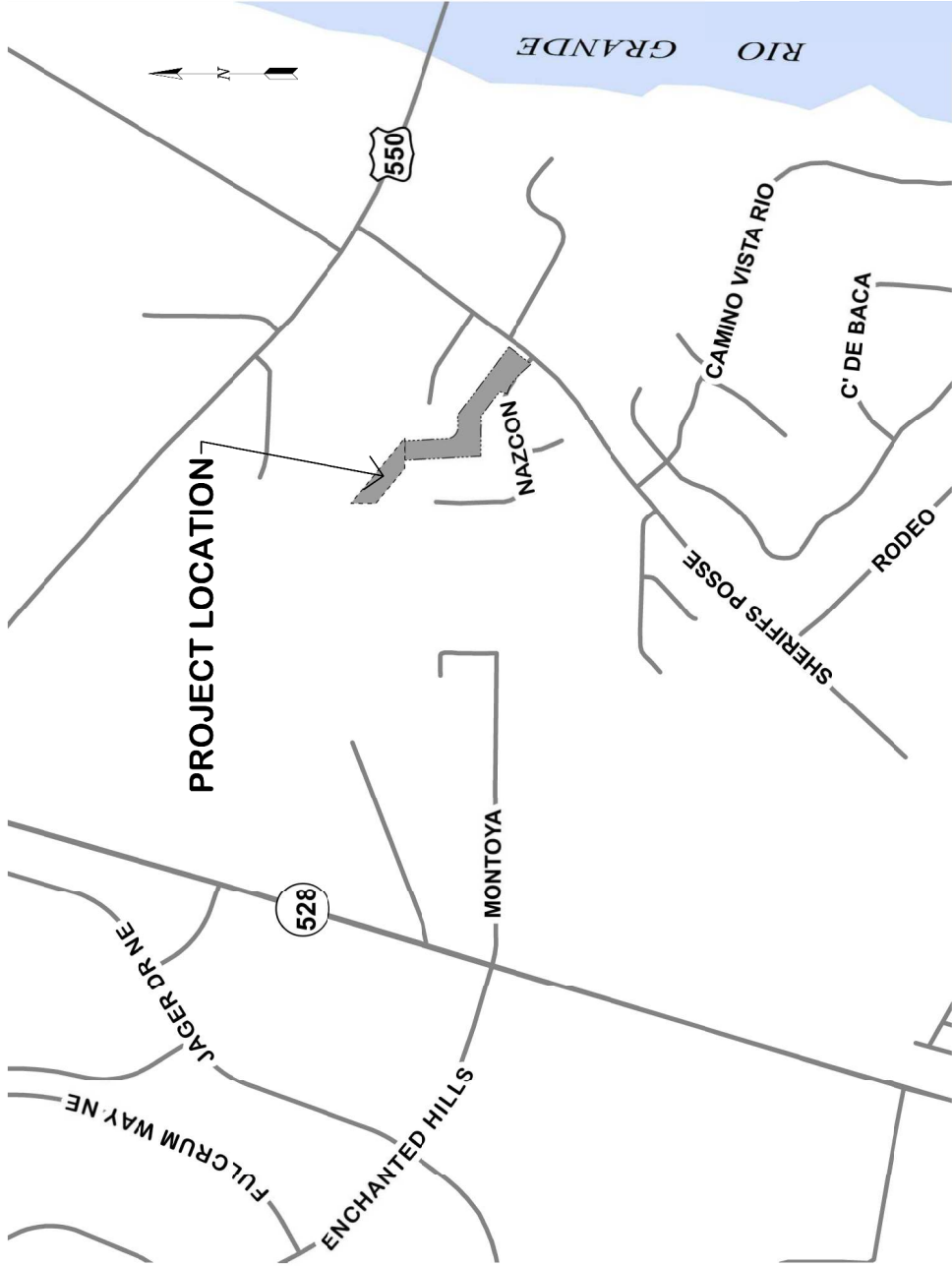


SOUTHERN SANDOVAL COUNTY
ARROYO FLOOD CONTROL
AUTHORITY
UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT
DHSEM Federal Grant No.: EMT-2018-PC-0006 CFDA No.: 97.047
Funding Source: SAP 19-D2531-GF
CORONADO WATERSHED



VICINITY MAP

SHEET INDEX

SHEET #	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	EXISTING SITE SURVEY
4	ALIGNMENT CONTROL
5	CHANNEL CROSS SECTIONS
6	PLAN & PROFILE STA. 10+00 - 18+00
7	PLAN & PROFILE STA. 18+00 - 21+48.54
8	ACCESS RAMP DETAILS
9	DROP STRUCTURE DETAILS
10	GENERAL SITE DETAILS
11	AMAFCA DETAIL
12	NMDOT STD. DWG. 511-80-1
13	NMDOT STD. DWG. 511-80-2
14	NMDOT STD. DWG. 511-80-3

APPROVALS

SSCAFCA: _____
EXECUTIVE ENGINEER

DATE: 4/21/20

TOWN OF BERNALILLO: Shay S. Montoya
PUBLIC WORKS DEPARTMENT

DATE: 4/23/2020



Southern Sandoval County
Arroyo Flood Control Authority
1041 Commercial Dr. S.E.
Rio Rancho, New Mexico 87124
505-892-RAIN (7246)
505-892-7241 (Fax)
www.sscatca.com



UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT

COVER SHEET
VICINITY MAP & SHEET INDEX

REVISIONS & CHANGE NOTICES	MARK	DESCRIPTION	DATE

PROJECT NO: CO_P0003
DESIGNED BY: AES
DRAWN BY: KLF
CHECKED BY: JB
DATE: 4/15/2020

GENERAL NOTES

1.

ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH 1) THE PROJECT CONSTRUCTION PLANS, 2) THE PROJECT SPECIFICATIONS, AND 3) NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, APWA NM CHAPTER, LATEST EDITION, IN THAT ORDER OF PRECEDENCE AT THE TIME OF CONSTRUCTION BID.
2.

THE CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME THE SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
3.

NO MODIFICATIONS TO THESE PLANS SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF THE OWNER, ENGINEER AND ALL APPROVAL SIGNATORIES. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION METHODS OR TECHNIQUES OR FOR THE PROSECUTION OF THE WORK AS SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR OTHER PERSONS PERFORMING ANY WORK, AS SHOWN IN THE PROJECT CONTRACT DOCUMENTS.
4.

UNLESS OTHERWISE PROVIDED AS PART OF THE CONSTRUCTION PLANS, A COMPLETE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY THE CONTRACTOR WHEN ANY PORTION OF THE WORK IMPACTS THE TRAVELING PUBLIC, EITHER VEHICULAR OR PEDESTRIAN. ALL CONSTRUCTION SIGNING, BARRICADING AND CHANNELIZATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD) LATEST EDITION. THE PLAN SHALL BE SUBMITTED TO THE TOWN OF BERNALILLO PUBLIC WORKS DEPARTMENT FOR APPROVAL AT LEAST 7 DAYS PRIOR TO THE DESIRED START OF CONSTRUCTION. THE CONTRACTOR SHALL NOT IMPLEMENT THE TRAFFIC CONTROL PLAN UNTIL APPROVAL OF THE PLAN HAS BEEN RECEIVED.
5.

THE CONTRACTOR SHALL DESIGNATE AT LEAST ONE EMERGENCY CONTACT PERSON, AND SHALL PROVIDE TELEPHONE NUMBERS WHERE THIS PERSON CAN BE CONTACTED AT ANY TIME. THIS INFORMATION SHALL BE PROVIDED TO THE OWNER/ENGINEER (SSCAFA). THE TOWN OF BERNALILLO PUBLIC WORKS DEPARTMENT (505-467-3311).
6.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL JURISDICTIONAL AUTHORITIES PRIOR TO START OF CONSTRUCTION.
7.

ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY, HEALTH, AND ENVIRONMENTAL PROTECTION.
8.

EXISTING SITE IMPROVEMENTS WHICH ARE DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. THE WORK SHALL BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION OF THE REPAIRS. REPAIRS MUST BE ACCEPTED BY THE OWNER PRIOR TO FINAL PAYMENT.
9.

THE CONTRACTOR SHALL ONLY UTILIZE THE DESIGNATED STAGING AREAS FOR STORAGE OF ALL EQUIPMENT AND MATERIALS. THE OWNER ASSUMES NO RESPONSIBILITY OR LIABILITY FOR CONTRACTORS OR OTHER PERSONS OR VEHICLES OR EQUIPMENT OR MATERIALS THAT ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IF NO STAGING AREA IS DESIGNATED ON THESE PLANS, AN OFF-SITE STAGING AREA SHALL BE PROVIDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, OR THE CONTRACTOR MAY NEGOTIATE WITH THE OWNER TO USE AN ON-SITE STAGING AREA.
10.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING IN ADVANCE OF FISHER CONSTRUCTION OPERATIONS, IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC., ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION IS EVIDENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION, ANY COSTS ASSOCIATED WITH THIS EFFORT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11.

FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL VERTICAL AND HORIZONTAL CONTROLS ON THE CONSTRUCTION DOCUMENTS, ARE SHOWN APPROXIMATE AND IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION PROVIDED BY VARIOUS OWNERS OF THE FACILITIES, AND SUPPLEMENTED BY VISUAL SURFACE INFORMATION WHERE APPROPRIATE. ACCURACY, LOCATION, AND COMPLETENESS OF THIS INFORMATION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE VERIFIED BY ANY MEANS NECESSARY, PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE OWNER/ENGINEER (SSCAFA) AT 505-892-7246 IMMEDIATELY.
12.

IT IS MANDATORY THAT A PRE-CONSTRUCTION MEETING BE HELD PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE OWNER/ENGINEER (SSCAFA) AT 505-892-7246 TO DETERMINE THE TIME AND LOCATION OF THE PRE-CONSTRUCTION MEETING.
13.

AT THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION SCHEDULE TO THE OWNER/ENGINEER (SSCAFA).
14.

ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE OWNER/ENGINEER (SSCAFA) AND/OR ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
15.

THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS AND TAKE WHATEVER MEASURES ARE NECESSARY TO ENSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST-FREE CONDITION AT ALL TIMES.
16.

THE CONTRACTOR SHALL CONTACT NEW MEXICO ONE CALL AT 811 OR 1-800-321-2637, FIVE (5) WORKING DAYS PRIOR TO CONSTRUCTION FOR UTILITY SPOTS IN ACCORDANCE WITH APPLICABLE STATE LAW.
17.

CONTRACTOR WILL NOTIFY THE OWNER/ENGINEER (SSCAFA) AT 505-892-7246 A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF WORK.
18.

THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE CONSTRUCTION LIMITS AND/OR PUBLIC RIGHTS-OF-WAY TO PRESERVE EXISTING VEGETATION, LANDSCAPING, AND PRIVATE PROPERTY. APPROVAL OF THESE PLANS DOES NOT GIVE OR IMPLY ANY PERMISSION TO TRESPASS OR WORK ON PRIVATE PROPERTY. PERMISSION MUST BE GRANTED IN WRITING BY THE OWNER OF THAT PROPERTY.
19.

IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO KEEP THE JOB SITE FREE FROM TRASH ON A DAILY BASIS, AND ALL MATERIALS WILL BE NEATLY ORGANIZED. TRASH AND/OR NON-USED MATERIALS SHALL NOT BE BURIED ON-SITE.
20.

CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES SO AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.

GENERAL NOTES (CONTINUED)

21.

CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING UTILIZING APPROVED CONSTRUCTION PLANS. THE APPROPRIATE RIGHT-OF-WAY MAPS, RECORDED PLATS, EACH REVISION TO THE PLANS SHALL BE RECORDED IN THE PLAN REVISION BLOCK. PLANS SHALL INCLUDE LOCATION MAP WITH LEGAL DESCRIPTION AND LOCATION GRID.
22.

THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE SET OF AS-BUILT PLANS FOR THE PROJECT. THE FINAL AS-BUILT PLANS, REFLECTING ANY AND ALL CHANGES TO THE ORIGINAL PLAN, SHALL BE SUBMITTED TO THE OWNER/ENGINEER (SSCAFA) PRIOR TO FINAL PAYMENT.
23.

THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION ACTIVITIES, PERMITTING, AND SUBMITTALS ARE IN ACCORDANCE WITH THE SSCAFA / CITY OF RIO RANCHO DEVELOPMENT PROCESS MANUAL (DPM) AND LOCAL ORDINANCES INCLUDING TOWN OF BERNALILLO.
24.

NO WORK SHALL BE PERFORMED IN A FEW A FLOODPLAIN WITHOUT WRITTEN AUTHORIZATION FROM THE LOCAL FLOODPLAIN MANAGER.
25.

CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF HIS WORK FROM STORMWATER FLOWS AS OUTLINED IN THE SUPPLEMENTAL TECHNICAL SPECIFICATIONS PROVIDED IN THE CONTRACT DOCUMENTS.
26.

UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL BE A MINIMUM OF 3,000 PSI.
27.

IF APPLICABLE, THE CONTRACTOR SHALL COMPLY WITH ALL CONSTRUCTION RELATED REQUIREMENTS OF THE PROJECT'S CORP OF ENGINEERS 404 PERMIT. COPIES OF THE PERMIT TERMS MAY BE OBTAINED FROM THE OWNER.
- EROSION CONTROL / ENVIRONMENTAL PROTECTION / STORMWATER POLLUTION PREVENTION PLAN
1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FUEL/ELLING ALL NECESSARY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, PREPARING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) OBTAINING AN NPDES PERMIT PRIOR TO CONSTRUCTION, FILLING OUT THE NOTICE OF INTENT (NOI) APPLICATION, AND FILLING OUT THE NOTICE OF TERMINATION (NOT) APPLICATION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE IMPLEMENTATION OF AND INSPECTION REPORTS FOR THE SWPPP.
2.

THE CONTRACTOR SHALL SUBMIT THE SWPPP WITH THE PROPOSED CONSTRUCTION STAGING AREA AND TEMPORARY SANITARY FACILITIES CLEARLY SHOWN, ANY CHECK DAMS, SILT FENCES, OR OTHER BEST MANAGEMENT PRACTICES (BMPs) THAT ARE REQUIRED IN THE APPROVED SWPPP SHALL BE INCLUDED IN AND ARE INCIDENTAL TO THE SWPPP BID AMOUNT.
3.

THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED SWPPP ON-SITE AT ALL TIMES AND SHALL COMPLY WITH THE REQUIREMENTS INDICATED ON THAT PLAN AND SHALL PROVIDE AN ADDITIONAL FULLY EXECUTED COPY TO THE OWNER.
4.

THE CONTRACTOR SHALL EITHER PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR INSTALL BMPs IDENTIFIED IN THE APPROVED SWPPP TO PREVENT DISCHARGE OF EXCAVATED MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY DURING A RAIN OR WIND EVENT.
5.

THE CONTRACTOR SHALL IMPLEMENT THE APPROVED SWPPP IF APPLICABLE, AND ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
6.

THE CONTRACTOR SHALL MITIGATE EROSION OF TEMPORARY OR PERMANENT DIRT SWALES BY INSTALLING BMPs IDENTIFIED IN THE APPROVED SWPPP IN THE SWALES PERPENDICULAR TO THE DIRECTION OF FLOW, AND AT INTERVALS AS SPECIFIED IN THE SWPPP.
7.

CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS REQUIRED. WATERING, AS REQUIRED FOR CONSTRUCTION AND DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR.
8.

ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY AN IMPERVIOUS SURFACE SHALL BE REVEGETATED WITH NATIVE GRASS SEEDING, WHEN CONSTRUCTION ACTIVITIES CEASE AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME WITHIN 14 DAYS, STABILIZATION MEASURES MUST BE INITIATED.
9.

ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNATED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.) GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL BE APPROPRIATELY DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMITS REQUIRED TO HAUL OR DISPOSE OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.
10.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS INCLUDE GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINTS, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE TEAM AT 505-827-3523.
11.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING SURFACE AND UNDERGROUND WATER, CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED. EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.
12.

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATION.
13.

WHERE STORM INLETS ARE SUSCEPTIBLE TO INFLOW OF SILT OR DEBRIS FROM CONSTRUCTION ACTIVITIES, PROTECTION SHALL BE PROVIDED ON THEIR UPSTREAM SIDE UTILIZING BMPs IDENTIFIED IN THE APPROVED SWPPP.

SOILS

1.

UNLESS OTHERWISE SPECIFIED SUBGRADE SOILS AND STRUCTURAL FILL MATERIALS SHALL BE COMPACTED TO THE FOLLOWING PERCENTAGES OF THE ASTM D-1557 MAXIMUM DENSITY.

MATERIALS		PERCENT (%)
STRUCTURAL FILL IN THE BUILDING AREA		
SUB-BASE FOR SLAB SUPPORT		95
MISCELLANEOUS BACKFILL BELOW STRUCTURAL FILL OR ROAD		95
MISCELLANEOUS BACKFILL BELOW UNPAVED, NON-BUILDING AREAS		90
ROAD SUB GRADE		95
SIDEWALK / TRAIL SUB GRADE		95
CURB AND GUTTER SUBGRADE		95

ABBREVIATIONS

MARK	DESCRIPTION	DATE
AP	ANALYSIS POINT	
@	AT	
BC	BEGIN CURVE	
BCR	BEGIN CURB RETURN	
BK	BOOK	
BLDG	BUILDING	
BM	BENCH MARK	
BOA	BEGINNING OF ALIGNMENT	
BVC	BEGINNING OF PROJECT	
BW	BEGIN VERTICAL CURVE	
CA	CABLE TIE LINE	
CATV	CABLE TV LINE	
CB	CATCH BASIN	
CF	CURB FACE	
CFS	CUBIC FEET PER SECOND	
CG	CURB AND GUTTER	
CLF	CHAIN LINK FENCE	
CL	CENTERLINE	
CMP	CORRUGATED METAL PIPE	
CO	CLEAN OUT	
CONC	CONCRETE	
CORR	CITY OF RIO RANCHO	
CY	CUBIC YARDS	
DUE	DRAINAGE UTILITY EASEMENT	
DI	DROP INLET	
DIA	DIAMETER	
Δ	DELTA	
EA	EACH	
EC	END CURVE	
ECR	END CURB RETURN	
ELEV	ELEVATION	
EOA	END OF ALIGNMENT	
EOP	END OF PROJECT	
EP	EDGE OF PAVEMENT	
ESMT	EASEMENT	
EST	ESTIMATE	
EVC	END VERTICAL CURVE	
EW	EACH WAY	
EXIST	EXISTING	
FF	FINISH FLOOR	
FG	FINISH GRADE	
FH	FIRE HYDRANT	
FL	FLOW LINE	
FOC	FACE OF CURB	
FP	FINISHED PAD	
FPS	FEET PER SECOND	
G	GAS	
GM	GAS METER	
GV	GATE VALVE	
HORIZ	HORIZONTAL	
INT	INTERSECTION	
INVERT	INVERT	
INV ELEV	INVERT ELEVATION	
LF	LINEAR FEET	
LP	LIGHT POLE	
L	LEFT	
MH	MANHOLE	
MD	MID-POINT	
NG	NATURAL GROUND	
OC	ON CENTER	
OHE	OVER HEAD ELECTRIC	
PB	PULL BOX	
PC	POINT OF CURVATURE	
PCG	POINT OF COMPOUND CURVATURE	
PG	PAGE	
PGL	PROFILE GRADE LINE	
PI	POINT OF INTERSECTION	
PL	PROPERTY LINE	
PR	POINT OF REVERSE CURVATURE	
PT	POINT OF TANGENCY	
RUE	PUBLIC UTILITY EASEMENT	
PVC	POLYVINYL CHLORIDE PIPE	
PVMT	PAVEMENT	
Q	100 YEAR PEAK DISCHARGE QUANTITY	
QTY	QUANTITY	
RAD	RADIUS	
RCF	REINFORCED CONCRETE PIPE	
RD	ROAD DRAIN	
REF	REFERENCE	
RP	RADIUS POINT	
RT	RIGHT	
RW/ROW	RIGHT-OF-WAY	
S	SLOPE	
SAS, SS	SANITARY SEWER LINE	
SD	STORM DRAIN	
SF	SQUARE FEET	
STA	STATION	
STD	STANDARD	
SW	SIDEWALK	
SY	SQUARE YARDS	
T	TANGENT	
TA	TOP OF ASPHALT	
TAC	TOP OF ASPHALT CURB	
TBC	TOP BACK OF CURB	
TC	TOP OF CONCRETE	
TEL	TELEPHONE LINE, RISER OR BOX	
TP	TOP OF PIPE	
TRANS	TRANSVERSE	
TOW	TOP OF WALL	
TYP	TYPICAL	
UE	UNDERGROUND ELECTRICAL LINE	
UT	UNDERGROUND TELEPHONE LINE	
V	VELOCITY	
VC	VERTICAL CURVE	
VERT	VERTICAL	
VPI	VERTICAL POINT OF INTERSECTION	
W	WATER LINE	
WM	WATER METER	
WQ	WATER QUALITY	
WSEL	WATER SURFACE ELEVATION	
WV	WATER VALVE	



Southern Sandoval County

Arroyo Flood Control Authority

1041 Commercial Dr. S.E.
Rio Rancho, New Mexico 87124
505-892-RAIN (7246)
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UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT

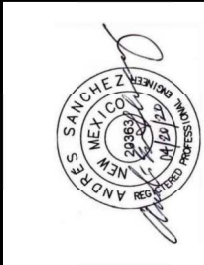
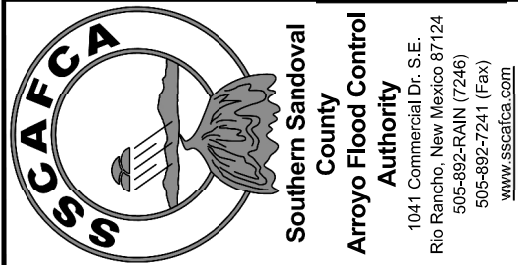
GENERAL NOTES

REVISIONS & CHANGE NOTICES	
MARK	DESCRIPTION

PROJECT NO: CO_P0003
DESIGNED BY: AES
DRAWN BY: JLF
CHECKED BY: KB
DATE: 4/15/2020

BOUNDARY AND TOPOGRAPHIC SURVEY
PARCEL "A" DRAINAGE EASEMENT
NAZCON SUBDIVISION

A DRAINAGE EASEMENT
 WITHIN A PORTION OF THE ORIGINAL 400'X1320' TRACT
 SITUATE WITHIN
 SECTIONS 30 AND 31, T. 13 N., R. 4 E., N.M.P.M.,
 TOWN OF BERNALILLO
 SANDOVAL COUNTY, NEW MEXICO
 MAY, 2016



UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT

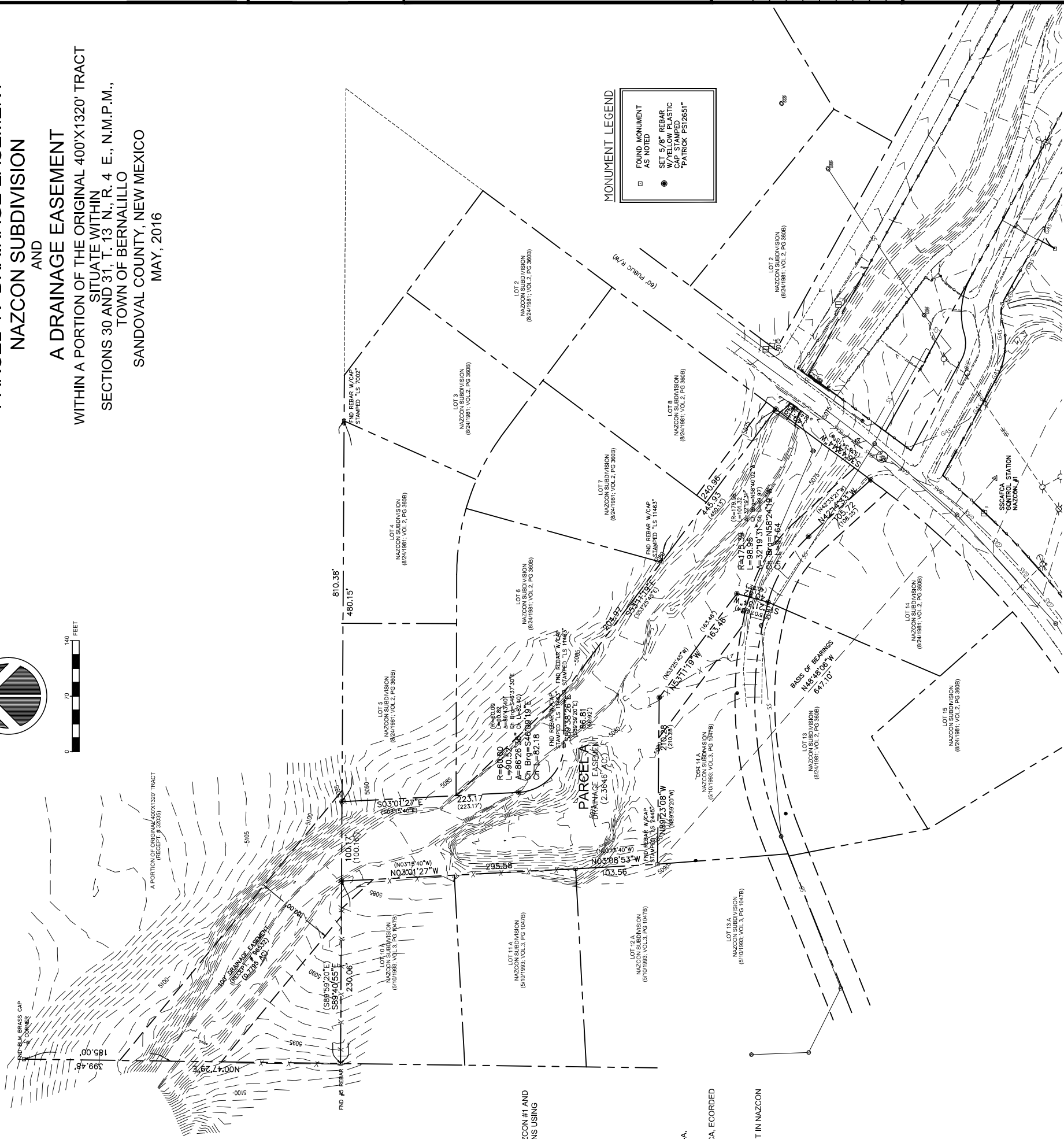
UPPER BOSQUE CHANNEL
SITE SURVEY

[illegible]

PROJECT NO: CO_P0003
DESIGNED BY: JB
DRAWN BY: KLF
CHECKED BY: AES
DATE: 4/20/2020

3

SHEET 3 OF 14



LEGAL DESCRIPTION

PARCEL "A" DRAINAGE EASEMENT, OF NAZCON SUBDIVISION, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF. FILED IN THE OFFICE OF THE COUNTY CLERK OF SANDOVAL COUNTY, NEW MEXICO ON AUGUST 24, 1981 IN VOLUME 2, FOLIO 360-B.

CONTAINS 2.3646 ACRES, MORE OR LESS.

AND

A DRAINAGE EASEMENT WITHIN A PORTION OF THE ORIGINAL 400'X1320' TRACT
SITUATED WITH IN SECTION 30, T13N, R4E, NMPM. RECEPTION NO. 96532.

CONTAINS 0.7795 ACRES, MORE OR LESS.

NOTES

1. BASIS OF BEARINGS FOR THIS SURVEY IS THE REFERENCE LINE BETWEEN SSCAFCA CONTROL STATION WAZCON #1 AND THE SOUTHWEST CORNER OF PARCEL "A" AS SHOWN HEREON AND AS DETERMINED FROM GPS OBSERVATIONS USING THE "TRIMBLE VRS NOW" GNSS RTK VIRTUAL REFERENCE SYSTEM.

BEARINGS ARE NEW MEXICO STATE PLANE BEARINGS, CENTRAL ZONE, NAD83.

DISTANCES ARE GROUND DISTANCES.

SSCAFCA CONTROL STATION NAZCON #1
NEW MEXICO STATE PLANE COORDINATES, CENTRAL ZONE NAD83
N1572093.38 USFT
E1546765.08 USFT
ORTHO ELEV= 5068.67 USFT (NAVD88)

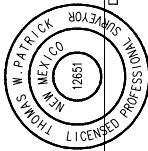
2. DOCUMENTS USED:

- a. PLAT OF NAZCON SUBDIVISION RECORDED 8/24/1981 IN VOL.3. FOLIO 360-B.
- b. PLAT OF NAZCON SUBDIVISION UNIT 2 RECORDED 5/10/1993 IN VOL.3. FOLIO 1048-A.
- c. REPEAT OF NAZCON SUBDIVISION UNIT2 RECORDED 7/13/1993 IN VOL.3. FOLIO 1064-B.
- d. PLAT OF PHASE II NAZCON SUBDIVISION RECORDED 10/21/1993 IN VOL.3. FOLIO 1087-A.
- e. REPEAT PHASE II LOT 5, 9A & 10B NAZCON SUBDIVISION RECORDED 4/15/1996 IN VOL.3. FOLIO 1380-A.
- f. WARRANTY DEED LOT 5, 9A & 10B NAZCON SUBDIVISION RECORDED 2/20/1997 IN VOL.453. FOLIO 10372.
- g. WARRANTY DEED LOT 10A RECORDED AS DOC. NO. 2012033884.
- h. 3/14/2002 95 THROUGH 104 AND TRACTS "B-1", "B-2" AND "B-3" BOSQUE ENCANTADO DE CIE BACA, RECORDED 3/14/2002 AS DOC. NO. 2012155-A.
- i. SPECIAL WARRANTY DEED AS DOC. NO. 32035.
- j. GRANT OF EASEMENT FOR DRAINAGE DOC. NO. 965332.

3. BEARING AND DISTANCES SHOWN ON THIS SURVEY IN PARENTHESES () ARE PER THE RECORDED PLATS WIT IN NAZCON AND NAZCON PHASE II. REFER TO DOCUMENTS USED, NOTE 2:

SURVEYOR'S CERTIFICATION:

I, THOMAS W. PATRICK, NEW MEXICO PROFESSIONAL SURVEYOR, HEREBY CERTIFY THAT THIS SURVEY PLAT WAS PREPARED FROM AN ACTUAL GROUND SURVEY PERFORMED BY ME, THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THIS SURVEY PLAT AND THE FIELD SURVEY UPON WHICH IT IS BASED MEET THE MINIMUM STANDARDS FOR SURVEYING PLAT AND FOR THE MINIMUM STANDARDS FOR TOPOGRAPHICAL SURVEY OF THE STATE OF NEW MEXICO, AND THAT THIS SURVEY IS NOT A LAND DIVISION OR SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT. THIS IS A SURVEY PLAT OF AN EXISTING TRACT OR TRACTS.



THOMAS W. PATRICK
NEW MEXICO PROFESSIONAL SURVEYOR NO. 12651



**Southern Sandoval
County
Arroyo Flood Control
Authority**
1041 Commercial Dr. S.E.
Rio Rancho, New Mexico 87124
505-892-RAIN (7246)
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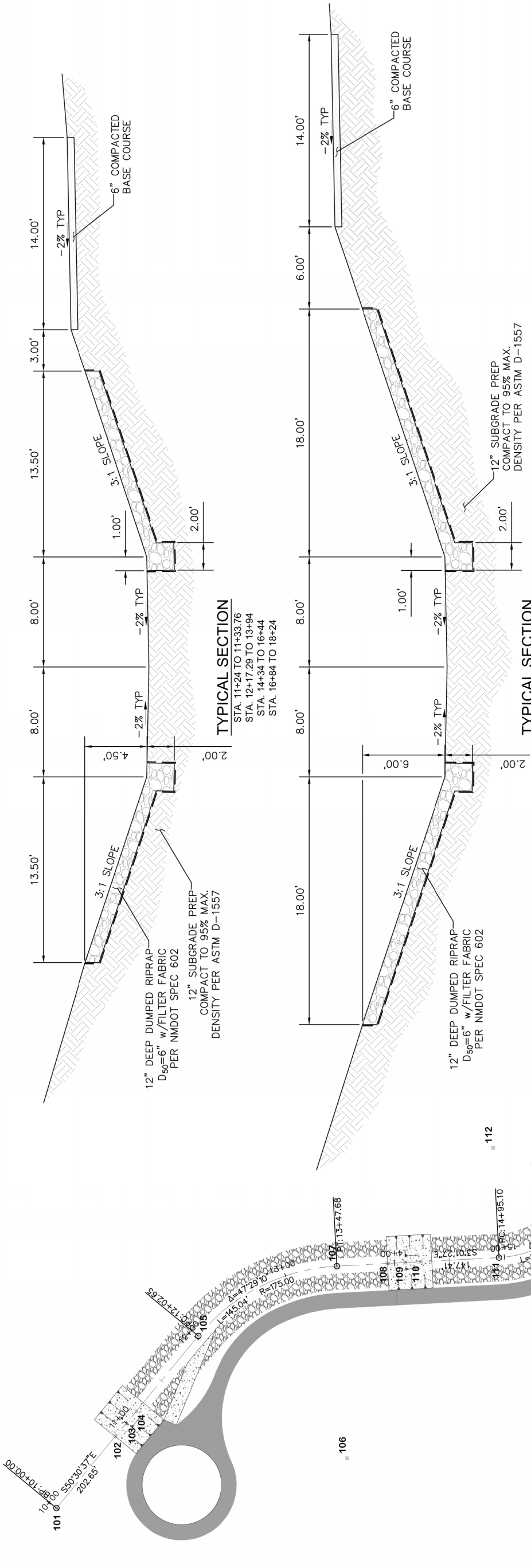


UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT

UPPER BOSQUE CHANNEL
ALIGNMENT CONTROL

MARK	REVISIONS & CHANGE NOTICES		DATE
	DESCRIPTION		

PROJECT NO: CO_P0003
DESIGNED BY: JB
DRAWN BY: KLF
CHECKED BY: AES
DATE: 4/15/2020

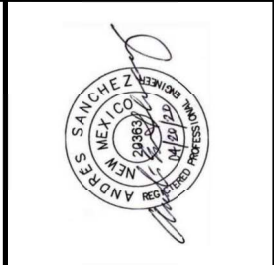


Point Table		
Point #	Elevation	Description
101	5085.52	BEGIN ALIGNMENT
102	5084.16	GRADE BREAK
103	5084.16	GRADE BREAK
104	5080.66	GRADE BREAK
105	5080.45	PC ALIGNMENT
106	5080.12	RP ALIGNMENT
107	5080.12	PT ALIGNMENT
108	5080.01	GRADE BREAK
109	5080.01	GRADE BREAK
110	5076.51	GRADE BREAK
111	5076.33	PC ALIGNMENT
112	5076.06	RP ALIGNMENT
113	5075.96	PT ALIGNMENT
114	5075.97	GRADE BREAK
115	5075.97	GRADE BREAK
116	5072.47	GRADE BREAK
117	5072.22	PC ALIGNMENT
118	5072.33	RP ALIGNMENT
119	5072.18	PT ALIGNMENT
120	5072.16	GRADE BREAK
121	5072.16	GRADE BREAK
122	5068.66	GRADE BREAK
123	5068.64	PC ALIGNMENT
124	5072.19	RP ALIGNMENT
125	5068.31	PT ALIGNMENT
126	5072.78	RP ALIGNMENT
127	5068.15	PT ALIGNMENT
128	5068.06	PC ALIGNMENT
129	5072.75	RP ALIGNMENT
130	5067.96	PT ALIGNMENT
131	5067.91	END ALIGNMENT





