

## ADDENDUM NO. 1

TO: ALL PLAN HOLDERS

RE: Oak Street Sewer & WWTP Improvements – City of Keo, Arkansas


ADDENDUM DATE: May 12, 2022

The Plans, Specifications and Contract Documents for the above referenced project are hereby modified as follows:

1. **Bid Proposal: Remove and Replace Bid Proposal with attached.**
2. **Plan Set: Remove and Replace Plan Set with attached.**

ADDENDUM NO.1 ISSUED BY:

A.L. FRANKS ENGINEERING

  
\_\_\_\_\_  
Caleb Mudford, P.E.  
Project Manager



5-12-22

**CTY OF KEO, ARKANSAS**  
**OAK STREET SEWER AND WWTP IMPROVEMENTS**

**BID PROPOSAL**

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
1	1	L.S.	Mobilization including preparatory work and operations, including but not limited to, movement of personnel, equipment, supplies, and incidentals to the project site for the lump sum price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/L.S.		
2	1	L.S.	Videoing of existing abandoned sewer main, clearing of any obstructions encountered and locating existing service taps for the lump sum price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/L.S.		

BID PROPOSAL CONTINUED

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
3	1	L.S.	Removal and disposal of existing 2" bypass force main including the sealing of any connections to the bypass pump or manhole for the lump sum price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/L.S.		
4	325	L.F.	Perform pipe bursting of 8" existing sewer w/8" solid wall HDPE including all fittings, connections, materials, labor, equipment, entry pits and all other items necessary for the installation of sewer main by pipe bursting per the plans for the unit price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/L.F.		

BID PROPOSAL CONTINUED

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
5	3	EA.	Provide and install sewer service connections including locating of connections and any necessary earthwork required, piping and fittings as described in the plans and specifications per each	\$ _____	\$ _____
			_____ Dollars and _____ Cents/EA		
6	1	L.S.	Provide and install asphalt street repair for any damages due to construction including service connections and any entry pits required as described in the plans and specifications for the unit price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/L.S.		

BID PROPOSAL CONTINUED

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
7	1	L.S.	Provide and install traffic control for Oak Street and fall protection/warning signage for all excavated areas throughout construction for the lump sum price of  _____ _____ Dollars and Cents/L.S.	\$ _____	\$ _____
8	1	L.S.	Provide and install trench protection as required in accordance with the plans and specifications for the lump sum price of  _____ _____ Dollars and Cents/L.S.	\$ _____	\$ _____

BID PROPOSAL CONTINUED

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
9	1	L.S.	Provide and install drop manhole connection as required in accordance with the plans and specifications for the lump sum price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/L.S.		
10	1	L.S.	Install & maintain erosion control measures as shown on the Oak Street erosion control plan including silt fencing, seeding, and other controls as necessary to limit erosion throughout the project and establish a minimum of 70% permanent vegetation for the lumpsum price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/L.S.		

BID PROPOSAL CONTINUED

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
11	0.03	AC	Provide and install hydroseeding at all disturbed areas within the Oak Street project area as necessary to establish permanent vegetation in accordance with ARDOT seeding and fertilizer requirements for site soil type and season for the unit price of  _____ Dollars and _____ Cents/AC	\$ _____	\$ _____
12	210	L.F.	Provide and install levee repair including materials, fabric, rock, dewatering, labor, select fill and all other incidental items required for the unit price of  _____ Dollars and _____ Cents/L.F.	\$ _____	\$ _____

BID PROPOSAL CONTINUED

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
13	1542	S.Y.	Provide and install SB-2 gravel access road including subgrade preparation, minor grading and all other incidental items required for the unit price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/S.Y.		
14	1	L.S.	Install & maintain erosion control measures as shown on the WWTP erosion control plan including silt fencing, rock berm, seeding, and other controls as necessary to limit erosion throughout the project and establish a minimum of 70% permanent vegetation for the lump sum price of	\$ _____	\$ _____
			_____ Dollars and _____ Cents/L.S.		
SCHEDULE B: TOTAL OF ITEMS 1-14				\$ _____	



NOTES: Contractor shall submit bids and hold price for a period of no more than 60 days from the bid opening. All work shall be done in accordance with ADEQ and ADH requirements and permits as provided in the specifications.

Items that are subsidiary to performing the work shall include all labor, equipment, and materials shall be supplied by the contractor. Existing utilities and improvements shall be protected during construction and contractor shall coordinate with City of Magnolia Utility Department for connections to existing sewer main. Protection measures shall be approved by the engineer prior to construction.

Haul routes approved designated by the city shall be restored to original conditions upon completion of the work. This area is not included in seeding / revegetation and shall be considered subsidiary to the work.

\*\*Sam.gov Unique Entity Identifier Number **MUST** be listed here: \_\_\_\_\_  
BID PROPOSAL CONTINUED

ITEM	QTY	UNIT	DEDUCTIVE ALERNATE #1 DESCRIPTION	UNIT PRICE	TOTAL PRICE
1	210	L.F	Item #12: Deduct Provide and install levee repair Including materials, fabric, rock, dewatering, labor, select fill and all other incidental items required for the unit price of	\$ _____	\$ _____
_____ Dollars and _____ Cents/L.F.				=====	
TOTAL DEDUCTIVE ALERNATE #1				\$ _____	
TOTAL BASE BID LESS DEDUCTIVE ALERNATE #1				\$ _____	

BID PROPOSAL CONTINUED

ITEM	QTY	UNIT	DEDUCTIVE ALERNATE #2 DESCRIPTION	UNIT PRICE	TOTAL PRICE
1	1542	S.Y.	Item #13: Deduct Provide and install SB-2 gravel access road including subgrade preparation, minor grading and all other incidental items required for the unit price of  _____ Dollars and _____ Cents/S.Y.	\$ _____	\$ _____
2	1	L.S.	Item #14: Deduct Install & maintain erosion control measures as shown on the WWTP erosion control plan including silt fencing, rock berm, seeding, and other controls as necessary to limit erosion throughout the project and establish a minimum of 70% permanent vegetation for the lump sum price of  _____ Dollars and _____ Cents/L.S.	\$ _____	\$ _____
TOTAL DEDUCTIVE ALERNATE #2				\$ _____	
TOTAL BASE BID LESS DEDUCTIVE ALERNATE #1 AND #2				\$ _____	

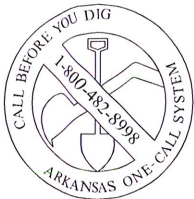
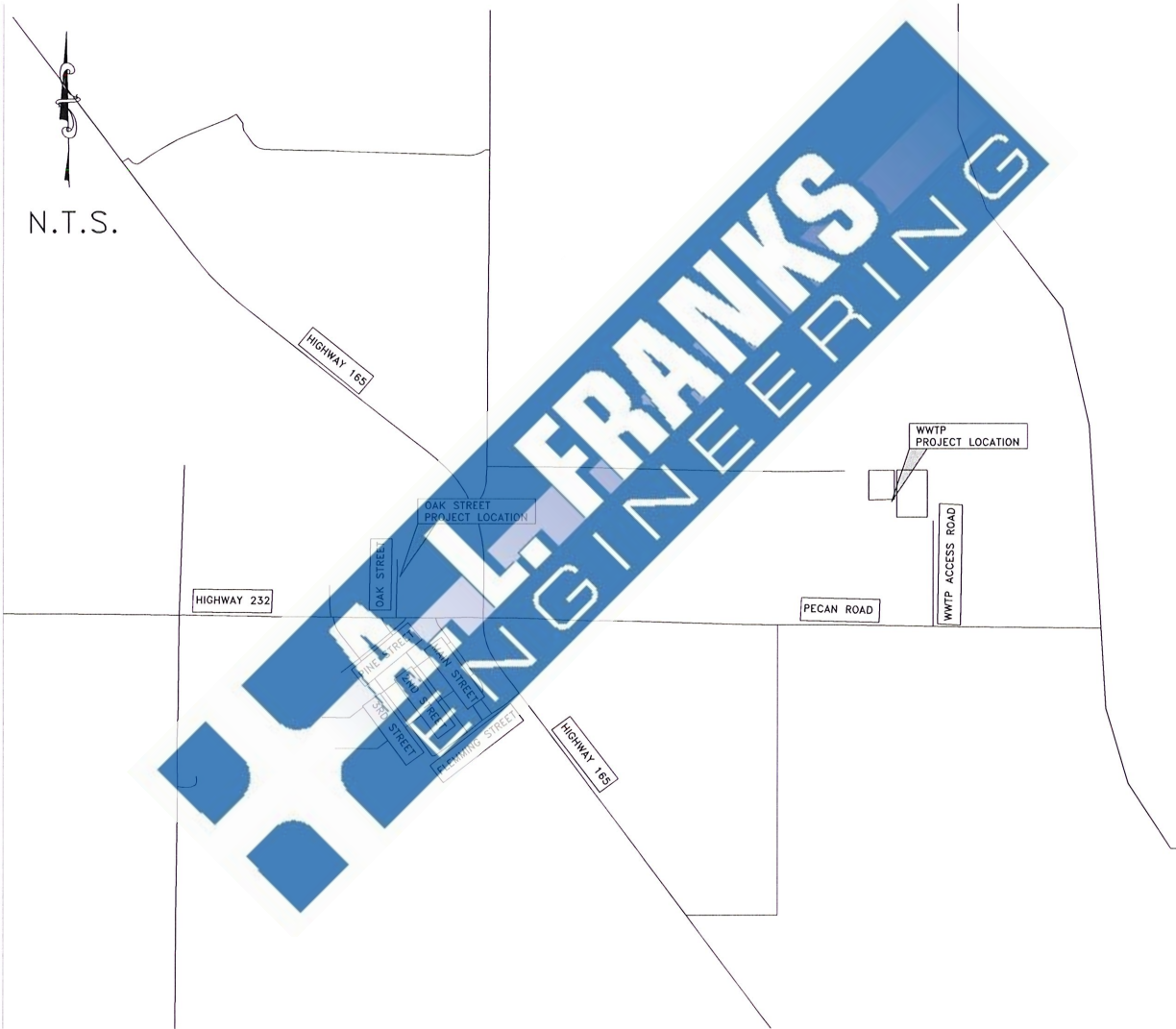
# CITY OF KEO

