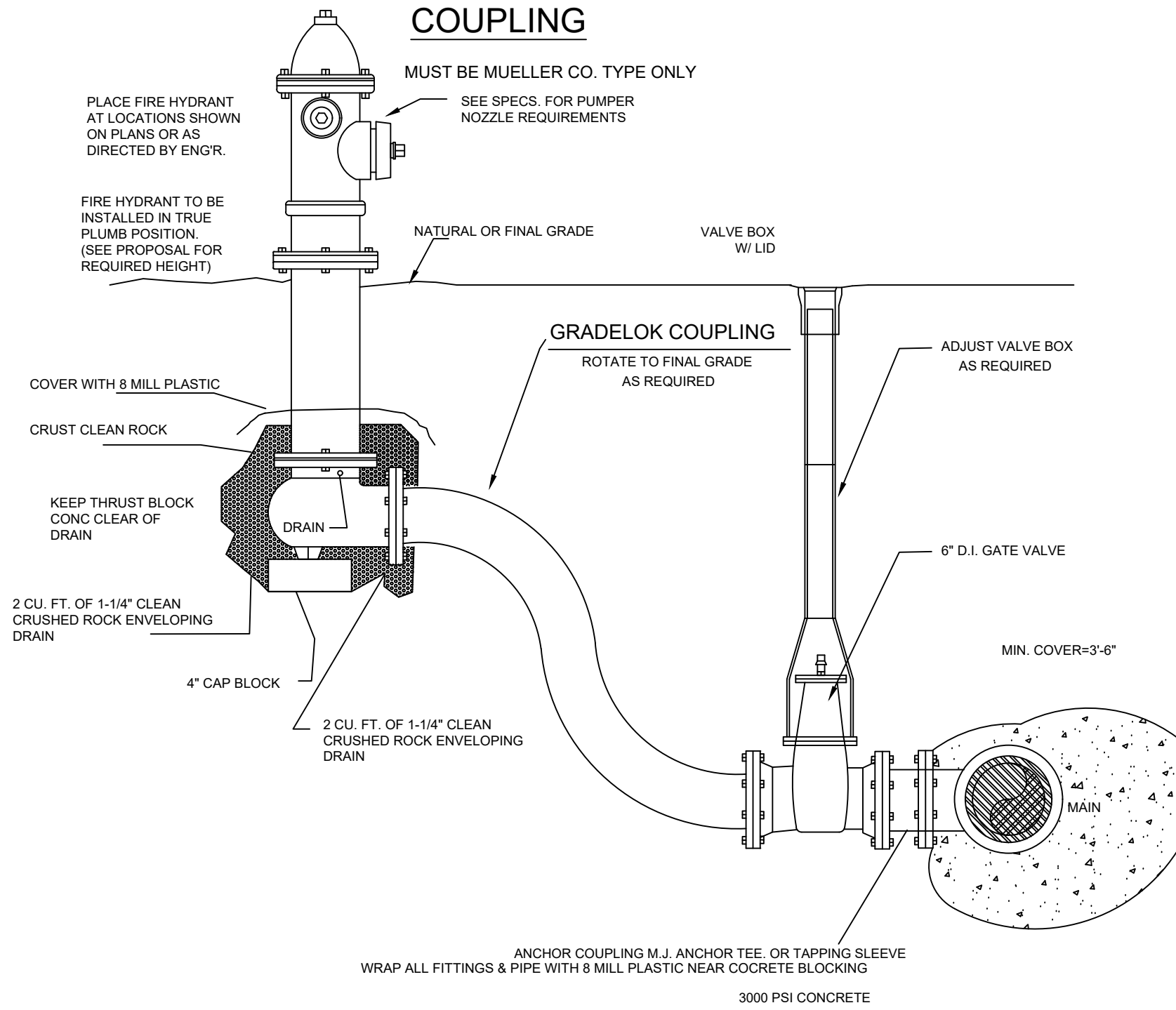
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DT-1

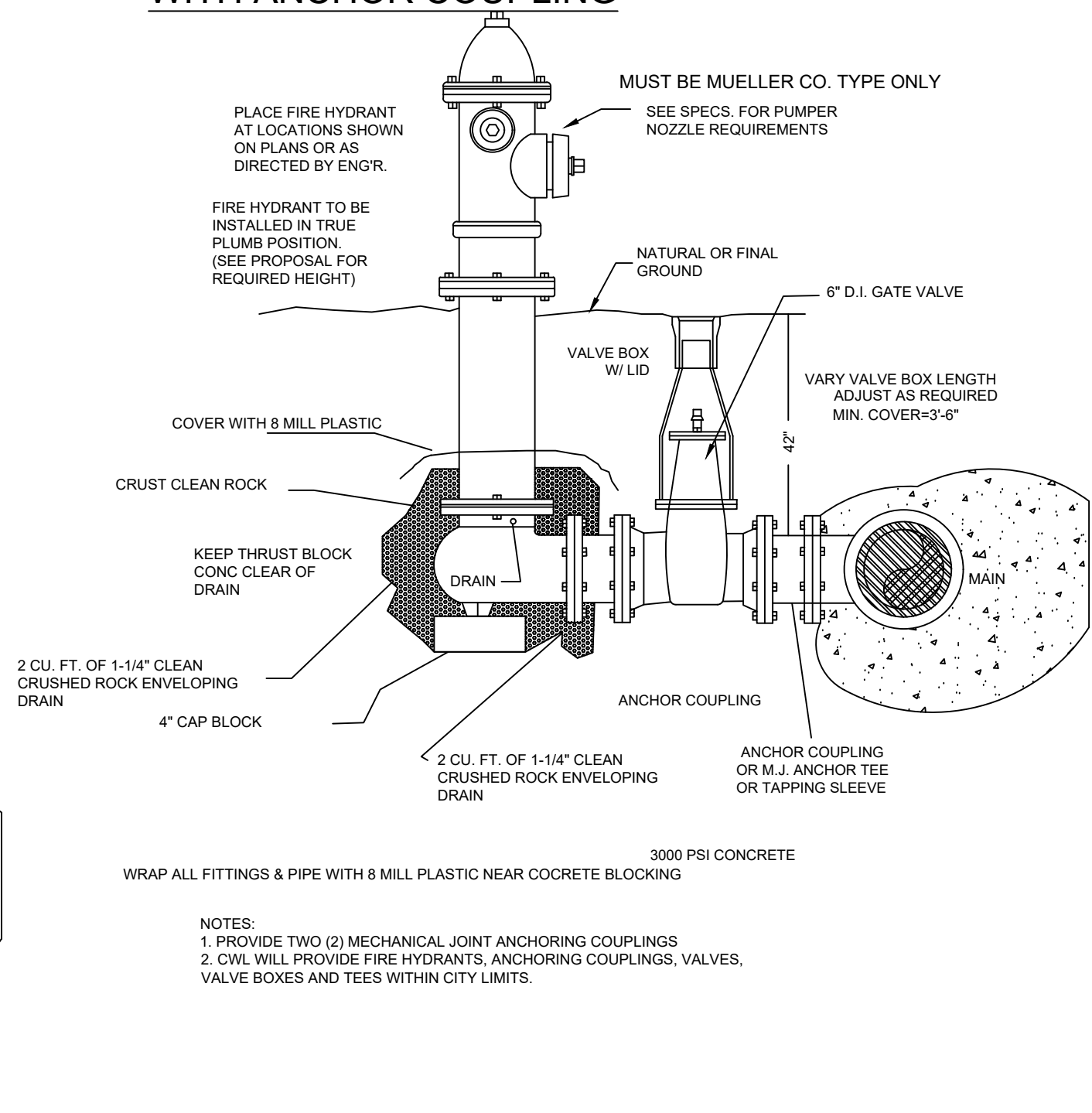
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FIRE HYDRANT DETAIL
WITH GRADELOK
COUPLING

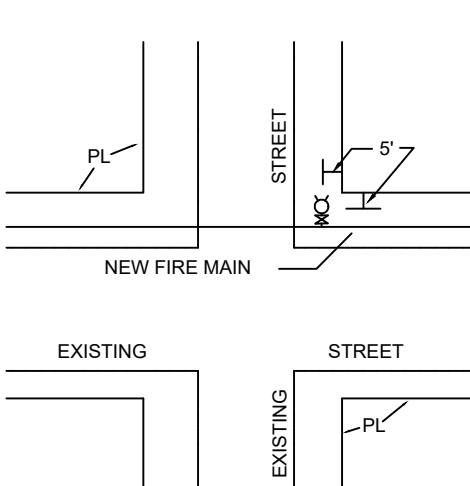
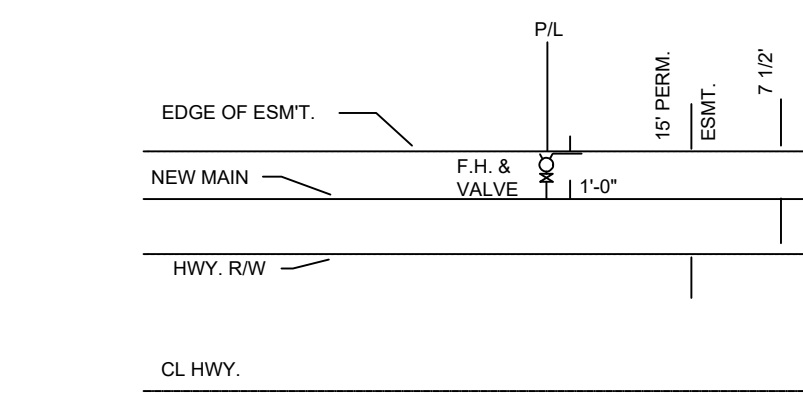


TYPICAL FIRE HYDRANT LOCATION
ALONG HWY. RIGHT-OF-WAY

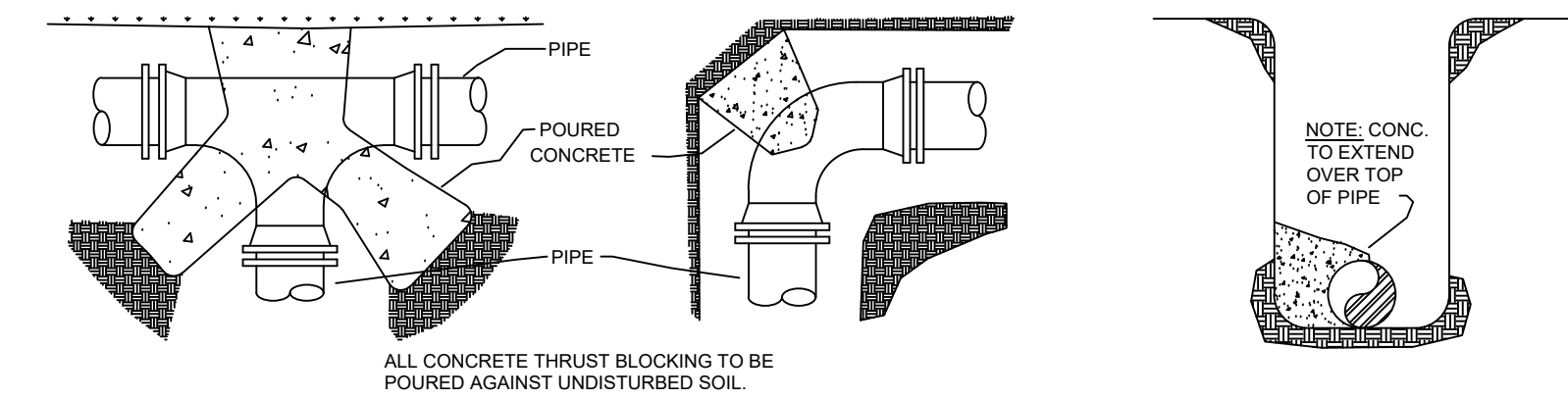
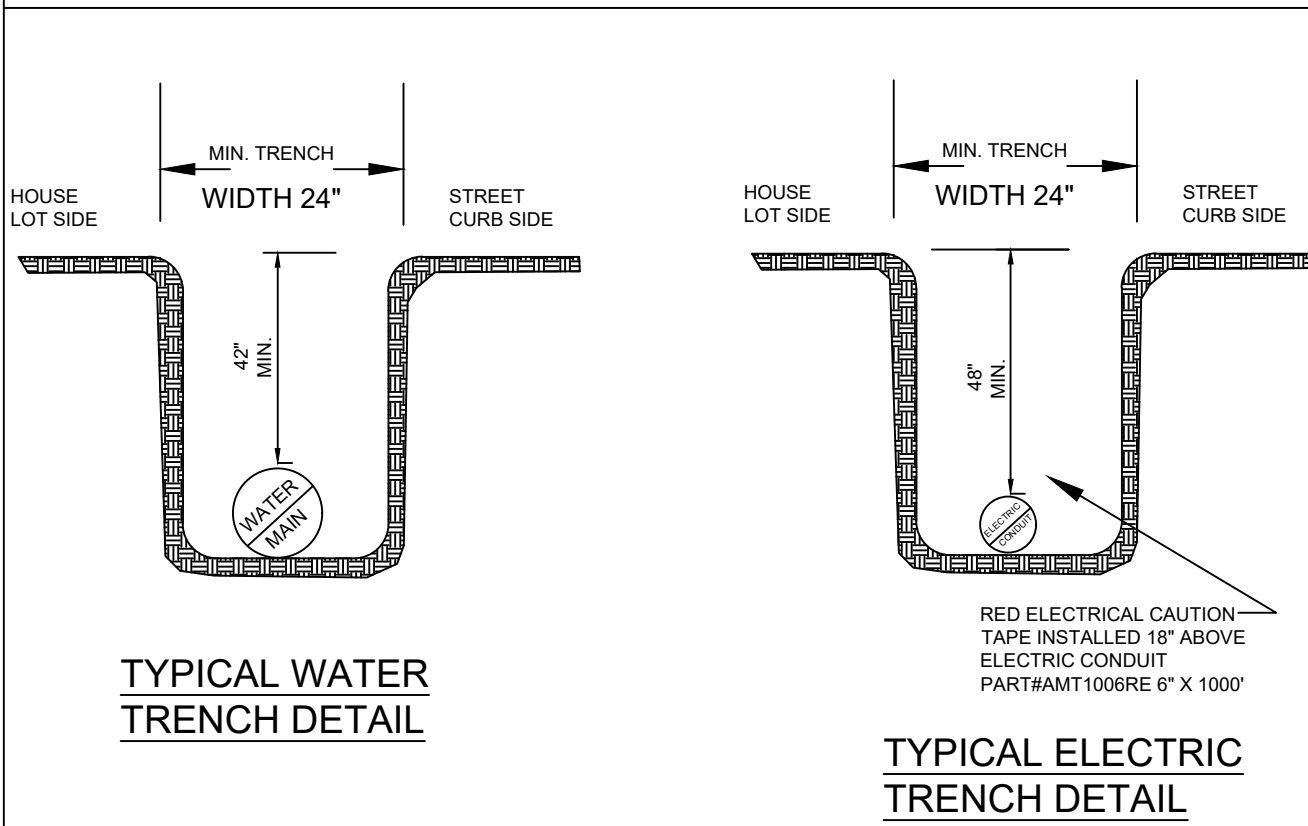
FIRE HYDRANT DETAIL
WITH ANCHOR COUPLING



