

SAN JACINTO RIVER AUTHORITY
HIGHLANDS DIVISION
ACCESS ROAD TO HCFCD DITCH SIPHON
CSP NO. 19-0040
CONTRACT NO. 19-0040



**RELEASED FOR
PROPOSALS
APRIL 2019**

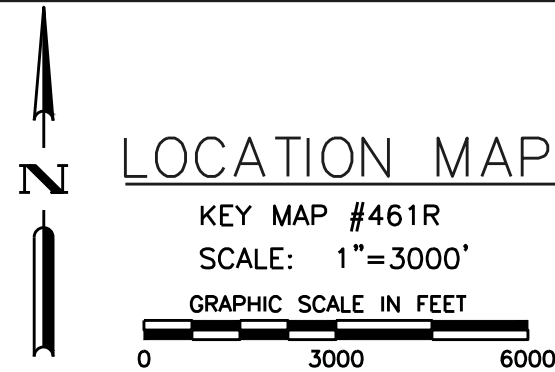
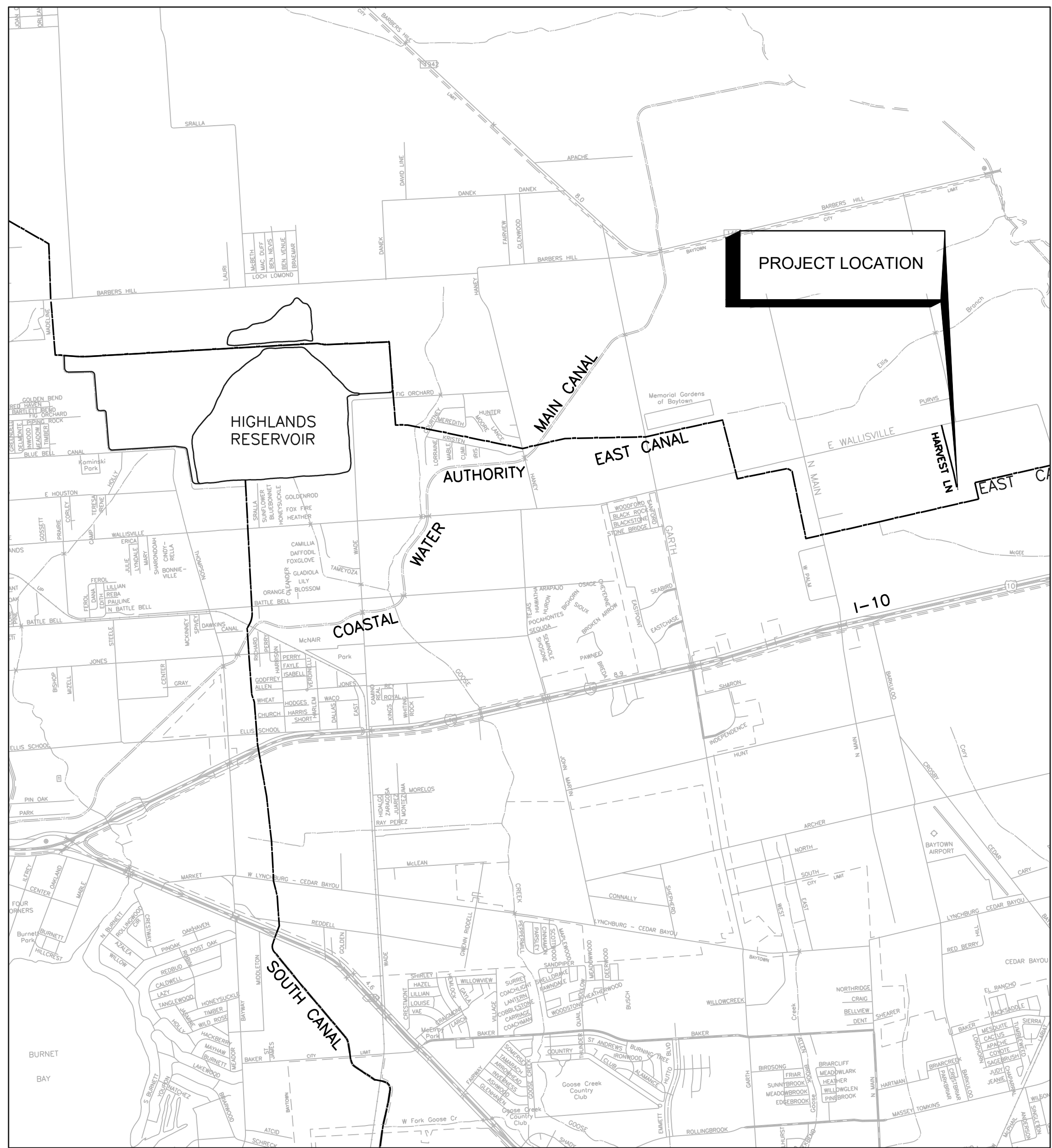
DIRECTORS

LLOYD B. TISDALE
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ED BOULWARE
MARK MICHELETTI
JIM ALEXANDER
BRENDA COOPER
GENERAL MANAGER: JACE A. HOUSTON

PRESIDENT
VICE PRESIDENT
SECRETARY
ASSISTANT SECRETARY
TREASURER
DIRECTOR
DIRECTOR

ONE-CALL NOTIFICATION SYSTEM
CALL BEFORE YOU DIG!!!
(713) 223-4567
(New Statewide Number Outside Houston)
1-800-545-6005

48 HOUR NOTICE:
CONTRACTOR SHALL NOTIFY HARRIS COUNTY
PRIOR TO COMMENCING CONSTRUCTION AND/OR
BACKFILLING ANY UTILITIES. CONTRACTOR(S) TO
CONTACT PUBLIC REVIEW DEPARTMENT @
(713-274-3931) (public.review@hcpid.org)

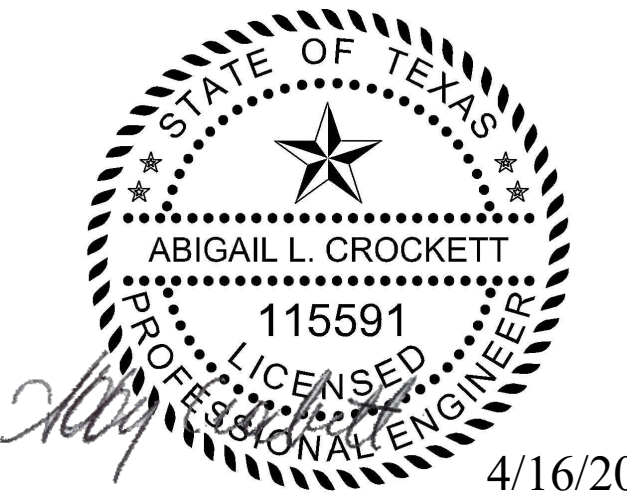


LOCATION MAP

KEY MAP #461R
SCALE: 1"=3000'
GRAPHIC SCALE IN FEET



TEXAS WATER ENGINEERING, PLLC.
Texas Registered Engineering Firm F-8482



COVER

SHEET
SEQ. 1 OF 10

FILE: C:\Users\Abby Crockett\Documents\Projects\SJRA\SJRA Detention Pond Culvert\CAD Drawings\SJRA-ACCESS HCFCD-SHTINDEX.dwg LAYOUT: Layout1 DATE: 4/15/19 BY: ABBY CROCKETT

INDEX OF SHEETS

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PROJECT DESCRIPTION

- THE WORK OF THIS CONTRACT IS BASED UPON AN IDENTIFIED NEED TO CONSTRUCT AN ACCESS ROAD TO THE SAN JACINTO RIVER AUTHORITY’S HARRIS COUNTY FLOOD CONTROL DISTRICT (HCFCD) DITCH SIPHON. THE WORK DESCRIBED IN THIS CONTRACT INCLUDES THE FOLLOWING:
 - 1.1. INSTALLATION OF TRAFFIC-RATED REINFORCED CONCRETE BOX CULVERT CROSSING IN THE HARVEST LANE SUBDIVISION DETENTION POND LOCATED AT THE SOUTH END OF HARVEST LANE, NORTH OF THE SJRA EAST CANAL.
 - 1.2. ASSOCIATED GRADING WORK AND HYDRO-MULCHING OF DISTURBED AREAS.
 - 1.3. INSTALLATION OF 8" THICK CRUSHED CONCRETE BASE COURSE AND GEOTEXTILE FABRIC AROUND THE HCFCD DITCH SIPHON INTAKE STRUCTURE, ON THE LEVEE, AND ON THE CULVERT CROSSING.

SURVEY/CONTROL NOTES

- THE SURVEY WAS PROVIDED BY GORRONDONA & ASSOCIATES, INC. ON JULY 6, 2018.
- SHOWN ELEVATIONS ARE BASED ON HARRIS COUNTY FLOOD CONTROL MONUMENT RM 140075, WITH A PUBLISHED ELEVATION OF 36.28 FEET, NAVD 88 (2001 ADJUSTMENT).
- HORIZONTAL COORDINATES SHOWN ARE BASED ON STATE PLANE COORDINATES, TEXAS SOUTH-CENTRAL (ZONE 4204), GROUND COORDINATES AND MAY BE BROUGHT TO GRID USING A SCALE FACTOR OF 0.999901481.
- THE FOLLOWING SURVEY CONTROL POINTS WERE USED:
 - 4.1. SURVEY CONTROL POINT #50: $\frac{5}{8}$ " IRON ROD: NORTHING: 13869559.34, EASTING: 6252691.30, ELEVATION: 34.48
 - 4.2. SURVEY CONTROL POINT #51: $\frac{5}{8}$ " IRON ROD: NORTHING: 13869759.41, EASTING: 6252645.89, ELEVATION: 34.64
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING CONSTRUCTION STAKING. CONTRACTOR WILL VERIFY ACTUAL CONDITIONS WITH STAKING INCLUDING EASEMENTS/LIMITS OF CONSTRUCTION.

CARE OF WATER NOTES

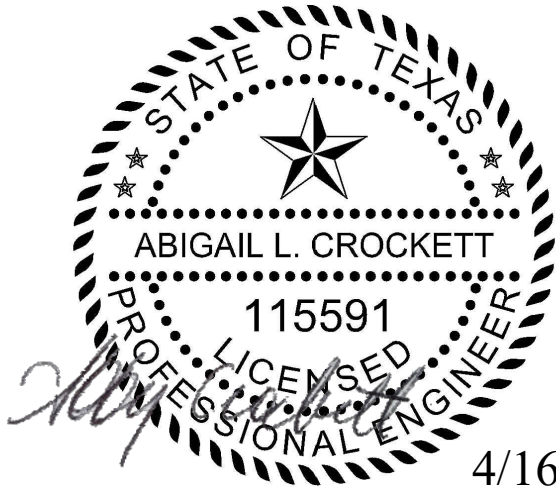
- CARE OF WATER IS CONSIDERED INCIDENTAL TO THE PROJECT. NO SEPARATE PAYMENT WILL BE MADE FOR WORK RELATED TO CARE OF WATER.
- WATER, IN RELATION TO THESE CONTRACT DOCUMENTS, INCLUDES: GROUNDWATER, SURFACE WATER, CANAL WATER, STORM WATER IN EXISTING DETENTION PONDS AND DRAINAGE CHANNELS, AND WATER IN CONDUIT SYSTEMS (WHETHER IT BE A NEW, TEMPORARY, OR EXISTING SYSTEM).
- CONTRACTOR SHALL MAINTAIN FLOWS IN EXISTING DETENTION POND AND ADJACENT HCFCD CHANNEL AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL NOT RESTRICT FLOW CAPACITY OF EXISTING DETENTION POND IN ANY MANNER DURING OR AFTER STORM EVENTS THROUGHOUT DURATION OF CONSTRUCTION.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR EQUIPMENT AND MATERIALS AND SHALL MOVE EQUIPMENT AS NECESSARY FOR INCLEMENT WEATHER.
- EXCAVATIONS SHALL BE MAINTAINED TO BE FREE OF SURFACE AND GROUNDWATER.

EARTHWORK NOTES

- EXISTING CONTOURS IN PLANS ARE SHOWN FOR TERRAIN RELIEF ONLY; ALL ELEVATIONS SHOULD BE VERIFIED BY CONTRACTOR PRIOR TO BEGINNING WORK.
- GEOTECHNICAL INVESTIGATIONS WERE PERFORMED FOR OTHER PROJECTS BY AVILES ENGINEERING CORP. IN 2013; THE REPORTS (REPORT NO. G116-13 AND REPORT NO. G144-13) ASSOCIATED WITH THESE EFFORTS IS AVAILABLE FOR THE CONTRACTOR’S INFORMATION ON REQUEST.
- PROPOSED CONTOUR LINES, SPOT ELEVATIONS AND SLOPE INDICATORS REPRESENT FINISHED GRADES AS INDICATED ON THE PLANS.
- CONTRACTOR SHALL PROVIDE ANY/ALL TEMPORARY SLOPE PROTECTION NECESSARY TO PREVENT EMBANKMENTS FROM SLOUGHING DURING CONSTRUCTION. TEMPORARY MEASURES ARE TO BE REMOVED WHEN CONSTRUCTION IS COMPLETED. CONTRACTOR’S FAILURE TO ADEQUATELY PROTECT/MAINTAIN SLOPES WHICH RESULTS IN SLOUGHING SHALL BE REPAIRED BY THE CONTRACTOR UNDER SJRA’S DIRECTION AT NO COST TO SJRA.
- CONTRACTOR MAY USE TEMPORARY ALL-WEATHER SURFACE TREATMENT ON THE CREST OF THE CANAL EMBANKMENTS WITHIN THE CONSTRUCTION LIMITS. MATERIALS TO BE USED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY PRINCIPAL ARCHITECT/ENGINEER PRIOR TO INSTALLATION. ALL MEASURES USED TO STABILIZE THE CANAL EMBANKMENTS SHALL BE REMOVED UPON PROJECT COMPLETION, AND THE CANAL EMBANKMENTS SHALL BE RETURNED TO EQUAL OR BETTER CONDITION THAN FOUND BEFORE CONSTRUCTION AND AS SHOWN ON DRAWINGS. ALL DISTURBED AREAS SHALL BE SEEDED, HYDROMULCHED, ETC. PER THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL NOT DISPOSE OF ANY EXCAVATED MATERIALS WITHIN AN AREA DESIGNATED AS BEING WITHIN THE 100-YEAR FLOOD PLAIN. THE CONTRACTOR SHOULD VERIFY THE FLOOD PLAIN STATUS OF ANY PROPOSED DISPOSAL SITE.



TEXAS WATER ENGINEERING, PLLC.
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4/16/2019

SAN JACINTO RIVER AUTHORITY
HIGHLANDS DIVISION



SJRA HIGHLANDS
ACCESS ROAD TO
HCFCD DITCH
SIPHON

ISSUE	DATE	DESCRIPTION
SJRA PROJECT NO:		
FILE NAME: SJRA-ACCESS HCFCD-SHTINDEX.dwg		
DRAWN BY:	KC	
CHECKED BY:	AC	
SCALE:	AS SHOWN	

GENERAL
SHEET INDEX & PROJECT NOTES

SHEET	G-1
SEQ.	2 OF 10

RFP SUBMITTAL

FILE: C:\Users\Abby Crockett\Documents\Projects\SJRA\SJRA Detention Pond Culvert\CAD Drawings\SJRA-ACCESS HCFCD-GENERALNOTES.dwg LAYOUT: Layout1 (2) DATE: 4/16/19 BY: ABBY CROCKETT

GENERAL NOTES

1. THE FOLLOWING NOTES ARE GENERAL AND APPLY TO ALL SHEETS OF THESE CONSTRUCTION DRAWINGS AS IF THEY WERE WRITTEN ENTIRELY ON EACH SHEET.
2. SCALES NOTED ON DRAWINGS ARE ASSOCIATED WITH FULL SIZE DRAWINGS (22-IN X 34-IN).
3. CONTRACTOR SHALL COORDINATE ALL WORK, RFIs, AND FIELD CHANGES WITH THE CONSTRUCTION MANAGER.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INCLUDING COUNTY RIGHT OF WAY PERMIT, AND BONDS PRIOR TO START OF CONSTRUCTION WORK.
5. THE CONTRACTOR SHALL PROVIDE ALL SHEETING/SHORING REQUIRED TO PROTECT EXISTING STRUCTURES, PIPES AND FACILITIES, WHETHER OR NOT INDICATED ON THE DRAWINGS.
6. CLEARING PROJECT SITE WITH FIRE IS NOT ALLOWED.
7. NO FIREARMS SHALL BE PERMITTED ON SITE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REQUIRED SECURITY TO PROTECT HIS/HER PROPERTY, EQUIPMENT, WORK IN PROGRESS AND COMPLETED WORK.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING HIS/HER PROPERTY, EQUIPMENT, WORK IN PROGRESS AND COMPLETED WORK FROM ALL WEATHER CONDITIONS AT NO ADDITIONAL COST TO SJRA.
- 10.CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE SAFETY OF HIS/HER LABORERS (INCLUSIVE OF ALL SUB-CONTRACTORS) FOR THE ENTIRE DURATION OF THE PROJECT.
- 11.CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DETERRENENTS TO PREVENT THE PUBLIC FROM ACCESSING THE PROJECT SITE.
- 12.CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP OF THE SITE AND ADJOINING ACCESS ROADS DURING ALL ASPECTS OF THE CONSTRUCTION. SITE AND IMPACTED ACCESS ROADS SHALL BE CLEAR OF TRASH AT THE END OF CONSTRUCTION EVERY DAY. ALL ACCESS ROADS TO BE RESTORED TO ORIGINAL OR BETTER CONDITION AT NO COST TO SJRA UPON COMPLETION OF THE PROJECT.
- 13.THE CONTRACTOR SHALL COMPLY WITH THE U.S. IRON AND STEEL REQUIREMENTS PROVIDED IN TWDB-1105 OF THE PROJECT SPECIFICATIONS.
- 14.CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING STRUCTURES, UTILITIES, TREES, SHRUBS, FENCES, AND OTHER ADJOINING FACILITIES, AND SHALL REPAIR OR REPLACE TO ORIGINAL OR BETTER CONDITION IF DAMAGE IS CAUSED BY CONTRACTOR AT NO COST TO OWNER. THIS ALSO INCLUDES SHEETING/SHORING REQUIRED TO PROTECT EXISTING STRUCTURES, PIPES AND FACILITIES. WHETHER OR NOT INDICATED ON THE DRAWINGS, SOME DIMENSIONS AND ELEVATIONS RELATED TO EXISTING STRUCTURES WERE OBTAINED FROM PREVIOUS SURVEYS AND CONSTRUCTION/RECORD DRAWINGS. ALL EXISTING DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE AND PRINCIPAL ARCHITECT/ENGINEER IF THERE IS A CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH WORK.
- 15.CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE TO ENSURE A DRY WORK AREA AT ALL TIMES DURING CONSTRUCTION.
- 16.CONTRACTOR SHALL PREVENT RUTS OR DAMAGE TO ANY AREA WITHIN THE LIMITS OF CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO ANY PORTION OF THE CANAL SLOPES, LEVEES (CREST AND SLOPES), AND OUTSIDE LEVEE TOES. ALL INCIDENTAL DAMAGE SHALL BE REPAIRED IMMEDIATELY AT NO COST TO OWNER.
- 17.CONTRACTOR SHALL SEED AND FERTILIZE ALL AREAS TO ESTABLISH GRASS TO OWNER STANDARDS FOR AREAS NOT COVERED BY A STRUCTURE THAT HAVE BEEN DISTURBED BY CONSTRUCTION ACTIVITIES EXCEPT THE CHANNEL BOTTOM AND WHERE PERMANENT STRUCTURAL EROSION MEASURES ARE USED. SEE SPECIFICATION SECTION 32 92 13 - HYDRO-MULCHING.
- 18.EXISTING PAVEMENTS, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO CURRENT HARRIS COUNTY STANDARDS, AT NO COST TO OWNER.
- 19.NOTIFICATIONS ISSUED BY HARRIS COUNTY PUBLIC INFRASTRUCTURE DEPARTMENT ARCHITECTURE AND ENGINEERING DIVISION PERMIT OFFICE REQUIRED PRIOR TO CONSTRUCTION WITHIN HARRIS COUNTY AND HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHTS-OF-WAY. CONTACT HARRIS COUNTY PERMIT OFFICE (713) 316-3562.
- 20.OBTAIN AND COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS AND APPROVALS, WITH ASSISTANCE FROM PRINCIPAL ARCHITECT/ENGINEER AND OWNER'S REPRESENTATIVE, IF NECESSARY.
- 21.IMMEDIATELY RECONSTRUCT ALL DRAINAGE CHANNELS DISTURBED BY CONSTRUCTION TO ORIGINAL OR BETTER CONDITION AND UTILIZING SAME FLOWLINES AND HYDRAULIC CAPACITY FOR STORM WATER SYSTEMS.
- 22.EXCESS EXCAVATED SOILS SHALL BE REMOVED AND DISPOSED OF IMMEDIATELY IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND OTHER ORDINANCES AT NO ADDITIONAL COST TO THE SJRA. FURNISH WRITTEN VERIFICATION FROM OWNER'S REPRESENTATIVE OF THE DISPOSAL SITE(S) AUTHORIZING THE CONTRACTOR TO DISPOSE OF MATERIALS AT THAT LOCATION BEFORE AND AFTER PLACEMENT.
- 23.SITE ACCESS SHALL BE PERMITTED VIA HARVEST LANE PER ACCESS EASEMENT AGREEMENT OBTAINED BY THE SJRA. EASEMENT AGREEMENT AVAILABLE UPON REQUEST.
- 24.CONTRACTOR SHALL COORDINATE WITH THE SJRA FOR AREAS AVAILABLE FOR LAYDOWN, STORAGE, AND PARKING USE AND SHALL OBTAIN APPROVAL FROM THE SJRA FOR LOCATION OF AREAS PRIOR TO USE.

ENVIRONMENTAL NOTES

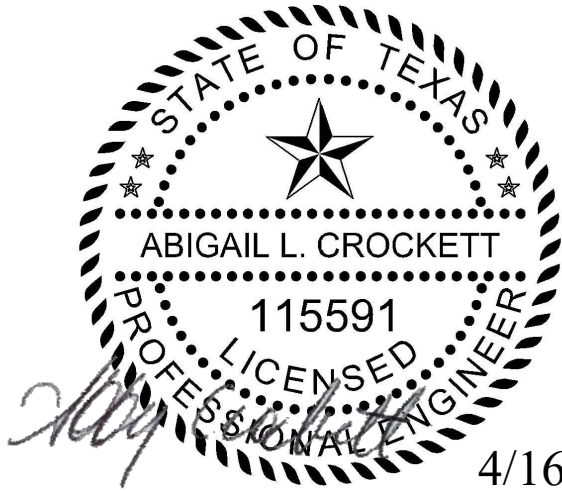
1. SEE SPECIFICATION SECTION 00 31 19 - EXISTING CONDITION INFORMATION FOR ENVIRONMENTAL STUDY INFORMATION.
2. AS PER AN AGREEMENT WITH THE HARRIS COUNTY FLOOD CONTROL DISTRICT, THE AUTHORITY AGREES TO SUBMIT PLANS FOR REVIEW AND OBTAIN ALL NECESSARY PERMITS OR WAIVERS PRIOR TO CONSTRUCTION WITHIN THE 100-YEAR FLOODPLAIN;
3. PRIOR TO CONSTRUCTION OR CLEARING ACTIVITIES WITHIN ANY 100-YEAR FLOODPLAIN, A PERMIT OR WAIVER FROM THE LOCAL FLOODPLAIN ADMINISTRATOR (NATIONAL FLOODPLAIN INSURANCE POLICY) MUST BE OBTAINED;
4. AS PER AN AGREEMENT WITH THE TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD PROJECT NO. 40191):
 - 4.1. TO ENSURE COMPLIANCE WITH THE MIGRATORY BIRD TREATY ACT, VEGETATION CLEARING WILL OCCUR OUTSIDE THE GENERAL BIRD NESTING SEASON (MARCH TO AUGUST) OR A SURVEY WILL BE CONDUCTED, PRIOR TO CLEARING, FOR ACTIVE NESTS. ANY VEGETATION OR BARE GROUND WITHIN AT LEAST 25 FEET OF OCCUPIED NESTS SHOULD NOT BE DISTURBED UNTIL THE EGGS HAVE HATCHED AND THE YOUNG HAVE FLEDGED. CONSTRUCTION ACTIVITIES SHOULD BE EXCLUDED FROM A MINIMUM ZONE OF 100 METERS SURROUNDING ANY RAPTOR NESTS FROM FEBRUARY 1 THROUGH JULY 15 IN ORDER TO AVOID DISTURBANCE TO RAPTOR NESTS;
 - 4.2. TO ENSURE COMPLIANCE WITH THE BALD AND GOLDEN EAGLE PROTECTION ACT (BGEPA), REFER TO THE UNITED STATES FISH AND WILDLIFE SERVICE (USFWS) NATIONAL BALD EAGLE MANAGEMENT GUIDELINES. WHEN POTENTIAL IMPACTS TO THE BALD EAGLE ARE ANTICIPATED, TPWD RECOMMENDS CONSULTATION WITH USFWS - HOUSTON ECOLOGICAL SERVICES REGARDING COMPLIANCE WITH THE BGEPA AND CONSULTATION WITH TPWD BECAUSE THE BALD EAGLE IS STATE-LISTED AS THREATENED;
 - 4.3. TO ENSURE COMPLIANCE WITH THE TEXAS PARKS AND WILDLIFE CODE, THE AUTHORITY WILL INCORPORATE ACTIONS INTO THE PROJECT TO AVOID IMPACTS TO ALLIGATOR SNAPPING TURTLES. THE AUTHORITY WILL INFORM EMPLOYEES AND CONTRACTORS OF THE POTENTIAL FOR ALLIGATOR SNAPPING TURTLES TO OCCUR WITHIN OR NEAR THE PROJECT CANALS AND HIGHLANDS RESERVOIR;
5. STANDARD EMERGENCY CONDITIONS APPLY FOR THE DISCOVERY OF CULTURAL RESOURCES; AND
6. STANDARD EMERGENCY CONDITIONS APPLY FOR THE DISCOVERY OF THREATENED AND ENDANGERED SPECIES.

STANDARD HCFCD NOTES

1. OBTAIN AND COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL PERMITS AND APPROVALS, WITH ASSISTANCE FROM PRINCIPAL ARCHITECT/ENGINEER, IF NECESSARY. OBTAIN PERMIT (CERTIFICATION) FROM HARRIS COUNTY PRINCIPAL ARCHITECT/ENGINEER TO ENTER HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY.
2. NOTIFY THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S PROPERTY MANAGER IN WRITING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. SUBMIT THE HCFCD 48 HOUR PRE-CONSTRUCTION NOTIFICATION FORM, A COPY OF THE APPROVED CONSTRUCTION DRAWINGS, AND A COPY OF THE CORPS OF ENGINEERS INDIVIDUAL SECTION 404 PERMIT, IF APPLICABLE, TO HCFCD, 9900 NORTHWEST FREEWAY, HOUSTON, TEXAS 77092, ATTN: PROPERTY MANAGEMENT DEPT. BY HAND DELIVERY, OR FAX TO 713-684-4129 (FAX NUMBER).
3. PRINCIPAL ARCHITECT/ENGINEER SHALL SUBMIT CERTIFICATION LETTER AND RECORD DRAWINGS TO THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S PROPERTY MANAGEMENT DEPARTMENT REQUESTING INSPECTION OF ITEMS CONSTRUCTED IN HARRIS COUNTY FLOOD CONTROL DISTRICT'S RIGHT-OF-WAY. PRIOR TO REQUESTING INSPECTION, THE DRAINAGE RIGHT-OF-WAY AND/OR EASEMENTS SHALL BE STAKED AND FLAGGED BY CONTRACTOR.
4. PROTECT, MAINTAIN, AND RESTORE EXISTING BACKSLOPE DRAINAGE SYSTEMS.
5. BACKSLOPE SWALE AND INTERCEPTOR STRUCTURE ELEVATIONS AND LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. FINAL ELEVATIONS AND LOCATIONS SHALL BE FIELD VERIFIED BY THE PRINCIPAL ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
6. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL OR DETENTION RIGHT-OF-WAY, EXCEPT THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED. MINIMUM ACCEPTANCE CRITERIA ARE 75% COVERAGE OF LIVE BERMUDA GRASS AND NO EROSION OR RILLS DEEPER THAN 4".
7. BACKFILL IN ACCORDANCE WITH HARRIS COUNTY FLOOD CONTROL DISTRICT STANDARD SPECIFICATION, SECTION 02315 - EXCAVATING AND BACKFILLING, OR EQUIVALENT.
8. EXCAVATE CHANNEL FLOWLINE TO DESIGN ELEVATION AS SHOWN ON PLANS AND DOWNSTREAM, AS NECESSARY, TO ENSURE NO WATER REMAINS IN THE FACILITY (STORM SEWER, LATERAL CHANNEL, OR DRY BOTTOM DETENTION BASIN) DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL, SO THE FACILITY WILL FUNCTION AS INTENDED. FOR WET BOTTOM DETENTION BASINS, ENSURE NO WATER IS ABOVE THE DESIGN LEVEL IN THE WET BOTTOM DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL.
9. MAINTAIN FLOW IN CHANNEL DURING CONSTRUCTION AND RESTORE CHANNEL TO ORIGINAL CONDITION.
10. REMOVE ALL EXCAVATED MATERIAL FROM THE HARRIS COUNTY FLOOD CONTROL DISTRICT OR DRAINAGE RIGHT-OF-WAY. NO FILL IS TO BE PLACED WITHIN A DESIGNATED FLOOD AREA WITHOUT FIRST OBTAINING A FILL PERMIT FROM THE APPROPRIATE JURISDICTIONAL AUTHORITY.
- 11.HARRIS COUNTY SPECIFICATIONS REFERENCED IN PREVIOUS NOTES ARE AVAILABLE AT http://www.hcfcd.org/media/1311/hcfcd_2005_specifications.pdf.



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SAN JACINTO RIVER AUTHORITY
HIGHLANDS DIVISION



SJRA HIGHLANDS
ACCESS ROAD TO
HCFCD DITCH
SIPHON

ISSUE	DATE	DESCRIPTION
SJRA PROJECT NO:		
FILE NAME: SJRA-ACCESS HCFCD-GENERALNOTES.dwg		
DRAWN BY:	KC	
CHECKED BY:	AC	
SCALE:	AS SHOWN	

GENERAL
GENERAL NOTES

SHEET G-3
SEQ. 4 OF 10

RFP SUBMITTAL

FILE: C:\Users\Abby Crockett\Documents\Projects\SJRA\SJRA Detention Pond Culvert\CAD Drawings\SJRA-ACCSS HCFCD-GN-LEGEND.dwg LAYOUT: LEGEND DATE: 4/10/19 BY: ABBY CROCKETT

SCHEDULE OF TYPICAL ABBREVIATIONS
(NOT ALL ABBREVIATIONS MAY BE USED)

A
AB ANCHOR BOLT
APPROX APPROXIMATELY
ASPH ASPHALT
AC ACRE
AL ALUMINUM

B
BGEPA BALD & GOLDEN EAGLE PROTECTION ACT
B/L BASELINE
BM BENCH MARK
BOT BOTTOM
BOC BOTTOM OF CONCRETE
BOW BOTTOM OF WALL
BEL BELOW
BET BETWEEN
BIT BITUMEN
BKWL BACKWALL
BW BOTH WAYS
BAS BASIN
BLD BUILDING
BOS BOTTOM OF SLAB

C
C CHANNEL
C/C CENTER TO CENTER
CCFRPMP CENTRIFUGALLY CAST FIBERGLASS
REINFORCED POLYMER MORTAR PIPE
CCF CUBIC FEET PER SECOND
CIP CAST IN PLACE
CJ CONTROL JOINT
C/L CENTERLINE
CLR CLEAR
CONC CONCRETE
CONST CONSTRUCTION
CONT CONTINUOUS
CONTR CONTRACTOR
CAM CAMERA
CLO CLEANOUT
CMP CORRUGATED METAL PIPE
COH CITY OF HOUSTON

D
DBL DOUBLE
DET/DTL DETAIL
DIA DIAMETER
DUC DUCT
DVB DIVERSION BOX
DS DOWNSTREAM

E
EA EACH
E EAST
EF EACH FACE
ELEV/EL ELEVATION
EPDM ETHYLENE PROPYLENE DIENE MONOMER
EW EACH WAY
EXIST EXISTING
EXP EXPOSED
EXP JT EXPANSION JOINT (OR EJ)

F
FF FINISH FLOOR
FC FILM CODE NUMBER
FFE FINISH FLOOR ELEVATION
FH FIRE HYDRANT
FIN FINISH
FL FLOW LINE
FND FOUND
FT FEET

G
GA GAUGE
GALV GALVANIZED
GND GROUND
GS GROUND SURFACE
GR GRADE

H
HORIZ HORIZONTAL
HR HOUR
HT HEIGHT
HC HARRIS COUNTY
HCED HARRIS COUNTY ENGINEERING DEPARTMENT
HCFCD HARRIS COUNTY FLOOD CONTROL DISTRICT
HCMR HARRIS COUNTY MAP RECORDS
HDPE HIGH DENSITY POLYETHYLENE

I
ID INSIDE DIAMETER
IF INSIDE FACE
IN INCH
IP IRON PIPE
IR IRON ROD

J
J JUNCTION
JS JUNCTION STRUCTURE
JT JOINT

K
KCJ KEYED CONSTRUCTION JOINT

L
L LENGTH
LF LINEAR FEET
LT LEFT
LVL LEVEL
LOU LOUVER

M
MAINT MAINTENANCE/MAINTAINED
MAT MATERIAL
MAX MAXIMUM
MET METAL
MFR MANUFACTURER
MH MANHOLE
MIN MINIMUM
MGD MILLION GALLONS PER DAY

N
NOM NOMINAL
N NORTH
NO NUMBER
NTS NOT TO SCALE
NWSE NORMAL WATER SURFACE
ELEVATION

O
OC ON CENTER
OCEW ON CENTER, EACH WAY
OD OUTSIDE DIAMETER
OF OUTSIDE FACE
O OVERHEAD
OH OVERHEAD ELECTRIC
OT OVERHEAD TELEPHONE
OHL OVERHEAD ELECTRIC TRANSMISSION LINES
OHWM ORDINARY HIGH WATER MARK
OPNG OPENING
OPRRPHC OFFICIAL PUBLIC RECORDS OF
REAL PROPERTY HARRIS COUNTY

P
PL PROPERTY LINE
PVC POLYVINYL CHLORIDE PIPE
PVMT PAVEMENT
PG PAGE
PROP PROPOSED
PP POLYPROPYLENE

R
RAD RADIUS
RCB REINFORCED CONCRETE BOX
RE REFER TO
REF REFERENCE
REINF REINFORCING (REINFORCED)
RCP REINFORCED CONCRETE PIPE
REQ'D REQUIRED
RET RETAINING
REV REVERSE
RO ROUGH OPENING
RT RIGHT
ROW RIGHT OF WAY

S
SAN SANITARY
SECT SECTION
SB SLAB BEAM
SCH SCHEDULE
SHT SHEET
SIM SIMILAR
SJ SAWCUT JOINT
S SOUTH
SPEC SPECIFICATIONS
SQ SQUARE
SS STAINLESS STEEL
SM SANITARY SEWER MANHOLE
STA STATION
STD STANDARD
STL STEEL
STR STRUCTURAL
SJRA SAN JACINTO RIVER AUTHORITY

T
T TREAD OR THICKNESS
TBD TO BE DETERMINED
T&B TOP AND BOTTOM
TC TOP OF CURB
TEMP TEMPERATURE
TPWD TEXAS PARKS AND WILDLIFE DEPARTMENT
TOB TOP OF BANK
TOC TOP OF CONCRETE
TOJ TOP OF JOIST
TOS TOP OF SLAB
TOW TOP OF WALL
TOP TOP OF PIPE
TWDB TEXAS WATER DEVELOPMENT BOARD
TWE TEXAS WATER ENGINEERING, PLLC
TWSE TEMPORARY WATER SURFACE ELEVATION
TYP TYPICAL SLAB
TxDOT TEXAS DEPARTMENT OF TRANSPORTATION

U
UHMWPE ULTRA-HIGH-MOLECULAR-WEIGHT POLYETHYLENE
US UPSTREAM
UG UNDERGROUND
UE UNDERGROUND ELECTRIC
USFWS UNITED STATES FISH AND WILDLIFE SERVICE
UT UNDERGROUND TELEPHONE

V
VERT VERTICAL
VOL VOLUME

W
W WEST
W/ WITH
W/O WITHOUT
WP WEATHERPROOF OR WORKING POINT
WPGF WATERPROOFING
WS WATER STOP
WSE WATER SURFACE ELEVATION

SYMBOLS

100+00
+
PROJECT BASELINE

EXISTING STRUCTURE AND PIPE

NEW STRUCTURE AND PIPE

ITEMS TO BE DEMOLISHED
OR ABANDONED IN PLACE

CENTERLINE

40
FINISH GRADE CONTOUR MAJOR

41
FINISH GRADE CONTOUR MINOR

3H:1V
SLOPE (3 HORIZONTAL TO 1 VERTICAL)

LOC
LIMITS OF CONSTRUCTION

SF
TEMPORARY SILT FENCE

BREAK LINE

BARBED WIRE FENCE

WOODEN FENCE

CHAIN LINK FENCE

GAS
GASLINE

E_x
ELECTRICAL POWER

OE
OVERHEAD ELECTRIC

UC
UNDERGROUND COMMUNICATION

T
TELEPHONE

TOP OF BANK

W
WATER

SD
STORMDRAIN

GUARD RAIL/HAND RAIL

EDGE OF ASPHALT

TREE LINE/BRUSH LINE

R.O.W. LINE

TOP OF BANK

TOE

40
EXISTING CONTOUR MAJOR

41
EXISTING CONTOUR MINOR

Ø DIAMETER

PLATE

B-1
BENCHMARK

B-1
BORE HOLE

TREE

SIGN

MAIL BOX

LP
LIGHT POLE

CP
SJRA MONU.

STORM MANHOLE

ELECTRIC MANHOLE

WV
WATER VALVE

FIRE HYDRANT

WATER METER

GAS METER

GAS VALVE

PP
POWER POLE

GUY WIRE

DIRECTION OF FLOW

SIGNAL POLE

ELECTRIC BOX

CONCRETE - SECTION

SAND OR GROUT - SECTION

FINISH OR NATURAL GRADE

EXISTING CONCRETE

GRAVEL - SECTION

REINFORCEMENT IN SECTION

CRUSHED CONCRETE ROAD BASE

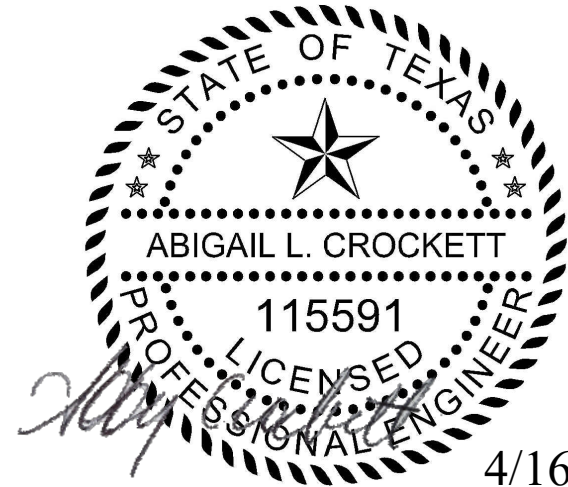
GRADED SIDE SLOPE-INFILL

GRADED SIDE SLOPE-INCUT

NOTE:
DISCIPLINE SPECIFIC ABBREVIATIONS MAY
NOT BE INCLUDED ON THIS LIST. THE
INDIVIDUAL DISCIPLINE ABBREVIATIONS
SUPERCEDE THIS LIST IN THE EVENT
OF AN OMISSION OR CONFLICT.



TEXAS WATER ENGINEERING, PLLC.
Texas Registered Engineering Firm F-8482



4/16/2019

SAN JACINTO RIVER AUTHORITY
HIGHLANDS DIVISION



SJRA HIGHLANDS
ACCESS ROAD TO
HCFCD DITCH
SIPHON

ISSUE	DATE	DESCRIPTION
SJRA PROJECT NO:		
FILE NAME: SJRA-ACCSS HCFCD-GN-LEGEND.dwg		
DRAWN BY:	KC	
CHECKED BY:	AC	
SCALE:	AS SHOWN	

GENERAL
LEGEND AND ABBREVIATIONS

SHEET G-4
SEQ. 5 OF 10

RFP SUBMITTAL

TYPICAL TITLE

DETAIL NUMBER
SHEET NUMBER
WHERE SHOWN

DETAIL NUMBER
SHEET NUMBER
WHERE SHOWN

TITLE
NOT TO SCALE

TYPICAL DETAIL MARKS

DETAIL NUMBER
SHEET NUMBER
WHERE SHOWN

DETAIL NUMBER
SHEET NUMBER
WHERE SHOWN

AREA OF DETAIL
ENLARGED PLAN

AREA OF DETAIL
ENLARGED PLAN

TYPICAL SECTION MARKS

DIRECTION OF
SECTION CUT

SECTION NUMBER
SHEET NUMBER WHERE CUT

DIRECTION OF SECTION CUT

SECTION NUMBER
SHEET NUMBER WHERE CUT



NORTH ARROW

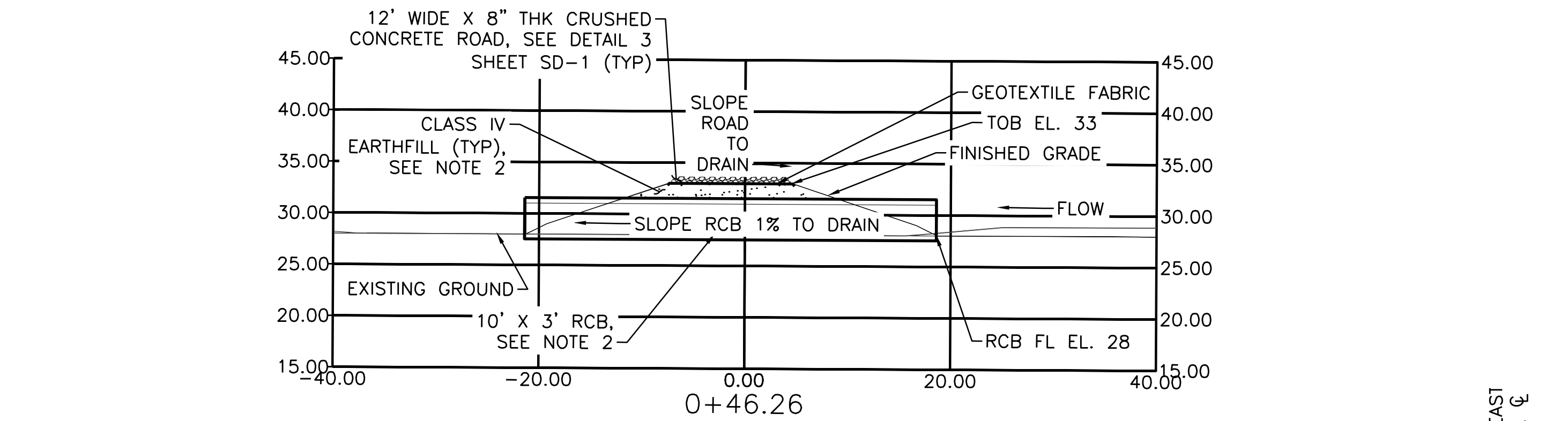


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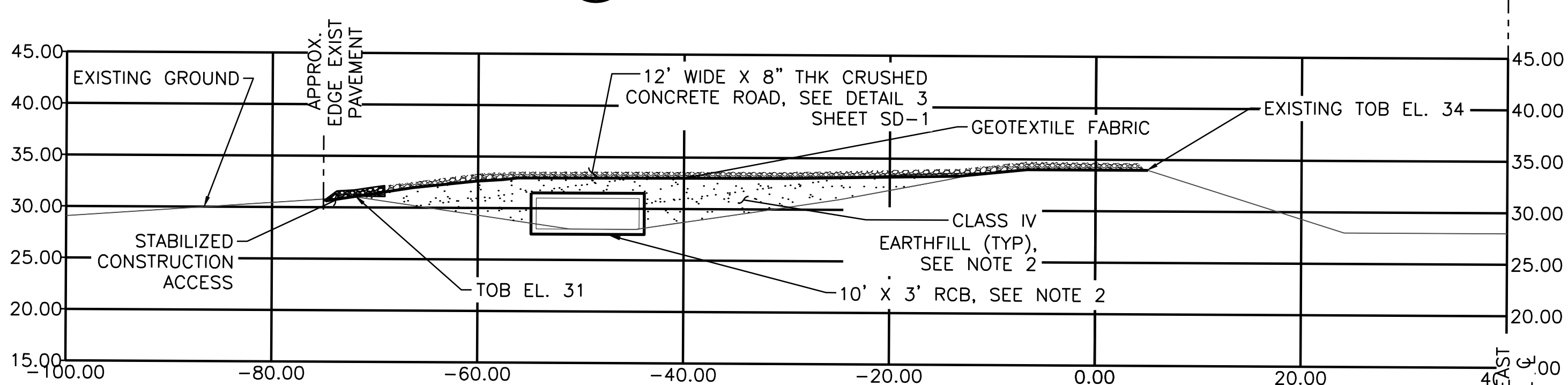


REVISION SYMBOL

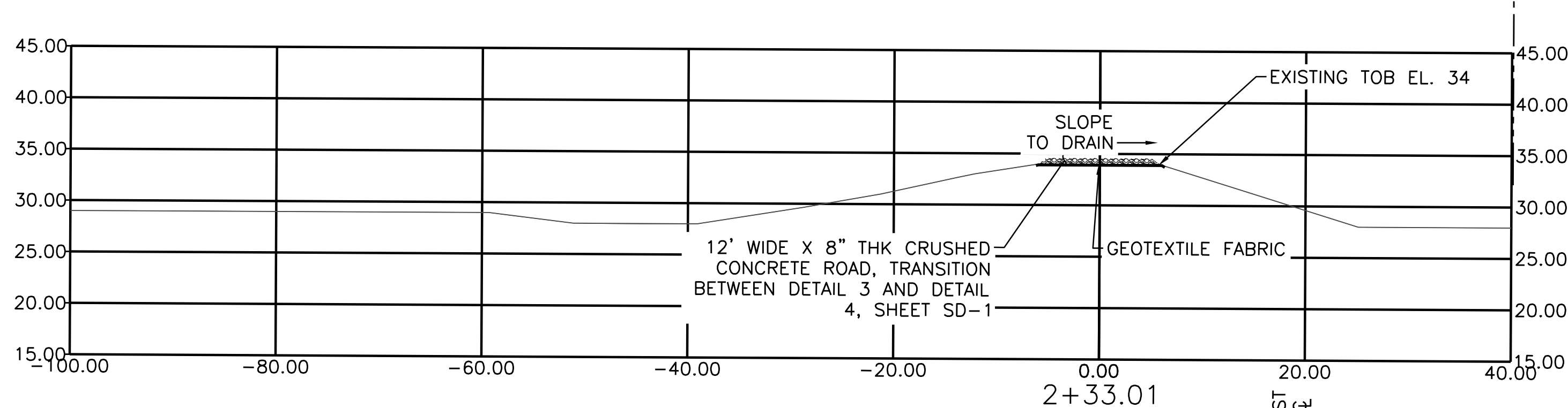
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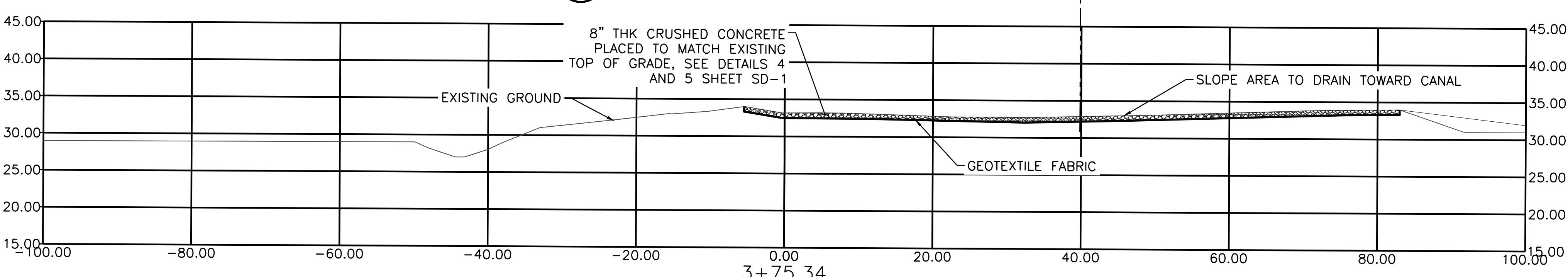
A
C-2 CROSS SECTION
1"=10'



B
C-2 CROSS SECTION
1"=10'

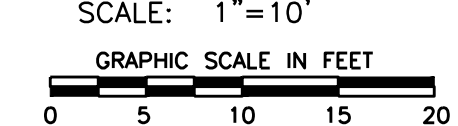


C
C-2 CROSS SECTION
1"=10'

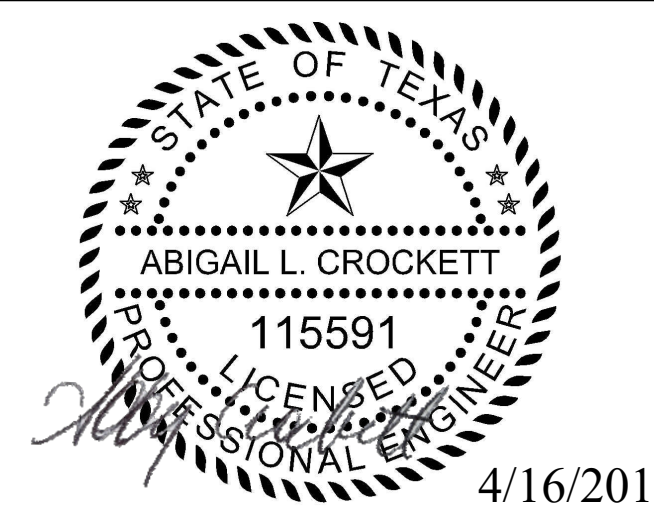


D
C-2 CROSS SECTION
1"=10'

- NOTES:
- CROSS SECTION A IS LOOKING SOUTH AND CROSS SECTIONS B THROUGH D ARE LOOKING DOWNSTREAM (EAST). ALL SECTIONS SHALL BE GRADED SUCH THAT THE TOP OF BANK SLOPES TO DRAIN TOWARD UPSTREAM SIDE OF DETENTION POND OR TOWARD SJRA EAST CANAL.
 - EXCAVATION LIMITS AND CEMENT STABILIZED SAND BACKFILL NOT SHOWN. SEE SHEET SD-1 FOR RCB INSTALLATION DETAILS.
 - SEE SPECIFICATION SECTIONS 31 23 00 - EARTHWORK AND 31 24 00.01 - BORROW FOR EARTHWORK REQUIREMENTS.
 - SEE SPECIFICATION SECTIONS 31 38 25 - GEOTEXTILES AND 32 11 00.01 - RECYCLED CRUSHED CONCRETE BASE COURSE FOR GEOTEXTILE AND CRUSHED CONCRETE BASE REQUIREMENTS.
 - SEE SPECIFICATION SECTION 33 05 01.01 - REINFORCED CONCRETE BOX CULVERT FOR PRECAST RCB REQUIREMENTS.
 - EXISTING SJRA PULL BOX AND SCADA SHED/SLAB NOT SHOWN IN SECTIONS. SEE SHEET SD-1 FOR DETAILS.
 - STABILIZED CONSTRUCTION ACCESS TO REMAIN AFTER CONSTRUCTION FOR PERMANENT ACCESS. SEE SHEET TCP-1 FOR DETAILS.
 - SEE PLAN VIEW SHEET C-2 FOR SJRA EASEMENT BOUNDARIES. CULVERT CROSSING EASEMENT AGREEMENT AVAILABLE UPON REQUEST.