## OAK STREET SEWER & WWTP IMPROVEMENTS

### KEO, AR

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BEFORE CONSTRUCTION BEGINS  
GIVE 48 HOURS NOTICE  
FOR UNDERGROUND UTILITY LOCATIONS  
CALL: THE ARKANSAS ONE-CALL SYSTEM 1-800-482-8998



118 E. Broad Street  
Texarkana, Arkansas 71854  
Phone (870) 216-1906  
Fax (870) 216-1907



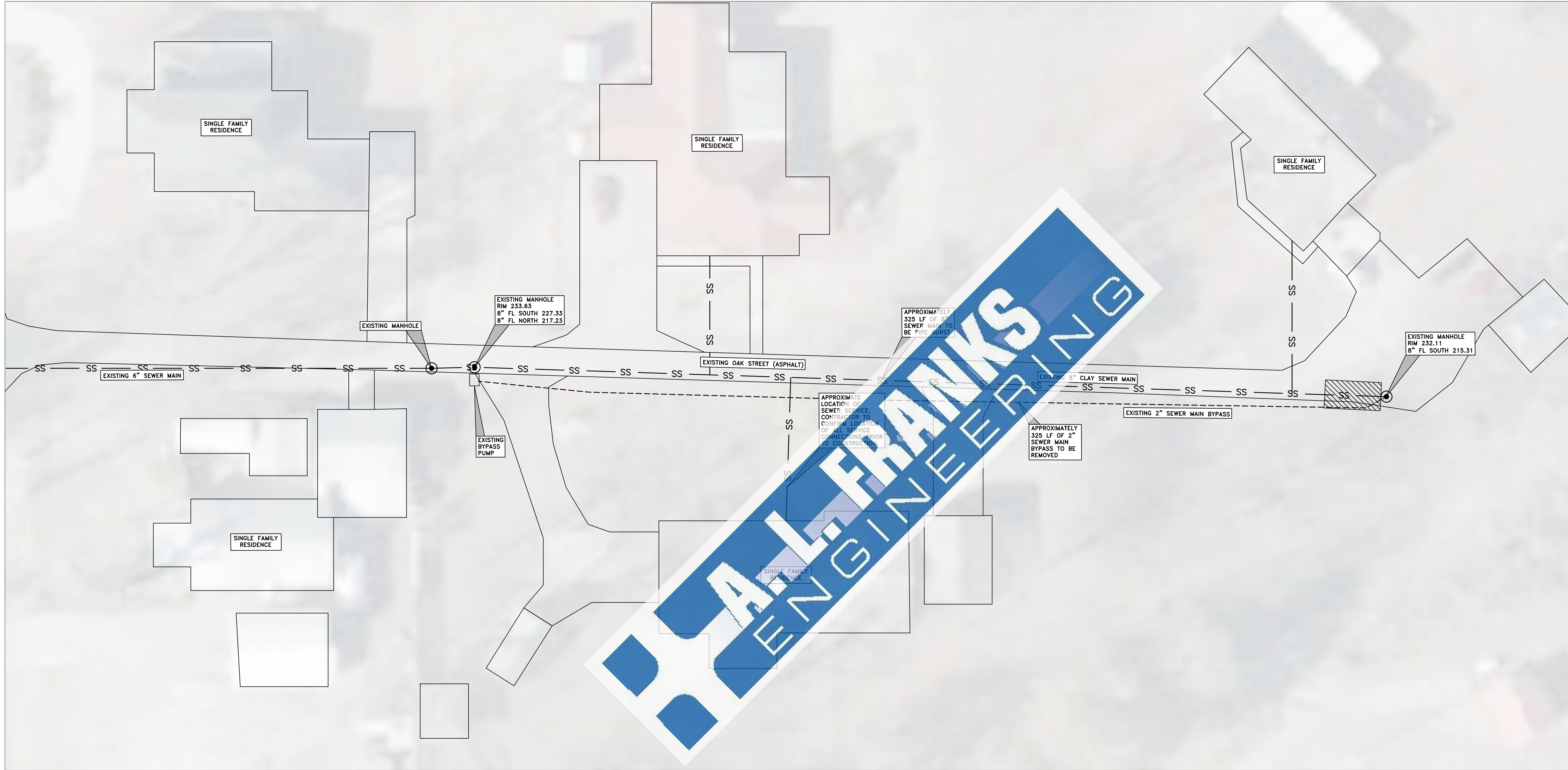
CLIENT  
CITY OF KEO, AR

*Caleb J. Mumford* 4-1-22  
CALEB J. MUMFORD, P.E. PROJECT ENGINEER DATE

*Jason C. Haley* 4-1-22  
JASON C. HALEY, P.E. PROJECT REVIEWER DATE



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LEGEND	
	SIGNAL POLE
	POWER POLE
	LIGHT POLE
	UTILITY RISER/TRANSFORMER
	EX. WATER METER
	PROP. WATER METER
	EX. WATER VALVE
	EX. FIRE HYDRANT
	EX. SANITARY SEWER CLEANOUT
	EX. SANITARY SEWER MANHOLE
	STORM DRAIN MANHOLE
	GAS METER
	GAS VALVE
	TELEPHONE BOX
	SIGN
	EXISTING CONTOURS
	PROPOSED CONTOURS
	SANITARY SEWER
	SANITARY SEWER BYPASS
	SILT FENCE
	BUILDING LINE
	O.H. POWER LINE
	TOP OF BANK
	TOE OF SLOPE
	EDGE OF PAVEMENT

EXISTING CONDITIONS NOTES  
EXISTING CONDITIONS ARE BASED UPON A TOPOGRAPHIC SURVEY PERFORMED BY A.L. FRANKS ENGINEERING ON SEPTEMBER 9, 2021. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY INCONSISTENCIES BETWEEN SITE CONDITIONS AND PLANS. NO SITE IMPROVEMENTS ARE SHOWN BEYOND THE SURVEY DATE.  
UNDERGROUND UTILITIES SHOWN ARE BASED UPON EXISTING DRAWINGS PROVIDED BY THIRD PARTY SOURCES AND FIELD OBSERVED MARKERS OR MANHOLES. THE SIZE, TYPE, MATERIAL AND PRESSURES OF ALL UNDERGROUND UTILITIES IN THE AREA ARE UNKNOWN AND UTILITY LOCATIONS SHOWN MAY DIFFER FROM THE EXACT LOCATION IN THE FIELD AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. UNDERGROUND UTILITIES WERE NOT PHYSICALLY LOCATED, BUT ARE SHOWN USING THE BEST AVAILABLE INFORMATION. CONTRACTOR SHOULD CALL ARKANSAS ONE CALL AT 811 BEFORE ANY EXCAVATION COMMENCES.  
EXISTING SITE FEATURES ARE TO REMAIN UNLESS NOTED OTHERWISE.