TYPICAL FIRE HYDRANT
LOCATION



RADIUS OF CURVATURE FOR BENDING OF PIPE AROUND CURVES OR IN COVES SHALL NOT EXCEED THAT OF THE RECOMMENDATIONS OF THE PIPE MANUFACTURER OR REFER TO THE PVC PIPE HANDBOOK.		
PIPE SIZE (inches)	LENGTH (feet)	MIN. BENDING RADIUS (feet)
(DR 21) 2"	20	60
(DR 21) 3"	20	60
(DR 18) 4"	20	100
(DR 18) 6"	20	144
(DR 18) 8"	20	189
(DR 18) 10"	20	231
(DR 18) 12"	20	275
(DR 35) 4"	12.5 or 20	54.9
(DR 35) 6"	12.5 or 21	81.6
(DR 35) 8"	12.5 or 22	109
(DR 35) 10"	12.5 or 23	137
(DR 35) 12"	12.5 or 24	163
(DR 35) 15"	12.5 or 25	199

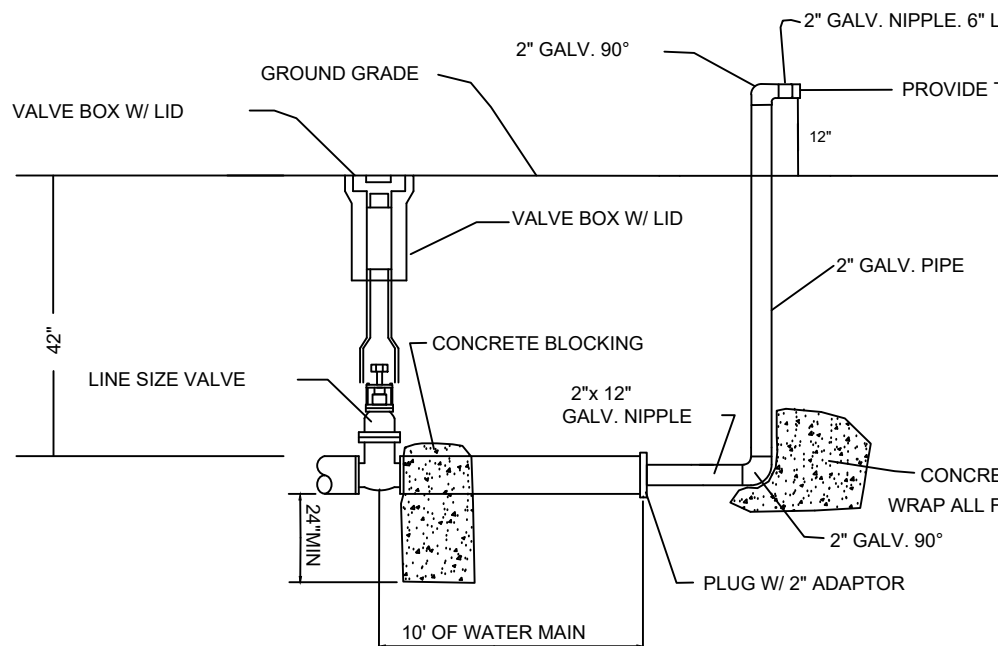


THRUST BLOCK DETAILS

- NOTES:
1. ALL BLOCKING SHALL BE AGAINST UNDISTURBED HAND DUG SOIL.
 2. WHERE SOIL CONDITIONS MAKE IT NECESSARY TO POUR CONCRETE BLOCKING OVER JOINTS, THE ENDS OF THE ADJACENT PIPES MUST HAVE A BRACE BLOCK TO RESIST MOVEMENT OF THESE JOINTS.
 3. ALL FITTINGS & PIPE SHALL BE COVERED WITH 8 MILL PLASTIC WHEN BLOCKING TO PREVENT BONDING OF CONCRETE.
 4. WHERE SHEAR IS HIGH PROPER REINFORCING MUST BE INSTALLED INTO THE BLOCKING AS DIRECTED BY ENGINEER.
 5. COVER SHALL BE A MINIMUM OF 3\"/>

WATERLINE PIPE BEND THRUST BLOCK AREA		
SIZE & BEND DEGREE	STATIC THRUST (LB)	BLOCKING AREA (FT ²)
4" - 22 1/2°	1103	1
4" - 45°	2164	2
4" - 90°/TEE/PLUG	3998	4
6" - 22 1/2°	2482	2.5
6" - 45°	4867	5
6" - 90°/TEE/PLUG	8997	9
8" - 22 1/2°	4413	4.5
8" - 45°	8656	8.5
8" - 90°/TEE/PLUG	15994	16

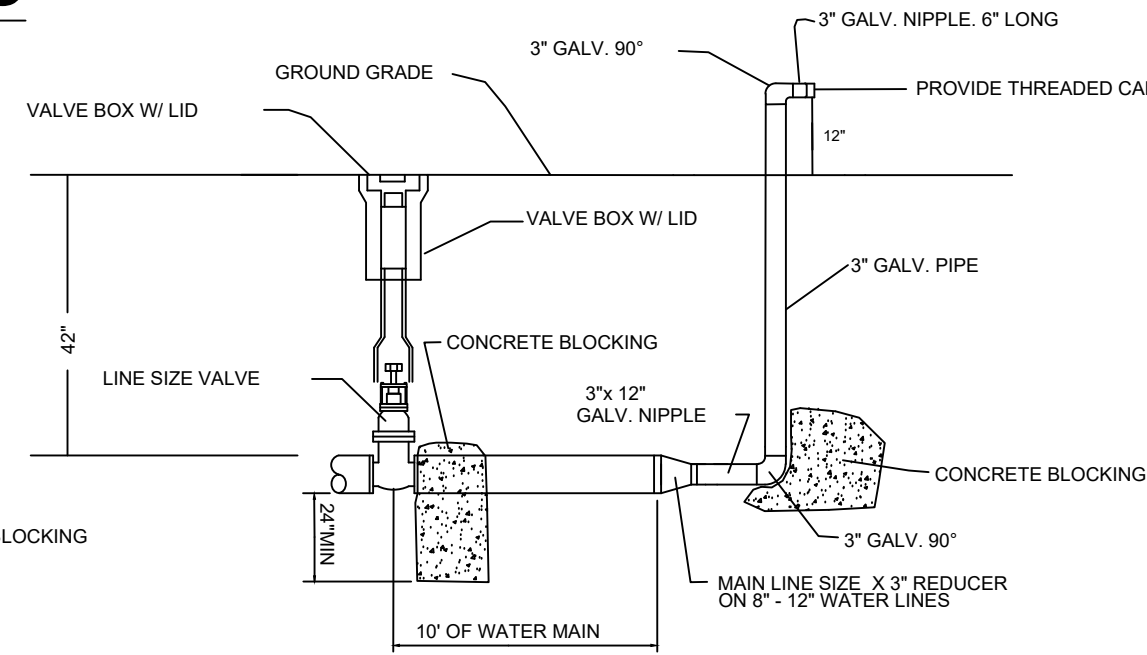
BLOW-OFF ASSEMBLY DETAILS



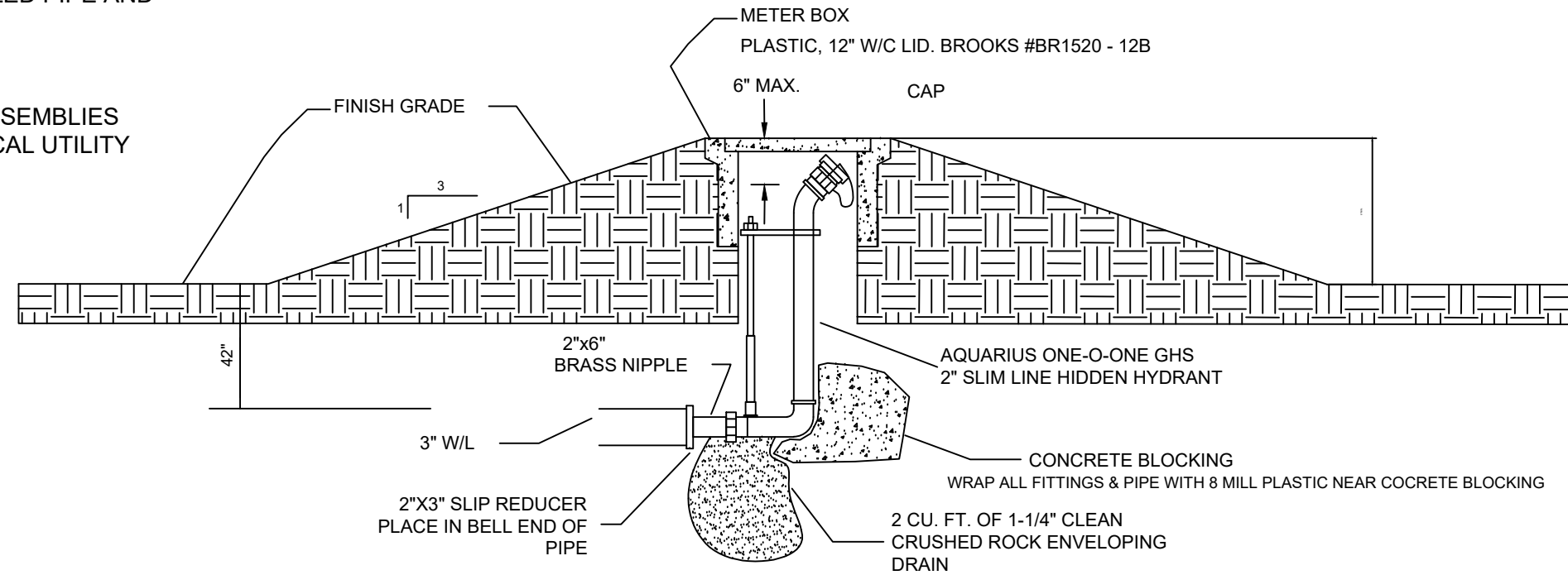
2" B.O. ASSEMBLY
FOR 2" THRU 6" LINES
WITH FUTURE EXPANSION