**Southern Sandoval
County
Arroyo Flood Control
Authority**
1041 Commercial Dr. S.E.
Rio Rancho, New Mexico 87124
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505-892-7241 (Fax)
www.sscatca.com

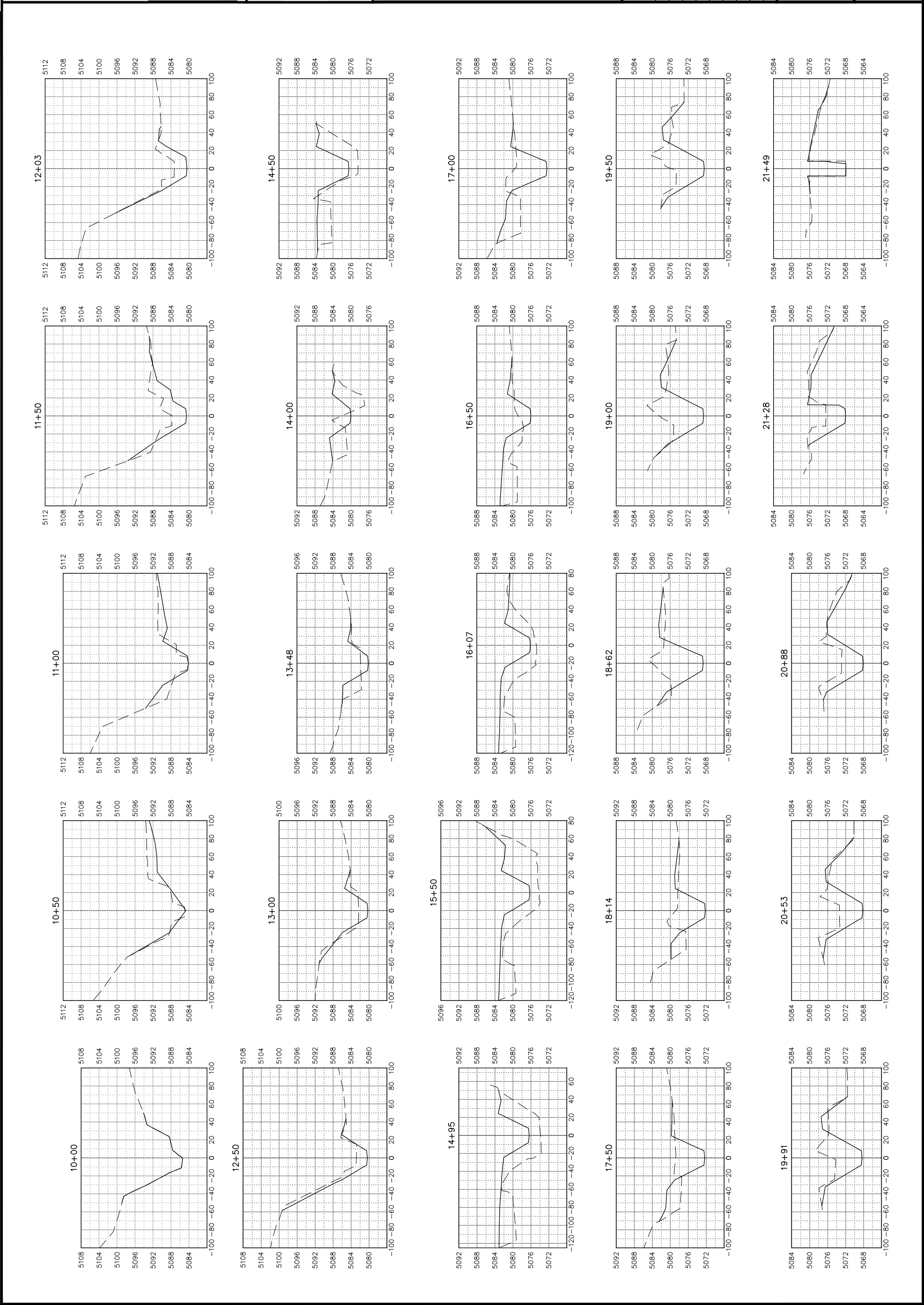


UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT

CHANNEL CROSS SECTIONS

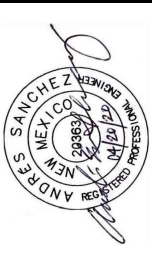
MARK	REVISIONS & CHANGE NOTICES		DATE
	DESCRIPTION		

PROJECT NO: CO_P0003
DESIGNED BY: JB
DRAWN BY: KLF
CHECKED BY: AES
DATE: 4/15/2020





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UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT
UPPER BOSQUE CHANNEL
PLAN & PROFILE STA. 10+00 - 18+00

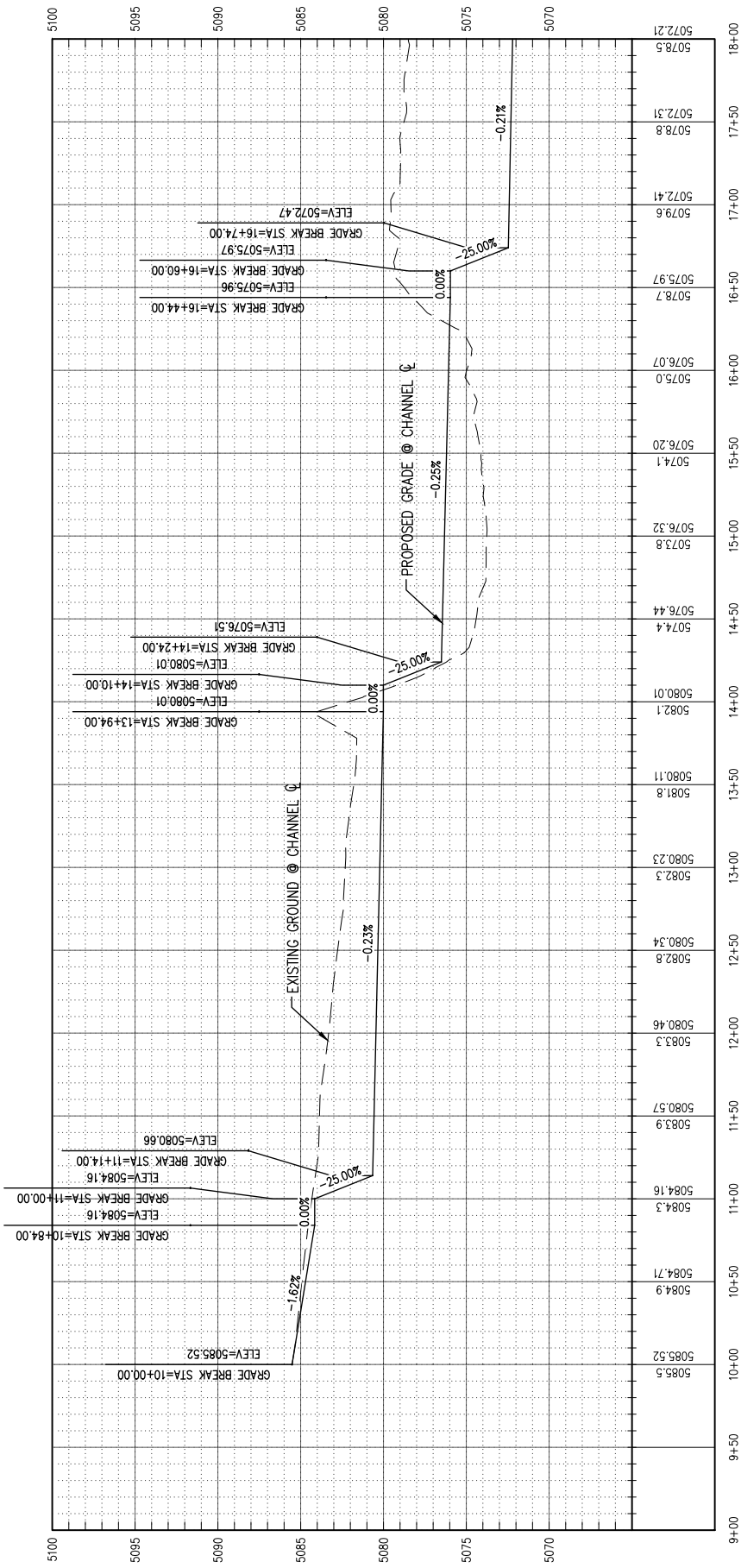
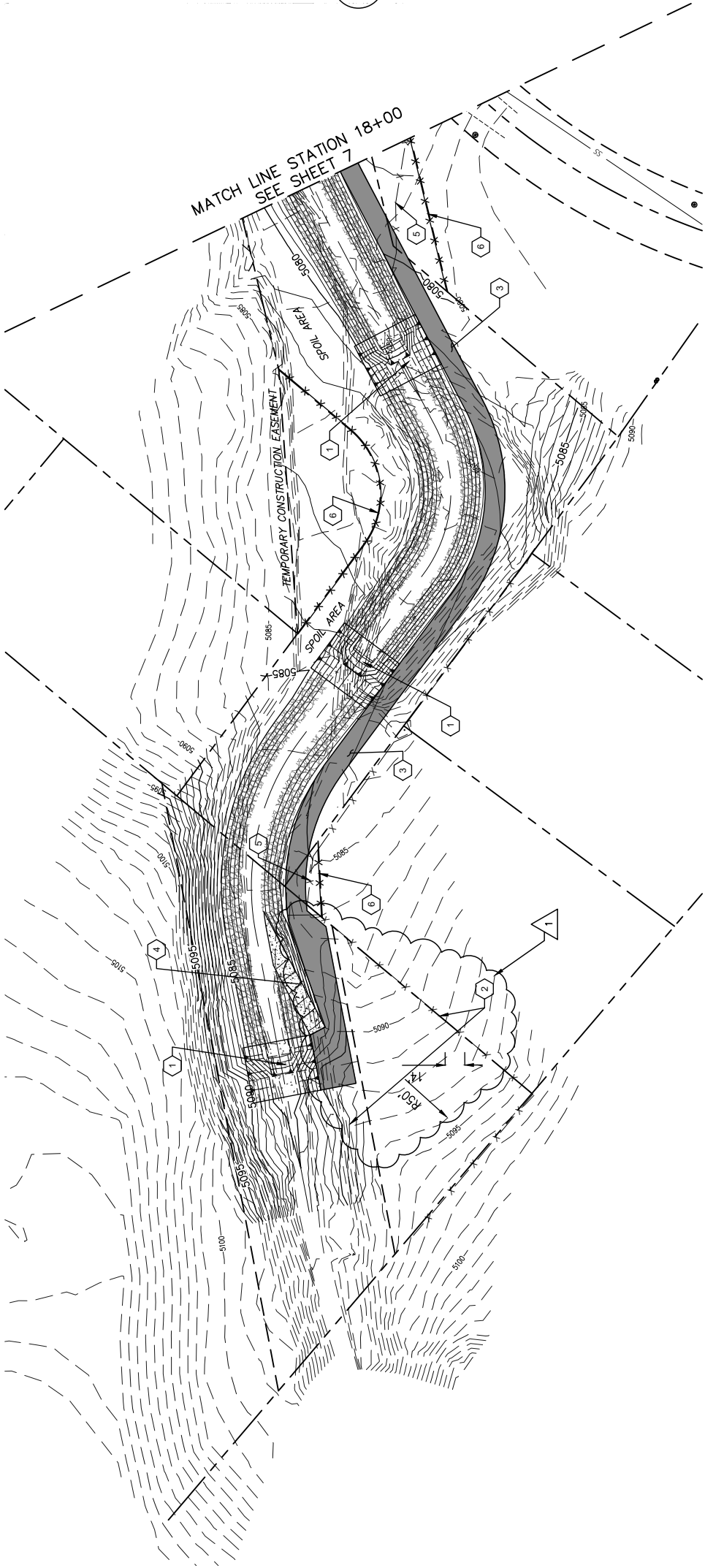
MARK	REVISIONS & CHANGE NOTICES	DESCRIPTION	DATE
1	REMOVED 50' RADIUS TURN AROUND FROM PLANS.		6/10/20

PROJECT NO: CO_P0003
DESIGNED BY: JB
DRAWN BY: KLF
CHECKED BY: AES
DATE: 6/10/2020



KEYED NOTES:

1. CONSTRUCT CONCRETE DROP STRUCTURE PER DETAIL 2 ON SHEET 9.
2. STA. 10+88.52, 74.50' RT., CONSTRUCT 50' RADIUS TURN AROUND WITH 6" COMPACTED-BASE COURSE, 14' WIDE.
3. CONSTRUCT 14' WIDE MAINTENANCE ACCESS WITH 6" COMPACTED BASE COURSE.
4. CONSTRUCT 12' WIDE SHOTORETE MAINTENANCE ACCESS RAMP PER DETAIL 1 ON SHEET 8.
5. REMOVE APPROX. 175 LF WIRE FENCING AT TWO LOCATIONS SHOWN ON PLANS.
6. BID ALTERNATE #1 CONSTRUCT APPROX. 461 LF 5 STRAND WIRE FENCE PER DETAIL SHEET 10.





