

August 21, 2015

Yohanes Sugeng, P.E., CFM Engineering Manager 3800 N. Classen Boulevard Oklahoma City, OK 73118

Re:

Misty Lake Dam, NID No. OK12578 - Application and Plans

Dear Mr. Sugeng:

Submitted under cover of this letter are a signed application for construction and plans for repair work for Misty Lake Dam, cited above. Please review this information at your earliest convenience and contact me at this office if you have any questions or if I may be of assistance.

Yours Sincerely,

E. O'Neil Robinson, P.E.

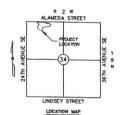
**Cardinal Engineering, LLC** 

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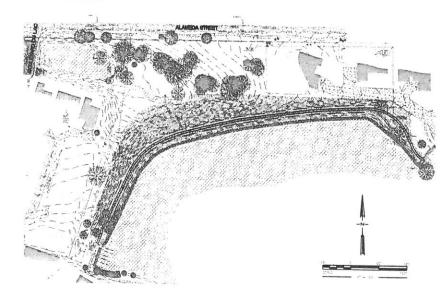
cc:

Jeff Puckett, Summit Lakes POA Curtis Fischer, Summit Lakes Villas Scott Sturtz, City of Norman Joe Willingham, City of Norman

# CONSTRUCTION DOCUMENTS FOR MISTY LAKE DAM REHABILITATION PHASE 2: DAM ID OK12578 NORMAN, OKLAHOMA



CIVIL SH	EET INDEX
Sheet Number	Sheet Title
TS-01	TITLE SHEET
EX-01	EXISTING CONDITIONS
\$P-01	SITE PLAN
DP-01	DEMOUTION PLAN
GP-61	GRADING PLAN
ECP-01	EROSION CONTROL PLAN



### SURVEY CONTROL

STA	NORTHING	EASTING	ELEV	DESC
tt5 101	686323.995	2147583.163	1204.33	B4 BAR W/ "LEMKE CONTROL" CAP
LtS 102	686293.189	2147093.139	1203.58	#4 BAR W/ "LEMKE CONTROL" CAP
ILS 103	686102.895	2146790.890	1198.12	#4 BAR W/ "LEMKE CONTROL" CAP
LLS 104	685977.870	2146998,722		#4 BAR W/ "LEMKE CONTROL" CAP
315	682721.151	2143995.172		BRASS CAP "NORMAN CONTROL"
375	691829.932	2146006.784	1189.92	BRASS CAP "NORMAN CONTROL"

#### EARTHWORK

LEGEND

CONTROL OF THE CONTRO

### GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION METHODS AND MATERIALS USED ON THE PROJECT SHALL MEET OR EXCELD THE REQUIREMENTS AS SET FORTH IN THE PROJECT SPECIFICATIONS AND ANY RELATED DOCUMENTS USETED THEREIN IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ACQUIRE AND REVIEW ALL PERTIFERS SECTIONS
- THE IS SELECTED TO REMAN SHALL BE PROTECTED PITE THE REQUIREMENTS THE CONSTITUCION COMMISSION AND SECTION OF AN OTHER PRODECT SPECIALISTICS. BUTSLAS HOMEOF PROTECTION CONTROL AND SECTION OF A RECOGNIZATION OF A RECOGNIZATI
- CONTRACTOR SHALL CONTACT THE ENGINEER AS 500N AS POSSIBLE SHOULD ANY CIRCULASTANCES. PURPO DIGRING THE COURSE OF PROJECT COMPLETION RECESSITATE A VARIANCE FROM THE PLANS VARIANCE FROM THE PLANS WILL BE REVIEWED BY THE DEBUFFER AND THE OWNER.
- ON-SITE INCHERATION OF CLEARED TREES AND BRUISH SHALL BE FROMBITED URLESS WHITTEN AUTHORIZATION IS RECEIVED BY THE CITY OF NORMAN, THE ENGINEER MARES NO WARRANTIES REGARDING WHETHER OR NOT ACCURATION OF A BURN PETIAL WILL BE POSCIBLE.
- STOCKFILE LOCATIONS TO BE DETERMINED AT TIME OF CONSTRUCTION LOCATIONS MAY BE INCOMED AS MECESSARY TO EXPETENT COMPLETION OF THE SCOPE OF WORK. MODIFICATIONS SUBJECT TO EXPLORE A PROPERTY AND APPROVING IN THE DEPOSITED AND THE OWNER.