NOTE: ALL 2", OR 3" GALVANIZED PIPE AND FITTINGS ARE TO BE SCH 40

NOTE: OTHER BLOW-OFF ASSEMBLIES MUST BE APPROVED BY LOCAL UTILITY COMPANY



3" B.O. ASSEMBLY
FOR 8" THRU 12" LINES
WITH FUTURE EXPANSION

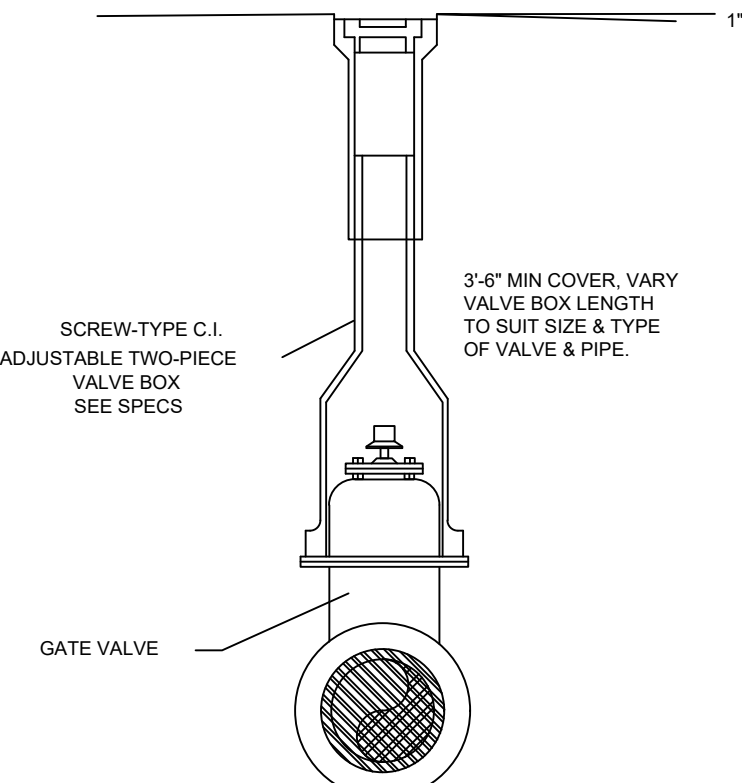


UNDERGROUND WASHOUT ASSEMBLY
FOR COVES AND DEAD END LINES WITH
NO FUTURE EXTENSION

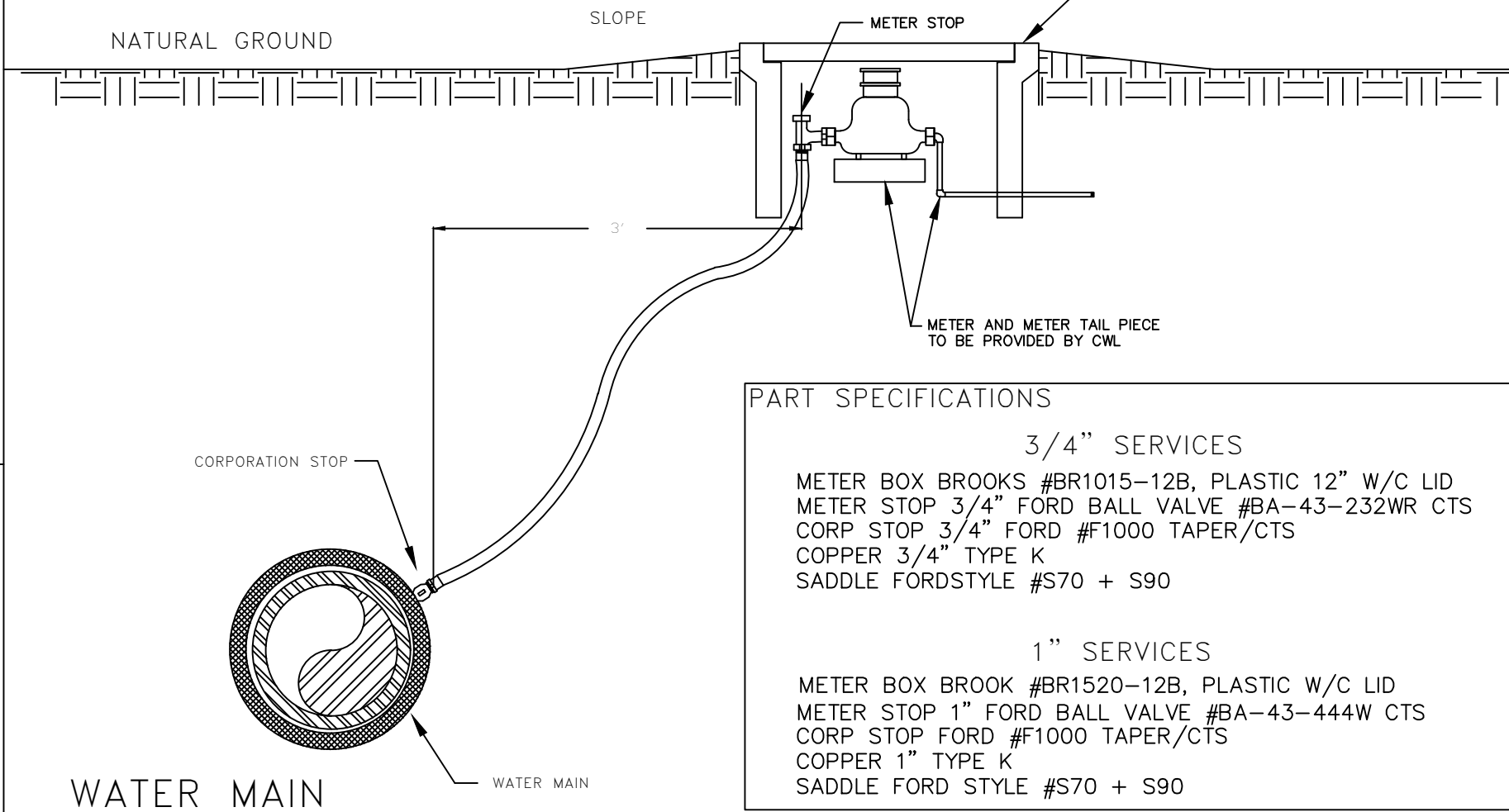
SERVICE CONNECTION AND METER SETTING

NOTE: ONLY 3/4" SERVICES TO BE USED OUTSIDE CITY LIMITS
NOTE: 1" SERVICES TO BE USE WHEN WATER PRESSURE IS BELOW 60 PSI

UNDERGROUND SERVICE LINE
MINIMUM REQUIREMENTS
CITY WATER AND LIGHT PLANT



VALVE BOX DETAIL



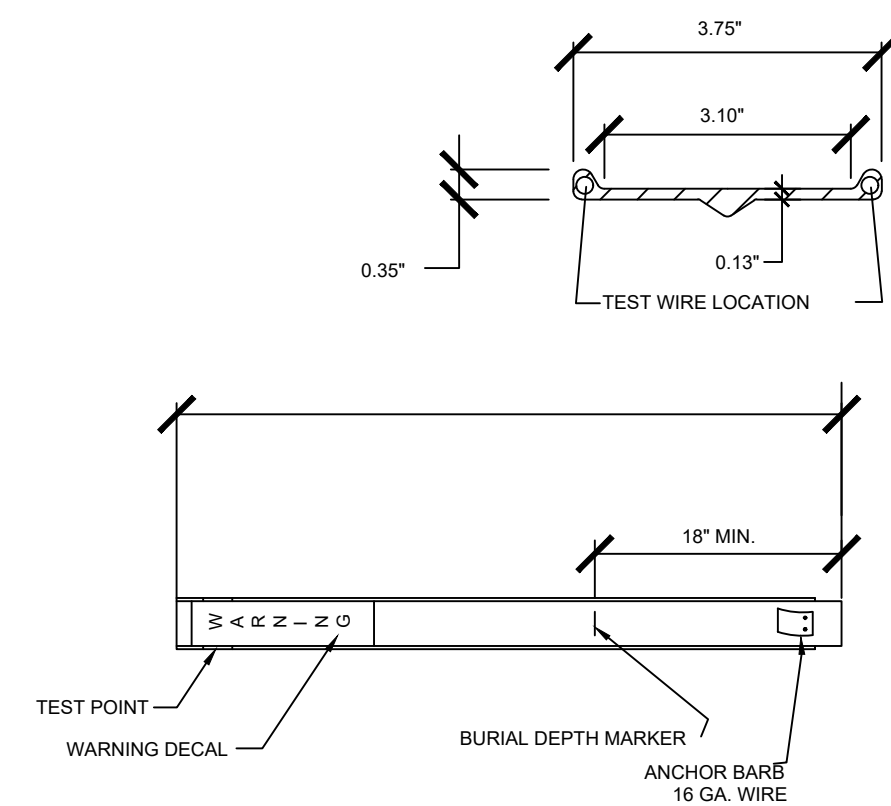
PART SPECIFICATIONS

3/4" SERVICES
METER BOX BROOKS #BR1015-12B, PLASTIC 12" W/C LID
METER STOP 3/4" FORD BALL VALVE #BA-43-232WR CTS
CORP STOP 3/4" FORD #F1000 TAPER/CTS
COPPER 3/4" TYPE K
SADDLE FORDSTYLE #S70 + S90

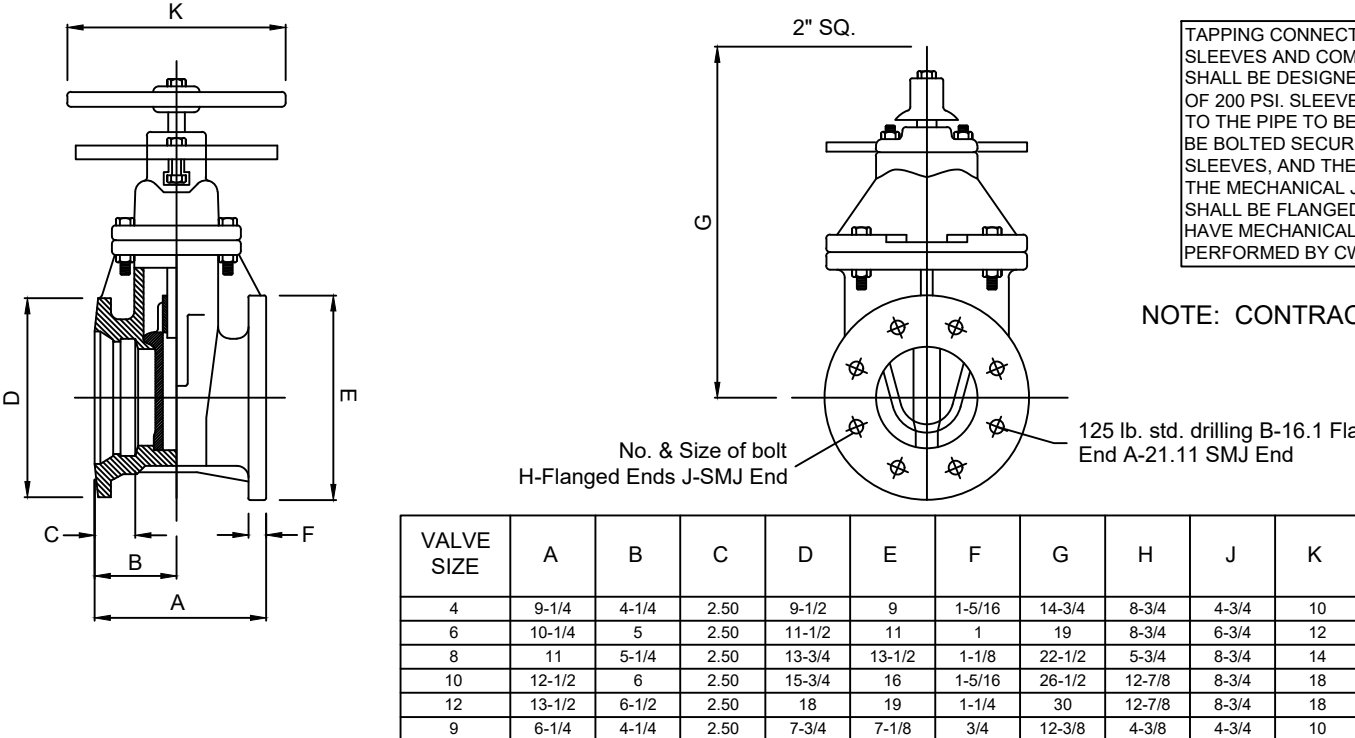
1" SERVICES
METER BOX BROOK #BR1520-12B, PLASTIC W/C LID
METER STOP 1" FORD BALL VALVE #BA-43-444W CTS
CORP STOP FORD #F1000 TAPER/CTS
COPPER 1" TYPE K
SADDLE FORD STYLE #S70 + S90

TAPPING CONNECTIONS SHALL CONSIST OF TAPPING SLEEVES AND COMPANION TAPPING VALVES. THEY SHALL BE DESIGNED FOR WORKING WATER PRESSURE OF 200 PSI. SLEEVES SHALL BE FASTENED SECURELY TO THE PIPE TO BE TAPPED. TAPPING VALVES SHALL BE BOLTED SECURELY TO THE FLANGES OF THE SLEEVES, AND THE TAPPING MACHINE CONNECTED TO THE MECHANICAL JOINT END. THE INLET OPENINGS SHALL BE FLANGED AND THE OUTLET OPENINGS SHALL HAVE MECHANICAL JOINT ENDS. ALL TAPS WILL BE PERFORMED BY CWL.

NOTE: CONTRACTOR TO PURCHASE FROM CWL



WATER LINE & FORCE MAIN
MARKER DETAIL



VALVE SIZE	A	B	C	D	E	F	G	H	J	K
4	9-14	4-14	2-50	9-12	9	1-5/16	14-3/4	8-3/4	4-3/4	10
6	10-14	5	2-50	11-1/2	11	1	19	8-3/4	6-3/4	12
8	11"	5-14	2-50	13-3/4	13-1/2	1-1/8	25-1/2	8-3/4	8-3/4	14
10	12-1/2	6	2-50	15-3/4	16	1-5/16	28-1/2	12-7/8	8-3/4	16
12	13-1/2	6-1/2	2-50	18	19	1-1/4	30	12-7/8	8-3/4	18
9	6-14	4-14	2-50	7-3/4	7-1/8	3/4	12-3/8	4-3/8	4-3/4	10

TAPPING SLEEVE
TAPPING VALVE DETAIL

WILLOW POINTE PHASE IV

WATER DETAILS



REVISIONS

DATE	BY	DESCRIPTION

DRAWING INFO.

DRAWN BY:
DATE:
SCALE:

SHEET NUMBER:

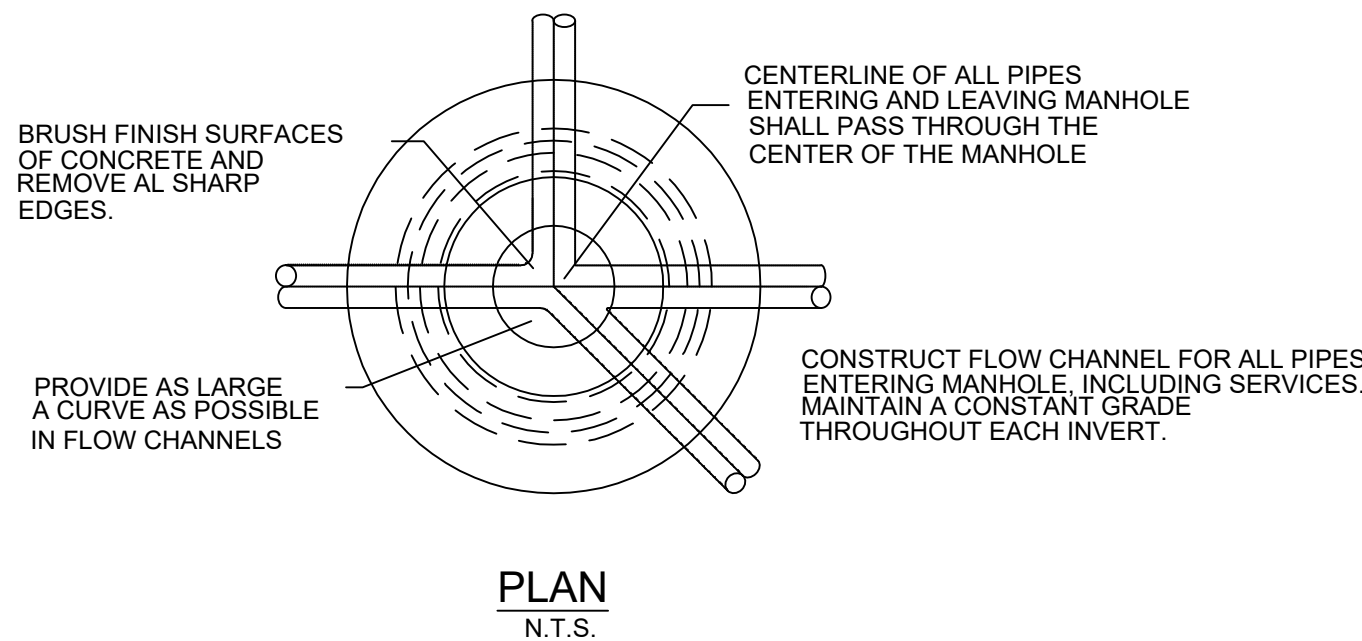
DT-2

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NOTES TYPICAL TO ALL MANHOLES