4/29/22	1-CORRECTED SEWER SIZE	CJM
Date	Revision	By

Designed	CJM
Checked	JCH
Drawn	CJM
Approved	JCH

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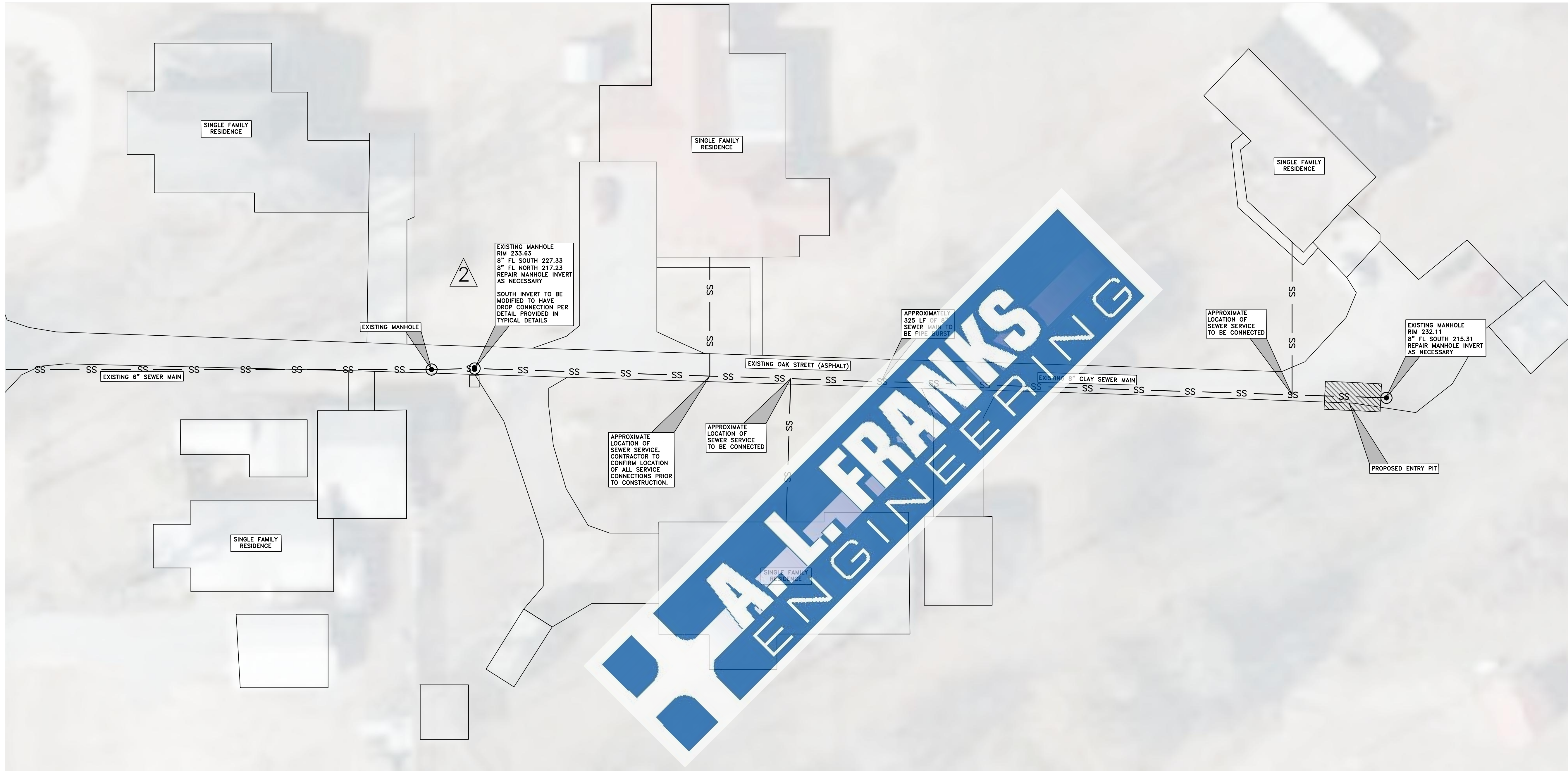
OAK STREET SEWER & WWTP IMPROVEMENTS  
CITY OF KEO  
LONOKE COUNTY, ARKANSAS

OAK STREET EXISTING CONDITIONS

Job No.: ID  
Scale: 1"=20'  
Date: 4/2022  
Sheet 2



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SCALE: 1"=20'-0"	
LEGEND	
	SIGNAL POLE
	POWER POLE
	LIGHT POLE
	UTILITY RISER/TRANSFORMER
	EX. WATER METER
	PROP. WATER METER
	EX. WATER VALVE
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	EX. SANITARY SEWER CLEANOUT
	EX. SANITARY SEWER MANHOLE
	STORM DRAIN MANHOLE
	GAS METER
	GAS VALVE
	TELEPHONE BOX
	SIGN
	EXISTING CONTOURS
	PROPOSED CONTOURS
	SANITARY SEWER
	SANITARY SEWER BYPASS
	SILT FENCE
	BUILDING LINE
	O.H. POWER LINE
	TOP OF BANK
	TOE OF SLOPE
	EDGE OF PAVEMENT

SEQUENCE OF WORK  
THE SEQUENCE OF WORK SHALL GENERALLY FOLLOW AS OUTLINED BELOW.

1. INSTALL BMPs AS NECESSARY AND AS SHOWN ON EROSION AND SEDIMENT CONTROL PLAN
2. INSTALL TRAFFIC CONTROL FOR OAK STREET
3. VIDEO EXISTING PIPE CHECKING FOR BLOCKAGES AND SAGS AS INDICATED IN SPECIFICATIONS
4. CORRECT ANY BLOCKAGES AND REPORT ANY ISSUES DISCOVERED BACK TO ENGINEER
5. INSTALL ENTRY AND RECEIVING PITS AS NECESSARY FOLLOWING ALL APPLICABLE TRENCH SAFETY PROTOCOLS
6. PIPE BURST EXISTING MAIN WHILE MAINTAINING BYPASS PUMPING
7. CONNECT TO EXISTING MANHOLES AND CONNECT EXISTING SERVICES TO SEWER MAIN
8. VIDEO INSPECT INSTALLED MAIN AND PERFORM ALL REQUIRED TESTING
9. BACKFILL ALL PITS AND PERFORM MINOR GRADING IN ALL DISTURBED AREAS AND REVEGETATE
10. PERFORM ANY SITE CLEANUP NECESSARY TO RETURN PROJECT TO EXISTING CONDITIONS AND DISPOSE OF EXISTING BYPASS LINE FOLLOWING ALL APPLICABLE STATE REQUIREMENTS

UTILITY NOTES  
UNDERGROUND UTILITIES SHOWN ARE BASED UPON FIELD OBSERVATIONS, GIS SOURCES AND OTHER THIRD PARTY SOURCES. THE SIZE, TYPE, MATERIAL AND PRESSURES OF ALL UNDERGROUND UTILITIES IN THE AREA ARE UNKNOWN AND UTILITY LOCATIONS SHOWN MAY DIFFER FROM THE EXACT LOCATION IN THE FIELD AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. UNDERGROUND UTILITIES WERE NOT PHYSICALLY LOCATED, BUT ARE SHOWN USING THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL CALL ARKANSAS ONE CALL AT 811 BEFORE ANY EXCAVATION COMMENCES.

CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UTILITIES BEFORE PERFORMING ANY GRADING ACTIVITIES AND NOTIFY THE ENGINEER OF ANY CONFLICTS.

CONTRACTOR IS RESPONSIBLE FOR TRENCH SAFETY DURING CONSTRUCTION.

ALL UTILITY MATERIALS AND METHODS SHALL MEET OR EXCEED THE CITY OF KEO REQUIREMENTS AND ALL APPLICABLE STATE AGENCY REQUIREMENTS.

IN THE EVENT THAT A SEPTIC TANK OR FIELD LINES ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.

CONTRACTOR TO FIELD VERIFY SEWER SERVICE CONNECTION LOCATIONS PRIOR TO CONSTRUCTION. SEWER SERVICE SHALL BE MAINTAINED AT ALL TIMES UNLESS GIVEN PRIOR APPROVAL FROM CITY OF KEO.

2  
DROP CONNECTION OF EXISTING SEWER MAIN  
TO BE ADDED PER ADH COMMENT LETTER  
DATED 5-9-22

4/29/22	1-SEQUENCE OF WORK ADDED	CJM
5/10/22	2-EXISTING MANHOLE TO HAVE DROP	CJM
Date	Revision	By

Designed	CJM
Checked	JCH
Drawn	CJM
Approved	JCH

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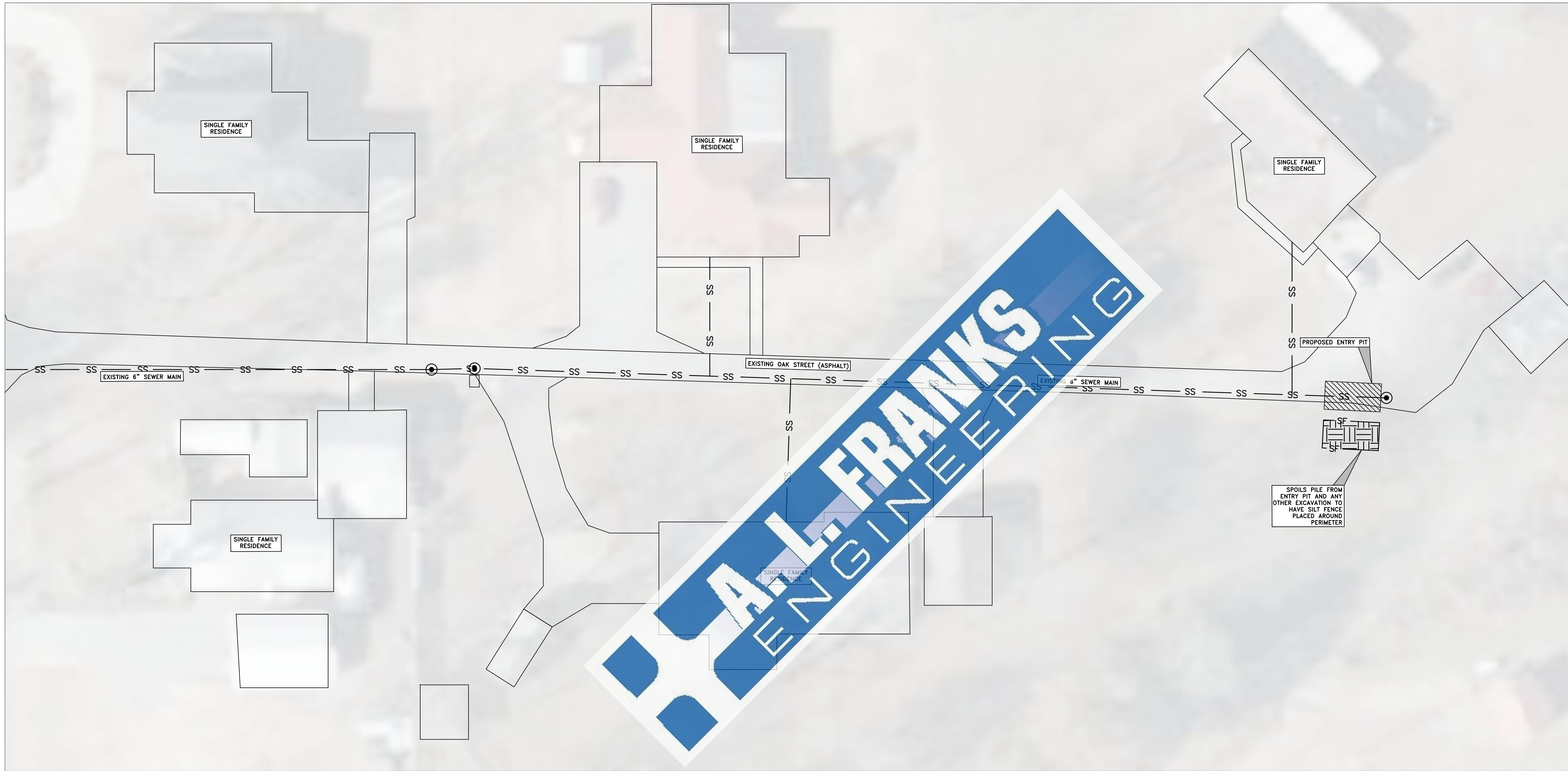
OAK STREET SEWER & WWTP IMPROVEMENTS  
CITY OF KEO  
LONOKE COUNTY, ARKANSAS

OAK STREET SITE/UTILITY PLAN

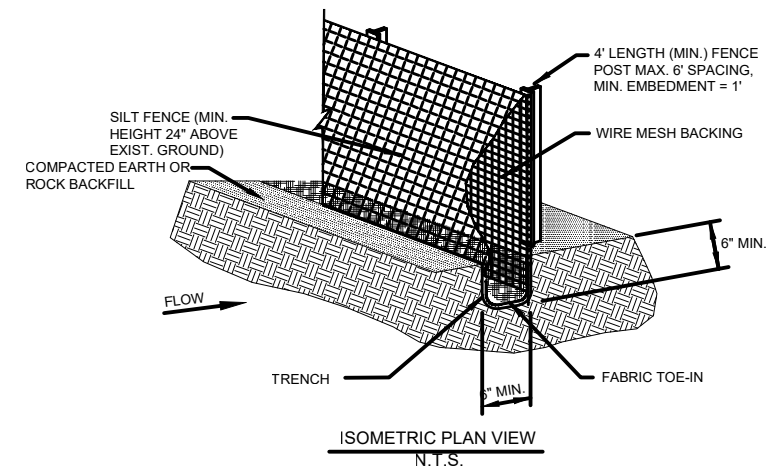
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Date: 5/2022  
Sheet 3



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LEGEND	
	SIGNAL POLE
	POWER POLE
	LIGHT POLE
	UTILITY RISER/TRANSFORMER
	EX. WATER METER
	PROP. WATER METER
	EX. WATER VALVE
	EX. FIRE HYDRANT
	EX. SANITARY SEWER CLEANOUT
	EX. SANITARY SEWER MANHOLE
	STORM DRAIN MANHOLE
	GAS METER
	GAS VALVE
	TELEPHONE BOX
	SIGN
	EXISTING CONTOURS
	PROPOSED CONTOURS
	PROPERTY LINE
	100 YEAR FLOODPLAIN
	ZONE X FLOODPLAIN
	100 YEAR ZONE A FLOODPLAIN
	O.H. POWER LINE
	TOP OF BANK
	TOE OF SLOPE
	SANITARY SEWER



- SILT FENCE GENERAL NOTES**
1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
  2. THE TIE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
  3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
  4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TOWIRE BACKING, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP. SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
  5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1\"/>
  6. SILT FENCE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.
  7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

**SILT FENCE DETAIL**

- EROSION CONTROL NOTES**
1. THE PROPOSED PROJECT AS SHOWN WILL DISTURB APPROX. 0.03 ACRES AND IS THEREFORE BELOW THE THRESHOLD FOR ADEQ SITE NOTICE REQUIREMENTS. CONTRACTOR IS TO MAINTAIN BMP'S ON-SITE THROUGHOUT CONSTRUCTION AND MAINTAIN BMP'S AS NEEDED TO AVOID SEDIMENT RUNOFF FROM THE SITE.
  2. THE CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES TO MINIMIZE THE IMPACTS OF SEDIMENTATION AND TURBIDITY IN DRAINAGE WAYS. THE CONTROLS SHOWN ARE CONSIDERED THE MINIMUM AND ADDITIONAL CONTROLS SHALL BE ADDED BY THE CONTRACTOR AS NECESSARY TO CONTROL SEDIMENT RUNOFF FROM THE SITE.
  3. BMP'S SHOWN ARE TO BE INSTALLED PRIOR TO DEMOLITION OR EARTHWORK OPERATIONS.
  4. THE CONTRACTOR SHALL MAINTAIN ALL BMP'S THROUGHOUT THE PROJECT UNTIL PERMANENT COVER & VEGETATION IS ESTABLISHED.
  5. DIRT ON ROADWAYS FROM SITE OFF-TRACKING SHALL BE REMOVED DAILY.
  6. ALL SITE NOTICES REQUIRED BY ADEQ AND THE CITY OF KEO SHALL BE POSTED FOLLOWING ALL STATE AND LOCAL GUIDELINES. NOTICES SHALL BE PROVIDED TO THE MS4 OPERATOR AS NECESSARY.
  7. EROSION CONTROL WORKFLOW SHALL PRIMARILY CONSIST OF THE PLACEMENT OF PERIMETER CONTROLS, CONSTRUCTION OF PERMANENT SITE FEATURES, SITE STABILIZATION INCLUDING VEGETATION OF AREAS ONCE FINAL GRADES ARE MET AND SITE CLEANUP ONCE CONSTRUCTION IS COMPLETE.