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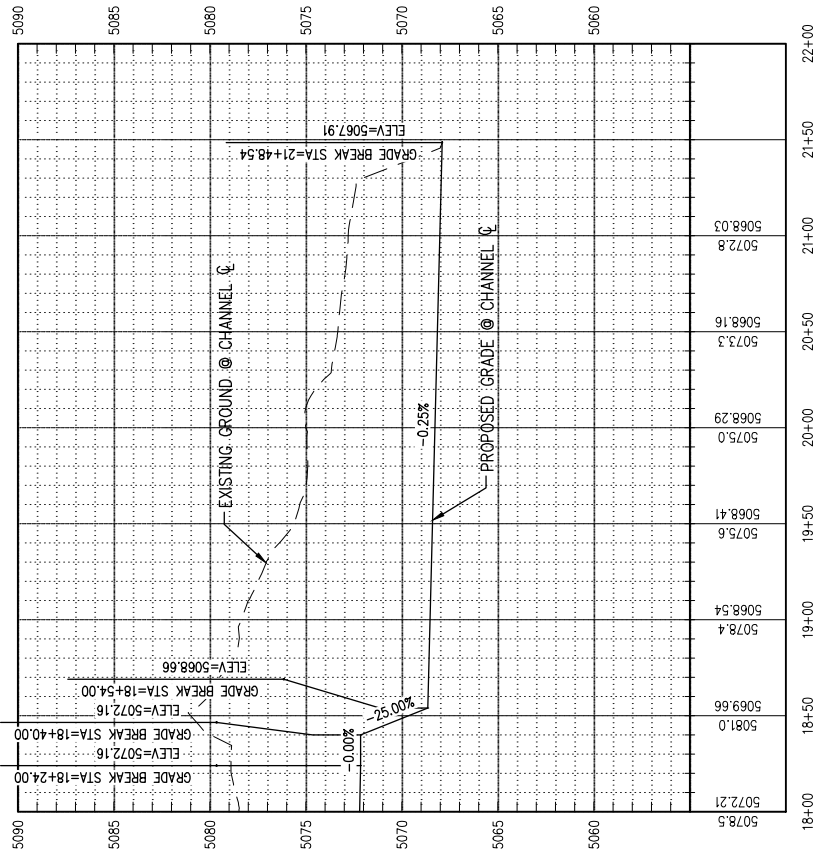
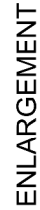
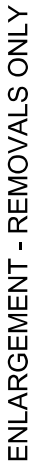
UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT

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PROJECT NO: CO_P0003
DESIGNED BY: JB
DRAWN BY: KLF
CHECKED BY: AES
DATE: 4/15/2020

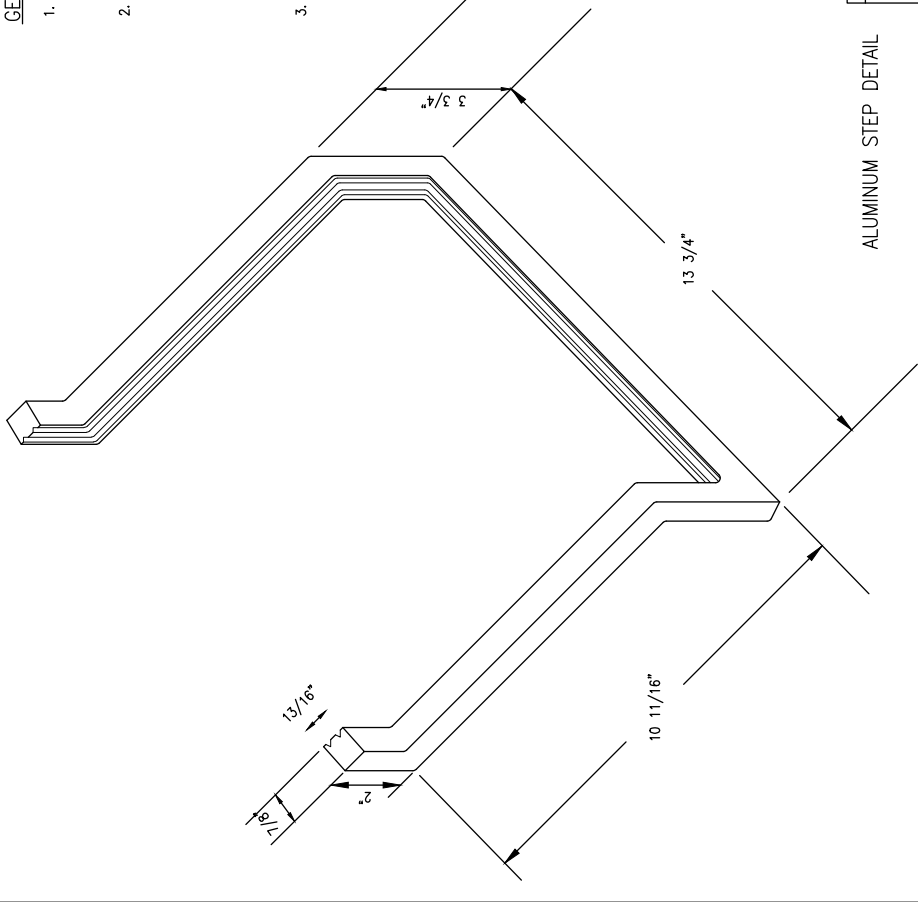
7

1. CONSTRUCT CONCRETE DROP STRUCTURE PER DETAIL 2 ON SHEET 9.
2. CONSTRUCT 14" WIDE MAINTENANCE ACCESS WITH 6" COMPACTED BASE COURSE.
3. SAWCUT, REMOVE & DISPOSE EXISTING CONCRETE STRUCTURE AND PIPE RAIL 3' FROM FACE OF EXISTING CONCRETE BOX CULVERT.
4. CONSTRUCT CANTILEVER RETAINING WALL PER NMDOT STD. DWG. 511-80-1,2&3/3, SEE SHEETS 12-14. H=10', TOW ELEV=5076.40. 12" SUBGRADE PREP REQUIRED UNDER & ON EACH SIDE OF WALL FOUNDATIONS & 12" EACH . TIE REINFORCEMENT TO EXISTING CONCRETE BOX CULVERT W/#6 DOWELS DRILL & EPOXY 8" DEEP. COORDINATE WALL DRAIN PLACEMENT & TERMINATION LOCATIONS W/ENGINEER.
5. REMOVE EXIST. 48" RCP PENETRATION TO FIRST PIPE JOINT.(APPROX. 9 LF) RE-CONNECT EXISTING 48" RCP PENETRATION IN NEW RETAINING WALL PER AMAFCA STD. DETAIL - DWG #105 SEE SHEET 11.
6. CONSTRUCT CANTILEVER RETAINING WALL PER NMDOT STD. DWG. 511-80-1,2&3/3, SEE SHEETS 12-14. H=8',TOW ELEV=5074.10. 12" SUBGRADE PREP REQUIRED UNDER & ON EACH SIDE OF WALL FOUNDATIONS. TIE REINFORCEMENT TO EXISTING CONCRETE BOX CULVERT W/#6 DOWELS DRILL & EPOXY 8" DEEP. COORDINATE WALL DRAIN PLACEMENT & TERMINATION LOCATIONS W/ENGINEER.
7. CONSTRUCT 4" CONCRETE SLAB WITH NO REINFORCEMENT AT FINISHED GRADE, INCLUDE SUBGRADE PREP & SEALED EXPANSION JOINT ALL SIDES. FF=5067.91.
8. CONSTRUCT 100± LF OF 5 STRAND WIRE FENCE PER DETAIL SHEET 10. MAINTAIN 1' CLEARANCE FROM FACE OF NEW RETAINING WALL.
9. INSTALL 16" GATE PER DETAIL SHEET 10. COORDINATE GATE SWING DIRECTION WITH ENGINEER.
10. REMOVE 50± LF EXISTING GUARDRAIL FOR CONSTRUCTION AND REPLACE.
11. REMOVE APPROX. 27 CY BURIED WIRED ENCLOSED RIPRAP.
12. INSTALL ALUMINUM STEPS EACH SIDE PER APWA DWG. 2229. SEE SHEET 8. COORDINATE WITH OWNER ON FINAL LOCATION.



GENERAL NOTES:

1. ALUMINUM STEP, ACOA NO. 12653A OR APPROVED EQUAL. STEPS TO BE PLACED AS NOTED ON PLANS.
2. STORM INLETS: INLETS GREATER THAN 4' DEEP SHALL HAVE ALUMINUM STEPS INSTALLED IN UPSTREAM FACE OF INLET WALLS. STEPS SHALL PROTRUDE 7" FROM THE WALL AND BE CENTERED 12" FROM FACE OF CURB. STEPS SHALL BE 12" APART, WITH THE TOP STEP ±18" FROM TOP OF GRATE AND THE BOTTOM STEP NO MORE THAN 16" ABOVE THE CONCRETE FILL IN THE BOTTOM OF THE INLET.
3. DRAINAGE CHANNELS: CHANNELS SHALL HAVE ALUMINUM STEPS FOR ACCESS AND RESCUE. INSTALLED PER DETAILS ON DWG 2229. STEPS SHALL BE INSTALLED ON BOTH SIDES OF THE CHANNEL AND SHALL BE LOCATED IMMEDIATELY BEFORE THE INLET AND AFTER OUTLET TRANSITIONS FOR CROSSING STRUCTURES AND AT 100' MAXIMUM SPACING ALONG CHANNELS.