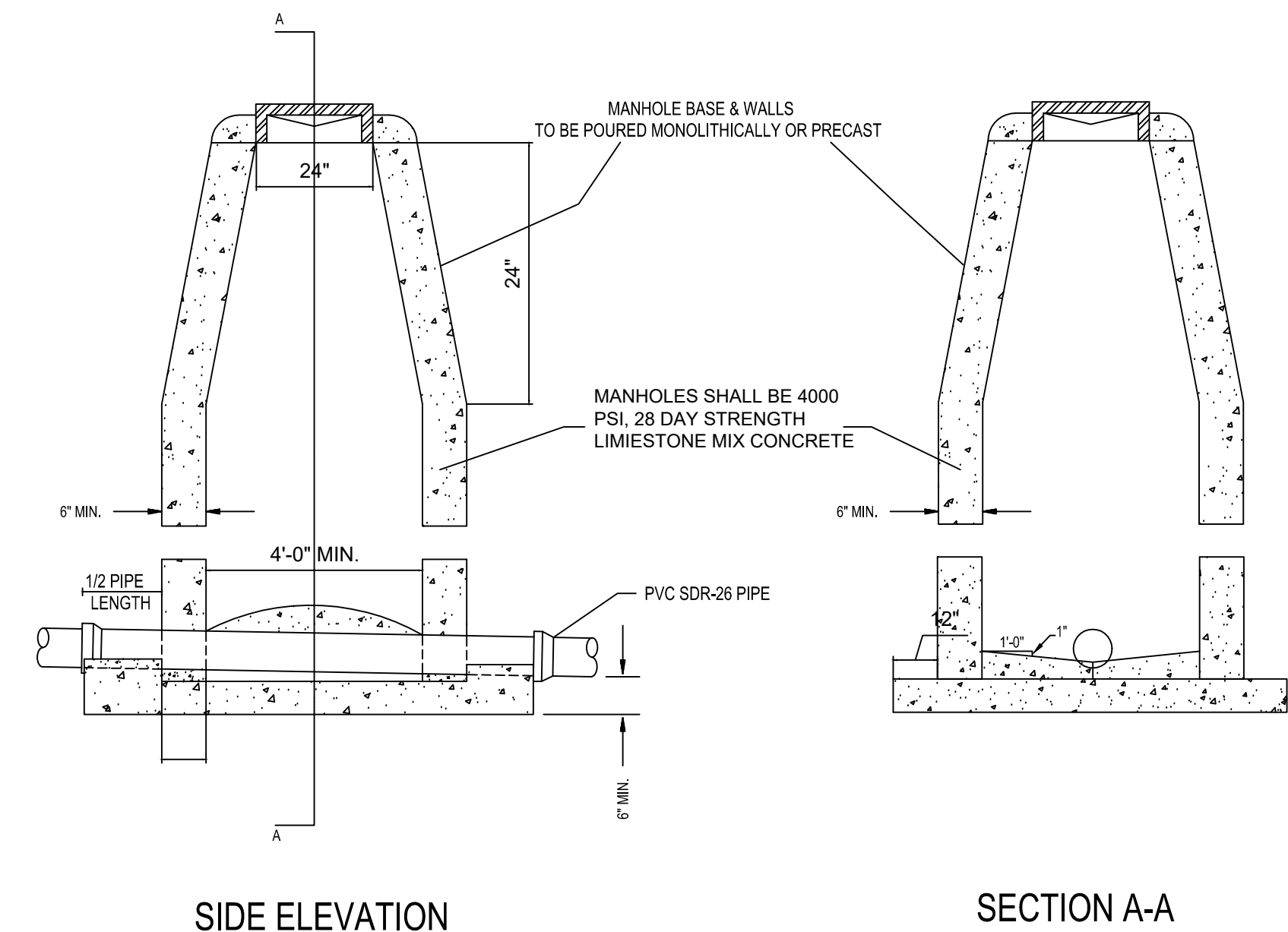
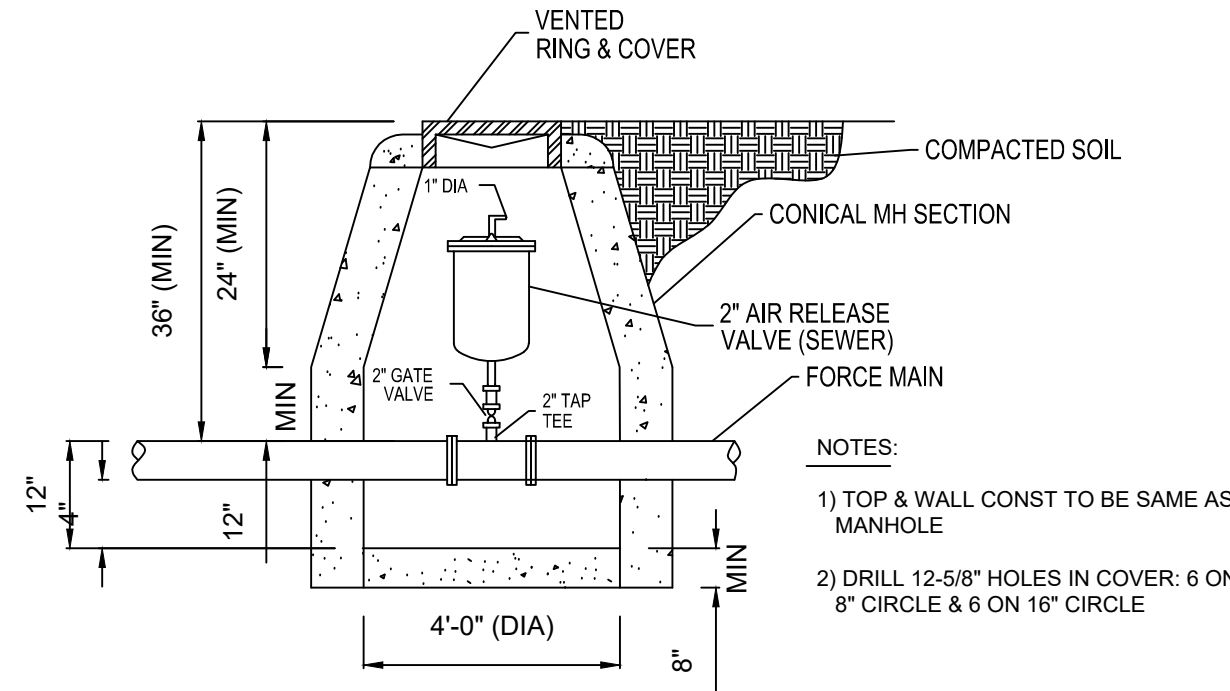
- MANHOLE BASES TO BE 4000 PSI, 28 DAY STRENGTH, LIMESTONE MIX CONCRETE ON UNDISTURBED SUB-GRADE OR ON COMPACTED SELECT FILL MATERIAL AS AUTHORIZED.
- MANHOLE SIDEWALL MATERIAL TO BE CONCRETE IN ACCORDANCE WITH PROPOSAL FORM REQUIREMENTS.
 - 4" I.D. FOR SEWER SIZES 6" THRU 24"
 - 5" I.D. FOR SEWER SIZES 24" THRU 30"
 - 6" I.D. FOR SEWER SIZES 36" THRU 42"
- SET MANHOLE TOPS AS FOLLOWS:
 - IN STREETS, ROADS, HIGHWAYS, AND OTHER PAVED AREAS: FLUSH WITH FINISHED PAVING GRADE.
 - UNDEVELOPED AREAS, SUCH AS FIELDS, WOODS, ETC...: 12" ABOVE GROUND.
 - OTHER AREAS: 1" ABOVE GROUND.
- MANHOLE FRAMES SHALL HAVE MIN. OPENING OF 22" DIA.

STANDARD MANHOLE



MANHOLE DETAILS

AIR/VACUUM RELEASE VALVE DETAIL

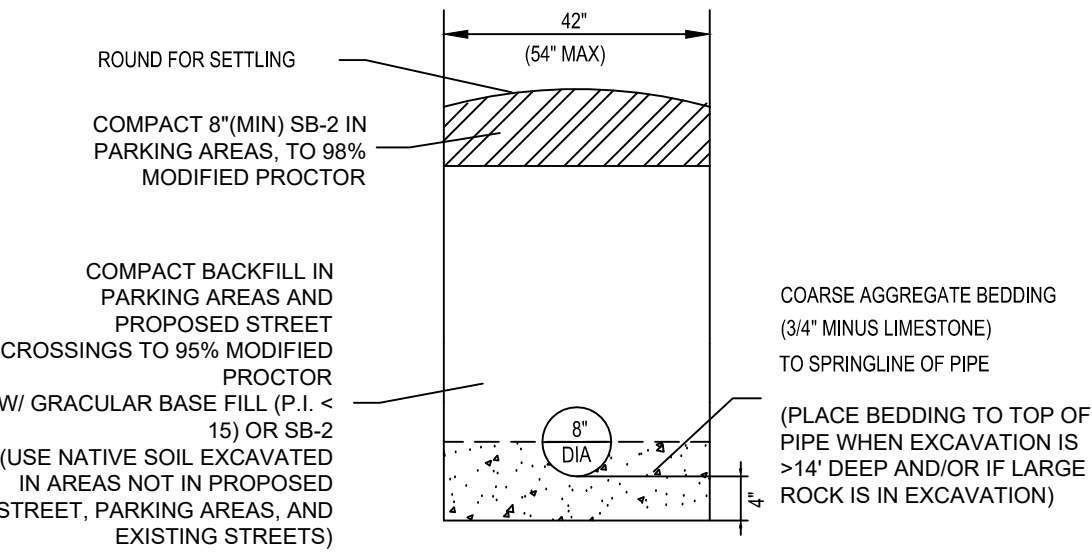


STANDARD MANHOLE

NON-EXISTING STREET LOCATIONS
SDR-26 PVC TRENCH DETAIL

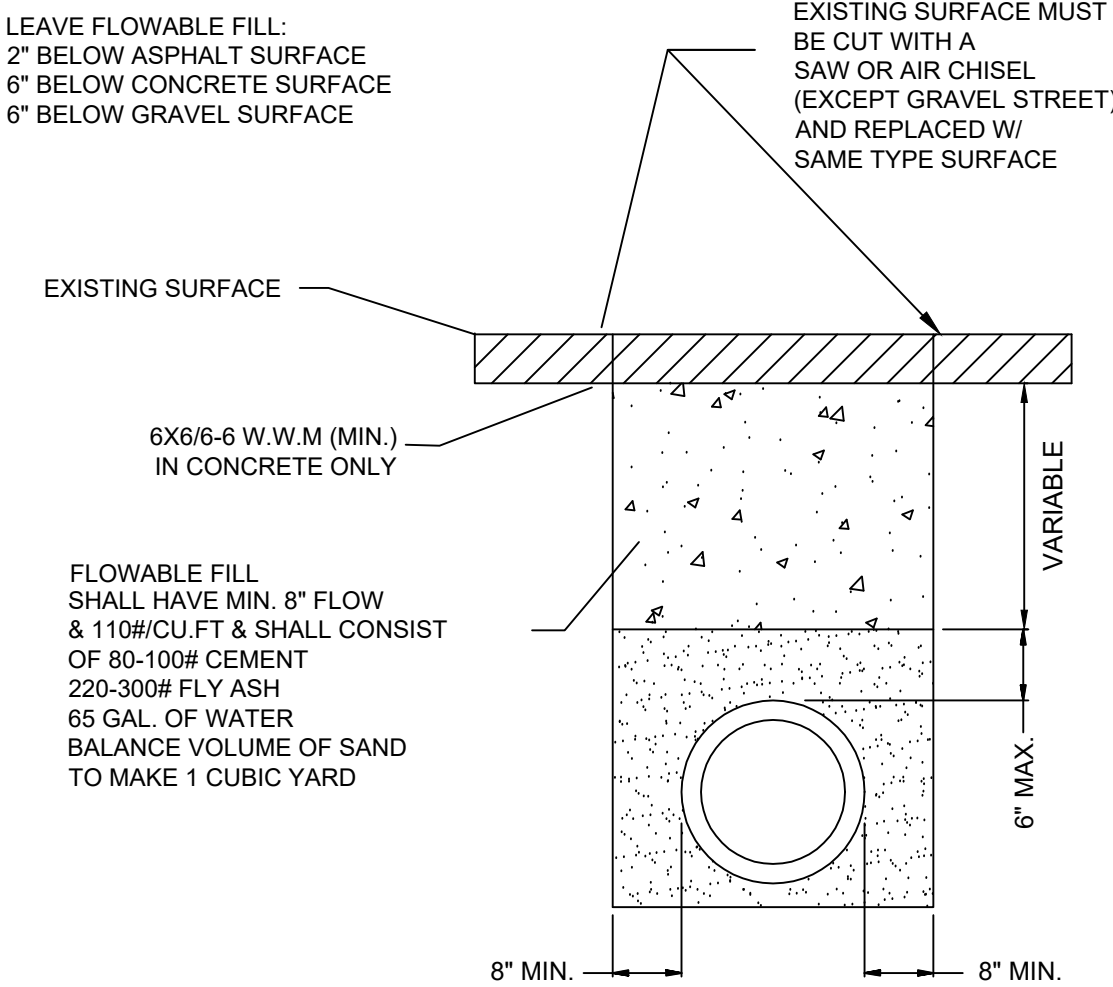
NOTES:

- COARSE AGGREGATE SHALL BE MECHANICALLY TAMPED WHEN USED.
- PIPE IN TRENCH SHALL BE PLACED ON NO LESS THAN 4" OF 3/4" MINUS LIMESTONE. ALL OVER EXCAVATION SHALL BE COMPACTED BACK TO GRADE W/ BEDDING MATERIAL.
- PVC PIPE SHALL BE SDR-26 AND INSTALLED IN ACCORDANCE WITH UNI-BELL PVC PIPE ASSOCIATION'S RECOMMENDATIONS FOR CONSTRUCTION.



PVC TRENCH DETAIL

- NOTE: (1) CONTRACTOR SHALL OBTAIN A STREET CROSSING PERMIT FROM THE CITY OF JONESBORO PRIOR TO CUTTING STREET.
(2) EXCAVATED MATERIAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR
(3) THIS REPAIR DETAIL IS REQUIRED FOR ALL EXCAVATION WITHIN 5' OF PAVED EDGE AND ALL TRANSVERSE EXCAVATIONS TO EXTEND 3' BEYOND PAVED EDGE.

