## VOLUME II

## EXHIBITS

## Reata Wash <br> Flood Control Improvement Study

Contract No. 2014-168-COS
Design Concept Report
Volume II - Exhibits
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Prepared for:


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EXPIRES 12-31-16

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Technical Solutions


# THE DESIGN CONCEPT REPORT FOR THE REATA WASH FLOOD CONTROL IMPROVEMENT 

 STUDY IS COMPOSED OF THREE SEPARATE VOLUMES:VOLUME I-REPORT<br>VOLUME II- EXHIBITS<br>VOLUME III - APPENDICES



EXPIRES 12-31-16

## VOLUME II <br> EXHIBITS

| Exhibit 1 | Study Location Reach Map |
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| Exhibit 2 | Study Location Reach Map and Existing Condition Floodplain |
| Exhibit 3 | Study Location Reach Map and Proposed Condition Floodplain |
| Exhibit 4 | Land Rights |
| Exhibit 5 | Concept Design Plan (15\%) |
| Exhibit 6 | Existing Condition Peak Discharges |
| Exhibit 7 | Proposed Condition Peak Discharges |



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## EXHIBIT 1

## STUDY LOCATION REACH MAP



## EXHIBIT 2

STUDY LOCATION REACH MAP AND EXISTING CONDITION FLOODPLAIN












## EXHIBIT 3

STUDY LOCATION REACH MAP AND PROPOSED CONDITION FLOODPLAIN











## EXHIBIT 4

## LAND RIGHTS













## EXHIBIT 5

## CONCEPT DESIGN PLAN (15\%)

## CITY OF SCOTTSDALE PUBLIC IMPROVEMENTS



 DETALS ASOR PUBLIC WORKS CONSTRUCTION AS AMENDECIFICATIONS AND SPECIFICATIONS AND DETALLS AND CITY OUPLEMENTAL STOTSALESDDESRD STIANDARD
\＆POLICIES MANUAL（DS\＆PM）．IF THERE IS A CONFLICT，THE LATTER SHALL APPLY．AL FACLLITIES CONSTRUCTION SHALL COMPLY WTH THE LATEST
BULLDING CODES AS AMENDED AND ADOPTED BY THE CITY OF SCOTTSDALE．
2．THE ENGINEERING DESIGNS ON THESE RLANS ARE ARPROVED BY THE CITY IN
SCOPE AND NOT IN DETALL．IF CONSTRUCTION QUANTITES ARE SHOWN ON SCOEE AND NOT IN DETANL IF CONSTRUCTION QUANT
THESE PLANS，THEY ARE NOT VERIFIED BY THE CITY．
3．BASED ON THE INFORMATION SUBMITTED ON THE PLANS AND ASSOCIATED DOCUMENTS，TE CITY CITY＇S MUNCIPAL CODE AND ARE ACCEPTABLE FOR PERMI ISSUANCE．THS ACCEPTANCE BY THE CITY DOES NOT AUTHORIZE
VILATIONS OF ANY APLICABLE CODE，ORDINANCE OR STANDRD AS
ADOPTED BY THE MUNICIPAL CODE

4．APRROVAL OF THE PLANS BY THE CITY IS VALID FOR SIX MONTHS．IF A OF REVIEW，TH．
REAPPROVAL．
5．ANY DEVIATION FROM THE APPROVED PLANS SHALL BE REVIEWED AND
APPROVED BY THE CITY PRIOR TO THAT CHANGE BEING INCORPORATED INTO THE PROJECT．
6．A CITY CAPITAL PROJECTS INSPECTOR WLLL INSPECT ALL WORK WITHIN THE
7．ANY SPECIAL INSPECTION REQUIRED SHALL BE IN ADDITION TO ANY ROUTINE
8．CITY ENCROACHMENT AND BUILDING PERMITS ARE REQUIRED FOR WORK IN
 SHALL BE AVAILABLE FOR INSPECTION AT ALL TMES FAILURE TO PRODUCE
THE REQURED LERMIS WIL RESULTINMEDIME WORL MTOPPAGE UNTLL
THE PROPER PERMIT DOCUMENTATION IS OBTAINED．
9．THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY
PERMITS FOR SALVAGING PROTECTED NATIVE PLANTS PRIOR TO THE START PERM TS FOR SALVA
OF CONSTRUCTION．
10．WHEREVER EXCAVATION IS DONE CONTACT THE BLUE STAKE CENTER AT（602）
263－1100 TWO WORKING DAYS BEFORE EXCAVATION IS TO BEGIN．THE CENTER 263－1100 TWO WORKING DAYS BEFORE EXCAVATION IS TO BEGIN．THE
WIL SE TAT THE LOCATON OF THE UNDERGROUND UTLITY LINES IS