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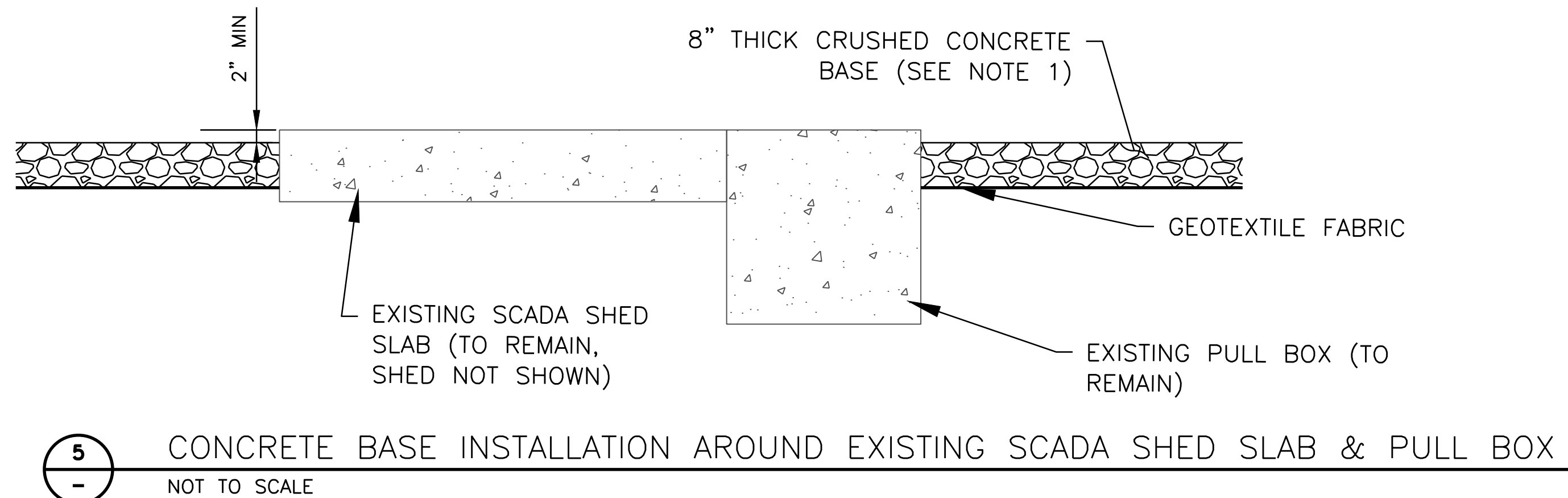
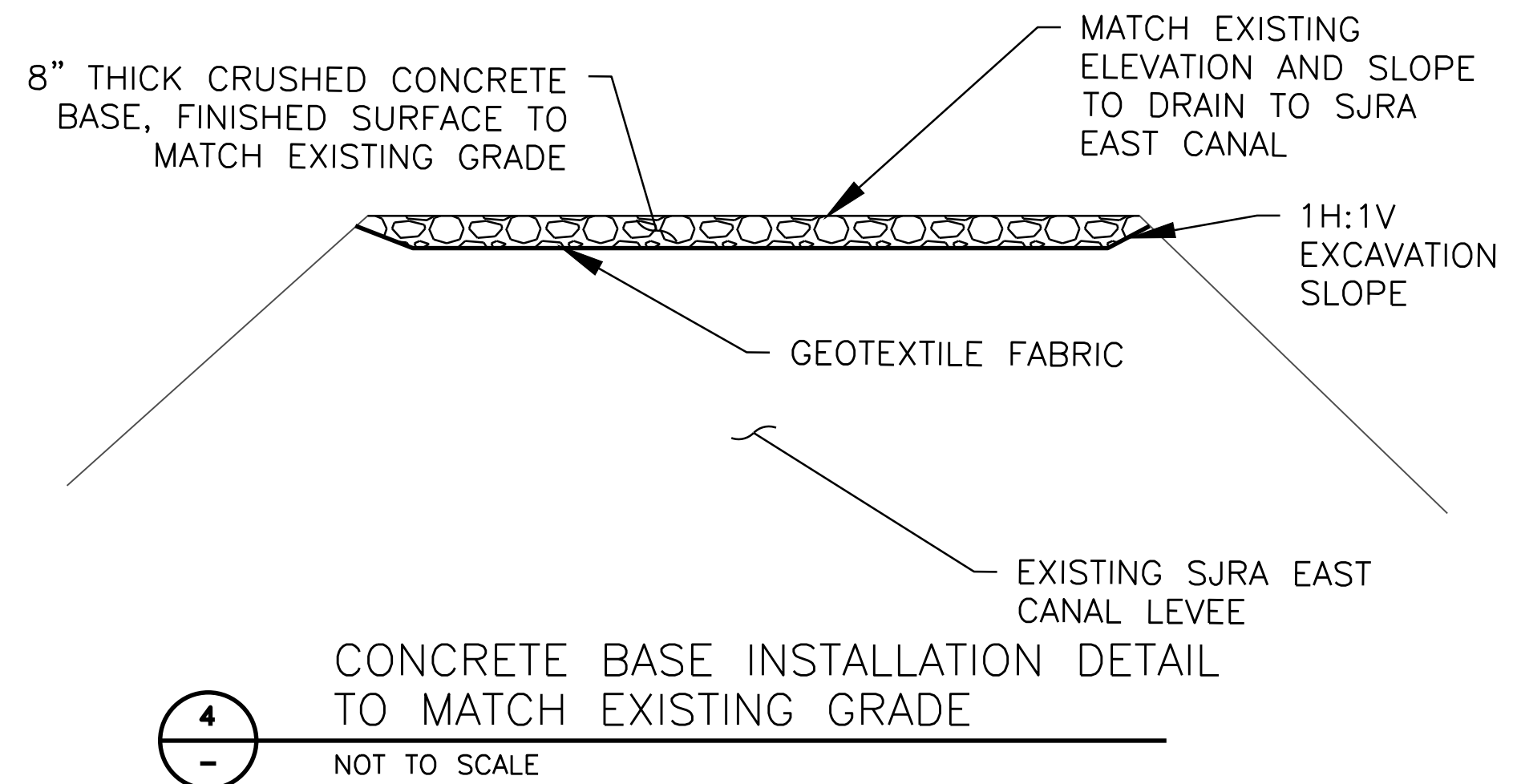
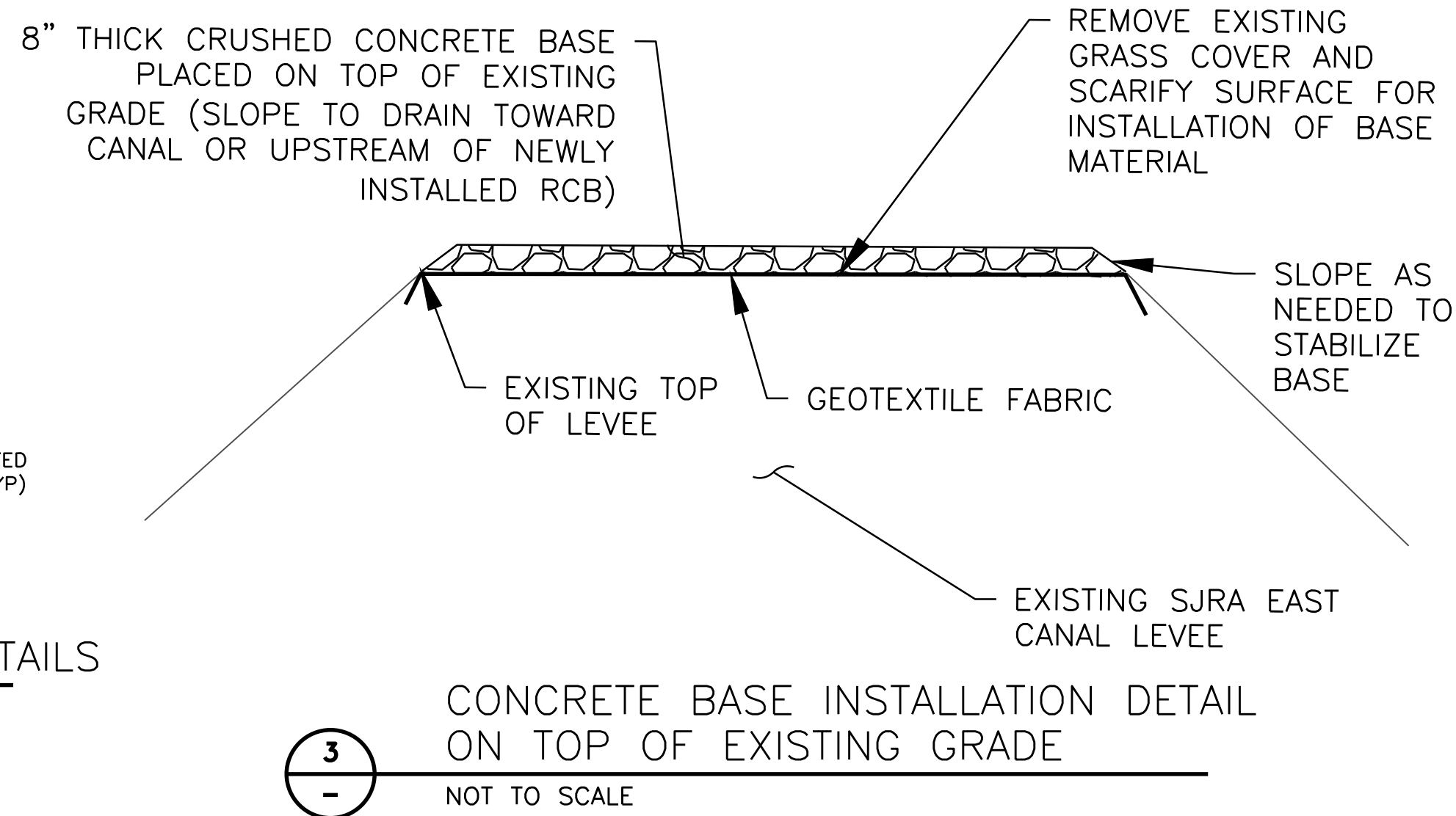
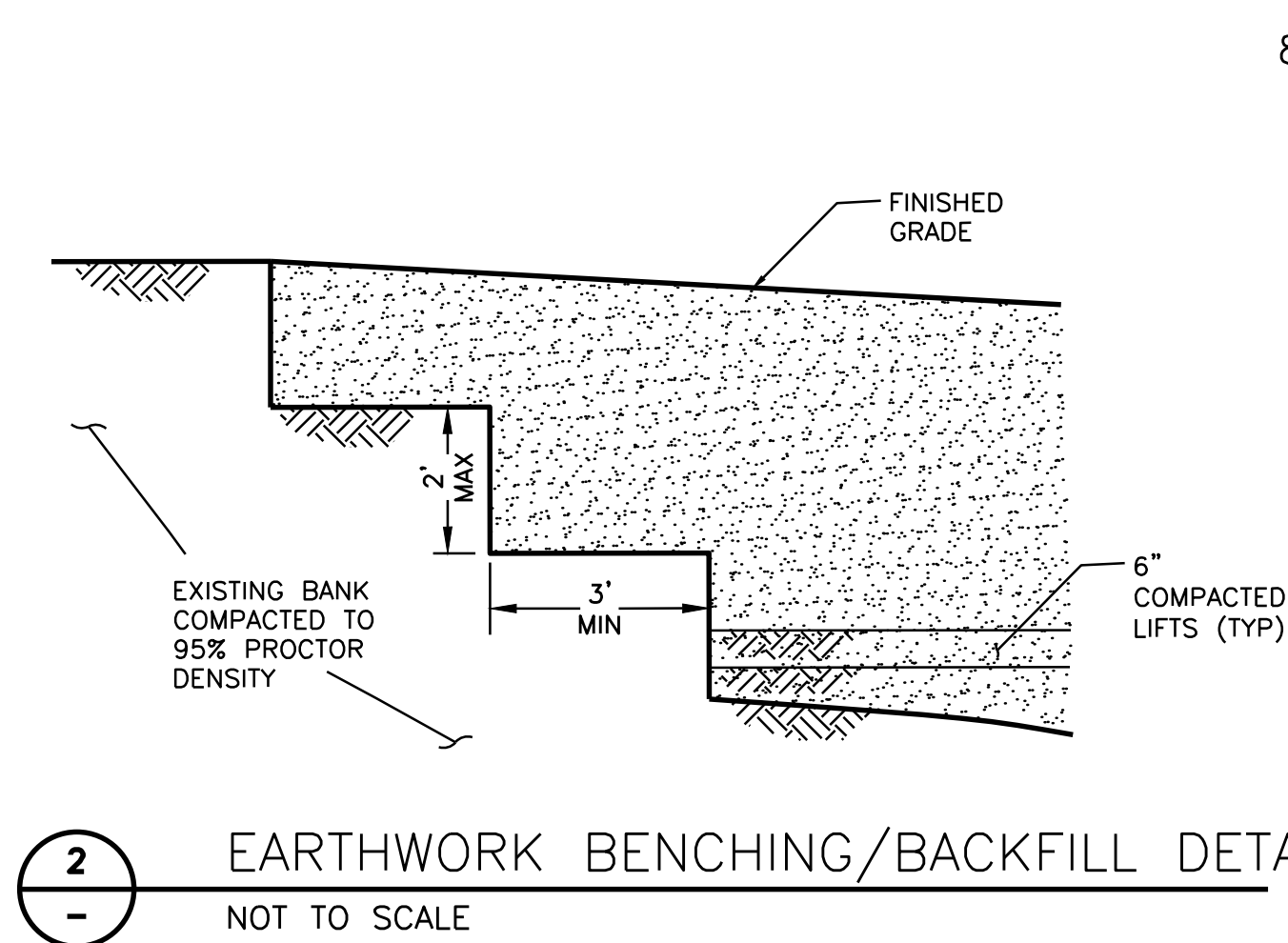
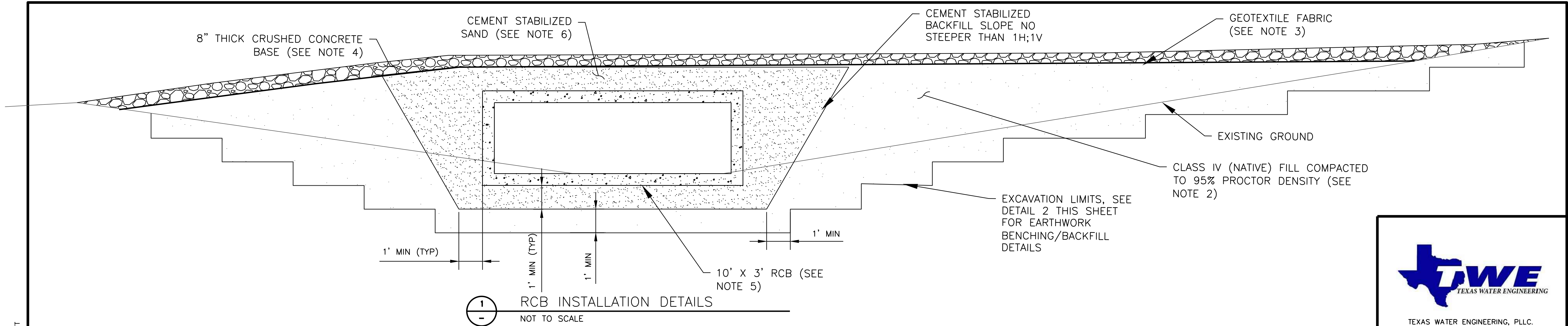
SJRA HIGHLANDS
ACCESS ROAD TO
HCFCD DITCH
SIPHON

ISSUE	DATE	DESCRIPTION
SJRA PROJECT NO:		
FILE NAME: SJRA-HARVEST LANE-CROSS SECTIONS.dwg		
DRAWN BY: AC		
CHECKED BY: KC		
SCALE: AS SHOWN		

CIVIL
CROSS SECTIONS
SHEET C-3
SEQ. 8 OF 10

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FILE: C:\Users\Abby Crockett\Documents\Projects\SJRA\SJRA Detention Pond Culvert\CAD Drawings\SJRA-HARVEST LANE-MISC DET.dwg LAYOUT: Layout1 DATE: 4/11/19 BY: ABBY CROCKETT

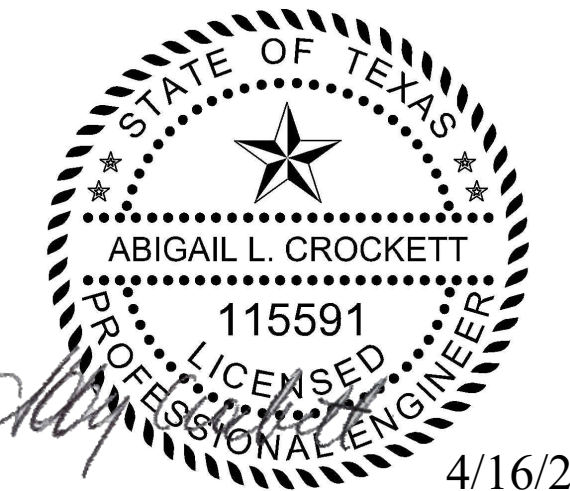


NOTES:

1. FINISHED GRADE OF CRUSHED CONCRETE BASE SHOULD BE SLOPED TO DRAIN AWAY FROM EXISTING SCADA SHED SLAB AND PULL BOX, TOWARD SJRA EAST CANAL.
2. SEE SPECIFICATION SECTION 31 23 00 - EARTHWORK FOR BACKFILL AND COMPACTION REQUIREMENTS.
3. SEE SPECIFICATION SECTION 31 38 25 - GEOTEXTILES FOR GEOTEXTILE FABRIC REQUIREMENTS.
4. SEE SPECIFICATION SECTION 32 11 00.01 - RECYCLED CRUSHED CONCRETE BASE COURSE FOR CRUSHED CONCRETE BASE MATERIAL REQUIREMENTS.
5. SEE SPECIFICATION SECTION 33 05 01.01 - REINFORCED CONCRETE BOX CULVERT FOR RCB REQUIREMENTS.
6. SEE SPECIFICATION SECTION 31 32 13.16 - CEMENT STABILIZED SAND FOR MATERIAL REQUIREMENTS. CEMENT STABILIZED SAND LIMITS TO BE MINIMUM OF 1 FOOT BEYOND ALL FACES OF RCB.
7. CONTRACTOR SHALL TRANSITION FROM CONCRETE BASE TYPICAL INSTALLATION DETAIL 3 TO DETAIL 4 BETWEEN EXISTING CANAL LEVEE AND EXISTING TOP OF GRADE AROUND EXISTING SIPHON INTAKE AS SHOWN ON SHEET C-2.