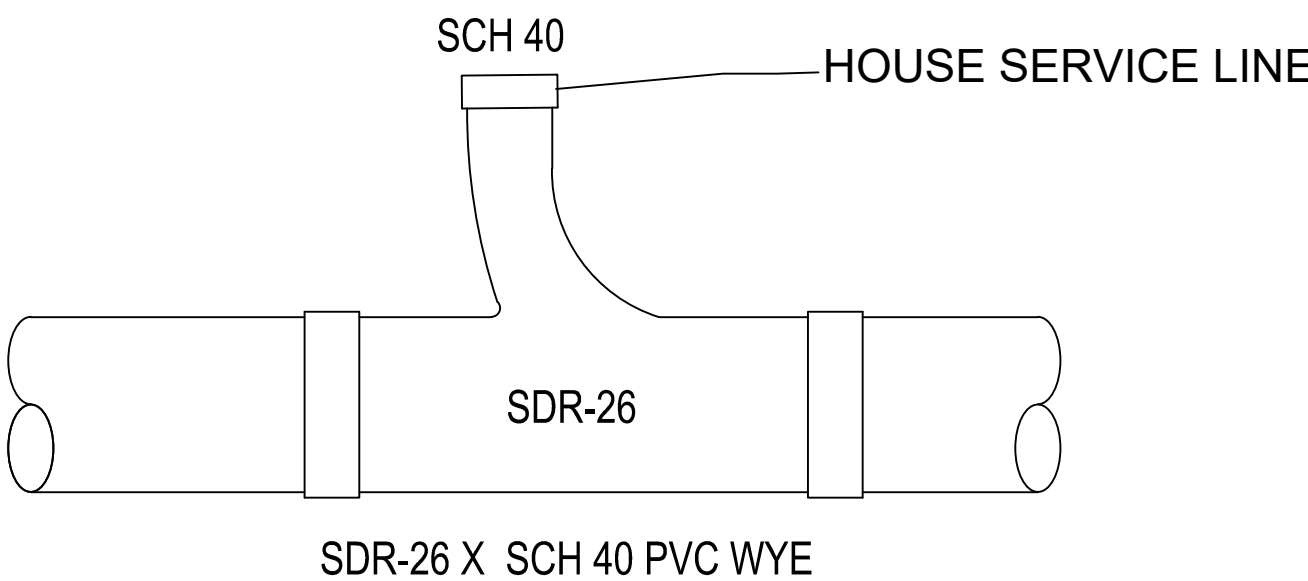


EXISTING STREET LOCATIONS

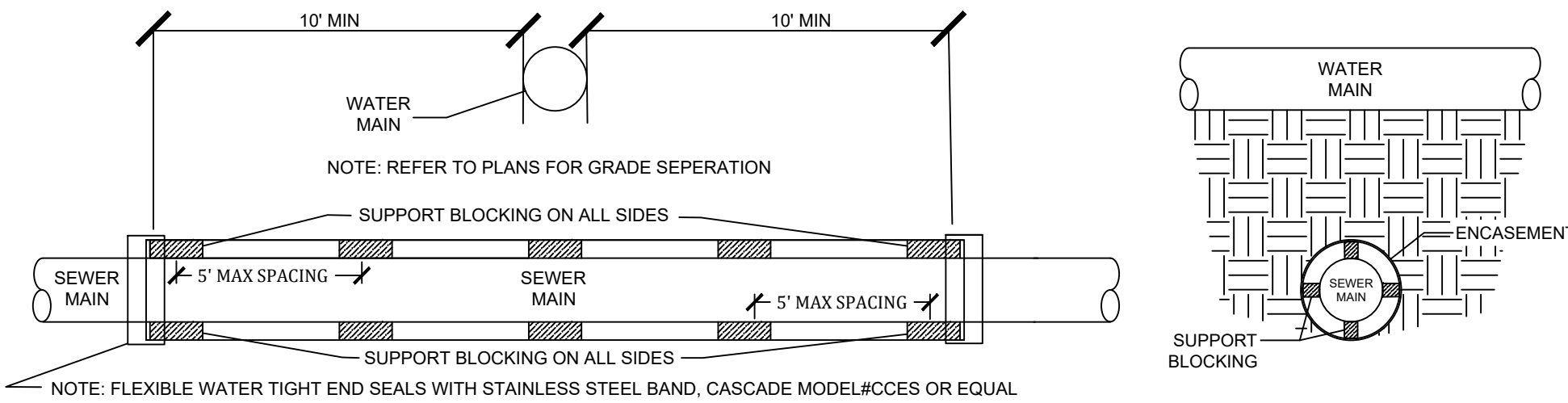
SINGLE WYE

ALL SERVICE LINES UNDER PAVEMENT SHALL BE PVC SCH 40 PIPE W/ PVC SCH 40 COUPLINGS

TEE WYE ONLY

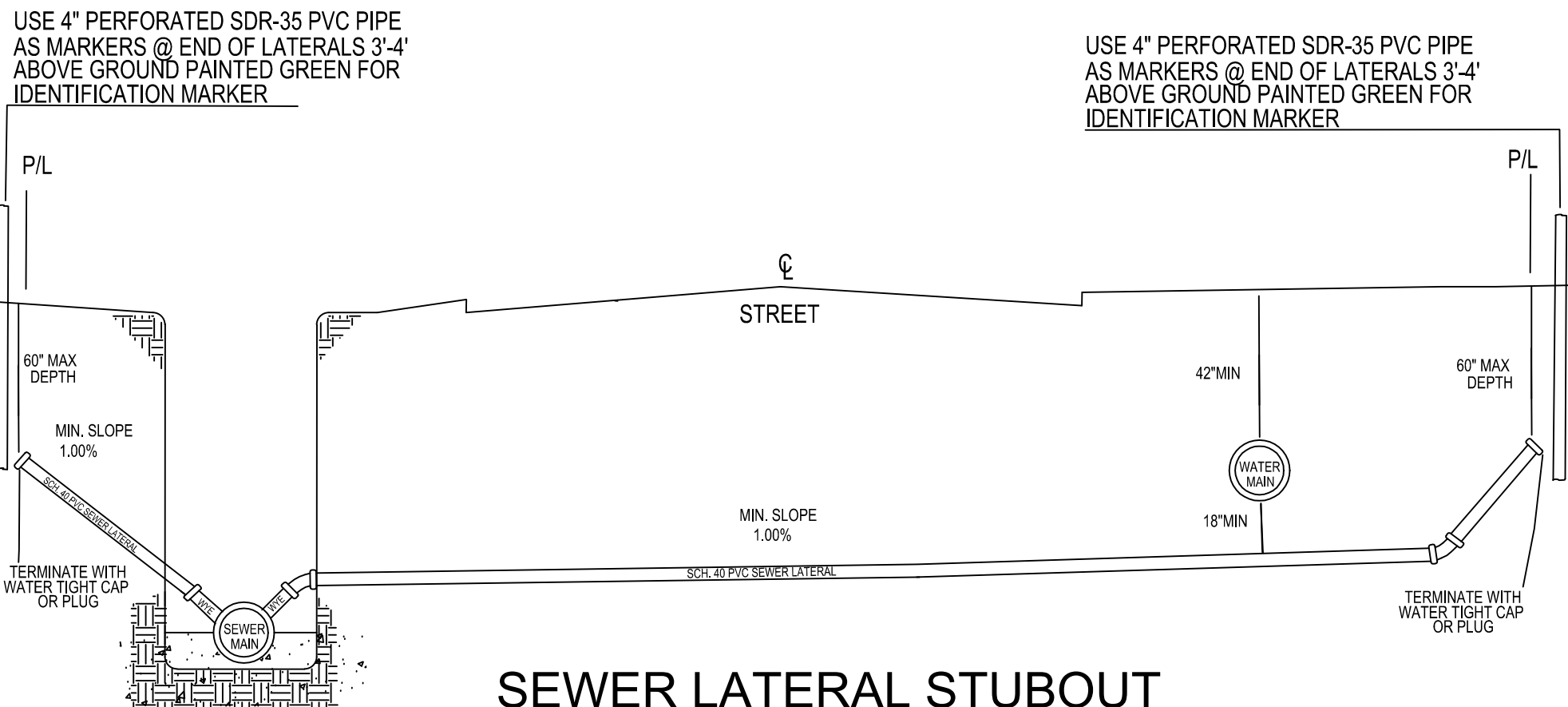


- NOTE: 0.25 THICKNESS STEEL OR SCH 40" PVC ENCASMENT PIPE SHALL EXTEND 10' MINIMUM EACH SIDE OF WATER MAIN
NOTE: REFER TO OPERATING ROUTING NOTE IF WATERLINE CANNOT AVOID GOING UNDER SEWERLINE



ENCASEMENT FOR SEWER MAINS AT WATER CROSSINGS

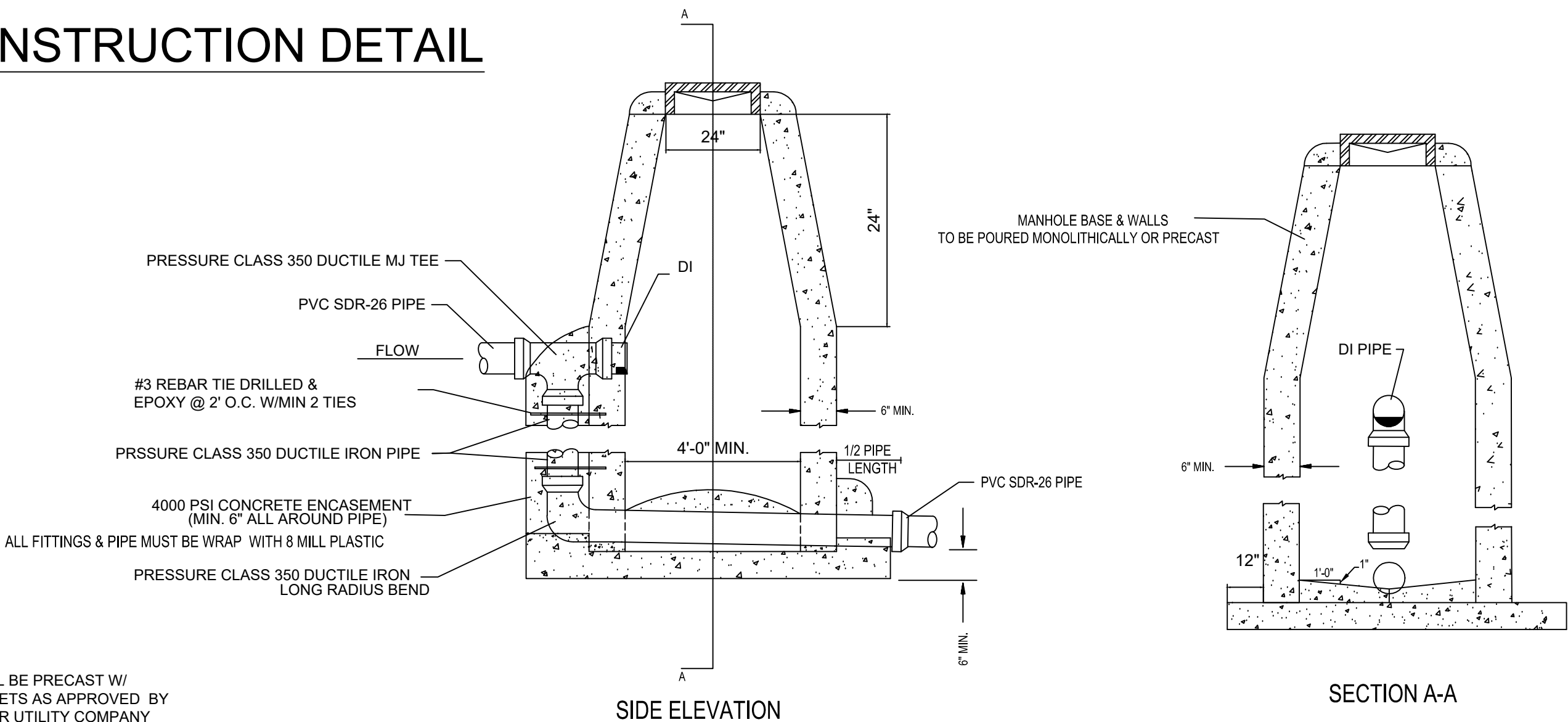
NOTE: WHEN 18" VERTICAL SEPERATION CANNOT BE MAINTAINED



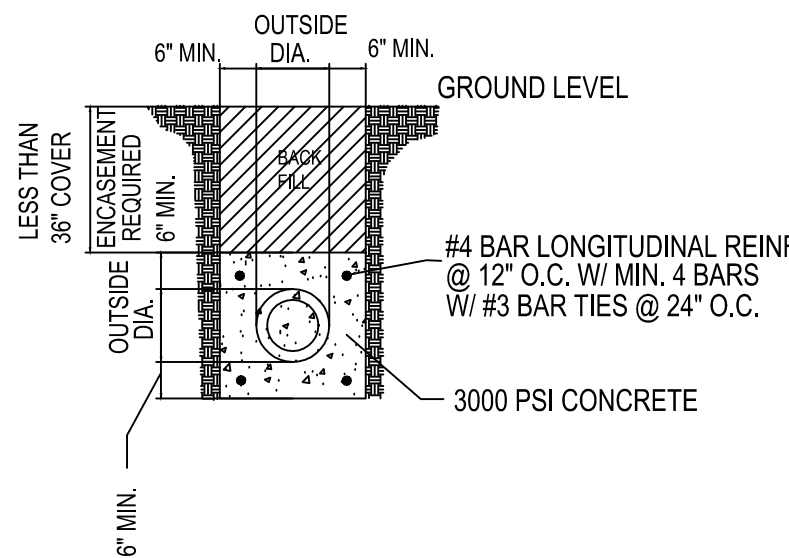
SEWER LATERAL STUBOUT
PERMITS REQUIRED BEFORE INSTALLATION

USE SAME CONFIGURATION FOR MANHOLE STUBOUTS

MANHOLE
CONSTRUCTION DETAIL



DROP MANHOLE



CONCRETE ENCASEMENT
FOR
DITCH CROSSINGS

NOTE: ENCASEMENT PIPE MUST PRESSURE CLASS 350 DUCTILE IRON AND WRAP DUCTILE IRON PIPE WITH 8 MILL PLASTIC

WILLOW POINTE PHASE IV

SEWER DETAILS



REVISIONS

DATE	BY	DESCRIPTION

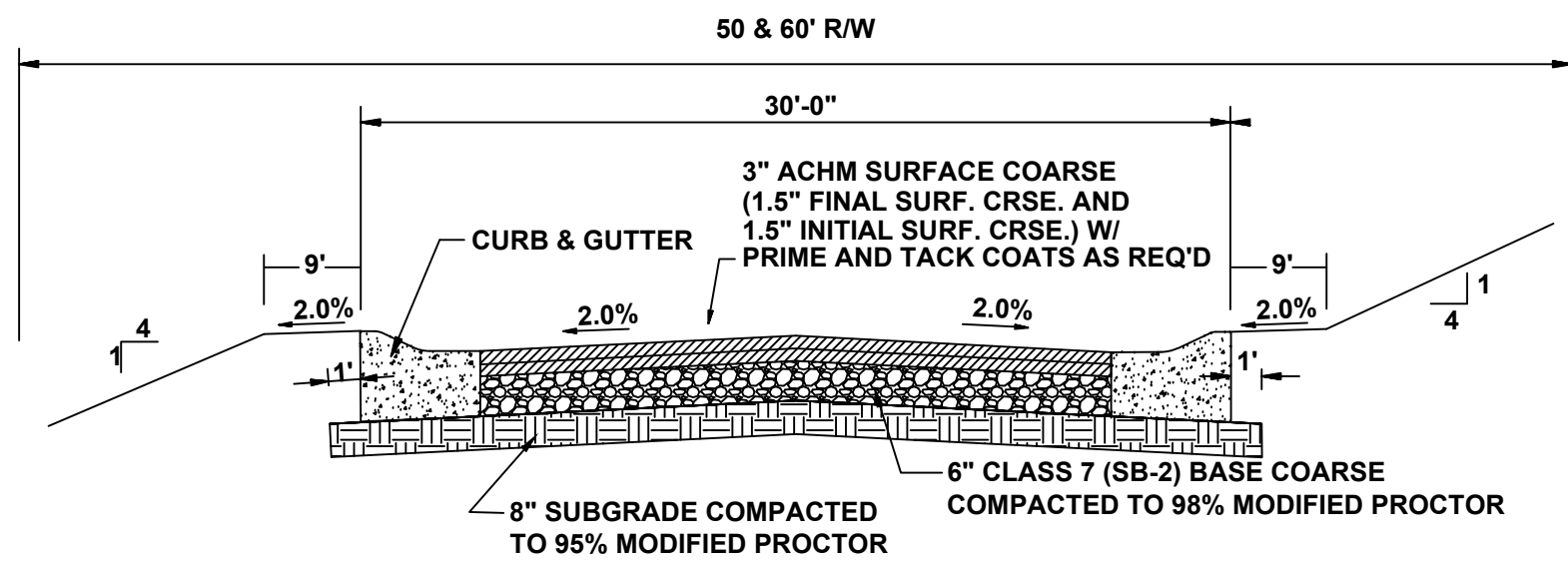
DRAWING INFO.