11．ALL EXCAVATION AND GRADING WHICH IS NOT IN PUBLIC RIGHTS－OF－WAY OR
IN EASEMENTS GRANTED FOR PUBLIC PURPOSES MUST CONFORM TO SECTION N EASEMENTS GRANTED FOR PUBLIC PURPOSES MUST CONFORM TO SECTION
1803 AND APPENDX OF THE 2000 EDITON OF THE INTRNATONAL
BUILDING CODE PREPARED BY THE INTERNATIONAL CODE COUNCIL．A PERMIT BUILDING CODE RREPARED BY THE INTERNATIONAL COD
FOR THIS GRADING MUST BE SECURED FROM THE CITY．
12．THRUST RESTRAINT，WHERE REQUIRED，ON ALL CITY WATER LINES SHALL BE
PROVIDED USIAG MEGALUG MECHANICAL JINT RESTRAINTS OR PROVIDED USING MEGAL
CITY－APPROVED EQUAL．
13．ANY ASPHALT MIX DESIGN USED ON CITY PROJECTS SHALL HAVE BEEN APPROVED FOR THAT USE PER SECTION 5－10 THE CITY＇S DS\＆EM AND
APEAR ON THE＂APPROVE LST OF ASPHAT MIXES＂AS DISTRIBUTED BY
14．THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND REPLACE，AT NO AND GUTTER，DRAINAGE STRUCTURES，ETC．OUTSIDE THE PAY LIMIT THAT ARE
DAMAGED DUE TO THER ACTVITIES ON THE PROJECT．THIS INCLUDES，BUT IS NOT LIMTED TO，THE REMOVAL AND REPLACEMENT OF NEWLY CRACKED
ROADWAY INFRASTRUCTURE，THE REMOVAL AND REPLACEMENT OF EXISTING ENACARED ROADWAY INFRASTRUCTURE WHERE THE CRACES HAVE BEEN
THE CONTACTRR＇S OPERTHONS，THE REMOVAL AND
ERPACEMENT FOR THE REMOVAL OF THESE TTEMS SHALL BE PERPENDICULAR ANDTS USED PARALLEL TO THE CENTERLINE CONTROLLING THAT ITEM，OR AT THE
DIRECTION OF THE CITY＇S CAPITAL PROUECTS INSPECTOR．

15．ALL CAPITAL IMPROVEMENT PROJECTS SHALL MEET THE PROCEDURES AND STANMARDS FOR OHE SEE OF IEMPORARY／SECURIY FENCING，AROUND
PRIMTER OF CNSTUCTON SIES，AS DEFINED IN THE CITY＇S ZONING
ORDINANCE，ARTICLE VII，SECTION 7.700 ．

## ABBREVIATIONS

SHEET
SANITARY SEWER LINE
station
Standard
TYPICAL
water line
WSEL WATER SURFACE ELEvation
CONSTRUCTION
CORRUGATED METAL PIPE
DETALL
drainage easement
DUCTLLE IRON PIPE
EASTING
Elevation
EASEMENT
EXISTING
EXISTING FLOWLINE
GRADE BREAK
HEIGHT
home owners association
invert elevation
LEFT
MARICOPA ASSOCIATION OF GOVERNMENTS
MAXIMUM
minimum
NORTHING
OVERHEAD ELECTRIC
POINT OF CURVE
POINT OF COMPOUND CURVE
POINT OF REVERSE CURVE
POINT OF TANGENCY
POLYVINYL CHLORINE
PROPERTY LINE
100 YEAR PEAK DISCHARGE
REINFORCED CONCRETE BOX CULVERT
RIGHT
SLOPE
ORM DRAIN
EET

## LEGEND

| LEGEND |  |
| :---: | :---: |
|  | EXISTING SEWER |
|  | EXISTING STORM DRAIN |
|  | EXISting water |
|  | EXISTING UNDERGROUND ELECTRIC |
|  | EXISTING GAS LINE |
|  | EXISTING UNDERGROUND TELEPHONE CABLE |
|  | Existing overhead electric |
| －2019 | Existing ground elevation |
| － | EXISTING TRANSMISSION TOWER |
| $\bigcirc$ | EXISTING UTLLITY POLE |
| －- －- | EXISTING WIRE FENCE |
| $\otimes$ | VW－Water valve |
|  | EXISTING OR NEW R／W LIINE |
|  | EXISTING PARCEL LINE |
| －ーーーー－ | EXISTING OR NEW EASEMENT |
|  | PROPERTY LINE |
| ［－2019 | Proposed contours |
| －WSEL－－ | WATER SURFACE ELEVATION |
| $\stackrel{100}{+}$ | Project control line \＆Channel stationing |
| $88^{\prime \prime}$ | PROPOSED WATER |
| 8＂5 | PROPOSED SEWER |

EXHIBIT 5

## CONCEPT DESIGN PLANS（15\％）

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING





REATA WASH - REACH 4
TYPICAL SECTIONS


EARTHERN TRAPEZOIDIAL CHANNEL WTH BURIED PROTECTION

REATA WASH - REACH 5 TYPICAL SECTIONS




## GRADING NOTES

(1) PROPOSED CONCREIE SEDMENT BASIN SIL PARAPET WALL
(2) PROPOSED MCIISED EARTHEN TRAPEOIOALCHANEE WTTH BURED
(3) PROPOSED CONCRETE DROP STRUCTURE.
(4) Proposede encasebo sewerline relocation.
(5) Proposede encaseo watre line relocation.
(6) SCOUR DEPTH AND Bottom Of PROPosed bank Protection.