## 2. STORMWATER/EROSION CONTROL

- INDEX TO INTRICKING CONSTRUCTION ACTIVITIES THE CONTRACTOR, SHALL VERBY THAT A MOTICE OF RETURN GROUPES SEED FOR DWY THE COLLAMORA DEPENDING OF ENDROGRAPHIC QUARTER OF SECOND AND BEST OF SERVINAL TOWNS THE COLLAMORA CONTRACTOR SHALL SEE EXCOUNTED THAT AND SECOND AND BEST OF SERVINAL TOWNS THE CONTRACTOR SHALL SEE EXCOUNTED THAT AND ADDITIONAL OF SECOND AND SECOND AND SECOND ASSOCIATION AND SECOND ASSOCIATION SHALL SEE EXCOUNTED THAT AND ADDITIONAL SECOND ASSOCIATION SHALL SEE EXCOUNTED THAT AND ADDITIONAL SECOND ASSOCIATION SHALL SEE SECOND ASSOCIATION ASSOCIATION SHALL SEE SECOND ASSOCIATION SHALL SEED SECOND SECOND SHALL SEED SECOND SECOND SECOND SECOND SECOND SECOND SECOND SECOND SECOND SECO
- THE MOTINE OF INTERED INCO AND THE STORMMATER POLLUTION PREVIDENCE PLAN (SWENG) AS WELL AS ANY OTHER AFFICAME COCLIMENTS SHALL BE KEPT ON SITE BY THE CONSTRUCTION SUPERINFORDIT AT ALL TIMES. SAD ITEMS SHALL BE LADE AVAILABLE TO STATE AND MANORING AUTHORITICS DEVENTIONED.
- CONSTRUCTION OF ALL EROSION CONTROL MEASURES. SHALL BE PERFORMED BY THE CONTRACTOR RECEIN TO THE INITIATION OF ANY LAND DISTINSIANO ACTIVITIES MAINTENANCE OF EROSION CONTROL MEASURES SHALL BE PERFORMED BY THE CONTRACTOR AS INDICATED IN THE SHAPP OR AT A SUFFICIENT MICRONIC TO PROJECT SETEMOTH OF STREAMENTS.
- A STABLEZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED BY THE CONTRACTOR AT ANY PORITS OF DYTRANCE OR EXIT (NOTE OR DESTRUCTS PUBLIC STREETS, WAS BOONN OF VEHICLES SHALL BE PERFORMED AS INCESSARY TO REDUCE ALL BANKET SOMEWINE DEPOSITS OF SEC ON REQUIRED.
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- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL DESTROY, UTERITES WHICH WAS REASONED BY THE SCORE OF WORK, THE COMMACTION SHALL CONSEQUENCE SHALL CONTRACTOR SHALL CON
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### 4. GEOTECHNICAL

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- FILL LISED TO REPAIR THE DAM EMBANGARY STALL CONSIST OF APPROVED SIZECY FIL MATERIALS THAT ARE FREE OF ORGANIC MATTER AND DESIGN. ALL ENGINEERED FIL SHALL BE APPROVED BY THE GEOTEO PICAL TESTING ENGINEER.
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  STRUCTURAL STABILITY. FILL SHALL NOT BE FROZEN WHEN PLACED OR PLACED ON PROZEN
  STREAMS.
- O PROTECT ACAINST EROSION, THE COWNSTREAM SLOPES SHALL BE VECETATED NAMEDIATELY OLLOWING COMPLETION OF REMEDIAL CONSTRUCTION
- THE CREST SURFACE OF THE PRISHED DAM SHALL SLOPE DOWN SLICKTLY FOWARD THE RESERVOIR BO THAT PRECIPITATION FALLING ON THE CREST WILL NOT ACCUMALATE CY FLOW OVER THE DOWNSTREAM SLOPE.