DRAWN BY:	
DATE:	
SCALE:	

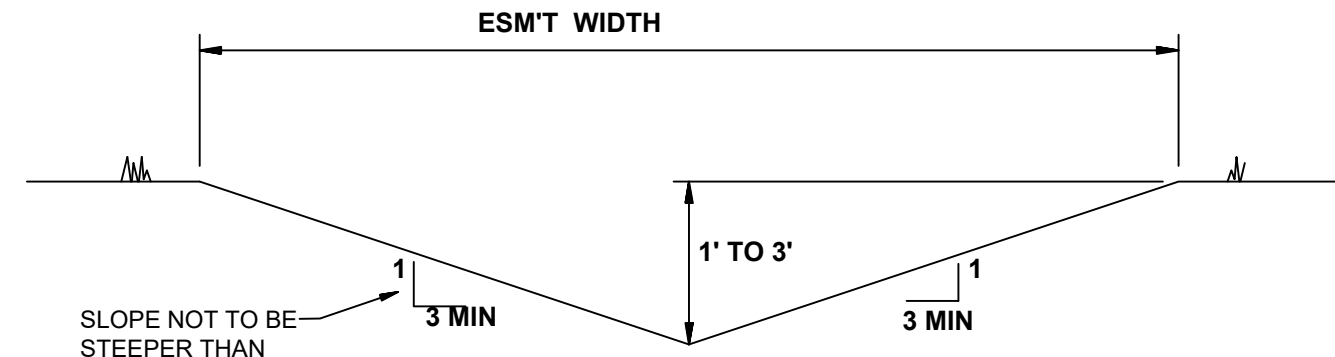
SHEET NUMBER:

DT-3

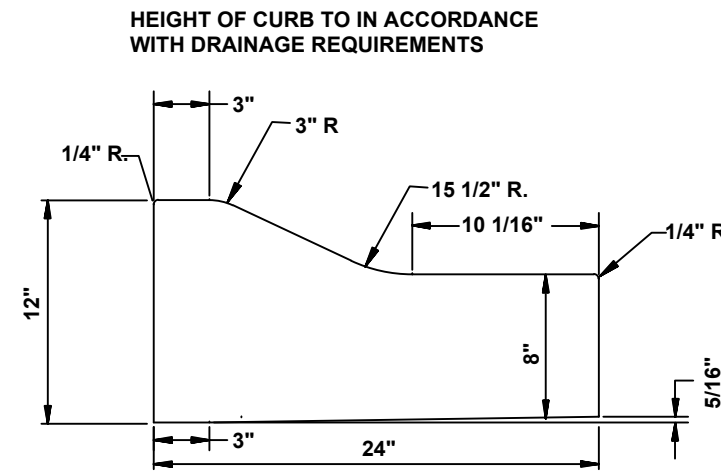
MARK MORRIS P.E.
3221 SHELBY DRIVE
JONESBORO, AR 72404
PH: 1-870-919-7700
MARK.B.MORRIS@YAHOO.COM



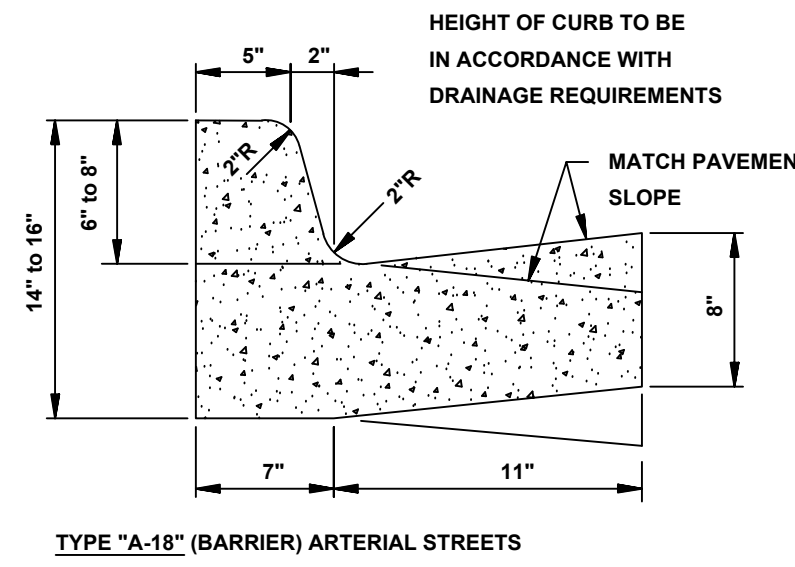
TYPICAL SECTION - INTERIOR STREETS
N.T.S.



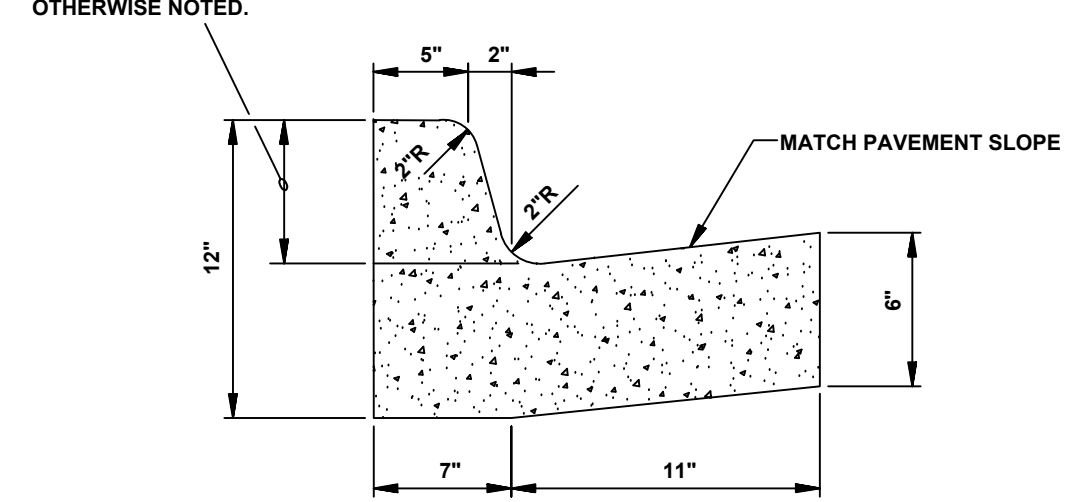
'A' TYPICAL DITCH DETAIL
N.T.S.



TYPE 'B' CURB & GUTTER
N.T.S.



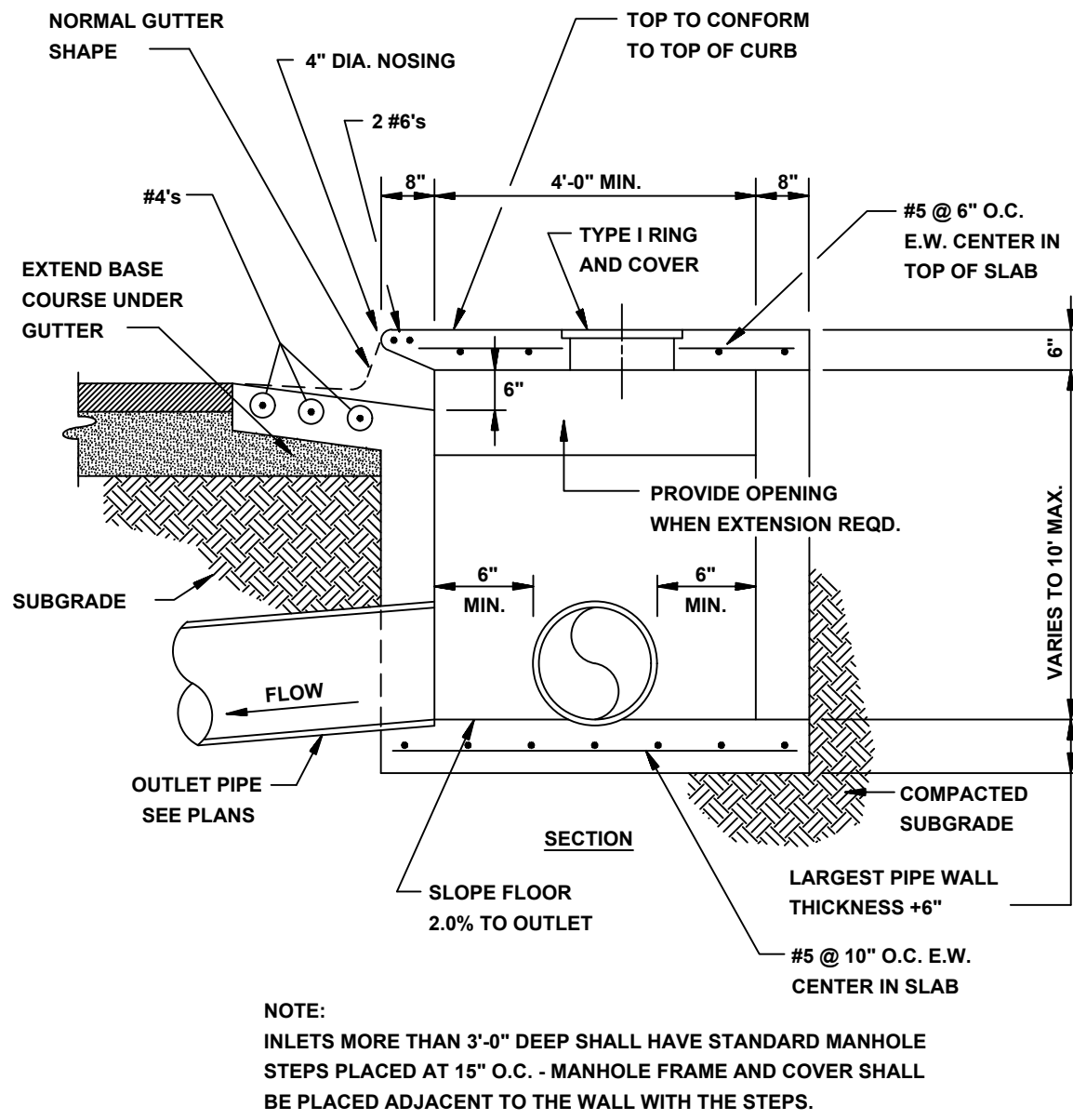
TYPE "A-18" (BARRIER) ARTERIAL STREETS



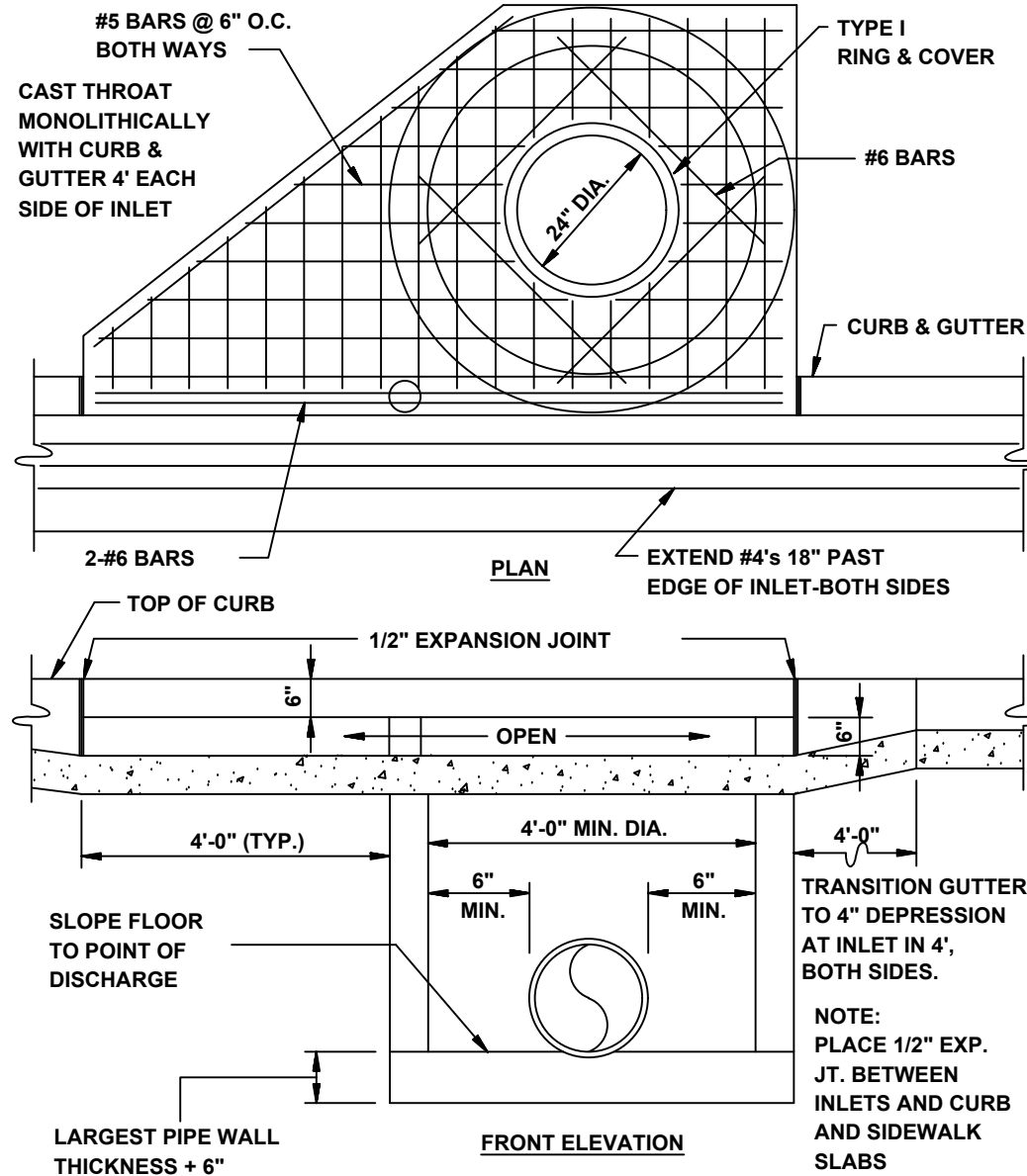
TYPE "A-18" (BARRIER) RESIDENTIAL & COLLECTOR STREETS

COMBINATION CURB & GUTTER
N.T.S.