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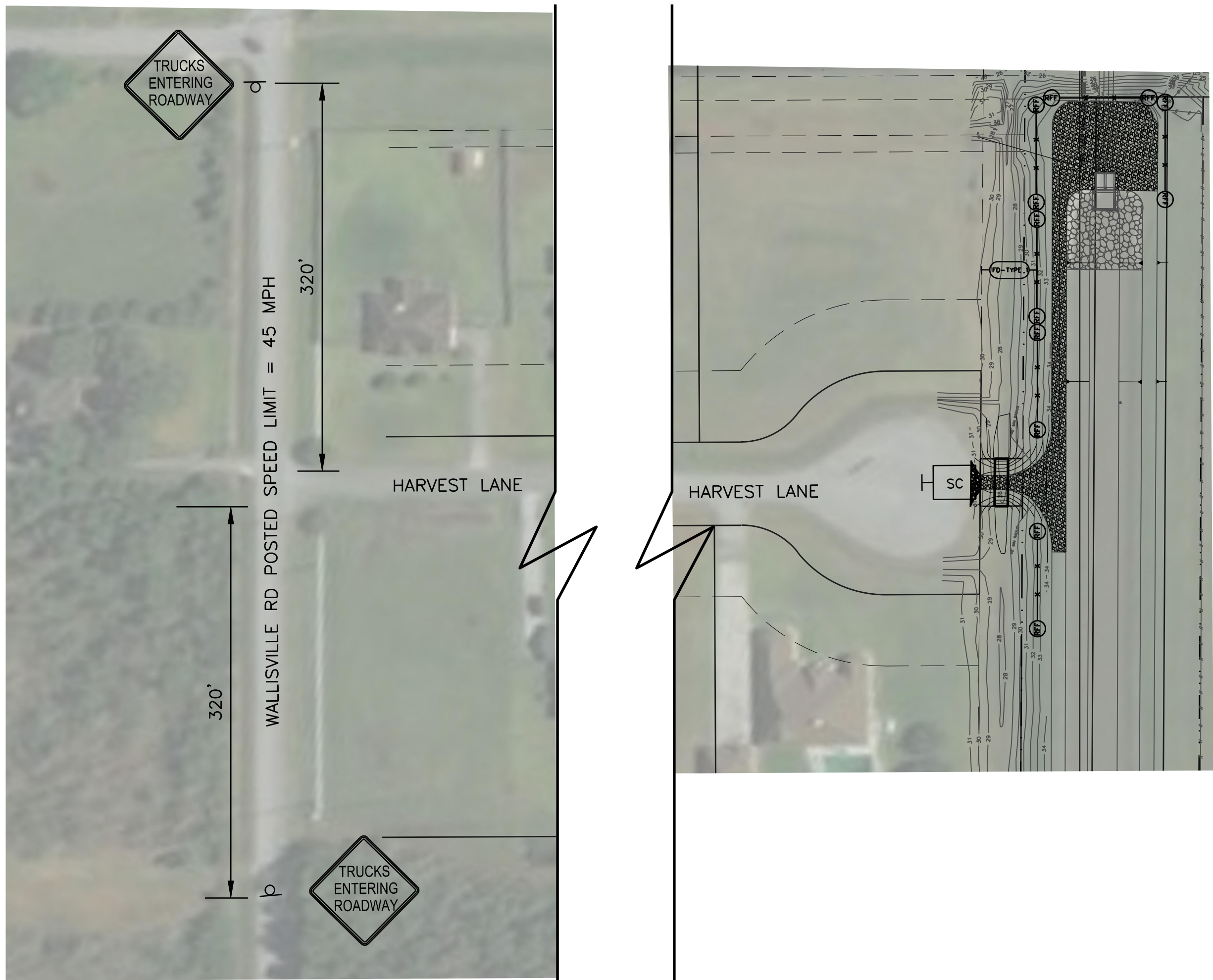
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FILE NAME: SJRA-HARVEST LANE-MISC DET.dwg		
DRAWN BY: AC		
CHECKED BY: KC		
SCALE: AS SHOWN		

DETAILS
MISCELLANEOUS DETAILS

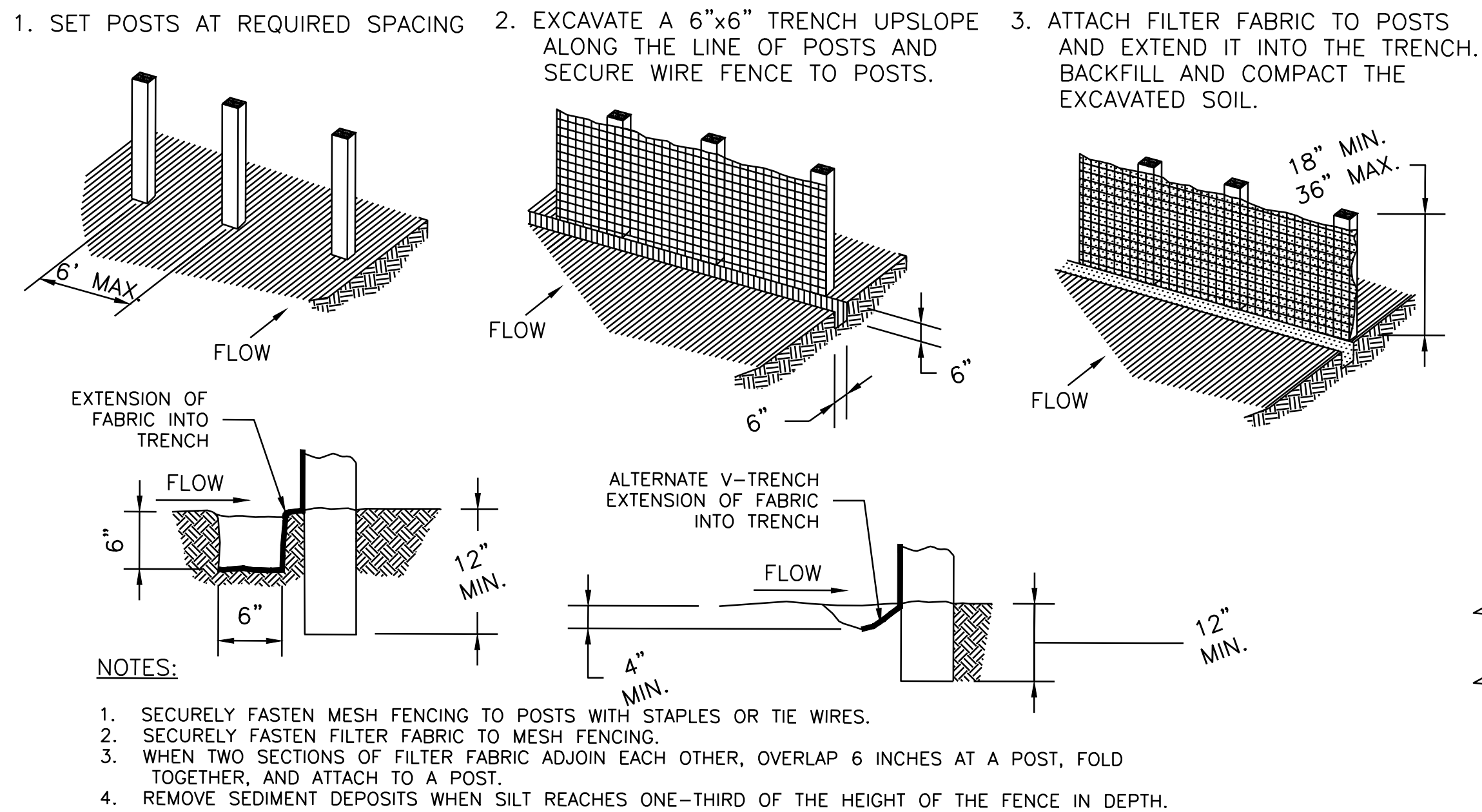
SHEET SD-1
SEQ. 9 OF 10

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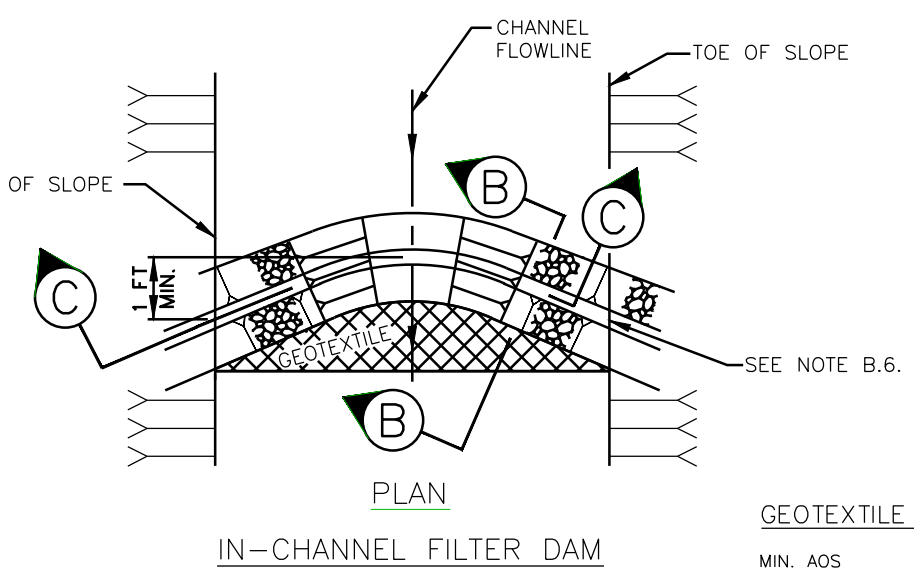
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TRAFFIC CONTROL/SITE ACCESS/STORM WATER POLLUTION PREVENTION PLAN