#### 5. SURVEYING

- COST OF STARRING TO BE INCLUDED IN SUBMITTED RID PROCE. ALL CONSTRUCTION STARRING SHALL BE PROVIDED BY INDEPENDENT LICENSED LAND SUBVETING COMMINE. CONTRACTOR TO PROVIDE ONLINEATION STARRING STROM SURVEYOR TO ENGINEER AND DYNER FOR REVIEW AND APPROVIL PRICE TO ENGLAGING SURVEYOR.
- PRIMARY CONTROL FOR CONSTRUCTION OF THE PROJECT MAS BEEN PROVIDED TO THE CONTRACTOR AS INCLASED ON THE FLAME, IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO CONFINAL THE ACCURACY OF THE PROVIDED COOCHINET AND RELEVAND DATA PRIVE TO LEMPO MY OF THE LISTED POINTS FOR CENSTRUCTION STARTED OR PLACEMENT OF SECONDARY CONTROL.
- PRIMARY CONTROL POINTS SHALL BE PROTECTED AND PRESENYED THROUGHOUT THE COLINSE OF THE PROJECT IN THE EVENT THAT THE LOCATION OF PRIMARY CONTROL INTERFERES WITH COMPLETION OF THE SCOPE OF WORKS, THE CONTRACTION SHALL CONTROL THE DIGITAL OF PORT REMEMBRIOR TO DISTURBING THE CONTROL POINT.
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## MISTY LAKE DAM **IMPROVEMENTS** PHASE 2

SUMMIT LAKES ADDITION NORMAN, OK

mmh Lakes Property Owners

TITLE SHEET

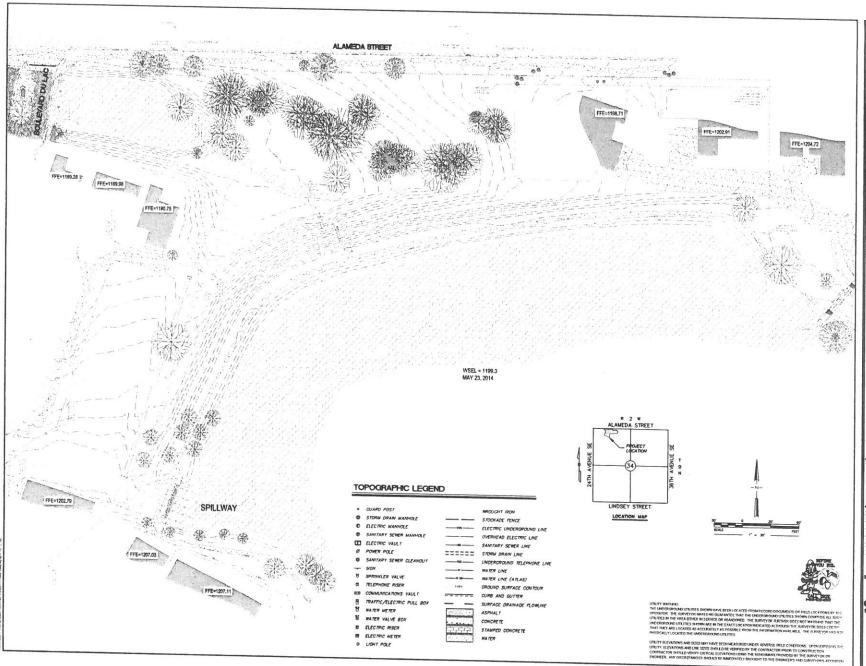
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## MISTY LAKE DAM IMPROVEMENTS PHASE 2