Date	Revision	By

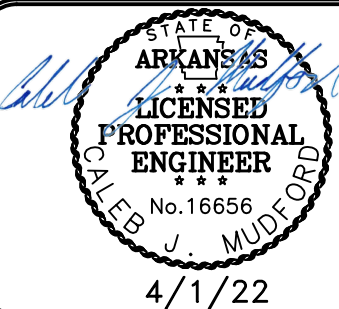
Designed	CJM
Checked	JCH
Drawn	CJM
Approved	JCH



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OAK STREET SEWER & WWTP IMPROVEMENTS  
CITY OF KEO  
LONOKE COUNTY, ARKANSAS

OAK STREET EROSION &  
SEDIMENT CONTROL PLAN



Job No.: ID  
Scale: 1"=20'  
Date: 4/2022  
Sheet 4



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SCALE: 1"=20'-0"

LEGEND

PP-CL	SIGNAL POLE
PP-P	POWER POLE
LP-L	LIGHT POLE
UR-L	UTILITY RISER/TRANSFORMER
WM	EX. WATER METER
WM	PROP. WATER METER
WV	EX. WATER VALVE
FH	EX. FIRE HYDRANT
CO	EX. SANITARY SEWER CLEANOUT
SM	EX. SANITARY SEWER MANHOLE
SDM	STORM DRAIN MANHOLE
GM	GAS METER
GV	GAS VALVE
TELE	TELEPHONE BOX
SIGN	SIGN
XXX	EXISTING CONTOURS
XXX	PROPOSED CONTOURS
---	PROPERTY LINE
---	100 YEAR FLOODPLAIN
---	ZONE X FLOODPLAIN
---	100 YEAR ZONE A FLOODPLAIN
---	O.H. POWER LINE
---	TOP OF BANK
---	TOE OF SLOPE
---	SANITARY SEWER

EXISTING CONDITIONS NOTES  
EXISTING CONDITIONS ARE BASED UPON A TOPOGRAPHIC SURVEY PERFORMED BY A.L. FRANKS ENGINEERING ON SEPTEMBER 5, 2021. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY INCONSISTENCIES BETWEEN SITE CONDITIONS AND PLANS. NO SITE IMPROVEMENTS ARE SHOWN BEYOND THE SURVEY DATE.  
UNDERGROUND UTILITIES SHOWN ARE BASED UPON EXISTING DRAWINGS PROVIDED BY THIRD PARTY SOURCES AND FIELD OBSERVED MARKERS OR MANHOLES. THE SIZE, TYPE, MATERIAL AND PRESSURES OF ALL UNDERGROUND UTILITIES IN THE AREA ARE UNKNOWN AND UTILITY LOCATIONS SHOWN MAY DIFFER FROM THE EXACT LOCATION IN THE FIELD AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. UNDERGROUND UTILITIES WERE NOT PHYSICALLY LOCATED, BUT ARE SHOWN USING THE BEST AVAILABLE INFORMATION. CONTRACTOR SHOULD CALL ARKANSAS ONE CALL AT 811 BEFORE ANY EXCAVATION COMMENCES.  
EXISTING SITE FEATURES ARE TO REMAIN UNLESS NOTED OTHERWISE.

Date	Revision	By

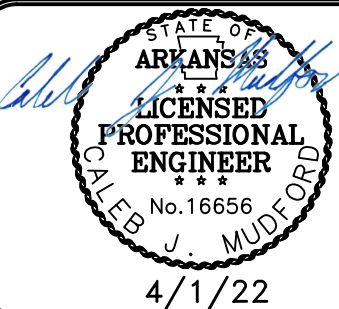
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Drawn	CJM
Approved	JCH



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Texarkana, Arkansas 71854  
Phone (870) 216-1906  
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OAK STREET SEWER & WWTP IMPROVEMENTS  
CITY OF KEO  
LONOKE COUNTY, ARKANSAS

WWTP EXISTING CONDITIONS



Job No.: ID  
Scale: 1"=20'  
Date: 4/2022  
Sheet 5



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UTILITY NOTES  
UNDERGROUND UTILITIES SHOWN ARE BASED UPON FIELD OBSERVATIONS, GIS SOURCES AND OTHER THIRD PARTY SOURCES. THE SIZE, TYPE, MATERIAL AND PRESSURES OF ALL UNDERGROUND UTILITIES IN THE AREA ARE UNKNOWN AND UTILITY LOCATIONS SHOWN MAY DIFFER FROM THE EXACT LOCATION IN THE FIELD AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. UNDERGROUND UTILITIES WERE NOT PHYSICALLY LOCATED, BUT ARE SHOWN USING THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL CALL ARKANSAS ONE CALL AT 811 BEFORE ANY EXCAVATION COMMENCES.

CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UTILITIES BEFORE PERFORMING ANY GRADING ACTIVITIES AND NOTIFY THE ENGINEER OF ANY CONFLICTS.

ALL UTILITY MATERIALS AND METHODS SHALL MEET OR EXCEED THE CITY OF KEO REQUIREMENTS AND ALL APPLICABLE STATE AGENCY REQUIREMENTS.

CONTRACTOR SHALL COORDINATE WITH CITY OF KEO FOR ACCESS TO WWTP.

Date	Revision	By

Designed	CJM
Checked	JCH
Drawn	CJM
Approved	JCH

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OAK STREET SEWER & WWTP IMPROVEMENTS  
CITY OF KEO  
LONOKE COUNTY, ARKANSAS

WWTP SITE PLAN

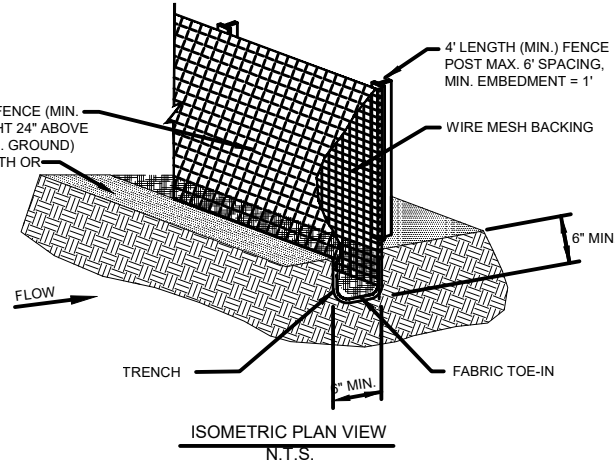
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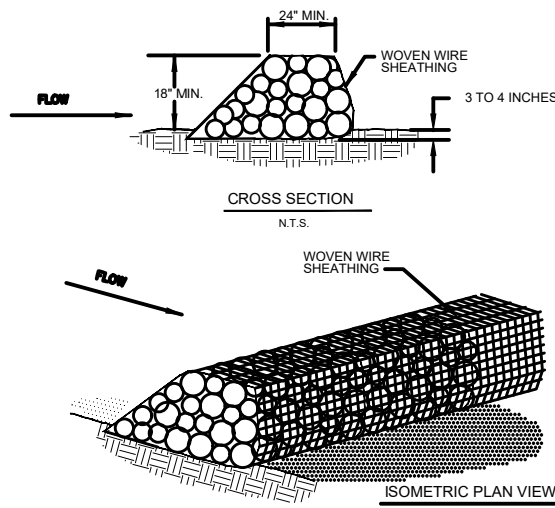
LEGEND	
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	EX. FIRE HYDRANT
	EX. SANITARY SEWER CLEANOUT
	EX. SANITARY SEWER MANHOLE
	STORM DRAIN MANHOLE
	GAS METER
	GAS VALVE
	TELEPHONE BOX
	SIGN
	EXISTING CONTOURS
	PROPOSED CONTOURS
	PROPERTY LINE
	100 YEAR FLOODPLAIN
	ZONE X FLOODPLAIN
	100 YEAR ZONE A FLOODPLAIN
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	TOE OF SLOPE
	SANITARY SEWER



#### SILT FENCE GENERAL NOTES

1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNDRIFT FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN A 6\"/>
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 8 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TOWIRE BACKING, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1/2\"/>
6. SILT FENCE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

#### SILT FENCE DETAIL



#### ROCK BERM GENERAL NOTES

1. USE ONLY OPEN GRADED ROCK 4-8 INCHES IN DIAMETER FOR STREAM FLOW CONDITION. USE OPEN GRADED ROCK 3-6 INCHES IN DIAMETER FOR OTHER CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING. WAVING A MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE SIZE OF 20 GAUGE AND SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP.
3. THE ROCK BERM SHALL BE INSPECTED EVERY TWO WEEKS OR AFTER EACH 1/2\"/>
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD OF THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.
6. ROCK BERM SHOULD BE USED AS CHECK DAMS FOR CONCENTRATED FLOW AND ARE NOT INTENDED FOR USE IN PERIMETER PROTECTION.

#### ROCK BERM DETAIL

#### EROSION CONTROL NOTES

1. THE PROPOSED PROJECT AS SHOWN WILL DISTURB APPROX. 0.40 ACRES AND IS THEREFORE BELOW THE THRESHOLD FOR ADEQ SITE NOTICE REQUIREMENTS. CONTRACTOR IS TO MAINTAIN BMP'S ON SITE THROUGHOUT CONSTRUCTION AND MAINTAIN BMP'S AS NEEDED TO AVOID SEDIMENT RUNOFF FROM THE SITE.
2. THE CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES TO MINIMIZE THE IMPACTS OF SEDIMENTATION AND TURBIDITY IN DRAINAGE WAYS. THE CONTROLS SHOWN ARE CONSIDERED THE MINIMUM AND ADDITIONAL CONTROLS SHALL BE ADDED BY THE CONTRACTOR AS NECESSARY TO CONTROL SEDIMENT RUNOFF FROM THE SITE.
3. BMP'S SHOWN ARE TO BE INSTALLED PRIOR TO DEMOLITION OR EARTHWORK OPERATIONS.
4. THE CONTRACTOR SHALL MAINTAIN ALL BMP'S THROUGHOUT THE PROJECT UNTIL PERMANENT COVER & VEGETATION IS ESTABLISHED.
5. DIRT ON ROADWAYS FROM SITE OFF-TRACKING SHALL BE REMOVED DAILY.
6. ALL SITE NOTICES REQUIRED BY ADEQ AND THE CITY OF KEO SHALL BE POSTED FOLLOWING ALL STATE AND LOCAL GUIDELINES. NOTICES SHALL BE PROVIDED TO THE MS4 OPERATOR AS NECESSARY.
7. EROSION CONTROL WORKFLOW SHALL PRIMARILY CONSIST OF THE PLACEMENT OF PERIMETER CONTROLS, CONSTRUCTION OF PERMANENT SITE FEATURES, SITE STABILIZATION INCLUDING VEGETATION OF AREAS ONCE FINAL GRADES ARE MET AND SITE CLEANUP ONCE CONSTRUCTION IS COMPLETE.

Date	Revision	By

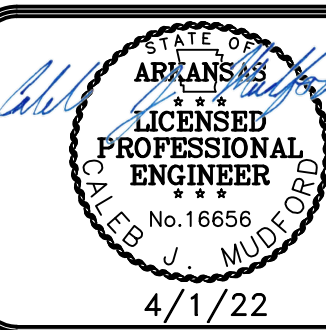
Designed	CJM
Checked	JCH
Drawn	CJM
Approved	JCH



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Phone (870) 216-1906  
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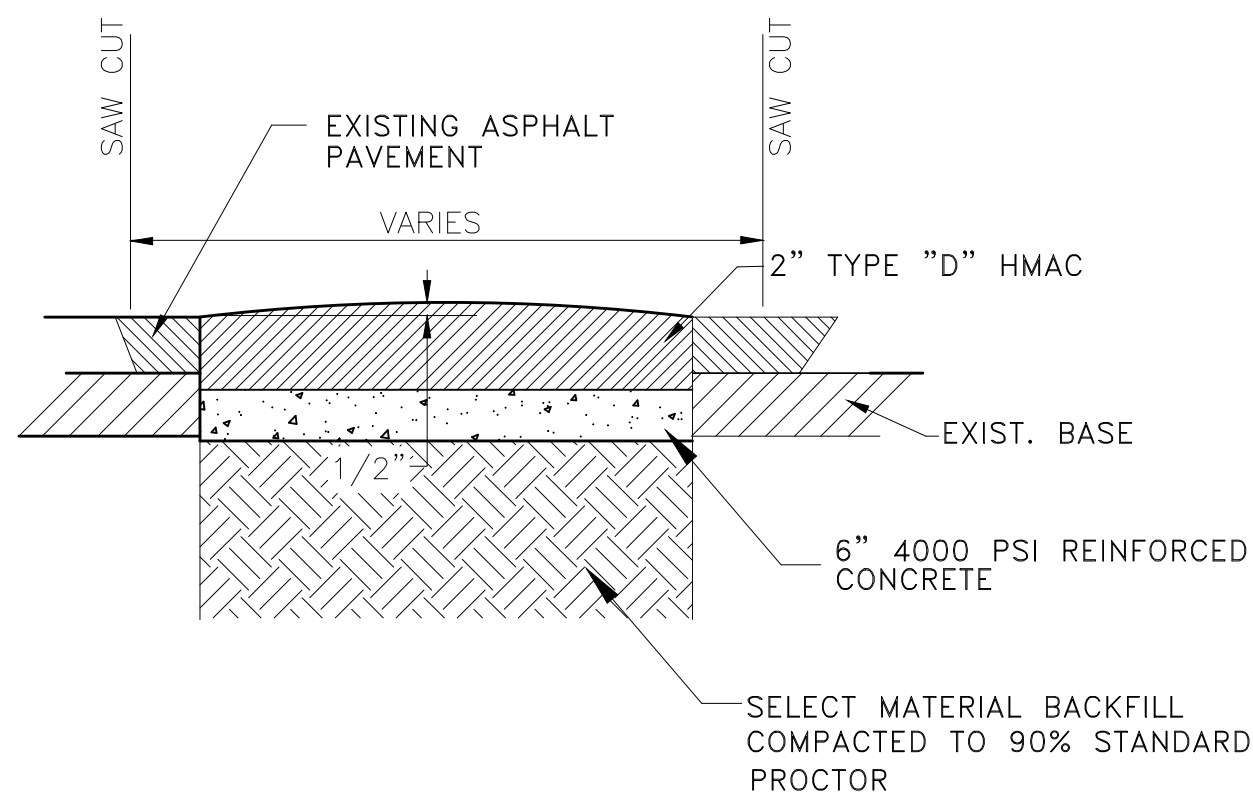
OAK STREET SEWER & WWTP IMPROVEMENTS  
CITY OF KEO  
LONOKE COUNTY, ARKANSAS

WWTP EROSION & SEDIMENT  
CONTROL PLAN



Job No.: ID  
Scale: 1"=50'  
Date: 4/2022  
Sheet 7



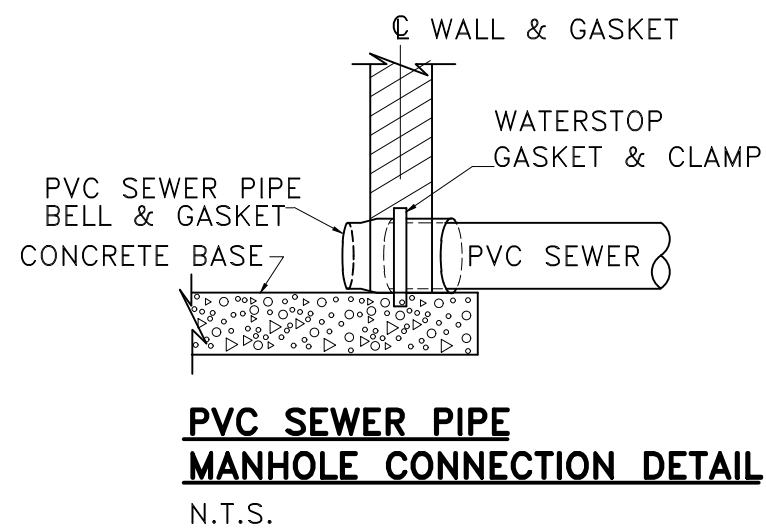


ASPHALT REPAIR DETAIL

ASPHALT PAVEMENT  
(PUBLIC STREETS)  
N.T.S.

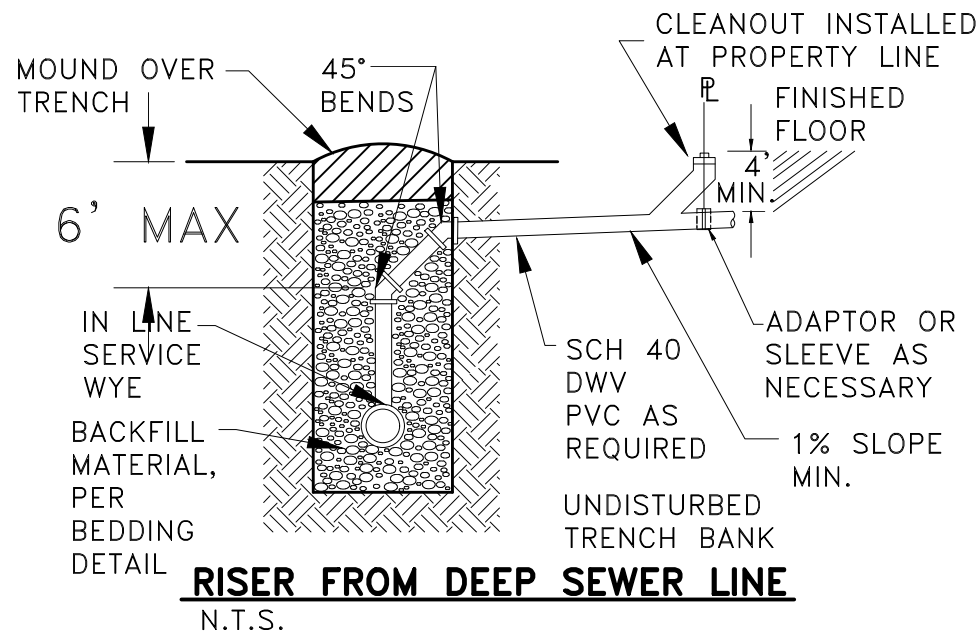
GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING STRUCTURES, PIPING, CONDUIT, ETC. RESULTING FROM CONSTRUCTION WHETHER SHOWN ON THESE DRAWINGS OR NOT.
2. CONTRACTOR SHALL PERFORM FINISH GRADING, TOP SOILING AND ESTABLISHMENT OF GRASS COVER IN ALL DISTURBED AREAS PER PLANS AND SPECIFICATIONS, OR AS DIRECTED BY THE ENGINEER.
3. ALL SEWER MAINS TO BE TESTED PER PLANS AND SPECIFICATIONS.
4. CONTRACTOR SHALL HAVE UTILITIES LOCATED AND SHALL BE RESPONSIBLE FOR DAMAGE TO ALL UTILITIES ARISING FROM CONTRACTORS WORK, REGARDLESS OF BEING SHOWN OR OMITTED FROM THESE DRAWINGS. SHOWN UTILITIES ARE INDICATED IN APPROX. LOCATIONS ONLY.
5. ALL DEBRIS SHALL BE DISPOSED OF PER SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
6. THE MINIMUM SEPARATION DISTANCES SHALL BE ADHERED TO FROM SEWER MAINS (10-FT HORIZONTALLY). IF THIS CANNOT BE OBTAINED CONTACT THE ENGINEER.
7. IN THE EVENT THAT A SEWER SERVICE IS UNCOVERED IN THE WATER MAIN TRENCH CONTACT THE ENGINEER.
8. CONTRACTOR SHALL RESTRICT ALL OPERATIONS INSIDE OF CONSTRUCTION EASEMENT. ACCESS PERMISSION ACROSS ADJACENT PROPERTIES SHALL BE OBTAINED BY CONTRACTOR. ANY DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. CONTRACTOR SHALL EXPOSE EXISTING UTILITIES IN ADVANCE OF CONSTRUCTION. GRADE ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER. COSTS ASSOCIATED w/ NOT EXPOSING EXISTING UTILITIES TO ALLOW GRADE ADJUSTMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
10. ALL JACK AND BORES TO BE DUCTILE IRON.
11. CONSTRUCTION STAKING FOR CENTER LINE OF WATER MAIN ALONG U.S. HIGHWAYS WILL BE CONTRACTORS RESPONSIBILITY.
12. ALL BENDS NECESSARY TO MEET DEFLECTION REQUIREMENTS AND ASSOCIATED BLOCKING SHALL BE INCLUDED IN BID.



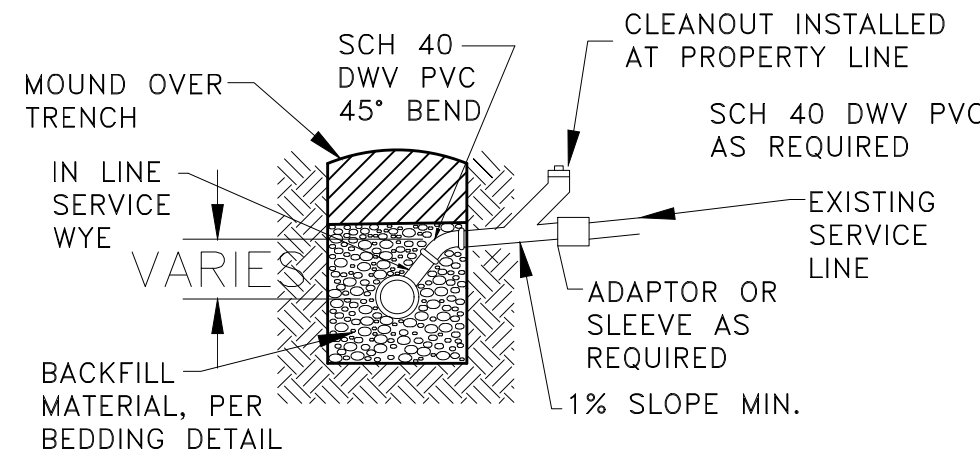
PVC SEWER PIPE  
MANHOLE CONNECTION DETAIL

N.T.S.



RISER FROM DEEP SEWER LINE

N.T.S.

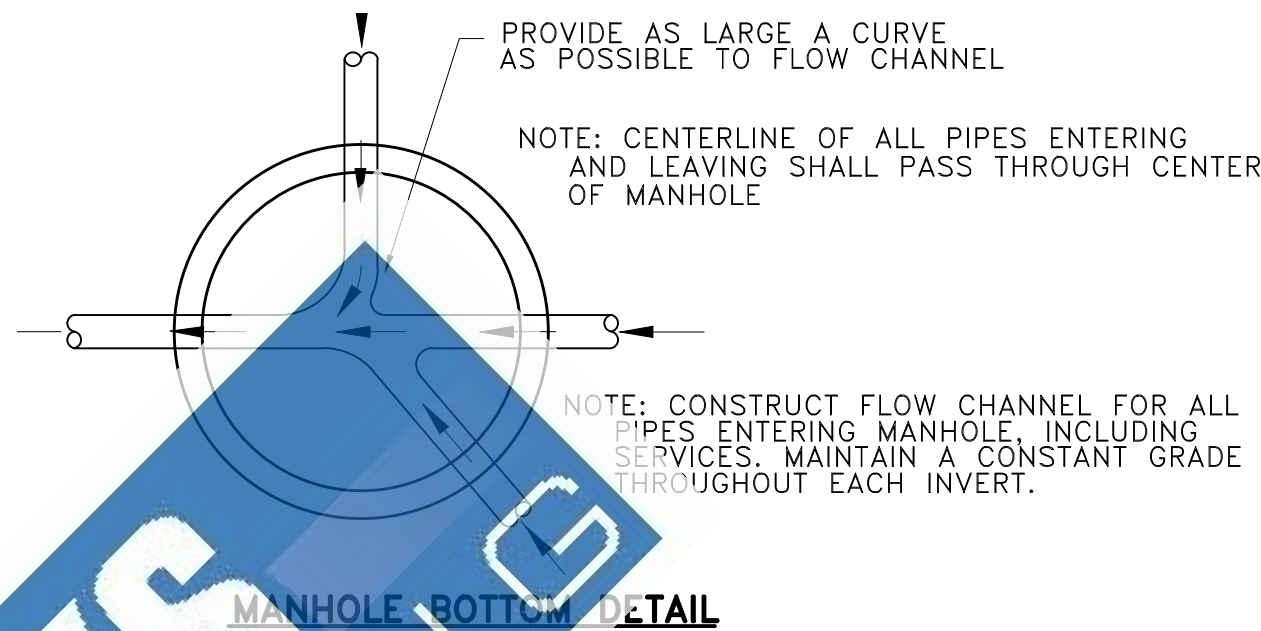


TYPICAL SERVICE OUTLET

N.T.S.

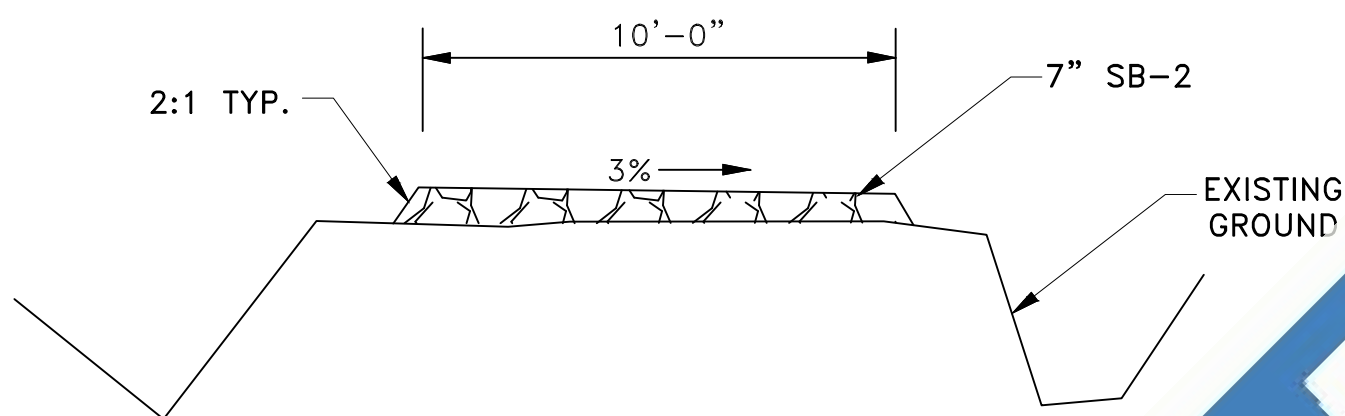
SERVICE OUTLET DETAIL

N.T.S.



MANHOLE BOTTOM DETAIL

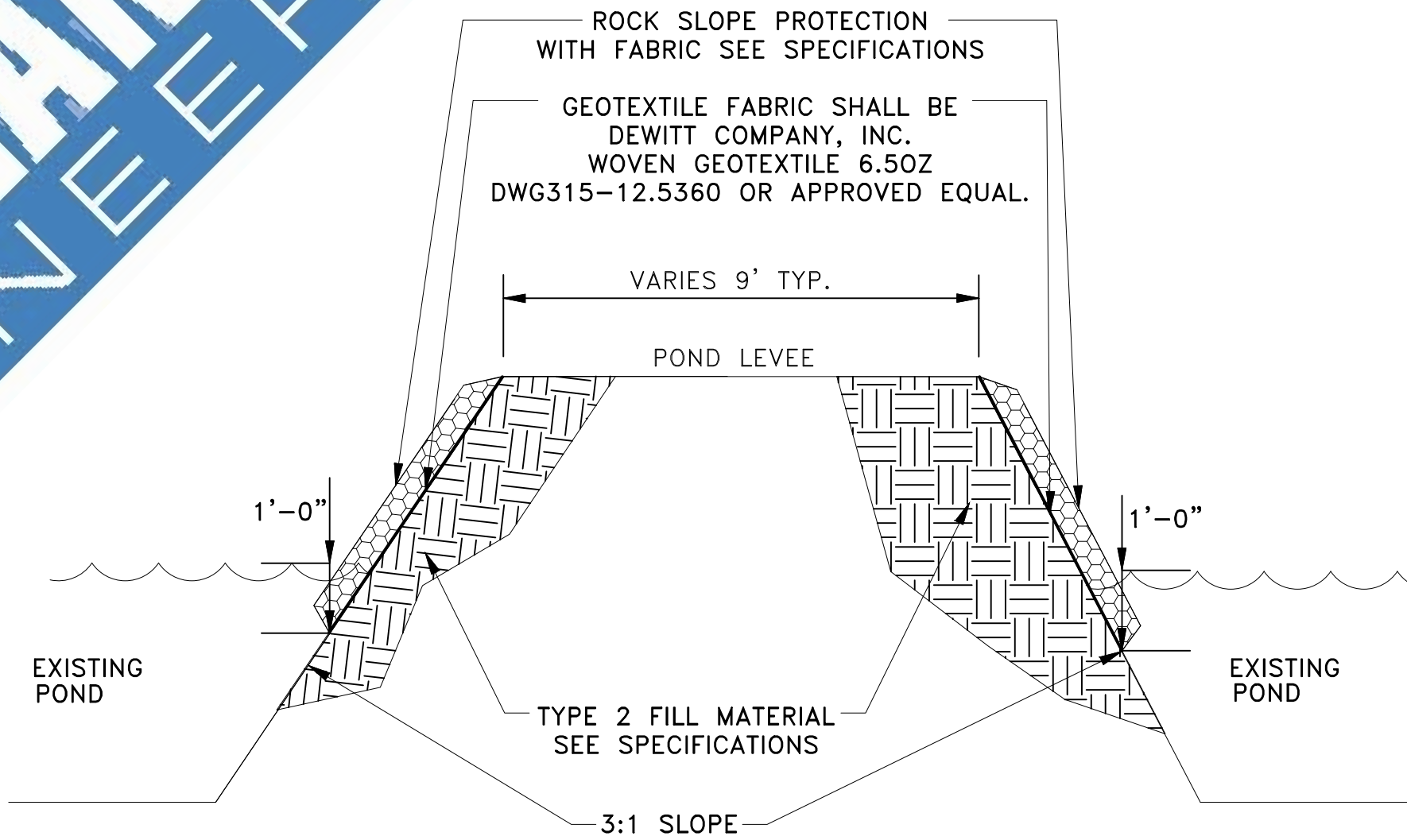
N.T.S.



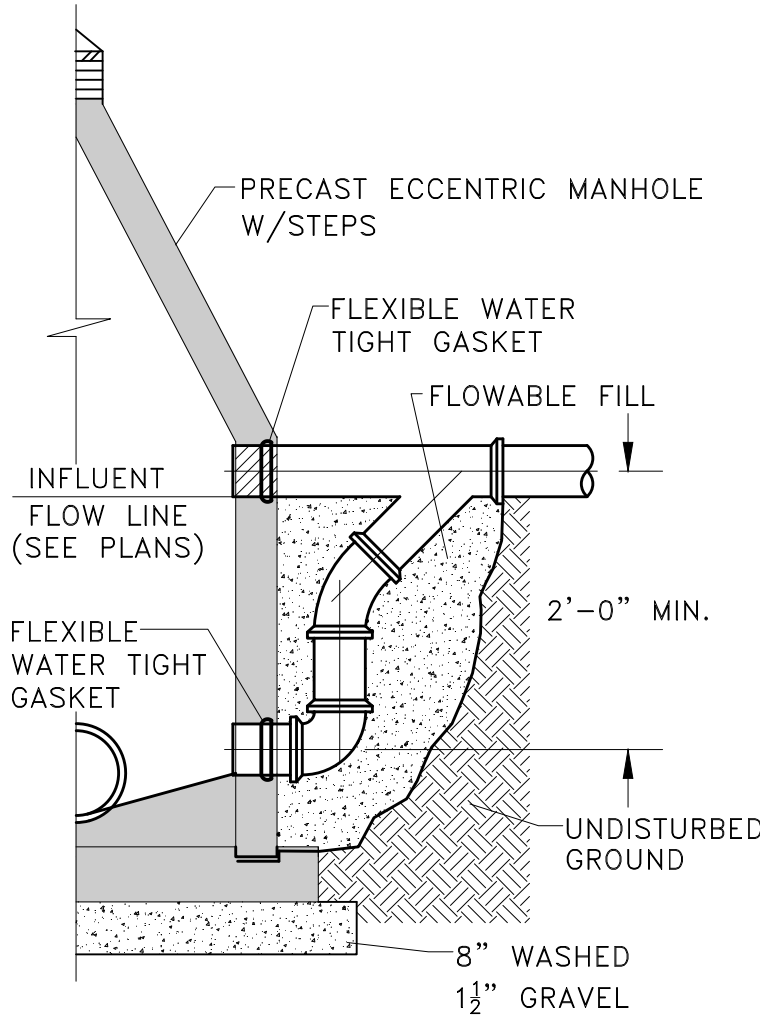
PROPOSED DRIVE SECTION  
N.T.S.

NOTE:

1. SUBGRADE STABILIZATION WILL REQUIRE 35 LB / SY OF LIME UNLESS OTHERWISE DIRECTED. SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR WITH MOISTURE CONTENT WELL ABOVE OPTIMUM.
2. SUBGRADE TO EXTEND MIN. 1' BEYOND EDGE OF SB-2 ON BOTH SIDES



PROPOSED LEVEE SECTION  
N.T.S.



DROP MANHOLE SECTION

N.T.S.

5/10/22	2-DROP CONNECTION DETAIL ADDED	CJM
Date	Revision	By

Designed	CJM
Checked	JCH
Drawn	CJM
Approved	JCH



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OAK STREET SEWER & WWTP IMPROVEMENTS  
CITY OF KEO  
LONOKE COUNTY, ARKANSAS

TYPICAL DETAILS

	Job No.: ID
	Scale: 1"=20'
	Date: 5/2022
	Sheet 8