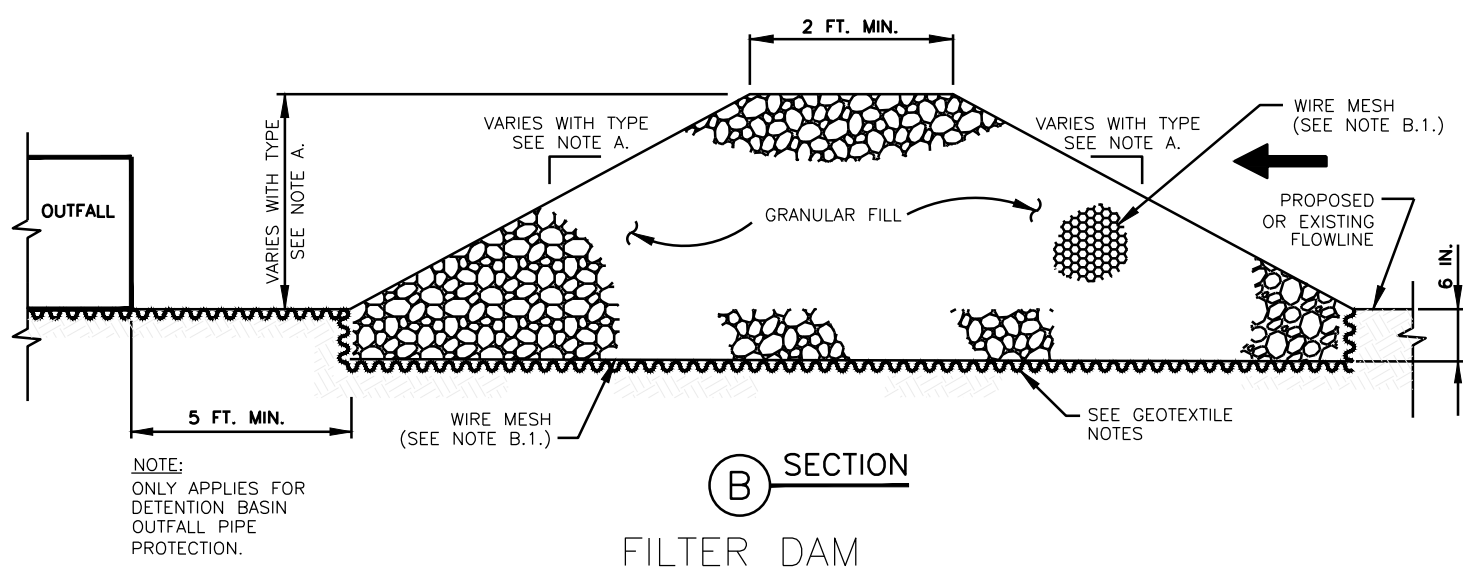


C REINFORCED FILTER FABRIC FENCE
NOT TO SCALE



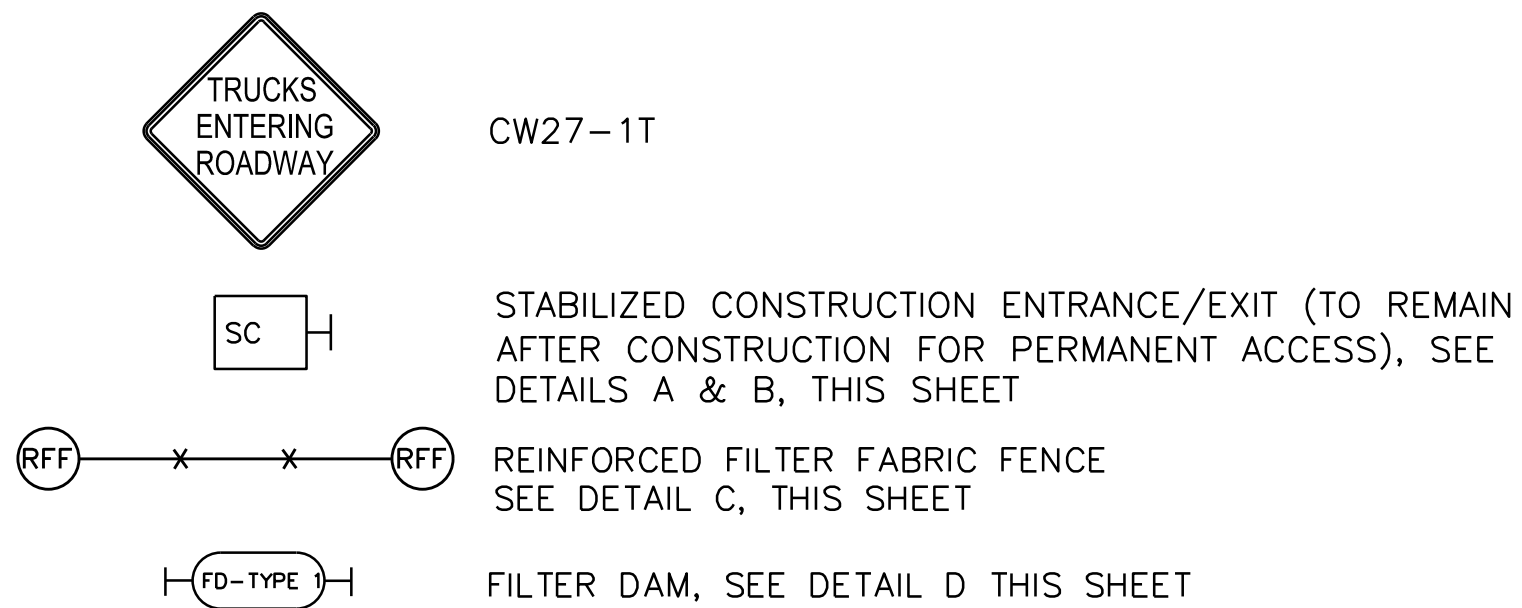
GEOTEXTILE NOTES:

MIN. AOS	SIEVE NO.	120 MIN
MAX. AOS	SIEVE NO.	50 MAX
WEIGHT	OZ/SY	4 OZ. MIN



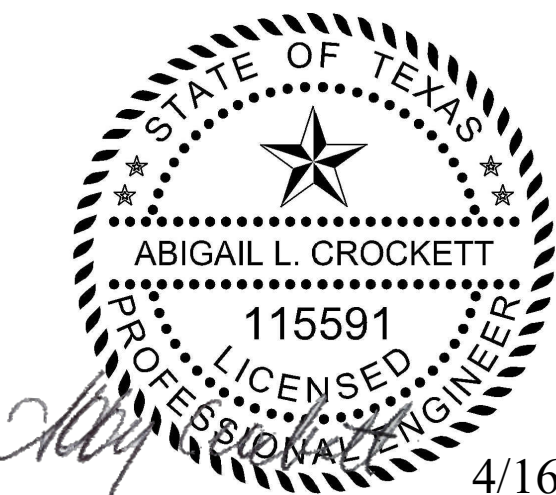
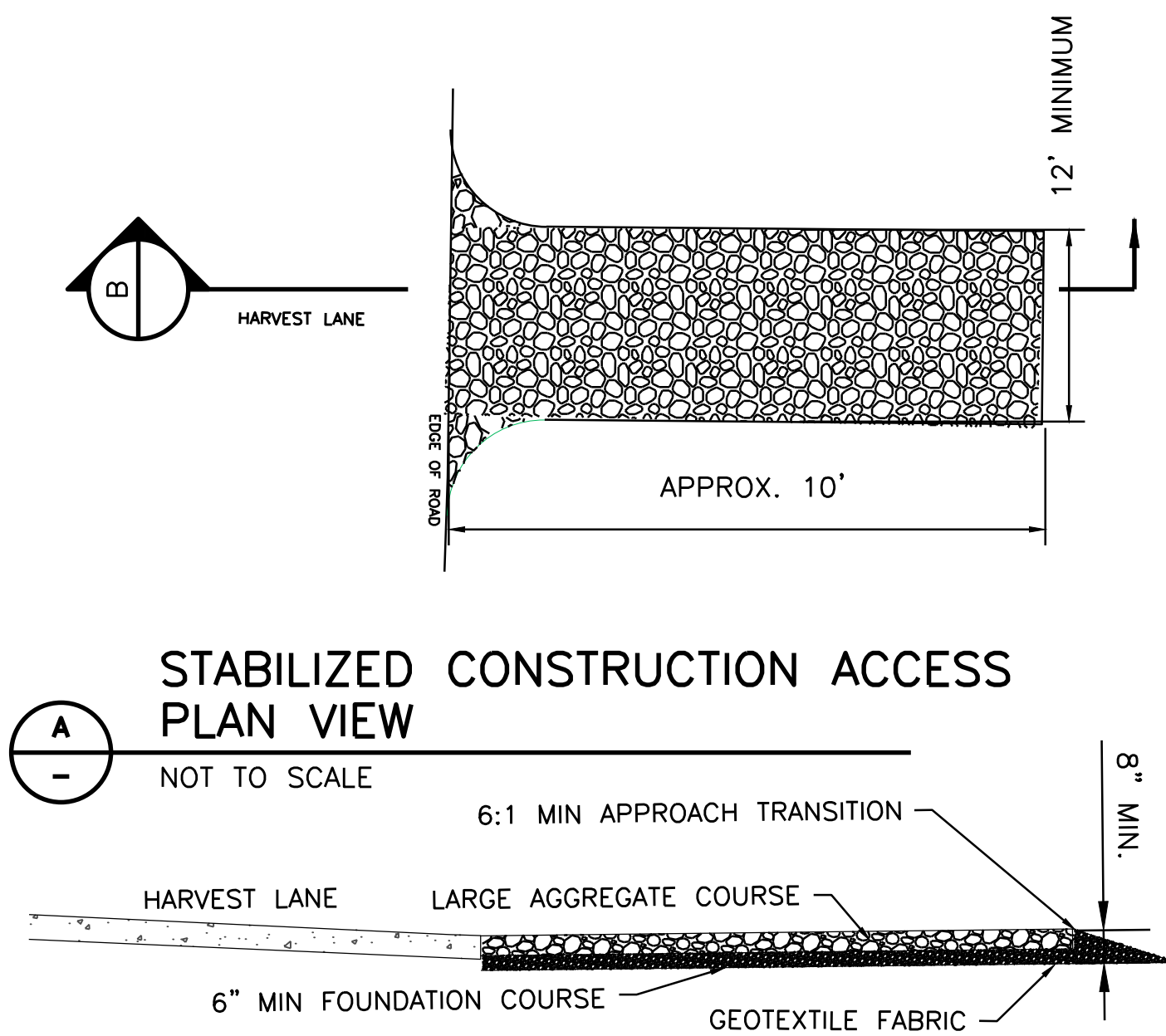
D FILTER DAM DETAILS
NOT TO SCALE

LEGEND



NOTES:

1. ACCESS TO SITE PERMITTED VIA HARVEST LANE PER ACCESS EASEMENT AGREEMENT OBTAINED BY THE SJRA. EASEMENT AGREEMENT AVAILABLE ON REQUEST.
2. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OCTOBER 2014 (REVISION 2).
3. NO LANES SHALL BE BLOCKED DURING CONSTRUCTION.
4. CONTRACTOR SHALL MAKE BEST EFFORT TO AVOID MATERIAL DELIVERIES DURING PEAK TRAFFIC VOLUME TIMES.
5. SEE SPECIFICATION SECTION 01 57 23 - TEMPORARY STORM WATER POLLUTION CONTROL.
6. REINFORCED FILTER FABRIC FENCE TO BE PLACED AT LOCATIONS SHOWN FOR ENTIRE LENGTH OF PROJECT.
7. ALL SWPPP MEASURES ARE TO BE MAINTAINED PER HARRIS COUNTY STANDARDS.
8. CONSTRUCT AND MAINTAIN EACH STABILIZED ACCESS WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
9. PROVIDE PERIODIC TOP DRESSING OF STABILIZED ACCESS WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
10. STABILIZED ACCESS TO REMAIN FOR PERMANENT ACCESS AFTER CONSTRUCTION.
11. PERIODICALLY TURN AGGREGATE OF STABILIZED ACCESS TO EXPOSE A CLEAN DRIVING SURFACE.
12. CONTRACTOR TO RESTORE DISTURBED AREAS TO ORIGINAL CONDITION OR BETTER UPON COMPLETION OF WORK.



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ISSUE	DATE	DESCRIPTION
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SJRA PROJECT NO:

FILE NAME: SJRA-HARVEST LANE-TCP.dwg

DRAWN BY: AC

CHECKED BY: KC

SCALE: AS SHOWN

TRAFFIC CONTROL

SITE ACCESS/TRAFFIC CONTROL/SWPPP

SHEET TCP-1

SEQ. 10 OF 10

RFP SUBMITTAL