SURBIT LAKES ADDITION NORMAN, OK

Summit Lakes Property Owners Association

EXISTING CONDITIONS

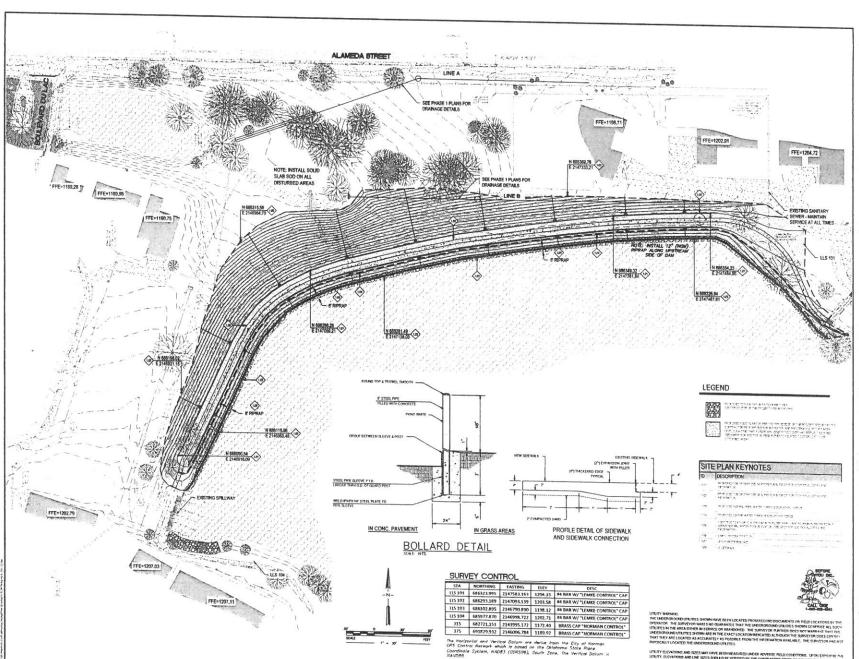
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## MISTY LAKE DAM IMPROVEMENTS PHASE 2

SUMMIT LAKES ADDITION NORMAN, OK

Summit Lakes Property Owner

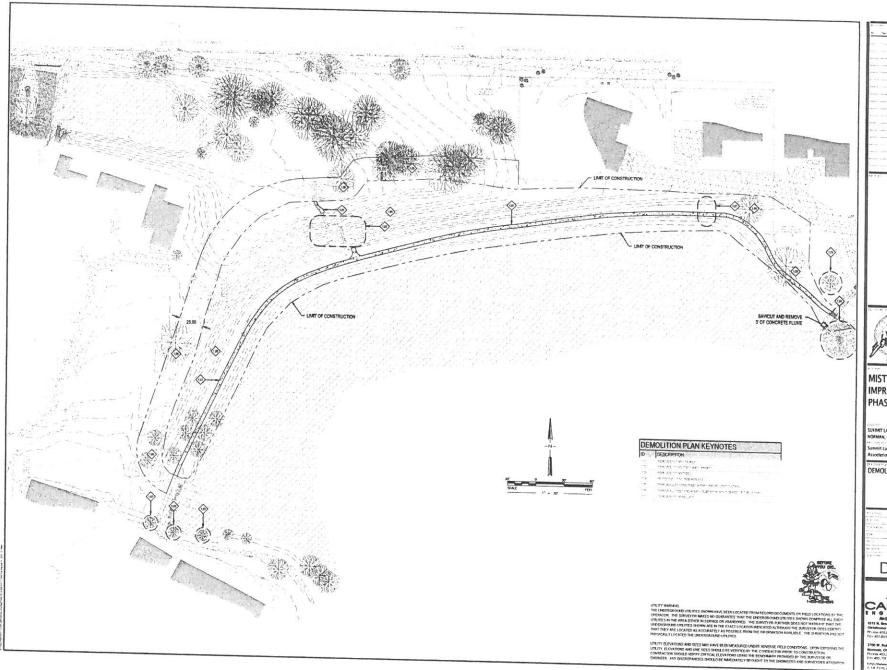
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1015 M. Broadway Ava., Julie 300 Ohlahoma Cily, OK 73109 Phone 405,842,1044