REVISIONS	NM APWA	
	ALUMINUM STEP DETAIL	DWG. 2229

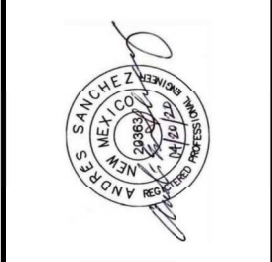
FEB. 2006



Southern Sandoval County

Arroyo Flood Control Authority

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UPPER BOSQUE DE BERNALILLO

FLOOD MITIGATION PROJECT

ACCESS RAMP DETAILS

REVISIONS & CHANGE NOTICES	
MARK	DESCRIPTION

PROJECT NO: CO_P0003

DESIGNED BY: JB

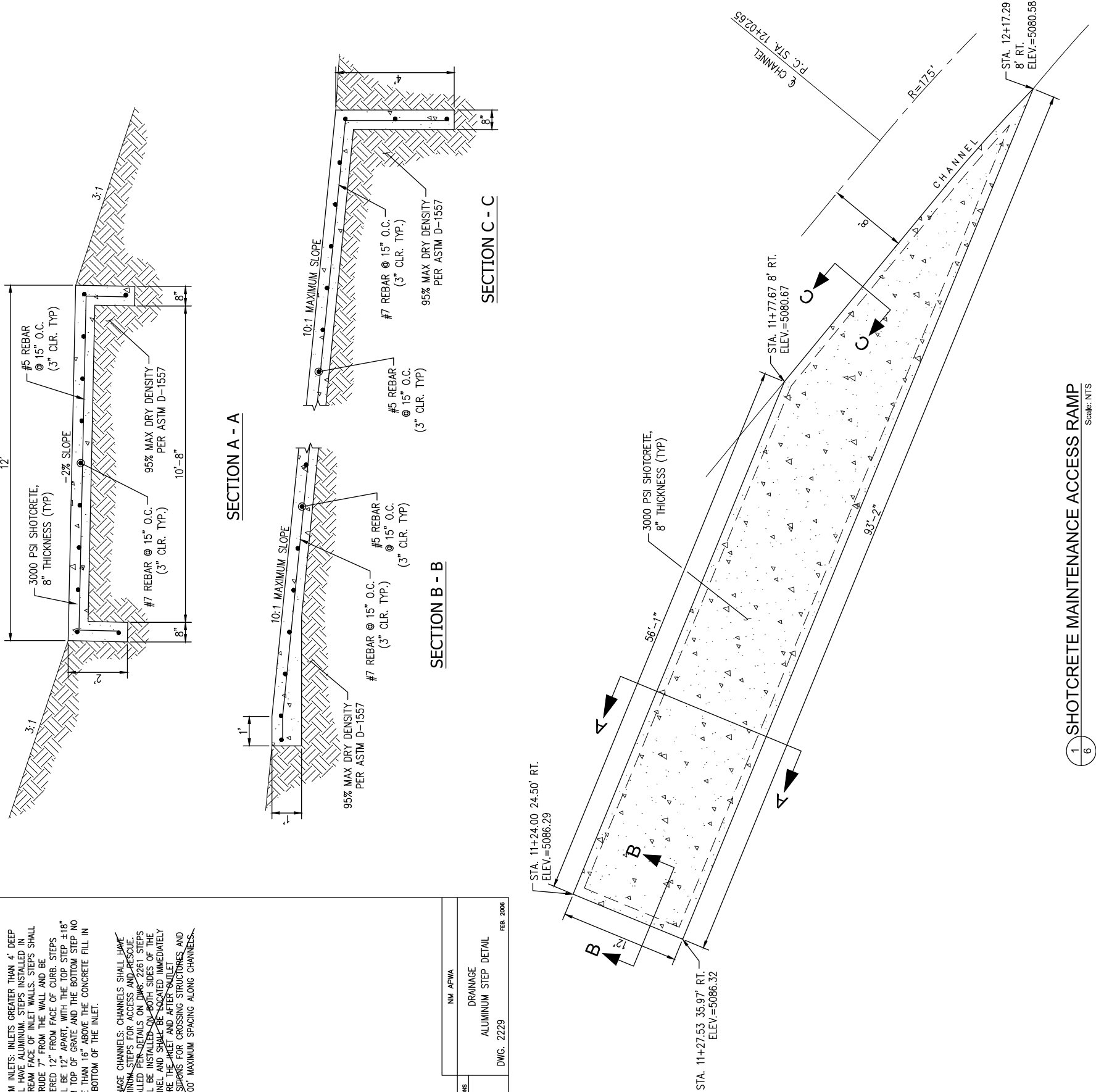
DRAWN BY: KLF

CHECKED BY: AES

DATE: 4/15/2020

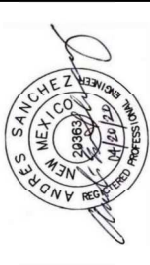
8

SHEET 8 OF 14





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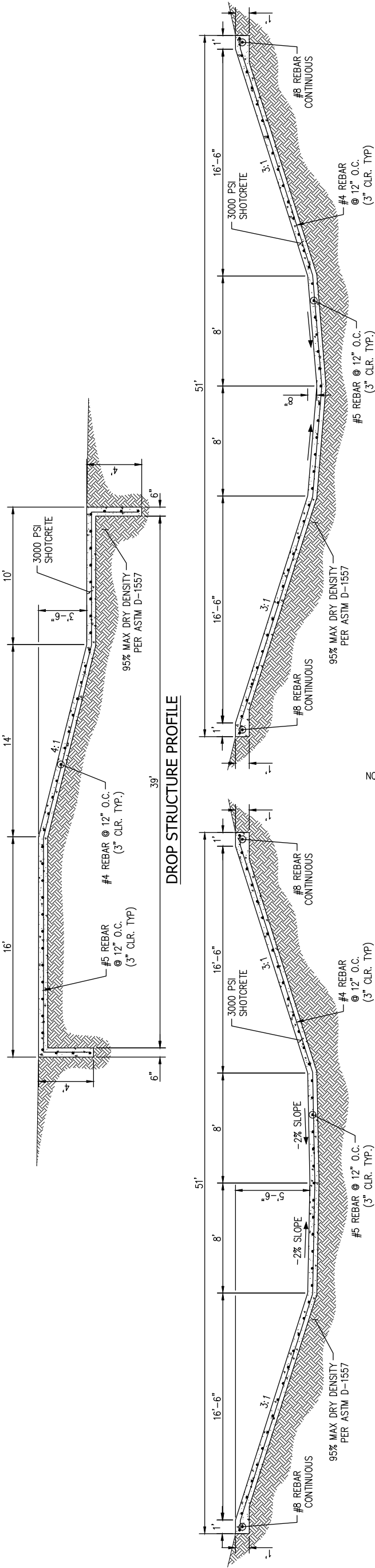


UPPER BOSQUE DE BERNALILLO
FLOOD MITIGATION PROJECT

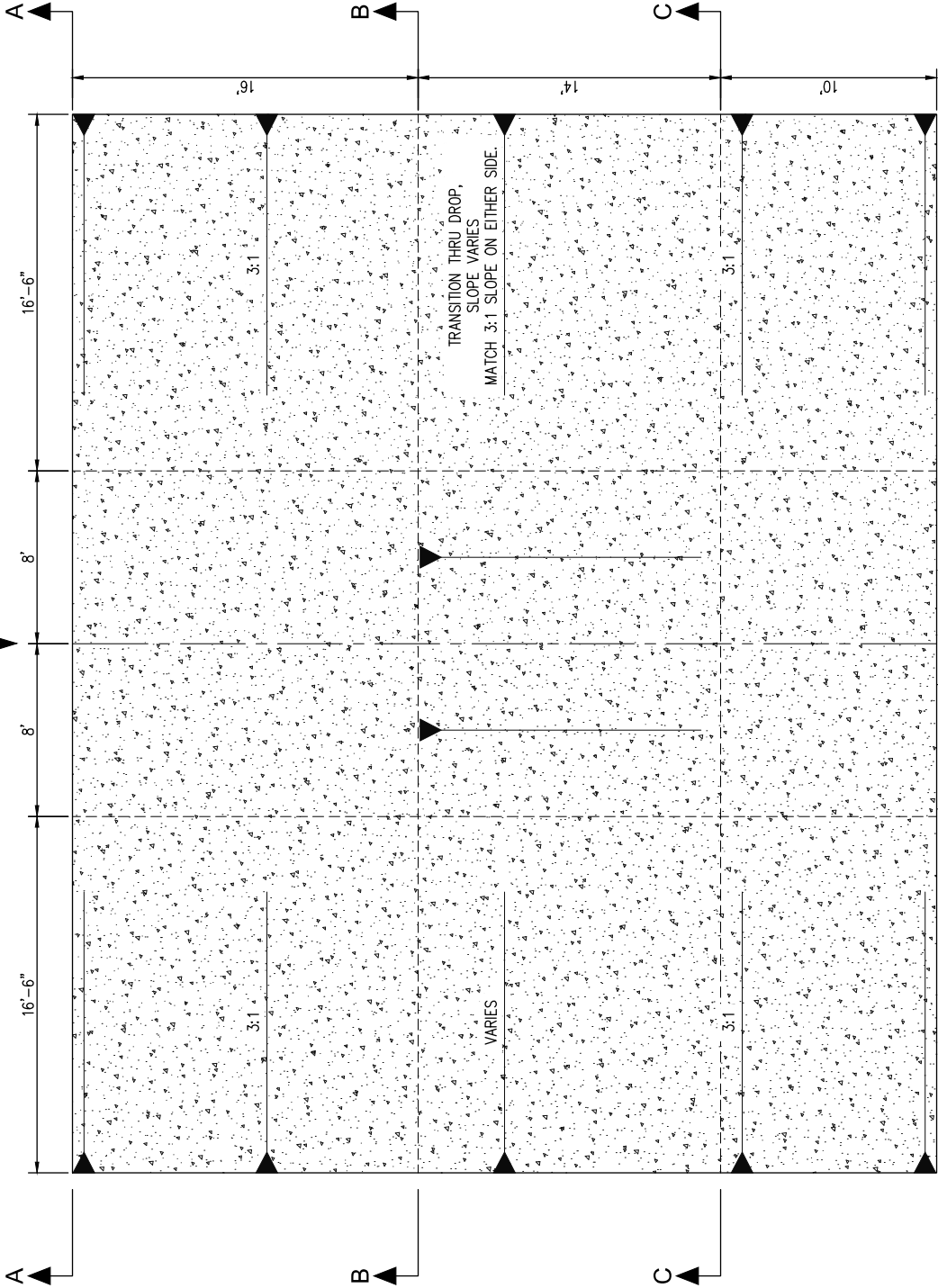
DROP STRUCTURE DETAILS

REVISIONS & CHANGE NOTICES		
MARK	DESCRIPTION	DATE

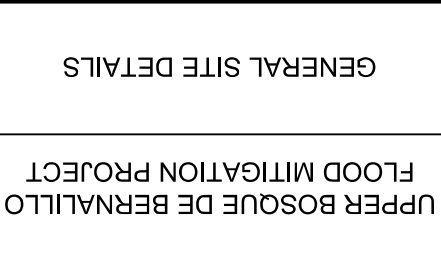
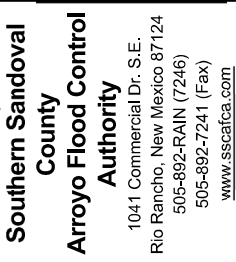
PROJECT NO: CO_P0003
DESIGNED BY: JB
DRAWN BY: KLF
CHECKED BY: AES
DATE: 4/15/2020



DROP STRUCTURE SECTION B-B

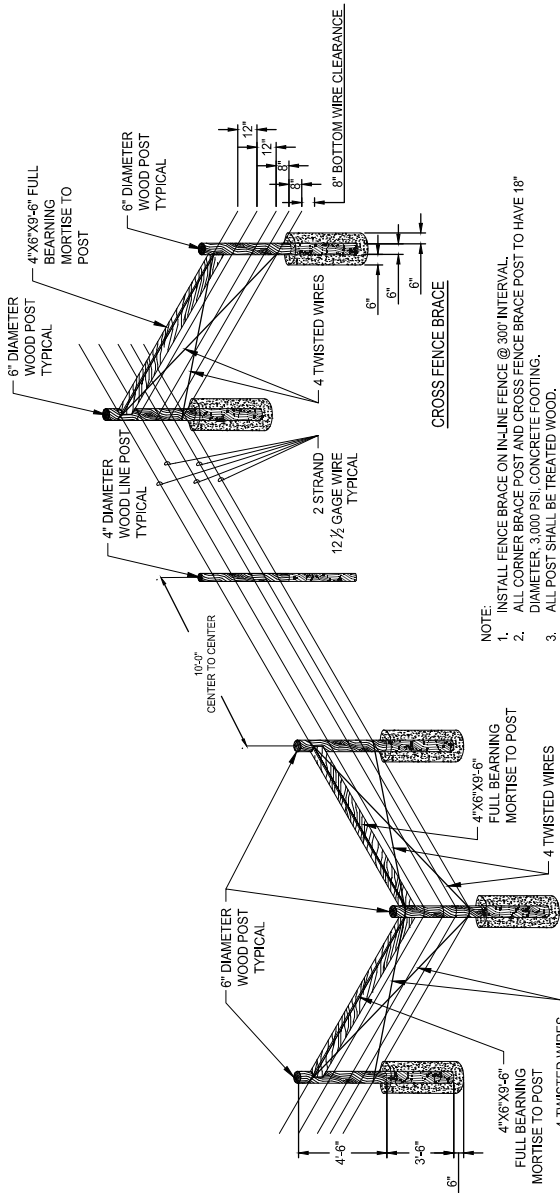
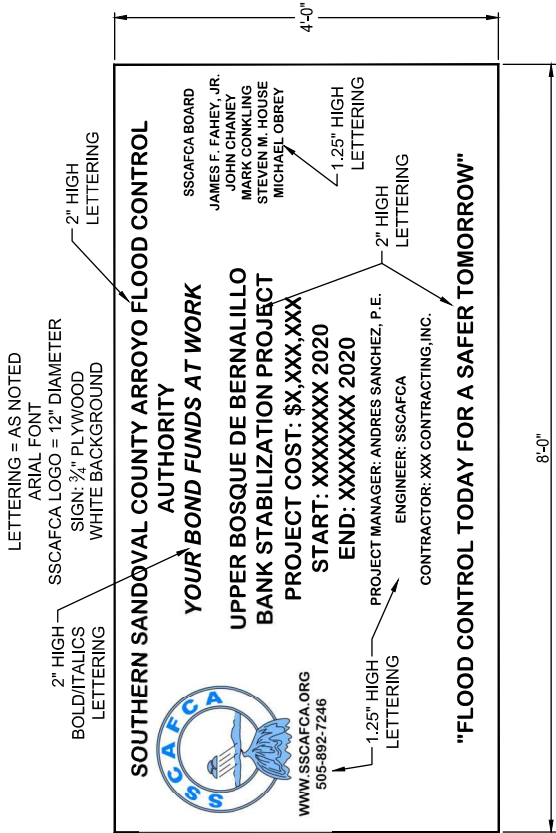


DROP STRUCTURE PLAN VIEW

[illegible]

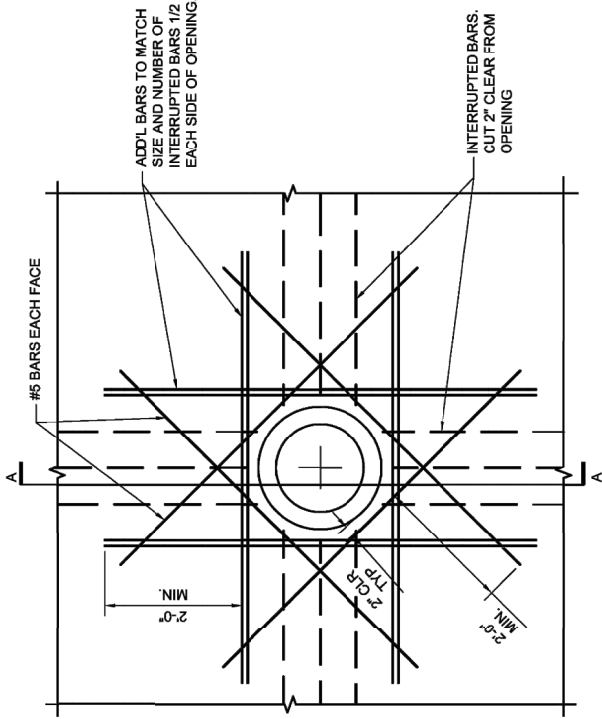
PROJECT NO: CO_P0003
DESIGNED BY: JB
DRAWN BY: KLF
CHECKED BY: AES
DATE: 4/15/2020

10
SHEET 10 OF 14



FIVE STRAND WIRE FENCE DETAIL

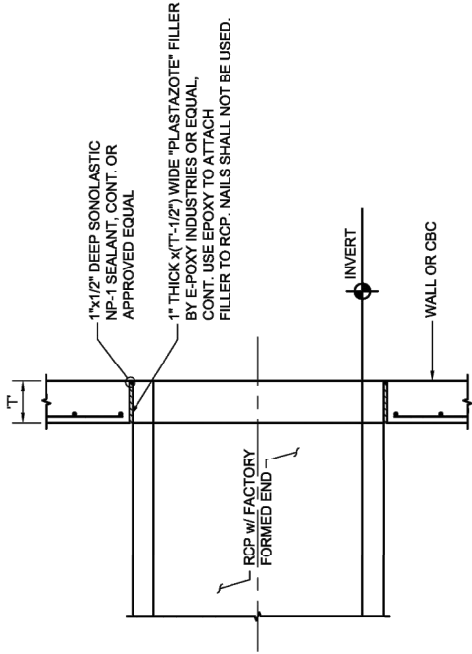
PROJECT CONSTRUCTION SIGN DETAIL



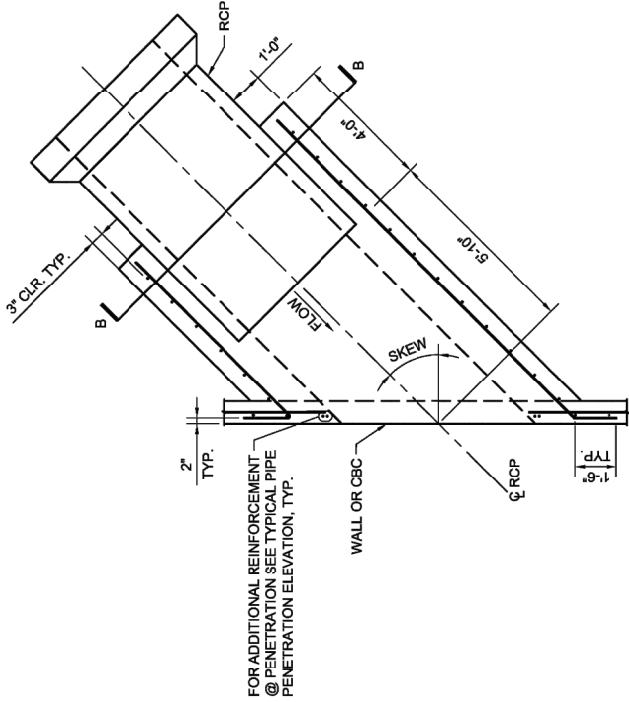
ELEVATION

TYPICAL PIPE PENETRATION
INTO WALL OR CBC, 0° SKEW

NOTE:
WHERE OBSTRUCTED BY ADJOINING WALL,
SLAB, OR NEAR AN EDGE, CONTRACTOR
SHALL AVOID CONFLICT BY PROVIDING
STANDARD HOOKS ON ADDITIONAL
REINFORCING BARS.

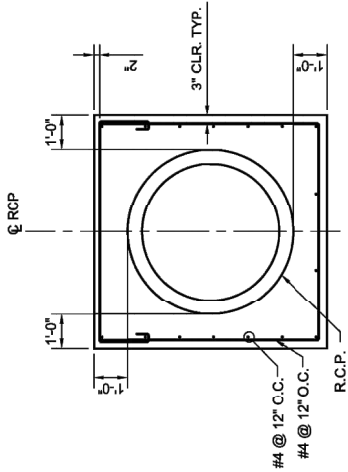


PIPE PENETRATION SECTION A-A



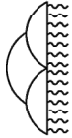
PLAN

TYPICAL PIPE PENETRATION
INTO WALL OR CBC, 45° SKEW MAX.



PIPE PENETRATION SECTION B-B

Dwg # 105



ALBUQUERQUE METROPOLITAN
ARROYO FLOOD CONTROL AUTHORITY

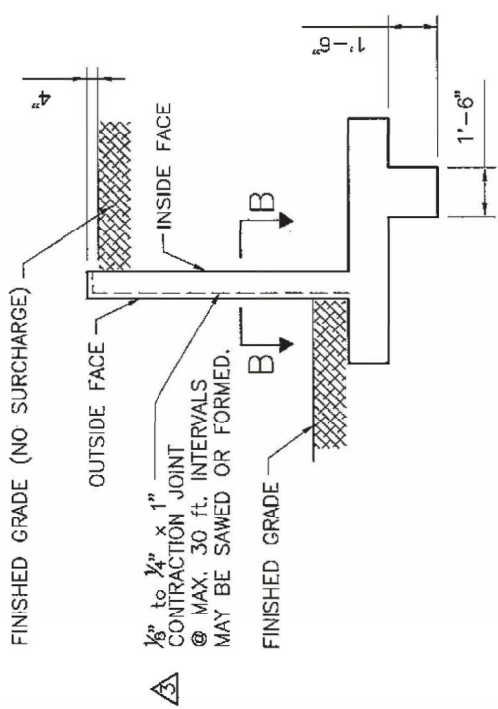
AMAFCA
STANDARD DETAILS

PIPE PENETRATIONS
INTO WALL OR CBC WITH 0° TO 45° SKEW

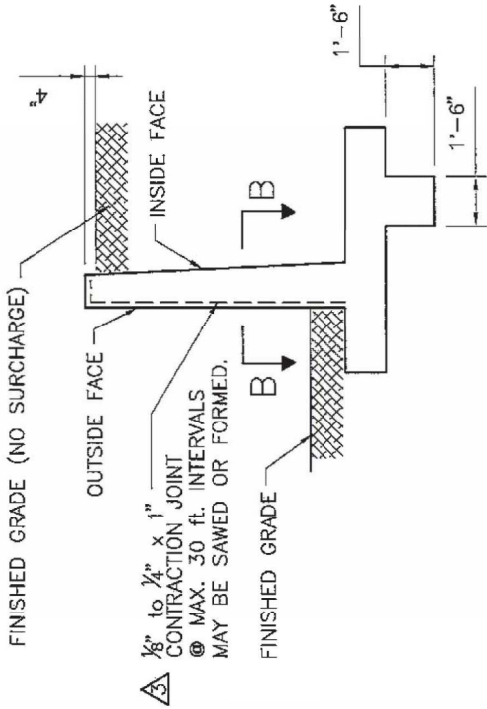
REV	DATE	DESCRIPTION	CHKD

DRAWING NO.	105	MAP NO.	SHEET	11 OF 14
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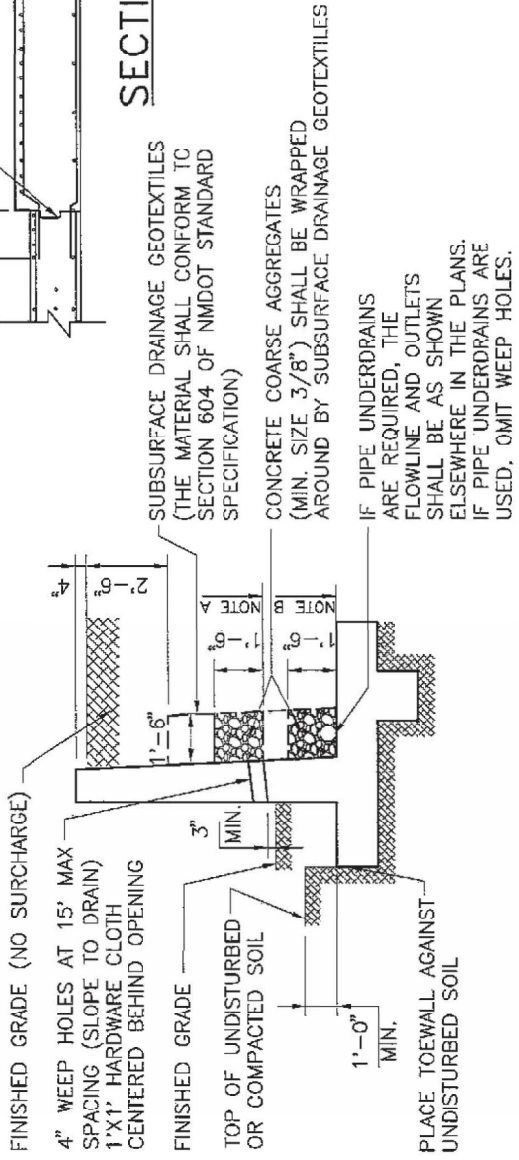
ISSUE DATE: 8-12-2008



TYPICAL SECTION
(FOR H = 4' TO 12')

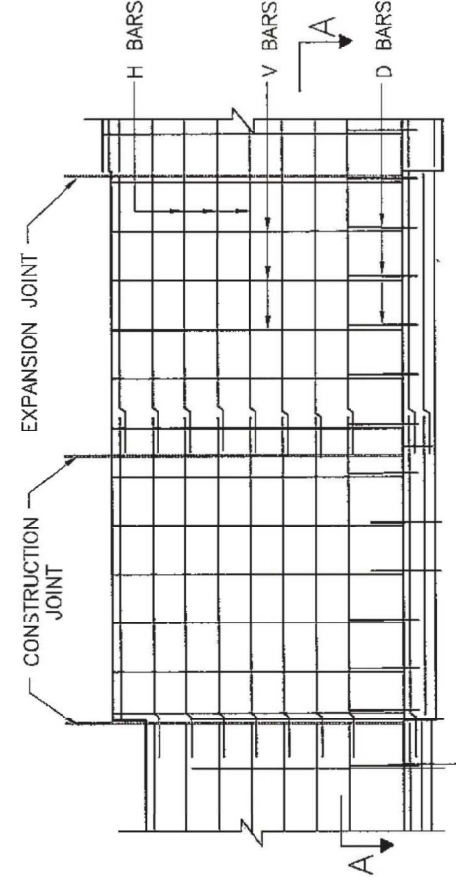


TYPICAL SECTION
(FOR H = 13' TO 16')

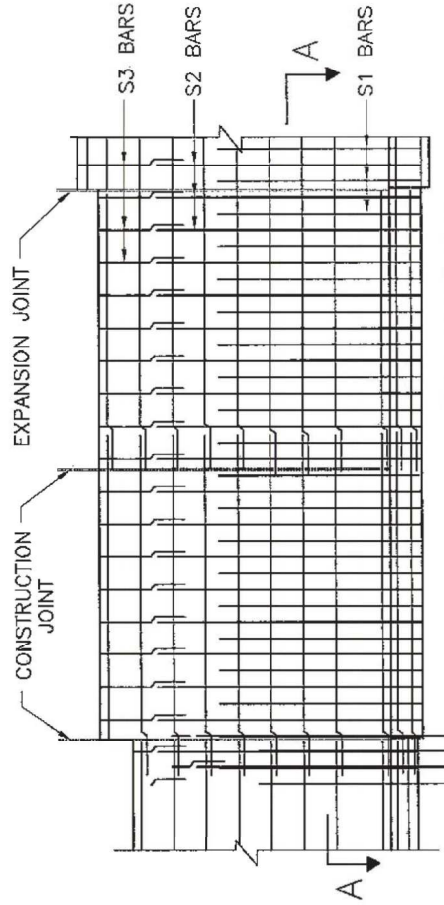


DRAINAGE DETAILS AND EXCAVATION DIAGRAM

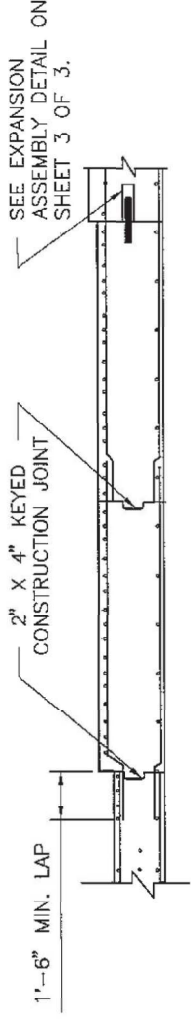
NOTE A: STOP COURSE AGGREGATE AT THIS LEVEL WHEN WEEP HOLES ARE USED.
NOTE B: USE COURSE AGGREGATE TO HERE WITH SUBSURFACE DRAINAGE GEOTEXTILES ABOVE WHEN PIPE UNDERDRAIN IS USED.



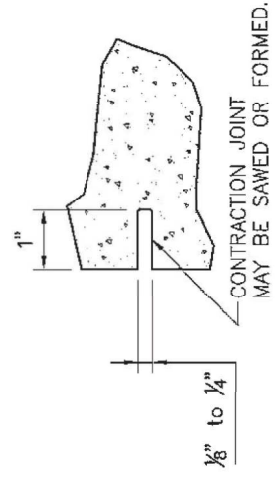
TYPICAL WALL ELEVATION
(OUTSIDE FACE ELEVATION)



TYPICAL WALL ELEVATION
(INSIDE FACE ELEVATION)



SECTION A-A



SECTION B-B

GENERAL NOTES:

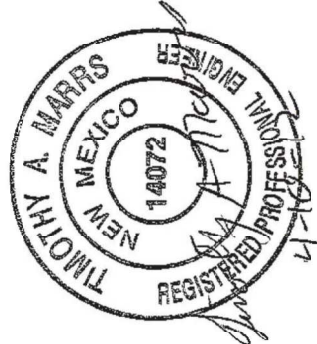
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO NMDOT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS, CURRENT EDITION.
- ALL CONCRETE SHALL BE CLASS "A." CHAMFER ALL EXPOSED EDGES 3/4", UNLESS OTHERWISE NOTED.
- ALL REINFORCING BARS SHALL CONFORM TO AASHTO STANDARD SPECIFICATIONS M 31 GRADE 60 UNLESS OTHERWISE NOTED. DIMENSIONS REFER TO CENTER LINE OF BAR.
- ALL REINFORCING BARS SHALL HAVE 2" CLEAR COVER UNLESS NOTED OTHERWISE.
- DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
- ALL RETAINING WALLS SHALL HAVE CONTRACTION JOINTS SPACED AT NO MORE THAN 30'-0" APART OR AS SHOWN. REINFORCING BARS SHALL PROJECT THROUGH THE JOINT.
- ALL RETAINING WALLS SHALL HAVE EXPANSION JOINTS PROVIDED AT INTERVALS NOT EXCEEDING 90'-0".
- FOOTINGS MAY BE CONTINUOUS WITH NO JOINT.
- SPECIAL DESIGN IS REQUIRED WHEN "H" DIMENSION IS ABOVE 16 FEET.
- COHESIVE SOILS OF SILT, CLAY, ETC. SHALL NOT BE USED FOR BACKFILL. THE BACKFILL SHALL BE FREE-DRAINING.
- APPROPRIATE DRAINAGE PROVISIONS SHALL BE PROVIDED AS SHOWN ON THE LAYOUT DRAWINGS.
- ALL EARTH WORK INCLUDING BACKFILL MATERIAL AND COMPACTION SHALL CONFORM TO SECTION 210 OF NMDOT STANDARD SPECIFICATIONS, CURRENT EDITION.
- FOR H GREATER THAN 8 FEET, FOUNDATION EXPLORATION WILL BE REQUIRED TO VERIFY ADEQUATE FOUNDATION CONDITIONS.
- THE LOCATIONS OF NEEDED CONSTRUCTION JOINTS ARE EITHER SHOWN ON THE PLANS OR TO BE DIRECTED OR APPROVED BY THE PROJECT MANAGER.

DESIGN DATA

DESIGN ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, THIRD EDITION, 2004.

DESIGN STRESS:

CLASS "A" CONCRETE: $f_c = 3000$ psi
GRADE 60 REINFORCING STEEL: $f_y = 60000$ psi
HORIZONTAL EARTH PRESSURE = 36 LBS./CU. FT. EQUIVALENT FLUID PRESSURE.
WEIGHT OF BACKFILL = 120 LBS./CU. FT.
WEIGHT OF CONCRETE = 145 LBS./CU. FT.
ANGLE OF INTERNAL FRICTION OF EXISTING GROUND = 29°
FACTORED BEARING CAPACITY $q_r = 2.0$ TONS/SQ. FT. IS USED FOR THE DESIGN ON THESE DRAWINGS.

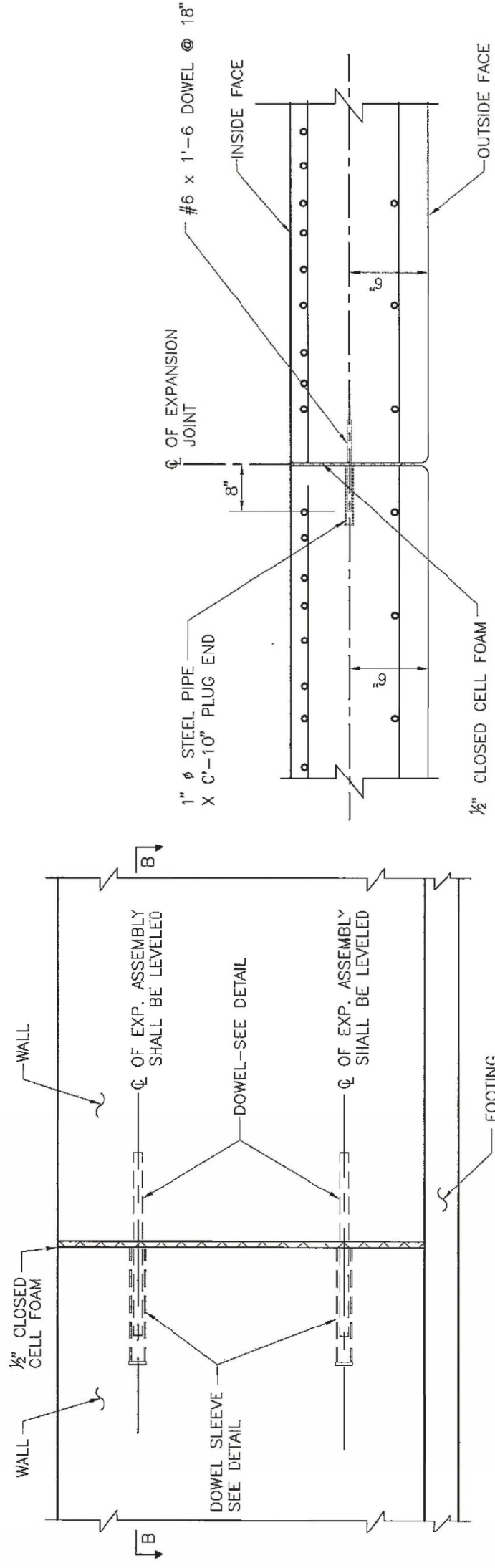


NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING
CANTILEVER RETAINING WALL
(CASE 1 - LEVEL FILL)
GENERAL NOTES.
SECTIONS & ELEVATIONS

DESIGNED BY: YML DRAWN BY: AJT CHECKED BY: YML/TM
511-80-1/3 1 of 3

GENERAL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO ASTM A 36 UNLESS OTHERWISE NOTED ON THE DETAILS, AND SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 111.
2. BEFORE AND AFTER THE CONCRETE OF THE WALL IS PLACED, THE CONTRACTOR SHALL ENSURE THAT THE CENTER LINES OF ALL EXPOSED ASSEMBLIES ARE ALWAYS KEPT LEVELED AND 6" AWAY FROM THE OUTSIDE FACE OF THE WALL, AS SHOWN ON THIS DRAWING.
3. THE MATERIAL AND INSTALLATION COST OF 1/2" CLOSED CELL FOAM AND EXPANSION ASSEMBLIES SHALL BE CONSIDERED INCIDENTAL TO THE COST OF RETAINING WALL CONSTRUCTION AND NO DIRECT PAYMENT WILL BE MADE THEREFOR.



ELEVATION VIEW

SECTION B-B

EXPANSION ASSEMBLY DETAIL



DOWEL SLEEVE DETAIL

DOWEL DETAIL

[illegible]

REVISIONS (OR CHANGE NOTICES)

NEW MEXICO
DEPARTMENT OF TRANSPORTATION
STANDARD DRAWING

**CANTILEVER RETAINING WALL
(CASE 1 - LEVEL FILL)
EXPANSION ASSEMBLY
DETAIL**

DESIGNED BY: VMI DRAWN BY: SVI CHECKED BY: VMI /TV

511-80-3/3