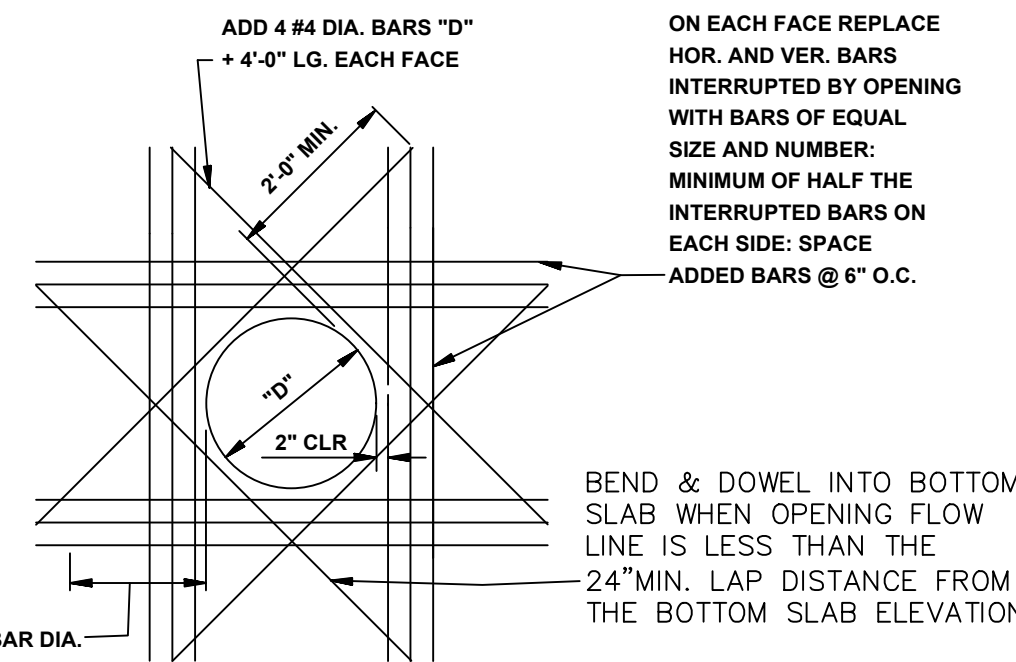
NOTE: CONTRACTION AND EXPANSION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.



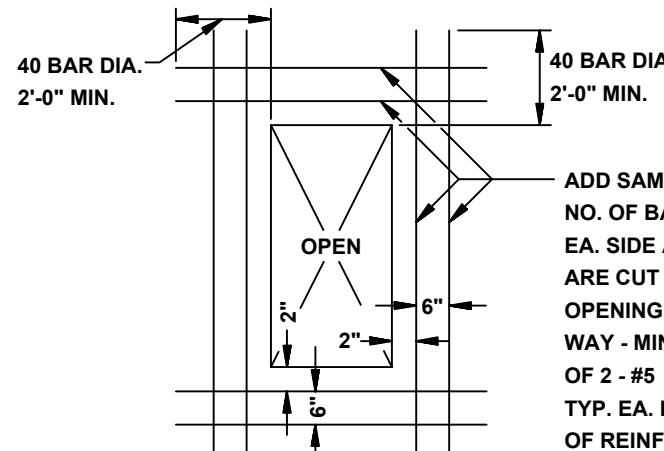
SECTION - CIRCULAR CURB INLET
N.T.S.



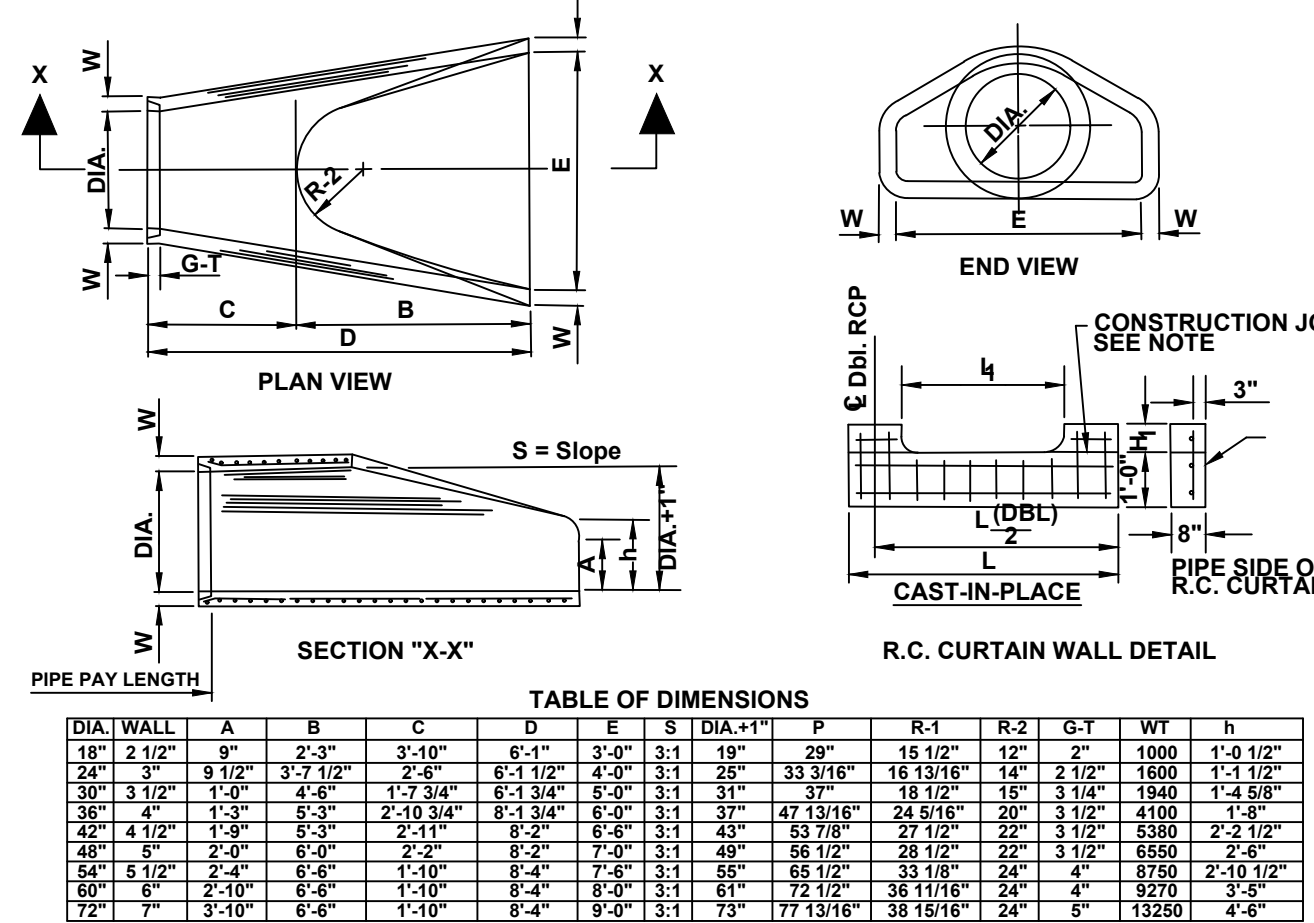
**CIRCULAR CURB INLET
W/ INLET EXTENSION**
N.T.S.



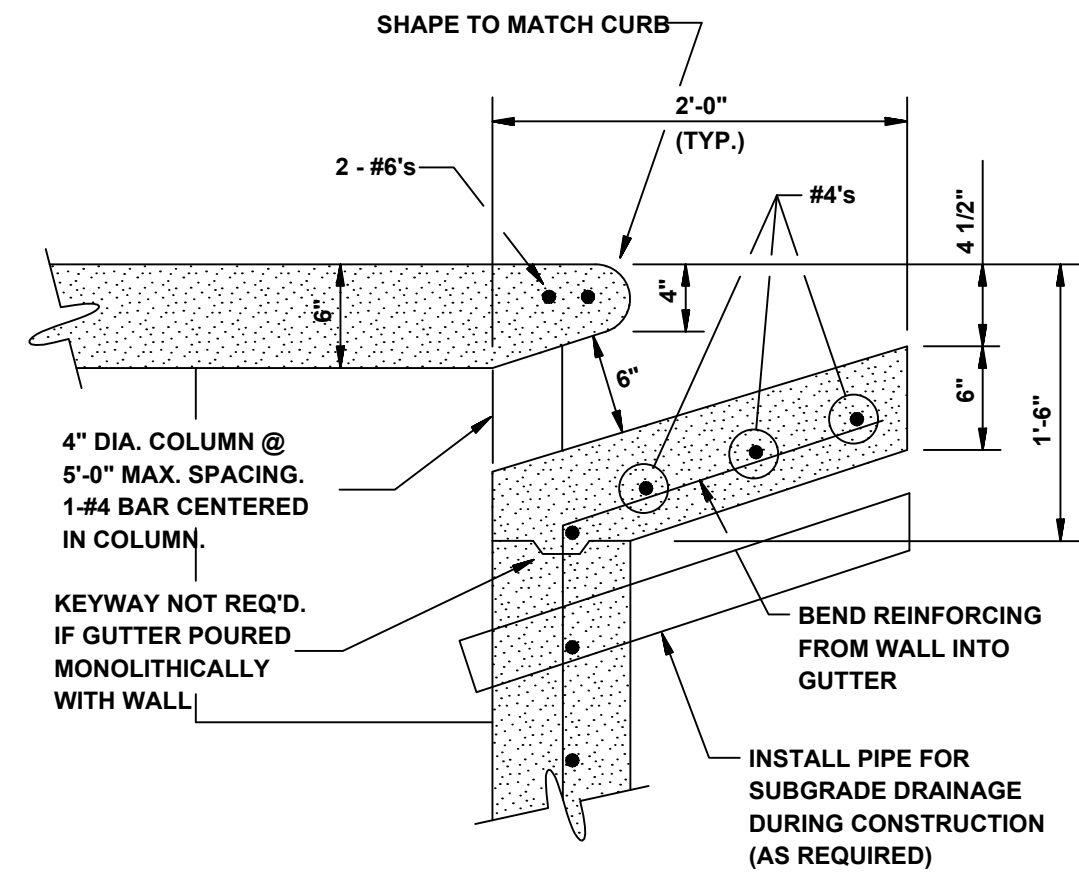
**ADDED REINFORCEMENT AT
ROUND OPENING IN WALL OR SLAB**
N.T.S.



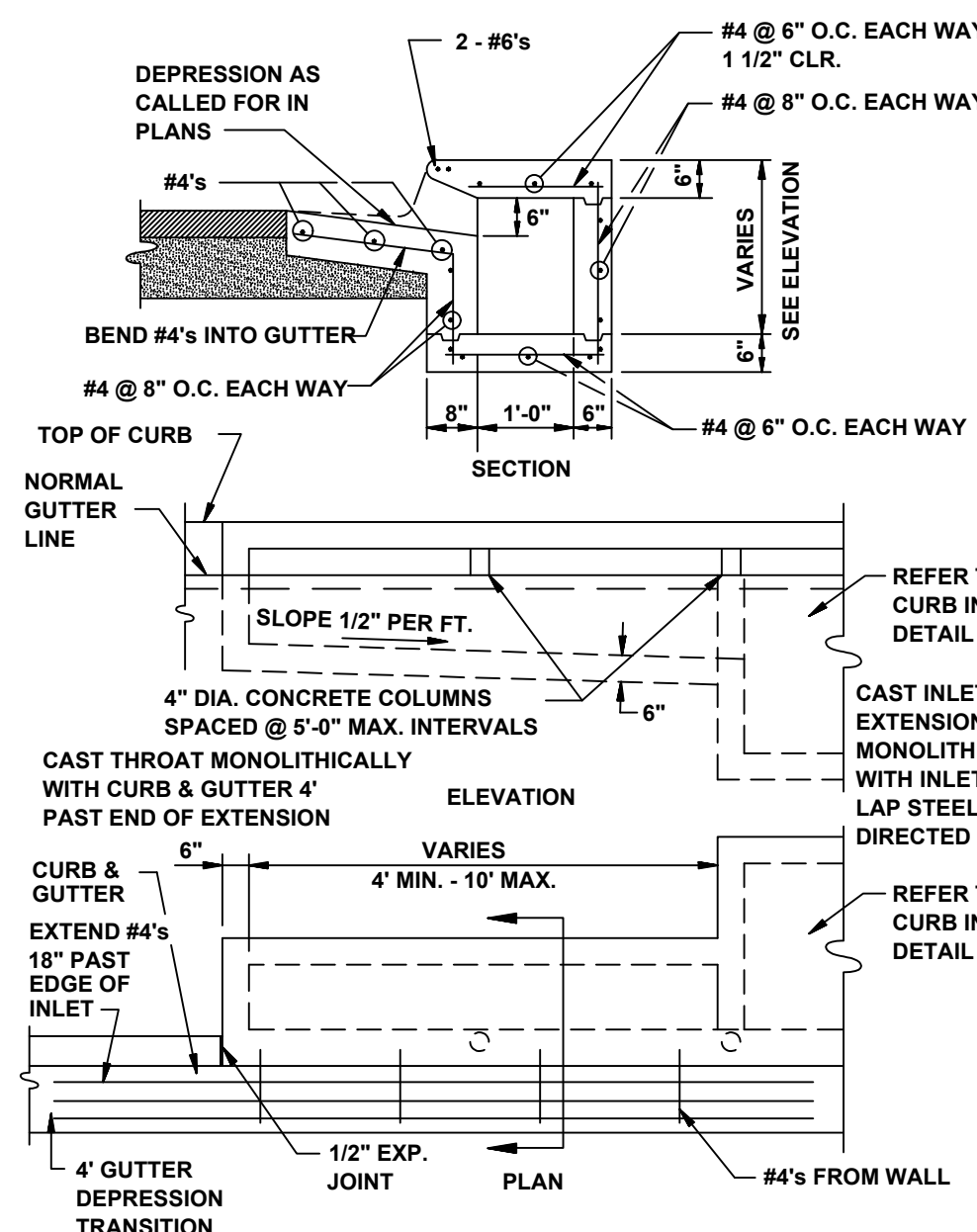
**ADDED REINFORCEMENT AT
RECTANGULAR OPENING
IN WALL OR SLAB**
N.T.S.



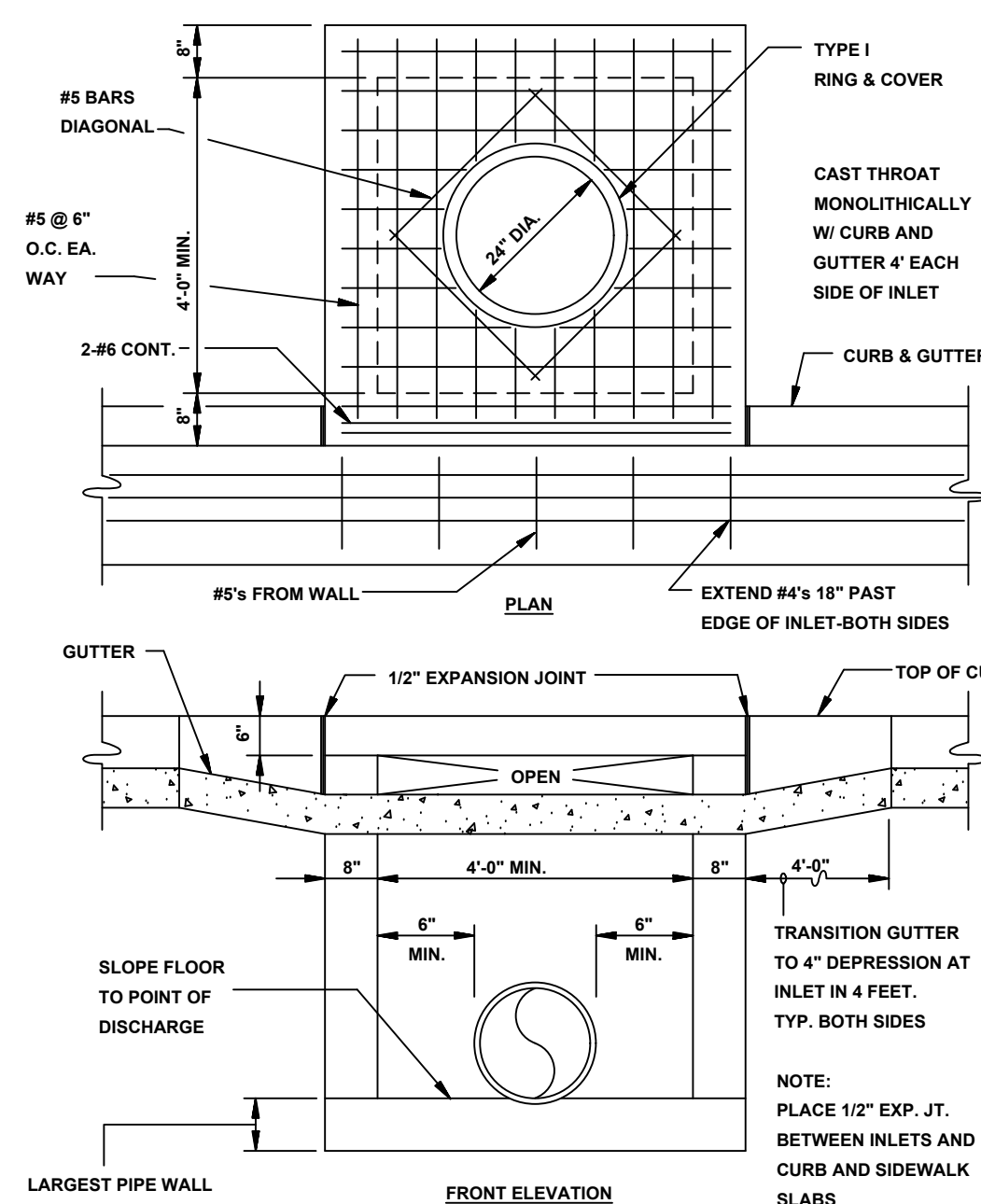
**FLARED END SECTION DETAIL FOR
REINFORCED CONCRETE PIPE CULVERT**
N.T.S.



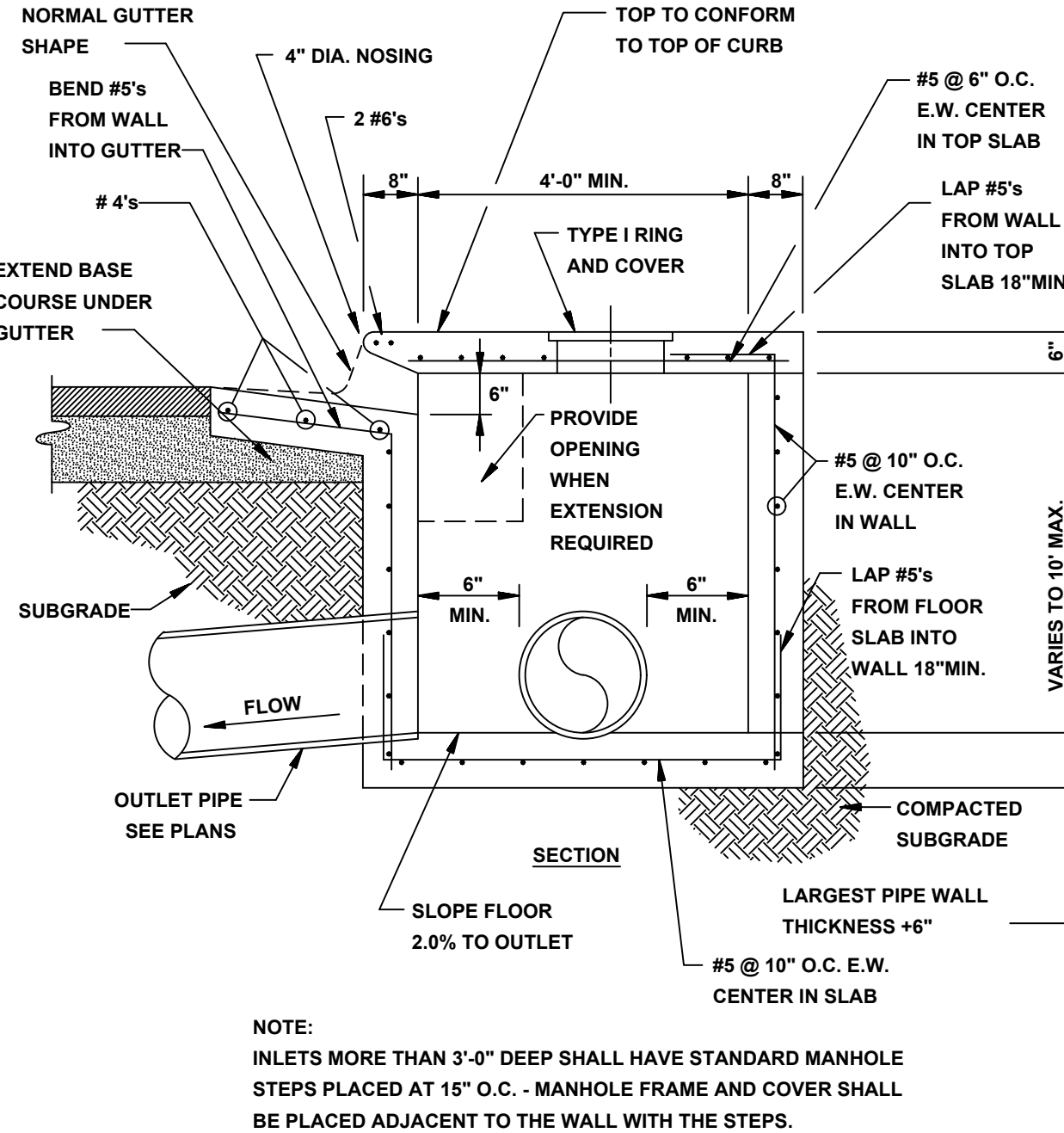
CURB OPENING
N.T.S.



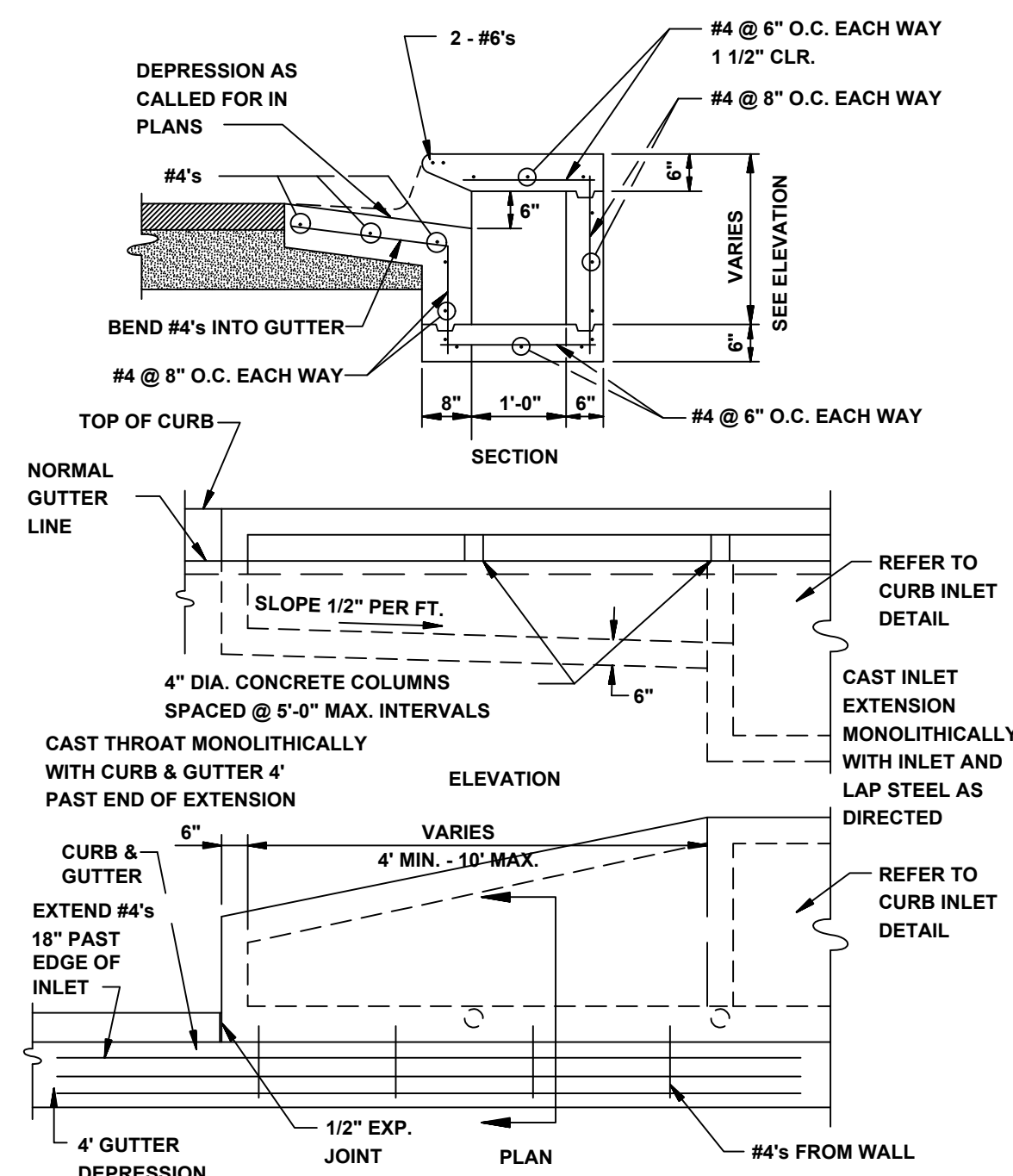
RECTANGULAR CURB INLET EXTENSION
N.T.S.



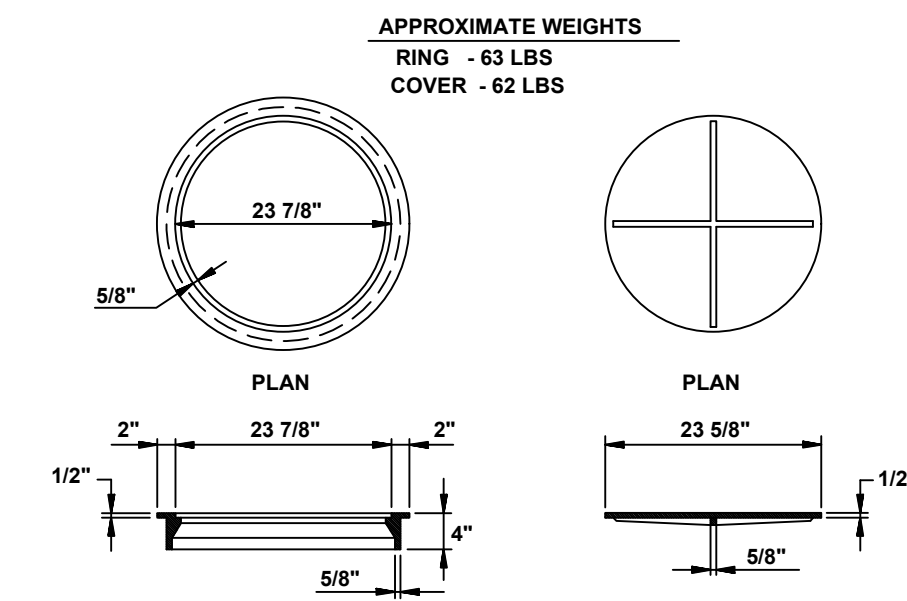
RECTANGULAR CURB INLET
N.T.S.



SECTION - TYPICAL CURB INLET - TYPE 'A'
N.T.S.

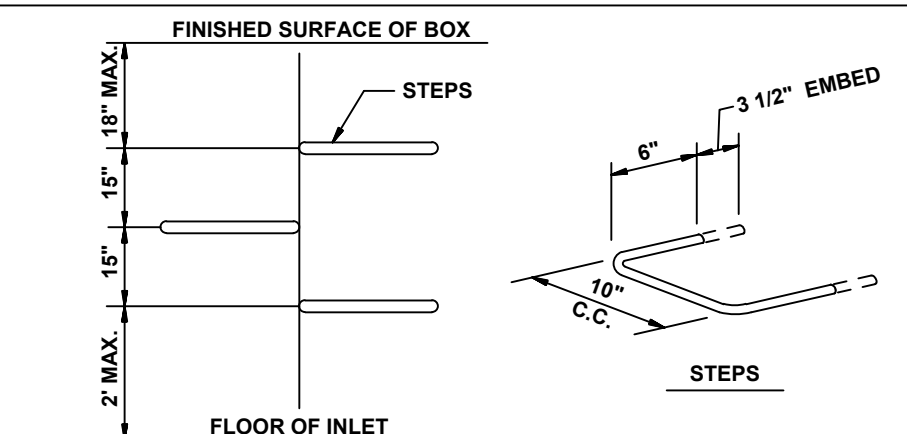


ALTERNATE CURB INLET EXTENSION
N.T.S.



TYPE I RING & COVER
N.T.S.

NOTE: TYPE I FRAME AND COVER PERMITTED ONLY ON STRUCTURES NOT SUBJECT TO VEHICULAR TRAFFIC.



MANHOLE / INLET STEPS
N.T.S.

STEPS SPECIFICATIONS:
A. MANHOLE STEPS: CORROSION RESISTANT, COATED AND REINFORCED WITH STEEL PER ASTM C-478. STEEL REINFORCING MINIMUM 1/2" DIAMETER.
B. CAPABLE OF SUPPORTING MINIMUM 300 LB. LOAD.
C. NON-SLIP TEXTURED TREADS.
D. REQUIRED IN ALL STRUCTURES 3'-0" DEEP OR DEEPER, UNLESS SPECIFIED OTHERWISE.