## MISTY LAKE DAM **IMPROVEMENTS** PHASE 2

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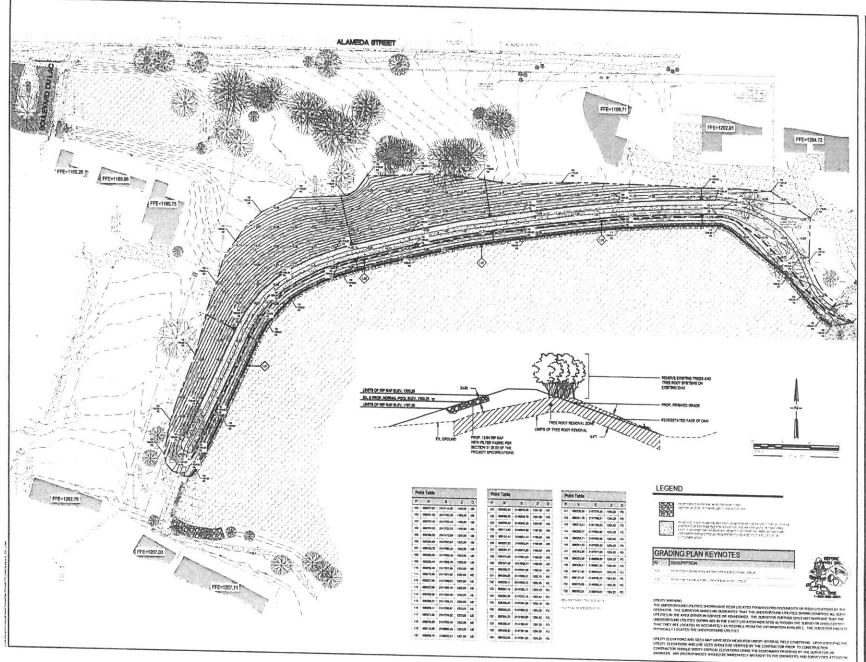
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# Exhibit A to Contract K-1617-137



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## MISTY LAKE DAM IMPROVEMENTS PHASE 2

SUSTIMIT LAKES ADDITION NORMAN, OK

Summit Lakes Property Owners Association

GRADING PLAN

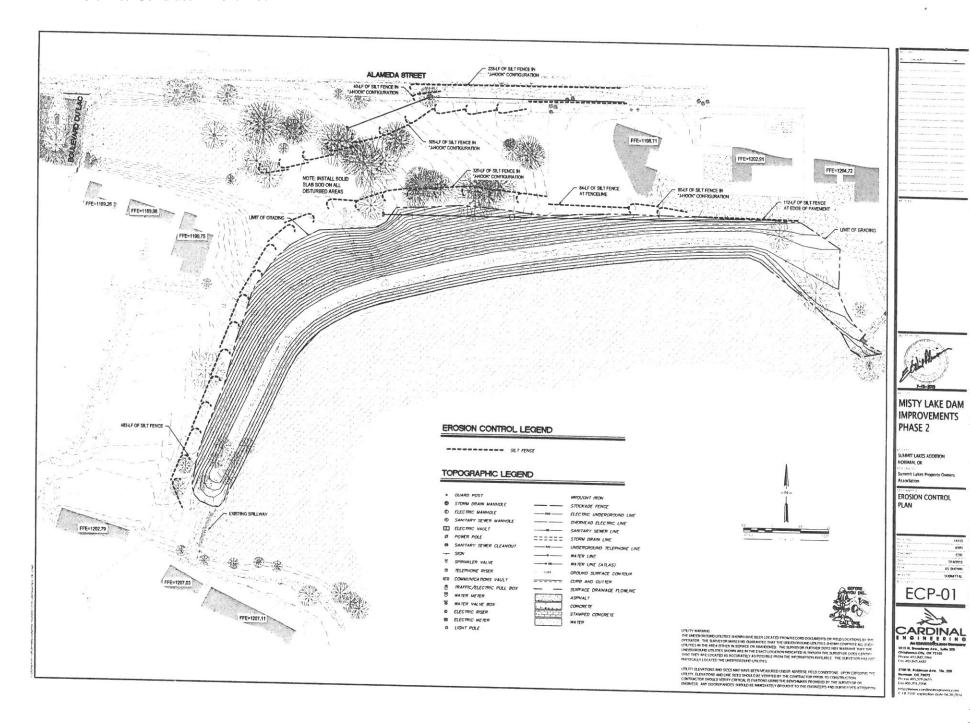
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> W. Robinson Ave., 31e, 200 man, OK 73672 or 403,579/655