EXHIBIT 5

## CONCEPT DESIGN PLANS (15\%

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING



WOOD/PATEL
$-\infty^{2}$

GRADING NOTES
(2) PROPOSED MCISEE EARTHEENTPAEEZODAL CHANE WTH BURED
(6) SCOUR DEPTH AND BOTTOM OF PROPOSSED BANK PROTECTION

EXHIBIT 5

## CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING



WOOD/PATEL mphaxaze wis


GRADING NOTES
(2) PRROPOSED NCIEED EARTHEN TRAPEZODDLL CHANNE LTHH BURED 5) PRoposed encasso water une relocation
(6) SCOUR DEPTH ANO BOTTOM OF PROPOSEED BANK RROTECTIO
 (3) PROPOSELDEVEE MPROVEMENS. SEE TTPCCAL SECTION (9) Proposebllocall hhannel gradma
(10) PROPOSEDTOP OF LEVEE/EMBANKMENT

## 

EXHIBIT 5

## CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING



WOOD/PATEL
$\Longrightarrow$ ( ) $\sum 7$

GRADING NOTES
6) SCOUR DEPTH AND BotToMOF PROPOSSED anNK PROTECTION


(10) Proposed top of Level /emeankinent:

##  <br> VERT SCALE N FEET

EXHIBIT 5

## CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING



## $\overbrace{\text { HORIZSCALE } \operatorname{NFEET}}^{100}$ <br> VERT SCALENFEET <br> EXHIBIT 5 <br> CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING



WOOD/PATEL


GRADING NOTES
(6) Scour depthand bottomof proposed bank protection.
(7) ${ }^{\text {PROOPOSED DURIED }}$ SEANK PROTEGTIONIMPROVEMENTS.
(8) PROPOSEL LEvEE IIPROVEMENTS. SEE THFICAL SECTION
(10) PROPOSED TOP OF Level/ /evanankent.

\section*{${ }^{100 \quad 50 \quad \underbrace{10} 0^{10020}}$ <br> | HORIZ SCALE N FEET |  |
| :--- | :--- |
| 20 | $100^{20}$ |
|  |  | <br> vertscale mfeet}

EXHIBIT 5 CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING



WOOD/PATEL wintive


GRADING NOTES
6) SCOUR DEETH AND BOTTOM OF PROPOOSED BANK PROTECTION


## $\underbrace{100}_{\text {HORIZ SCALE IN FEET }}$ <br> vert scale in feet

EXHIBIT 5

## CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

|  |  | ARZONABU |  |
| :---: | :---: | :---: | :---: |
|  |  | [or |  |
| 15\% <br> PRELIMINARY NOT FOR CONSTRUCTION | PUBLIC WORKS capital project MANAGEMENT <br>  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| CHANNEL PLAN \& PROFILE SHEET |  |  |  |
| REATA WASH FLOOD CONTROL IMPROVEMENT STUDY |  |  |  |
|  |  |  |  |  |  |  |
|  | August 2016 | ¢010x |  |

## 



VERT SCALE N FEET

EXHIBIT 5

## CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING



WOOD/PATEL $\rightarrow_{2}$

## GRADING NOTES

(6) SCOUR DEPTH ANO BOTTOM OF PROPOSSED ANN PROTECTION.
(11) PROPOSEDE BURED BANK PROTECTION SEE TTPPCCLLSECTION

 (144) PRROPOSED GREOUTED ROCK CHANNEL SEE TYPICAL LECTION
(22) PROPOSEED GOLF CART CROSSING



VERT SCALE I NEEET


## GRADING NOTE

(4) PROPOSED GROUTED ROCK CHANNEL SEE TTPCCAL SECTION
(15) PRoposed Rcge with wingalls.
(10) PROPosEL Pavenent replacement and guaroralls

EXHIBIT 5

## CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR
CONSTRUCTION OR RECORDING



WOOD/PATEL


GRADING NOTES

(1) Proposeo grouted rock channel orop
(18) PRoposed offsite flow mlet Chanvel.

EXHIBIT 5

## CONCEPT DESIGN PLANS (15\%)

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

|  |  | ARZONA |  |
| :---: | :---: | :---: | :---: |
|  |  | \|ar |  |
|  |  |  |  |  |
| $\left\|\begin{array}{c} 15 \% \\ \text { PRELIMINARY } \\ \text { NOTFOR } \\ \text { CONSTRUCTION } \end{array}\right\|$ |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| setme CHANNEL PLAN \& PROFILE SHEET |  |  |  |
| REATA WASHmantFLOOD CONTROL IMPROVEMENT STUDY |  |  |  |
|  |  |  |  |  |  |  |
| $0^{100}{ }^{\text {cosamed }}$ | Augusit 2016 | 0xix | cif |
|  |  |  |  |




EXHIBIT 6

## EXISTING CONDITION PEAK DISCHARGES



## EXHIBIT 7

PROPOSED CONDITION PEAK DISCHARGES