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APPLICATION T	TO CONSTRUCT, ENLARGE, REPAIR	100
Office Use Only:	TER DAM AND/OR SPILLWAY  Office Use Only:	Lane
OKLAHO	OMA WATER RESOURCES BOARD	
Stream System:	3800 N Classen Boulevard Inventory No. :	
Phone	one: 405-530-8800 Fax: 405-530-8900 County.	-
Ag Exempt	Fees: \$ Pa	aid
PRINCIPAL OWNER:		
Name or Organization: Summit Lakes Property Owners	rs Association Point-of-Contact: Jeff Puckett	
Address: 3260 Marshall Avenue	City: Norman State: OK Zip: 7307	72
Phone: Home: 405-409-5524 Business:	s: 405-364-3433 24-Hour Emergency: 405-409-5524	
DDITIONAL OWNERS: (Use additional sheets i	's if necessary)	
lame: Summit Lakes Villas Homeowners Association	n - C/O Reliance Property Management	_
ddress: 429 E. Robinson, Suite B	City: Norman State: OK Zip: 7307	71
hone Home: Business:	24-Hour Emergency:	
STATUS:	TYPE OF DAM:	=
New Construction   Inventory Information Only	Earthfill Concrete Buttress	
Enlargement X Repair	Rockfill Concrete Gravity	
Alteration Other	Concrete Arch Other	-
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DAM AND RESER  Little River Tributary  DAM AND RESER  Low Significant High E CLASSIFICATION: In accordance with OAC 785:25-3-3  Lock one: O Small Intermediate Large  SLOPE  LOW Significant Large  Large  Low Significant OAC 785:25-3-3  Lock one: O Small Intermediate Large  Low OS Significant OAC 785:25-3-3  Lock one: O Small Intermediate Large  LEEVATION  LOPSTREAM  LOPSTR	Watershed: Little River  ERVOIR INFORMATION: (if applicable)  Name of Dam: Misty Lakes Dam Length: 750 feet  Structural Height: (stream bed to top)  21 feet Drainage Area: Yield: (at principal spillway)  90 acres  Storage  Top of Dam: Emergency Spillway: Principal Spillway:  171 ac-ft Spillway Info  Principal Spillway Type: CONCRETE Size: 8 inch  Length: Outlet Control Type: Discharge:	iles iles ideet
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DAM AND RESER  DAM AND RESER  Little River Tributary  DAM AND RESER  Low Significant High CLASSIFICATION: In accordance with OAC 785:25-3-3  Lock one: Company Significant Carge  Low Significant Large  Low OS Significant Large  Low ON Top OF DAM  LOPSTREAM  LOPE HO HO LOPSTREAM  LOPST	Watershed: Little River  ERVOIR INFORMATION: (if applicable)  Name of Dam: Misty Lakes Dam Length: 750 feet  Structural Height: (stream bed to top)  21 feet 24 feet Surface Area: (at principal spillway)  Principal Spillway Type: CONCRETE Size: 8 inch  Length: Outlet Control Type: Source Surface Area:  Length: Outlet Control Type: Source Surface Area: (at principal spillway)  Principal Spillway Type: CONCRETE Size: 8 inch  Valley Floor Valley Floor Maximum  Valley Floor Valley Floor Maximum	feet acres
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**PURPOSE OF STRUCTURE:** Agriculture Flood Control Livestock X Recreation Domestic Industrial [ Municipal Wastewater Wastewater X Fish/Wildlife Irrigation Power Other Please ensure that all necessary permits have been obtained from those Federal, State, and/or local government agencies from which prior approval is required. ESTIMATED COST OF PROJECT: 2000 Dete: 08-10-2015 CONSTRUCTION COMPANY NAME: APPLICANT: Applicant's Signature: Subscribed and sworn to before me this OFFICIAL SEAL DIANE HAMILTON Cornraisation of 07011273 Ignature of Notary Public Expires Mov. 23, 2015 My commission expires: Affix stamp above ENGINEER: Engineer's Name: E. O'Neil Robinson Engineering Firm: | Cardinal Engineering, LLC Address: 3700 W. Robinson, Suite 200 City: Norman Zip: 73072 State: OK Phone Home: 405-990-1333 Business: 405-579-0655 24-Hour Emergency: |405-740-9777 Government Agency: (or)

Date: 8-4-2015

Exhibit A to Contract K-1617-137

Engineer's Signature: