

FLYING HORSE NORTH
COUNTY OF EL PASO, STATE OF COLORADO
IRRIGATION RESERVOIR EMBANKMENT

SECTION 31, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF 6TH PRINCIPAL MERIDIAN
WATER DIVISION 1, WATER DISTRICT 8

GENERAL CONSTRUCTION NOTES:

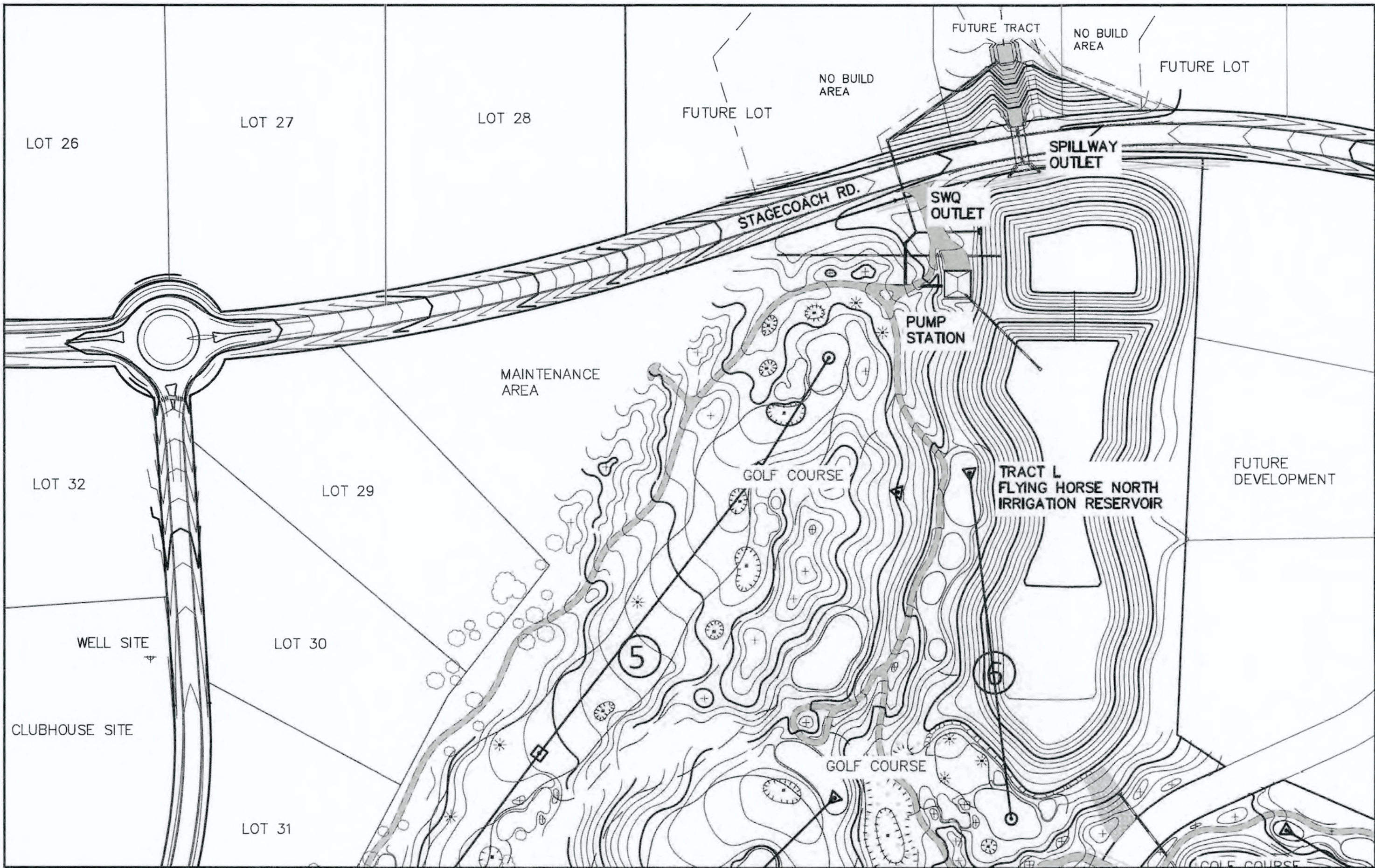
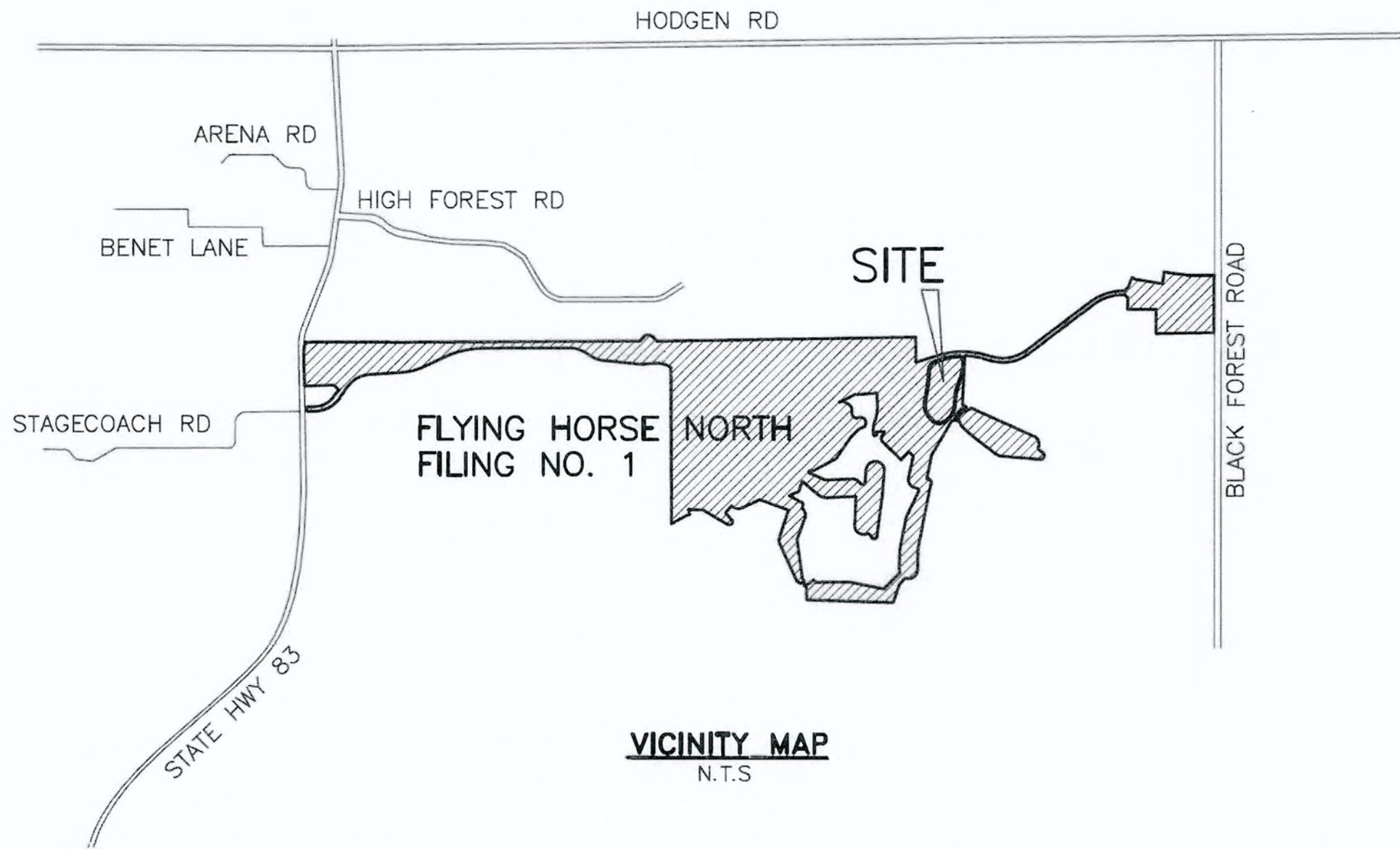
- THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND MAY NOT INCLUDE ALL UTILITIES. THE EXCAVATION CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
- BEFORE COMMENCING ANY EXCAVATION, CALL 1-800-922-1987 FOR EXISTING UTILITY LOCATIONS.
- THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION.
- ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS AS SOON AS POSSIBLE AND EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
- ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC EOM APPENDIX K - 1.2C.
- ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
- ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY DEVELOPMENT SERVICES DEPARTMENT PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS WITHIN 21 DAYS OF SUBSTANTIAL GRADING COMPLETION. EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER IS RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
- TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED.
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
 - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
 - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
 - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
 - CDOT M & S STANDARDS
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND DSD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY DSD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DSD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

SIGNING AND STRIPING NOTES:

- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
- ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
- ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
- STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS."
- ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
- ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-B REGARDING USE OF THE P2 TUBULAR STEEL POST SUBBASE DESIGN.
- ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
- ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
- ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
- THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY DEVELOPMENT SERVICES (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
- THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY PUBLIC SERVICES DEPARTMENT (PSD) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.



KEY MAP
N.T.S.

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CONTACT INFORMATION:

PROPERTY OWNER/DEVELOPER:	PRI #2 LLC 6385 CORPORATE DRIVE, SUITE 200 COLORADO SPRINGS, CO 80919 MR. DREW BALSICK, (719) 592-9333
CIVIL ENGINEER:	CLASSIC CONSULTING ENGINEERS & SURVEYORS 619 N. CASCADE, SUITE 200 COLORADO SPRINGS, CO 80903 MR. MARC A. WHORTON, P.E. (719) 785-2802
GEOTECHNICAL ENGINEER:	ENTECH ENGINEERING LLC 505 ELKTON DRIVE COLORADO SPRINGS, CO 80907 MR. JOE GOODE, P.E. (719) 531-5599
DAM SAFETY ENGINEER:	COLORADO DIVISION OF WATER RESOURCES 4255 SINTON ROAD COLORADO SPRINGS, CO 80907 MR. JOHN HUNYADI, P.E. (719) 227-5294
COUNTY ENGINEERING	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, COLORADO 80903 MR. GILBERT LAFORCE, (719) 520-7945

OWNER/DEVELOPER'S STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

Drew Balsick
MR. DREW BALSICK
PRI #2

9-8-18
DATE

DESIGN ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY DIRECTLY CAUSED BY THE NEGLIGENCE, ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.



MARC A. WHORTON, COLORADO P.E. #37155
FOR AND ON THE BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS
9/17/18
DATE

EL PASO COUNTY:

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2 AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH WITH ECM SECTION 1.1.2, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

Approved
by Jennifer Irvine, County Engineer
El Paso County Planning and Community Development
on behalf of Jennifer Irvine, County Engineer, CCA Administrator
09/25/2018 2:39:57 PM

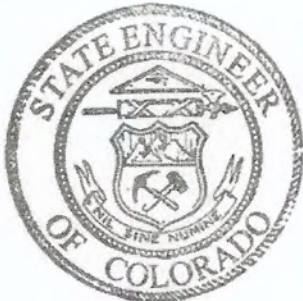
JENNIFER IRVINE, P.E.
COUNTY ENGINEER / ECM ADMINISTRATOR

STATE ENGINEER APPROVAL:

APPROVED ON THE 17th DAY OF SEPTEMBER 2018

KEVIN G. REIN
STATE ENGINEER

BY: *William T. McCormick III*
William T. McCormick III
Chief, Colorado Dam Safety, CO PE 29127



THESE PLANS REPRESENT THE AS-CONSTRUCTED CONDITIONS OF THE FLYING HORSE NORTH IRRIGATION RESERVOIR EMBANKMENT TO THE BEST OF OUR KNOWLEDGE AND JUDGEMENT, BASED IN PART ON INFORMATION FURNISHED BY OTHERS, AS OF THE DAY OF 2018.

FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC
MARC A. WHORTON, P.E. #37155

DESIGN ENGINEER SIGNATURE:

SF 18-001

STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW	
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.	

NO.	REVISION	DATE
1	REVISED PER STATE COMMENTS	4-3-18
2	REVISED PER COUNTY COMMENTS	7-31-18

REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC
<i>Marc A. Whorton</i> MARC A. WHORTON, P.E. #37155
9/17/18 DATE

CLASSIC CONSULTING ENGINEERS & SURVEYORS	
619 N. Cascade Avenue, Suite 200 (719) 785-0790 Colorado Springs, Colorado 80903 (719) 785-0799 (fax)	

FLYING HORSE NORTH IRRIGATION RESERVOIR EMBANKMENT			
TITLE SHEET			
DAM ID -- 080459			
DESIGNED BY	MAW	SCALE	DATE 1-4-18
DRAWN BY	MAW	(H) 1" = N/A	SHEET 1 OF 14
CHECKED BY		(V) 1" = N/A	JOB NO. 1096.11



WELL NAME: FLYING HORSE NORTH A-1
LOCATION: SEC. 36, T 11 SOUTH, R 66 WEST, 6TH P.M.
NORTHING: 1445275.0
EASTING: 3220345.0
(STATE PLANE)

PERMIT # 81145-F

ISSUE DATE: 7/24/17

WATER DIVISION 1

WATER DISTRICT 8

ARAPAHOE AQUIFER
TOTAL DEPTH 2400 FT.

47170 FLYING HORSE GOLF PUMP TEST.xls)47170 FLYING HORSE GOLF PUMP TEST.xls47170 FLYING HORSE GOLF PUMP TEST.xls.xlsSTATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

9/17/18

DATE _____

619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903

DAM ID - 080459 EPC 9/25/18

DESIGNED BY	MAW	SCALE	DATE	1-4-18
DRAWN BY	MAW	(H) 1"= N/A	SHEET 2	OF 14
CHECKED BY		(V) 1"= N/A	JOB NO.	1096.11

CLASSIC
CONSULTING
ENGINEERS & ARCHITECTS

N:\109611\DRAWINGS\CONSTRUCTION\2-JD POND - Well Site - 3.dwg, 8/21/2018 3:17:53 PM, 1:1

PUMP STATION SPECIFICATIONS:
NAME: FLYING HORSE RANCH
STATION MODEL:
VTV-1-75x3(75)/5ST-480-3-2250(3000)-110

STATION TOTAL PERFORMANCE:
2250GPM @ 110PSI
3000GPM @ 110PSI (FUTURE)

PUMP HORSEPOWER:
SUSTAIN PUMP: 5HP
PUMP NO. 1-3: 75HP
PUMP NO. 4: 75HP (FUTURE PUMP/MOTOR)

CHECK VALVE SIZE
SUSTAIN: BUILT IN
PUMP NO. 1-2: 6"

ISOLATION VALVE SIZES:
SUSTAIN PUMP: 2"
PUMP NO. 1-2: 5" (EBV)

DISCHARGE ISOLATION VALVE: 10"
RELIEF VALVE SIZE: 6"

PUMP STATION DISCONNECT: 600 AMP
POWER REQUIREMENTS:
480V, 60 HZ, 3 PZ, 386 FLA
EXHAUST FAN REQ'D FOR BUILDING:
5400 CFM

WET WELL DIMS: Ø96"

WET WELL DEPTH:25'-0"

MAIN LINE CONNECTION: 16" FLANGED
NOMINAL PIPE SIZE: NA

DROP PIPE COVER: 48"
INTAKE FLUME PIPE SIZE:30"
INTAKE FLUME MATERIAL:.....SDR35 PVC
OD32"

PLEASE VERIFY ALL INFO WITH
YOUR INITIALS AND DATE

PLEASE INDICATE POWER SUPPLY CONDITION BELOW FOR
FCC COMPLIANCE. REFER TO WATERTRONICS DRAWING #
FCC-1 FOR ADDITIONAL INFORMATION

- ☐ A: CONNECTED THROUGH A COMMERCIAL BUILDING
☐ B: CONNECTED THROUGH A DEDICATED TRANSFORMER
☐ C: CONNECTED THROUGH A PAD TRANSFORMER SHARED
WITH OTHER NON-RESIDENTIAL EQUIPMENT.
☐ D: CONNECTED TO A POLE TRANSFORMER ON A
RESIDENTIAL POWER GRID.
☐ E: CONNECTED TO A PAD TRANSFORMER SHARED WITH
RESIDENTIAL DWELLINGS.

PLEASE USE THE SPACE BELOW FOR ANY ADDITIONAL COMMENTS:

1. MIN. WATER LEVEL IN THE WET WELL 56" FROM THE BOTTOM
2. NORMAL WATER LEVEL AT THE WET WELL ??
3. MAX/HIGH WATER LEVEL IN THE WET WELL ??
4. TO DRAIN THE BOND COMPLETELY THE BOTTOM OF THE BOND NEED
TO BE LOWER THAN THE BOTTOM OF WET WELL !

- ☐ APPROVED AS SUBMITTED
☐ APPROVED AS NOTED
☐ REVISE AND RESUBMIT

REVIEWED BY: _____

NAME: _____

DATE: _____

DIMENSIONS AND SIZES OF EXISTING STRUCTURES, AND/OR COMPONENTS
MUST BE VERIFIED TO WATERTRONICS BEFORE STATION CONSTRUCTION
BEGINS.

UNLESS SPECIFIED BY THE CUSTOMER, PUMP HOUSE/CONCRETE SLAB
DIMENSIONS ARE RECOMMENDED MINIMUMS FOR NEC AND SERVICE
CLEARANCE, AND ARE FOR ILLUSTRATION PURPOSES ONLY. PROJECT
MANAGER SHALL BE CONSULTED ON FINAL DESIGN.

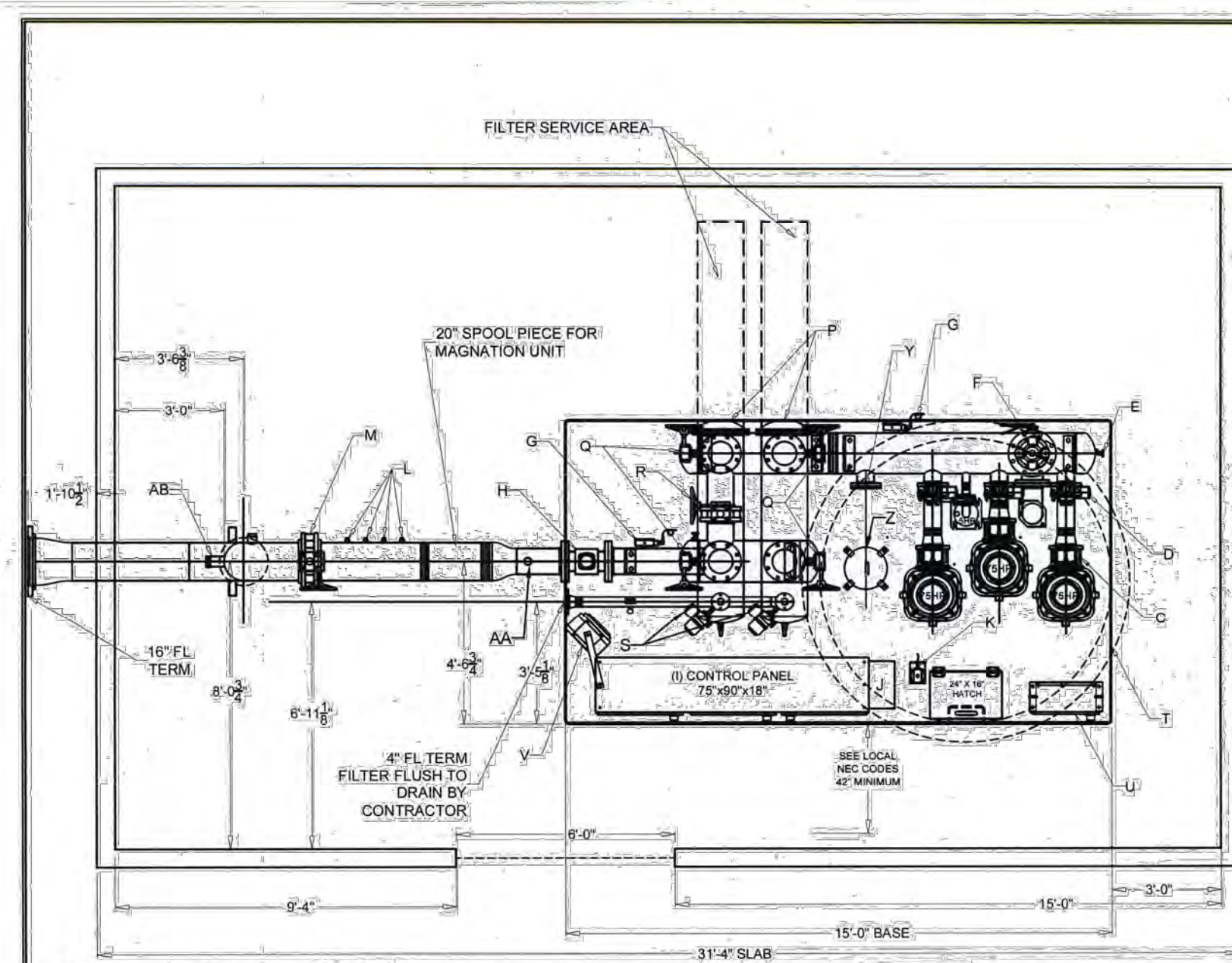
THE PUMP STATION PROPOSED HEREIN IS DESIGNED TO BE PLACED IN A
PUMP HOUSE FOR PROTECTION FROM THE ENVIRONMENT. IF A PUMP HOUSE
IS NOT USED, WATERTRONICS MUST BE NOTIFIED AT TIME OF QUOTATION
SO SPECIAL PROVISIONS CAN BE MADE.



PHONE: 1-262-367-5000
FAX: 1-262-367-5001

SHEET 1 OF 4 SHEETS

DRAWING NO. PRVT12023 09/15/2016

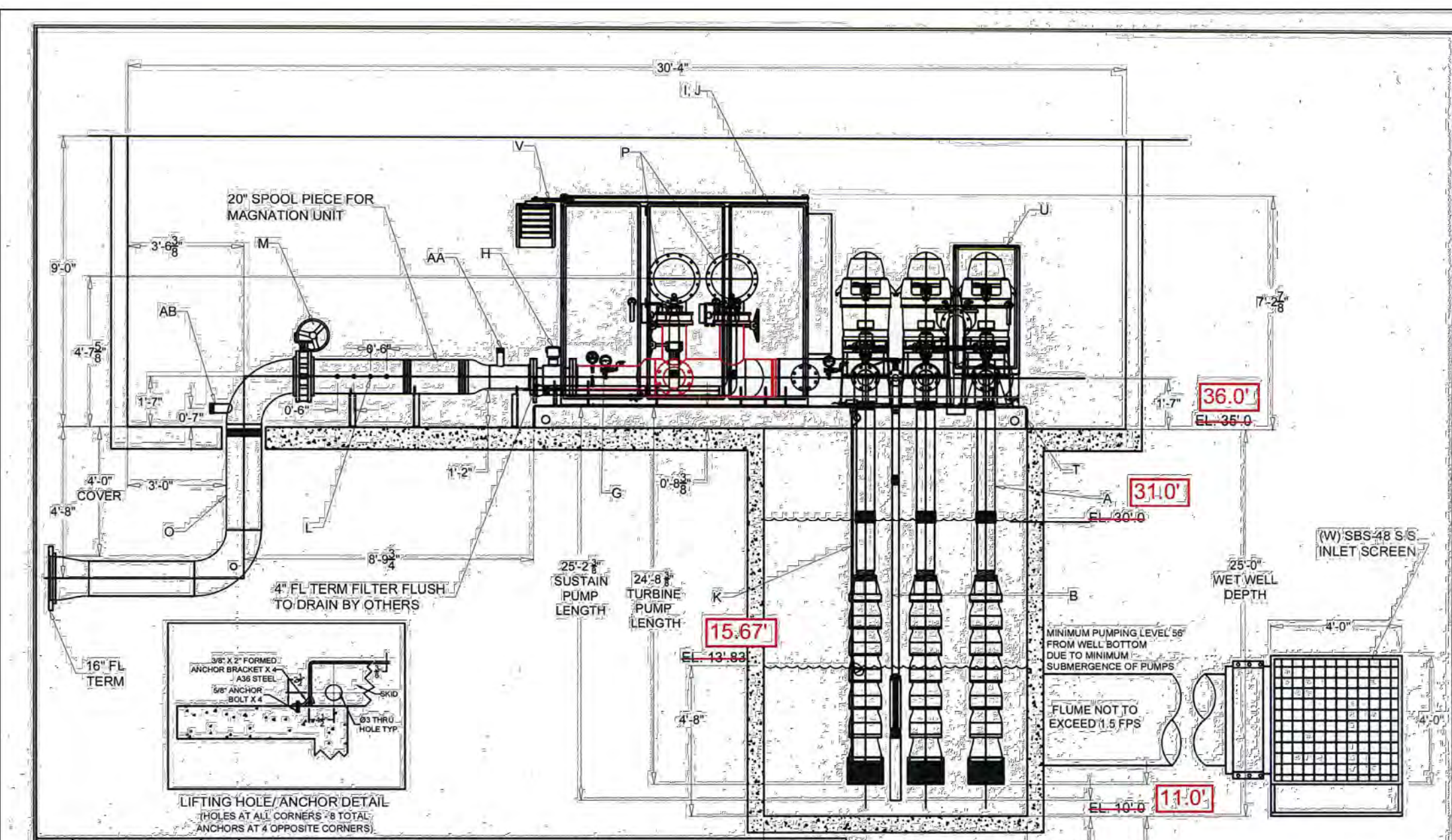


STATION COMPONENTS:
A: 75HP PUMP AND MOTOR
B: 5HP SUBMERSIBLE PUMP AND MOTOR
C: 6" CHECK VALVE
D: 5" PUMP ISO VALVE W/ EBV CONTROL
E: BOILER DRAIN 3/4"
F: 6" PRESSURE RELIEF VALVE
G: PRESSURE TRANSDUCER W/ GAUGE
H: 8" MAGNETIC FLOW METER
I: CONTROL CABINET
J: HEAT EXCHANGER
K: LEVEL SENSOR W/ ALARM FLOAT
L: T-LETS 3/4" W/ PLUG (X4)-SPACED @ 6"
M: STATION ISOLATION VALVE 12"
N: BLOW OUT FITTING 2" W/ PLUG
O: 12" X 12" DROP PIPE AND 12" X 16"
ECCENTRIC WITH 16" FL
P: 8" VAF1500 FILTER W/ 300 MICRON
SCREEN (X2)
Q: 8" FILTER ISOLATION VALVE
R: 8" FILTER BY-PASS VALVE
S: FILTER FLUSH W/ EBV CONTROL
T: PAINTED STEEL BASE (SANDSTONE)
U: 3KVA REGULATED POWER SUPPLY
(4X15CB)
V: 5KW ELECTRIC HEATER
W: SSS-48 INLET STAINLESS STEEL SCREEN
X: NA
Y: 5" BLIND FLANGE FOR FUTURE PUMP
Z: 14" Ø HATCH FOR FUTURE 75HP PUMP
AA: 2" TOL INJECTION PORT OF PIPE
AB: 3" TOL INJECTION PORT

PLAN VIEW

12	11/13/2017	MJH	REVISED ELEVATION
11	10/24/2017	MJH	REVISED SIZE OF THE MAGNATION UNIT PIPE SPOOL FROM 10" TO 12"
10	10/18/2017	MJH	REVISED LOCATION OF AA AND AB FITTINGS INJECTION PORTS. WILL SHAUL 10/18/2017
9	10/17/2017	MJH	REVISED LOCATION OF MAGNATION SPOOL PIPE, ISO VALVE, DISCHARGE ELBOW, BLDG DIM
8	09/07/2017	MJH	REVISED WET WELL DEPTH FROM 19'-0" TO 25'-0"
7	07/14/2017	MJH	REVISED WET WELL DEPTH FROM 12'-0" TO 19'-0"
6	03/29/2017	MJH	ADDED 20" SPOOL PIECE FOR MAGNATION UNIT
5	03/24/2017	MJH	REVISED DROP PIPE TERMINATION TO 16" FL
4	03/23/2017	MJH	ADD 3KVA REGULATED POWER SUPPLY
3	03/02/2017	MJH	DELETED FERTIGATION, 3KVA REGULATED AND RELOCATED 2" O LET TO TOP
2	02/08/2017	MJH	LOCATED 34" TOL, ADDING 2" & 3" TOL TO OTHER SIDE OF THE PIPE
1	10/10/2016	MJH	REVISED WET WELL DEPTH TO 12'-0" & ADDING 2" TOL
NO	DATE	BY	DESCRIPTION

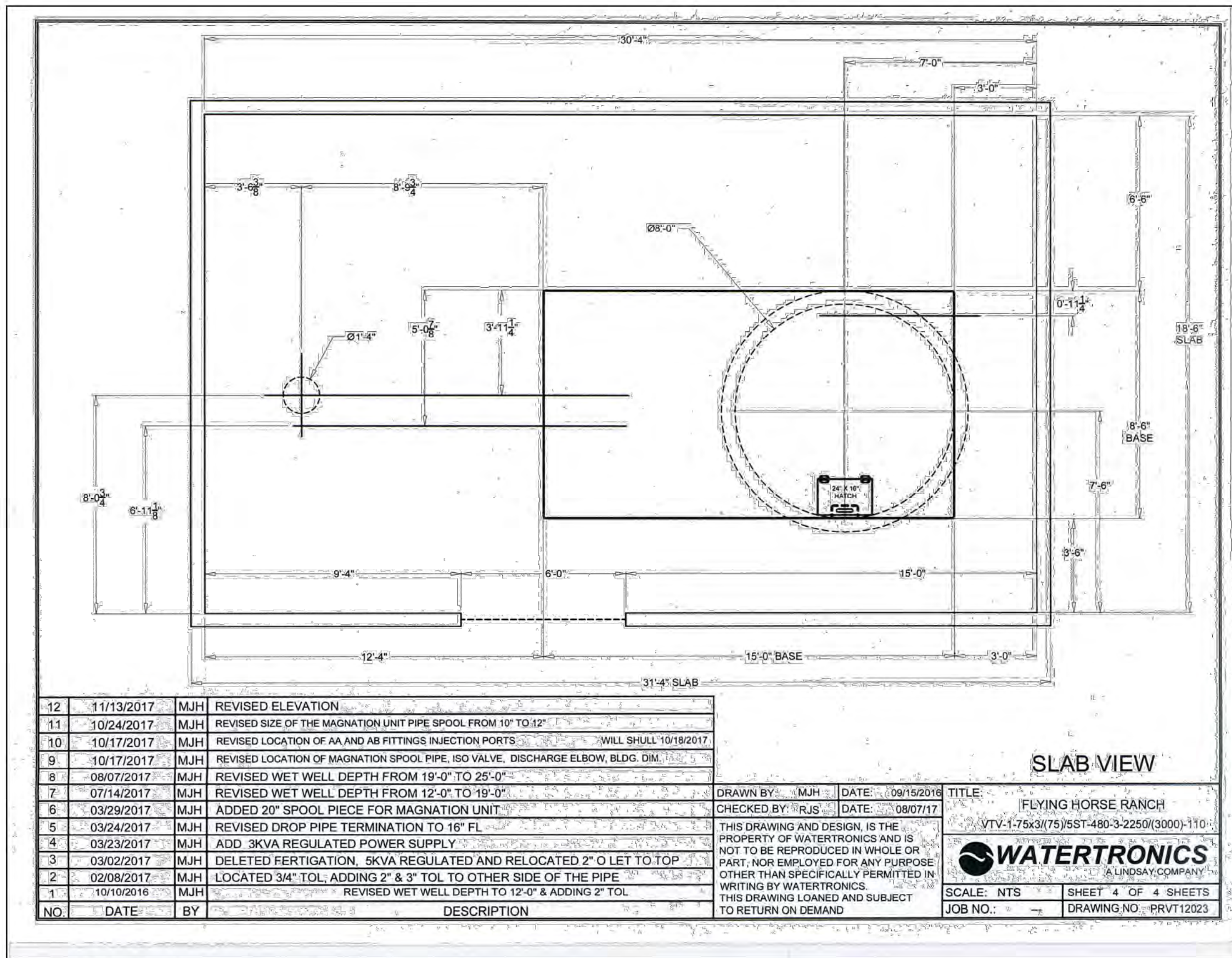
DRAWN BY: MJH DATE: 09/15/2016
CHECKED BY: RJLS DATE: 08/07/17
TITLE: FLYING HORSE RANCH
VTV-1-75x3(75)/5ST-480-3-2250(3000)-110
SCALE: NTS SHEET 2 OF 4 SHEETS
JOB NO.: DRAWING NO. PRVT12023



ELEVATION VIEW

12	11/13/2017	MJH	REVISED ELEVATION
11	10/24/2017	MJH	REVISED SIZE OF THE MAGNATION UNIT PIPE SPOOL FROM 10" TO 12"
10	10/18/2017	MJH	REVISED LOCATION OF AA AND AB FITTINGS INJECTION PORTS. WILL SHAUL 10/18/2017
9	10/17/2017	MJH	REVISED LOCATION OF MAGNATION SPOOL PIPE, ISO VALVE, DISCHARGE ELBOW, BLDG DIM
8	09/07/2017	MJH	REVISED WET WELL DEPTH FROM 19'-0" TO 25'-0"
7	07/14/2017	MJH	REVISED WET WELL DEPTH FROM 12'-0" TO 19'-0"
6	03/29/2017	MJH	ADDED 20" SPOOL PIECE FOR MAGNATION UNIT
5	03/24/2017	MJH	REVISED DROP PIPE TERMINATION TO 16" FL
4	03/23/2017	MJH	ADD 3KVA REGULATED POWER SUPPLY
3	03/02/2017	MJH	DELETED FERTIGATION, 3KVA REGULATED AND RELOCATED 2" O LET TO TOP
2	02/08/2017	MJH	LOCATED 34" TOL, ADDING 2" & 3" TOL TO OTHER SIDE OF THE PIPE
1	10/10/2016	MJH	REVISED WET WELL DEPTH TO 12'-0" & ADDING 2" TOL
NO	DATE	BY	DESCRIPTION

DRAWN BY: MJH DATE: 09/15/2016
CHECKED BY: RJLS DATE: 08/07/17
TITLE: FLYING HORSE RANCH
VTV-1-75x3(75)/5ST-480-3-2250(3000)-110
SCALE: NTS SHEET 3 OF 4 SHEETS
JOB NO.: DRAWING NO. PRVT12023



SLAB VIEW

12	11/13/2017	MJH	REVISED ELEVATION
11	10/24/2017	MJH	REVISED SIZE OF THE MAGNATION UNIT PIPE SPOOL FROM 10" TO 12"
10	10/17/2017	MJH	REVISED LOCATION OF AA AND AB FITTINGS INJECTION PORTS. WILL SHAUL 10/18/2017
9	10/17/2017	MJH	REVISED LOCATION OF MAGNATION SPOOL PIPE, ISO VALVE, DISCHARGE ELBOW, BLDG DIM
8	09/07/2017	MJH	REVISED WET WELL DEPTH FROM 19'-0" TO 25'-0"
7	07/14/2017	MJH	REVISED WET WELL DEPTH FROM 12'-0" TO 19'-0"
6	03/29/2017	MJH	ADDED 20" SPOOL PIECE FOR MAGNATION UNIT
5	03/24/2017	MJH	REVISED DROP PIPE TERMINATION TO 16" FL
4	03/23/2017	MJH	ADD 3KVA REGULATED POWER SUPPLY
3	03/02/2017	MJH	DELETED FERTIGATION, 3KVA REGULATED AND RELOCATED 2" O LET TO TOP
2	02/08/2017	MJH	LOCATED 34" TOL, ADDING 2" & 3" TOL TO OTHER SIDE OF THE PIPE
1	10/10/2016	MJH	REVISED WET WELL DEPTH TO 12'-0" & ADDING 2" TOL
NO	DATE	BY	DESCRIPTION

DRAWN BY: MJH DATE: 09/15/2016
CHECKED BY: RJLS DATE: 08/07/17
TITLE: FLYING HORSE RANCH
VTV-1-75x3(75)/5ST-480-3-2250(3000)-110
SCALE: NTS SHEET 4 OF 4 SHEETS
JOB NO.: DRAWING NO. PRVT12023

Job Name: Flying Horse Ranch Wet Well
Frontier Environmental

Structure ID: Wet Well
Size: 96"
Rim to Invert: 24'
Precast Height: 25'
Step Position:

1) 96" FLAT TOP RISER - 96BXG60
1) 96" RISER - 96TXG48
2) 96" RISER - 96TXG72
1) 96" PBU - 96PBU48
2) KOR-N-SEAL - BOOT38

96" - FLAT TOP RISER - 96BXG60 - (P6)
96" - RISER - 96TXG48 - (P4)
96" - RISER - 96TXG72 - (P3)
96" - RISER - 96TXG72 - (P2)
96" - PBU - 96PBU48 - (P1)

Hole: 36" Hole: 36"
Flow Direction: OUT
Degree: 0 degree

Bottom of Hole - Left - Top of Floor

(P1) - 96" - PBU - 96PBU48

Oldcastle Precast / Mark H. 9/22/2017

Approved for production

Quote ID: 2017090089
Page: 1 of 1

NOTE: The invert elevation of the 30" PVC is not indicated on the detail drawing. To be confirmed by contractor.

Catch Depth to be confirmed by contractor

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MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND
PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE
1	REVISED PER STATE COMMENTS	4-2-18

REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, P.E. 37155

9/17/18
DATE

CLASSIC
CONSULTING
ENGINEERS & SURVEYORS

619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

FLYING HORSE NORTH
IRRIGATION RESERVOIR EMBANKMENT
PUMP STATION PLAN / DETAILS
DAM ID - 080459

DESIGNED BY MAW SCALE DATE 1-4-18
DRAWN BY MAW (H) 1"= N/A SHEET 3 OF 14
CHECKED BY (V) 1"= N/A JOB NO. 1096.11

EPC 9/25/18

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ENGINEERS & SURVEYORS

N:\008611\DRAWINGS\CONSTRUCTION\Jurisdictional Plans\4-JD FOND - Site Grading.dwg, 8/27/2018 3:14:51 PM, 1:1

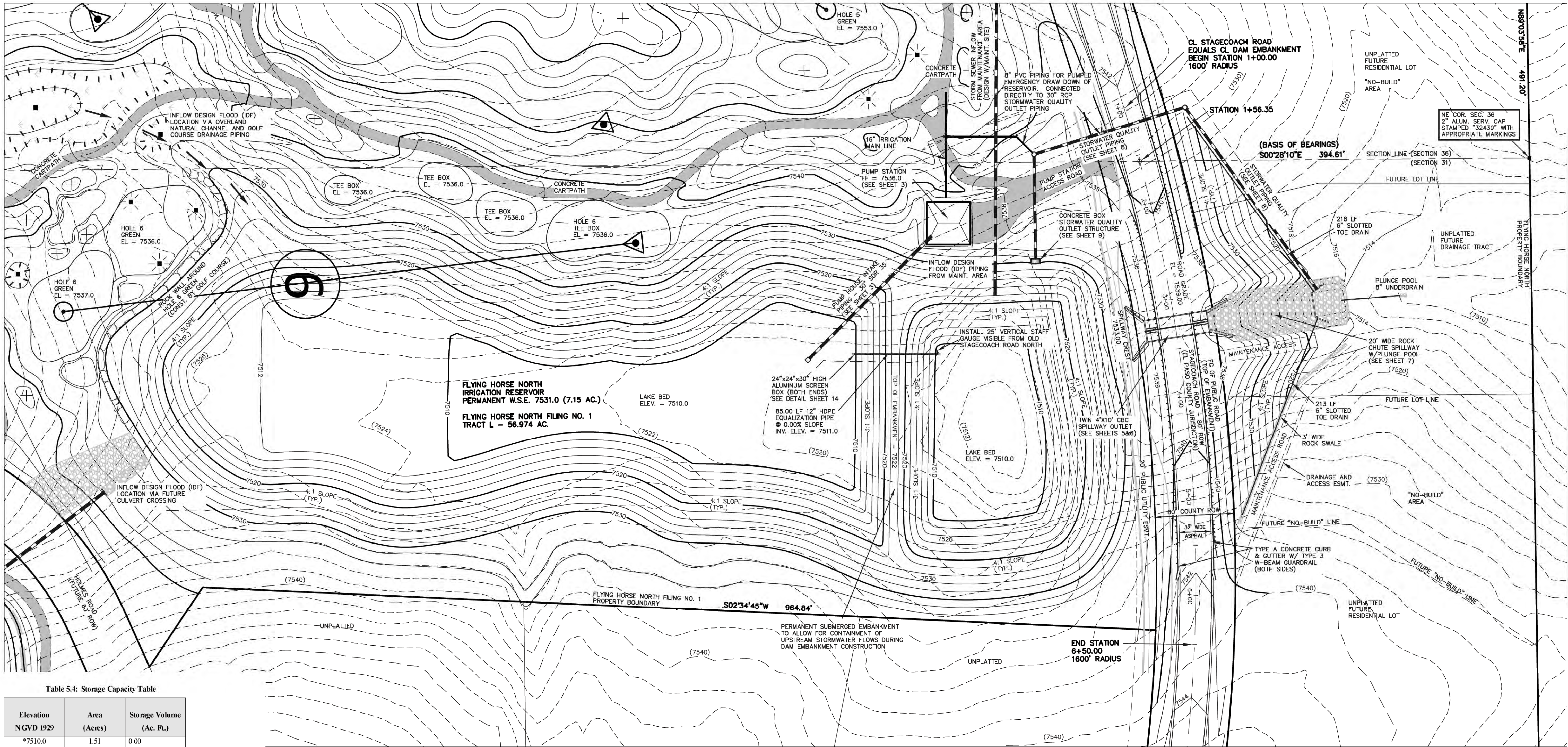


Table 5.4: Storage Capacity Table

Elevation NGVD 1929	Area (Acres)	Storage Volume (Ac. Ft.)
*7510.0	1.51	0.00
*7511.0	1.99	1.74
*7512.0	2.52	3.99
*7513.0	2.85	6.68
*7514.0	3.05	9.63
*7515.0	3.26	12.78
7516.0	3.48	16.15
7517.0	3.70	19.74
7518.0	3.93	23.56
7519.0	4.16	27.60
7520.0	4.40	31.88
7521.0	4.64	36.40
7522.0	4.88	41.16
7523.0	5.14	46.17
7524.0	5.36	51.42
7525.0	5.59	56.89
7526.0	5.84	62.61
7527.0	6.08	68.57
7528.0	6.33	74.77
7529.0	6.57	81.22
7530.0	6.81	87.91
7531.0	7.15	94.89
7532.0	7.52	102.22
7533.0	7.83	109.90
7534.0	8.37	118.00
7535.0	8.77	126.57
7536.0	9.17	135.53

*Indicates dead storage below pumping ability

Table 5.5: Reservoir Discharge Table

Elevation	Discharge (cfs) (SWQ Outlet Box)	Discharge (cfs) (Twin CBC Spillway)	Discharge (cfs) (Total)
7531.0	0.0	0.0	0.0
7532.0	13.89	0.0	13.89
7533.0	27.77	0.0	27.77
7534.0	51.31	49.05	100.36
7535.0	69.52	138.56	208.08
7536.0	74.61	254.72	329.33

Permanent WSE = 7531.0

Top of SWQ Outlet box = 7533.0

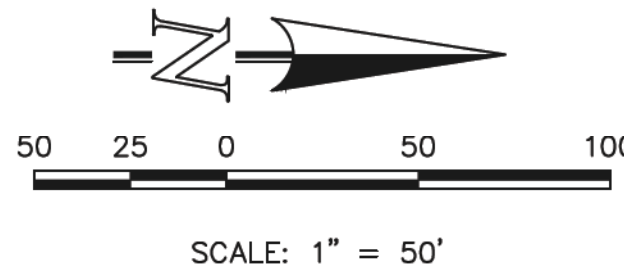
Spillway elevation = 7533.0

NOTES:

- TOPOGRAPHIC BASE MAPPING PRODUCED FROM AERIAL PHOTOGRAPHY PROVIDED BY NORTH AMERICAN MAPPING IN 2009. HORIZONTAL CONTROL IS BASED ON LOCAL CALIBRATION TIED TO SECTION CORNER AND VERTICAL CONTROL IS BASED ON NGVD 1929 DATUM.
- PERMANENT WSE = 7531.0
- RESERVOIR LINER INSTALLED UP TO ELEVATION 7534.0

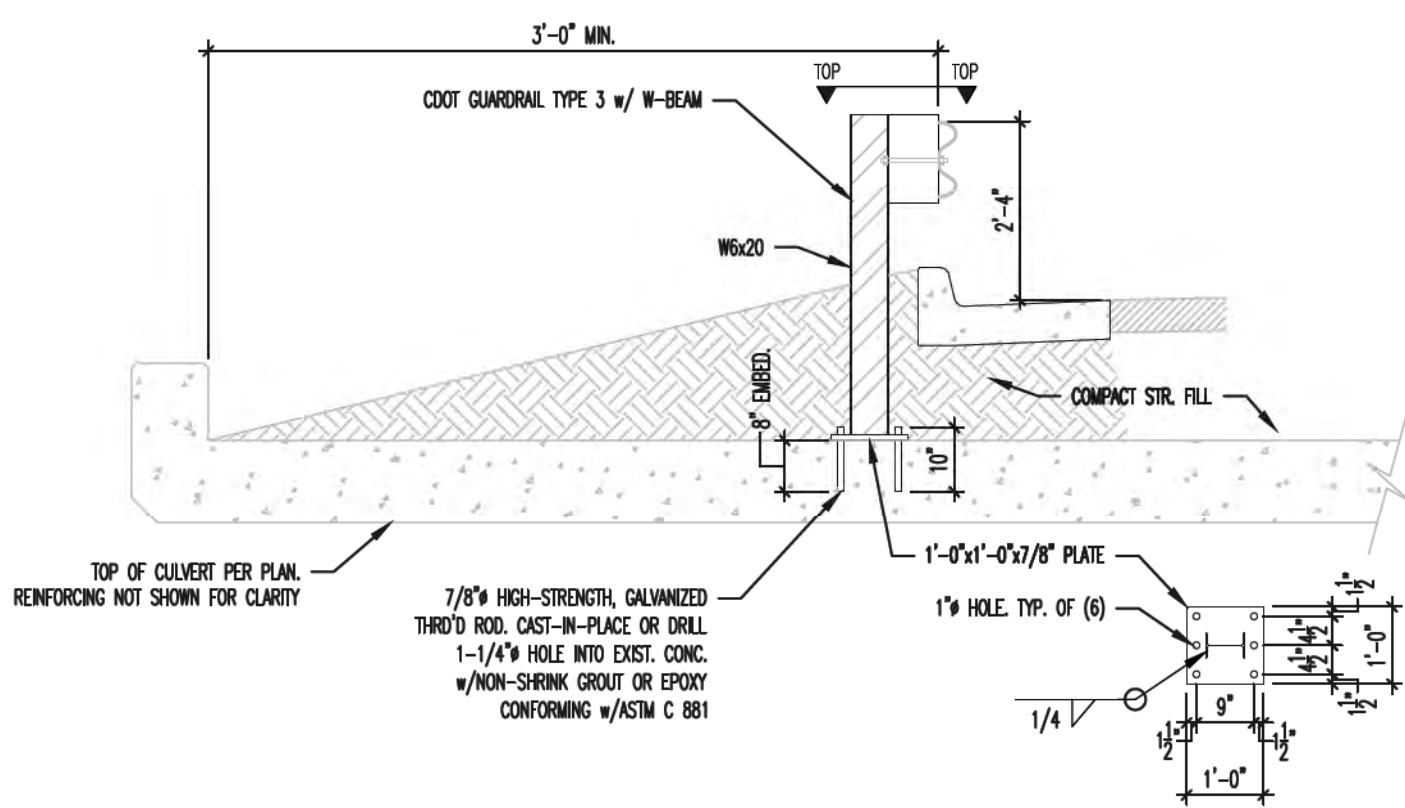
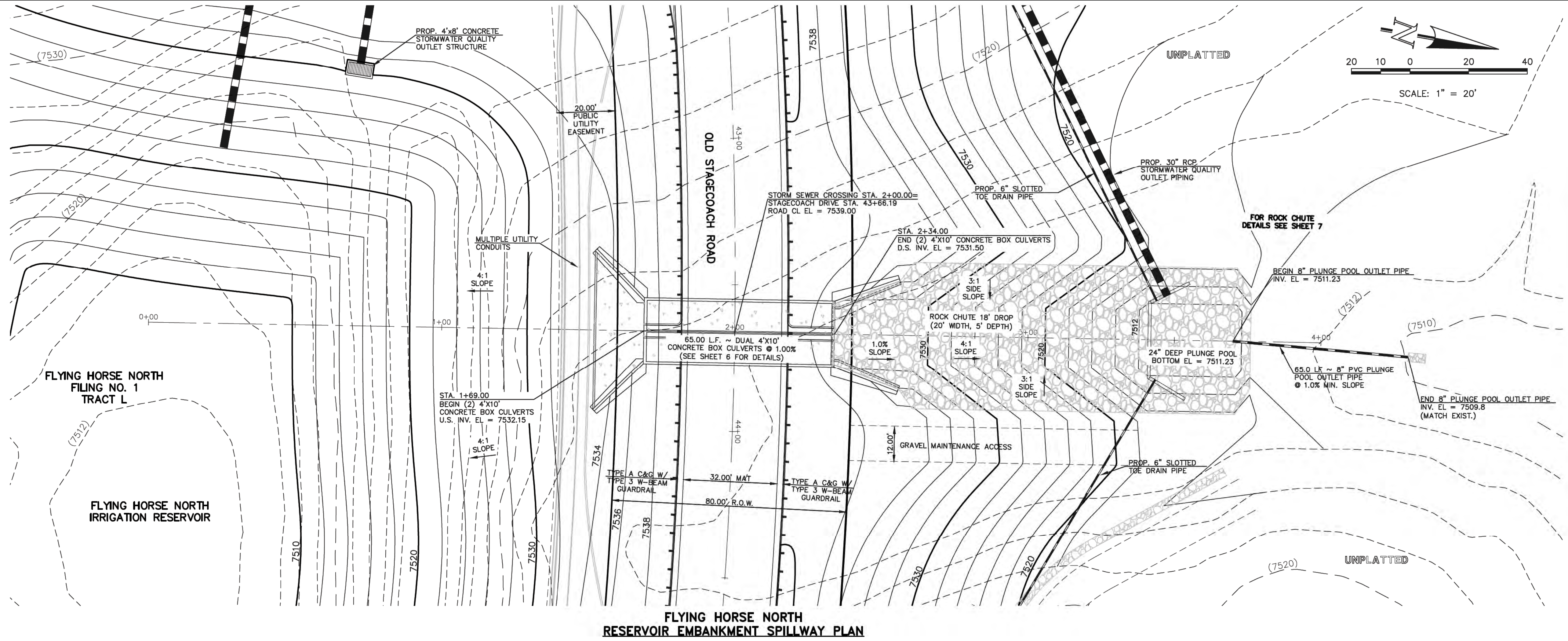
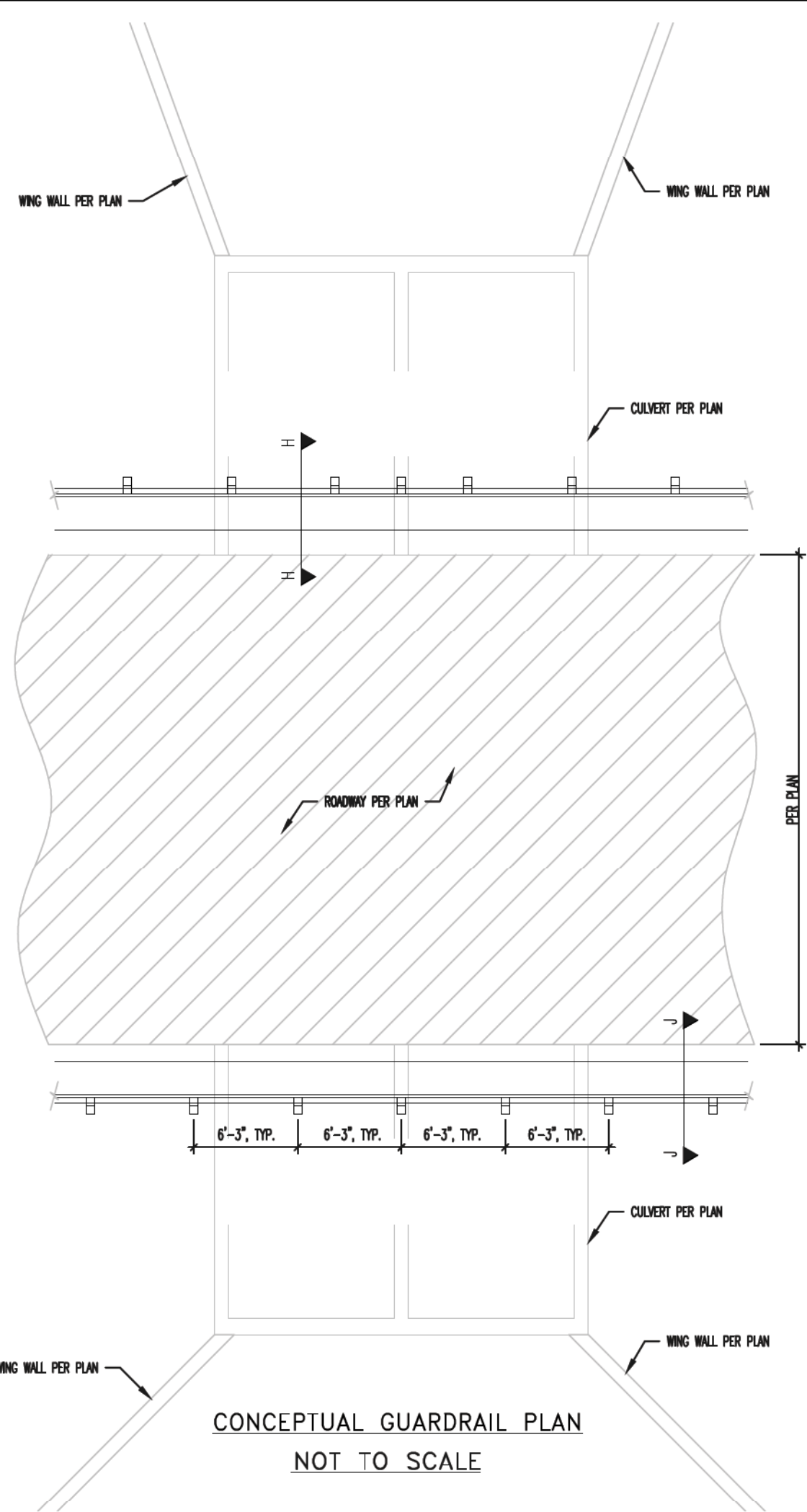
STAFF GAUGE DETAILS:

- 12"x25"x1/2" PVC
- LASER CUT ACRYLIC NUMBERS AND HATCH MARKS LIQUID WELDED TO PVC ON 1 FT. INCREMENTS
- MOUNTED ON ALUMINUM FRAME WITH CROSS BRACKETS ANCHORED INTO SLOPE
- BASE FASTENED TO 12" PIPE
- ELEVATION DISPLAY RANGE: 7512-7535

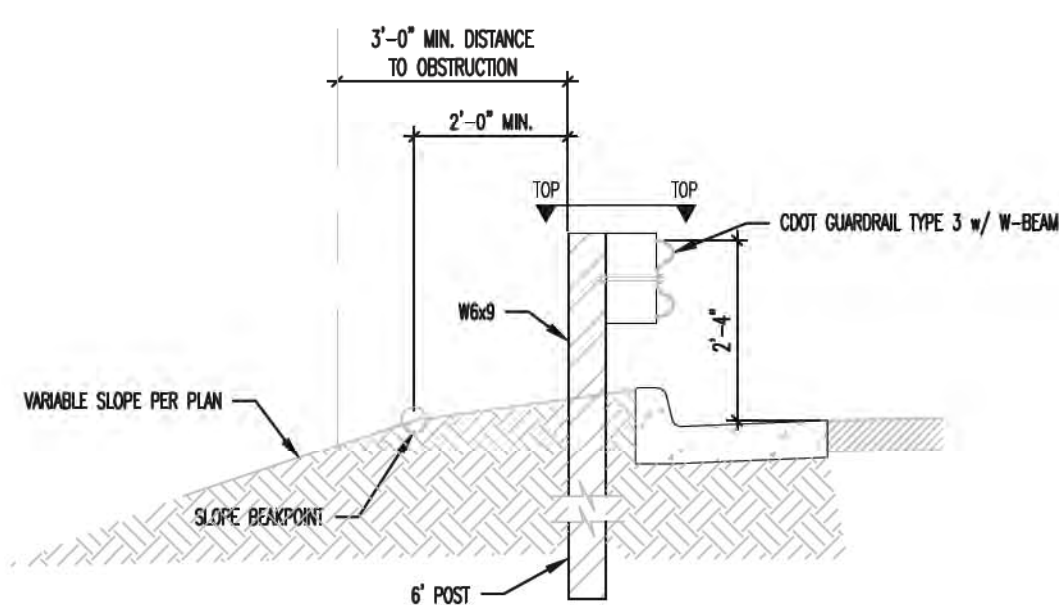


STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

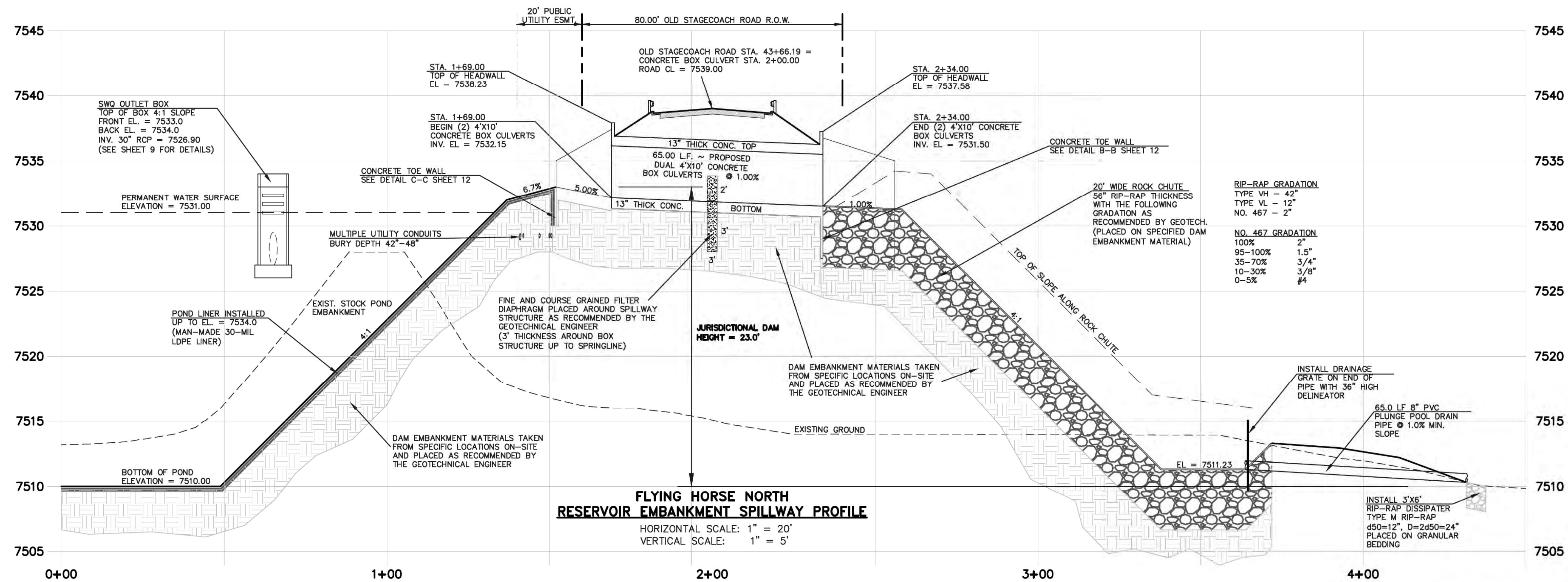
48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW <small>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</small>		NO. REVISION 1 REVISED PER STATE COMMENTS 2 REVISED PER COUNTY COMMENTS	DATE 5-14-18 7-31-18	REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC MARC A. WHORTON, COLORADO P.E. #37155	9/17/18 DATE	 CLASSIC CONSULTING ENGINEERS & SURVEYORS 619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903 (719)785-0790 (719)785-0799(Fax)	FLYING HORSE NORTH IRRIGATION RESERVOIR EMBANKMENT SITE LAYOUT WITH GRADING DAM ID - 080459 EPC 9/25/18 DESIGNED BY MAW DRAWN BY MAW CHECKED BY SCALE (H) 1"= 50' (V) 1"= N/A DATE 1-4-18 SHEET 4 OF 14 JOB NO. 1096.11
---	--	---	----------------------------	--	-----------------	---	---



H-H GUARDRAIL ATTACHMENT TO CULVERT
NOT TO SCALE



J-J TYPICAL GUARDRAIL DETAIL
NOT TO SCALE



FLYING HORSE NORTH
RESERVOIR EMBANKMENT SPILLWAY PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

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NO.	REVISION	DATE
1	REVISED PER STATE COMMENTS	4-2-18
2	REVISED PER COUNTY COMMENTS	7-31-18

REVIEW:
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CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON/COLORADO P.E. #37155
9/17/18
DATE

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ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

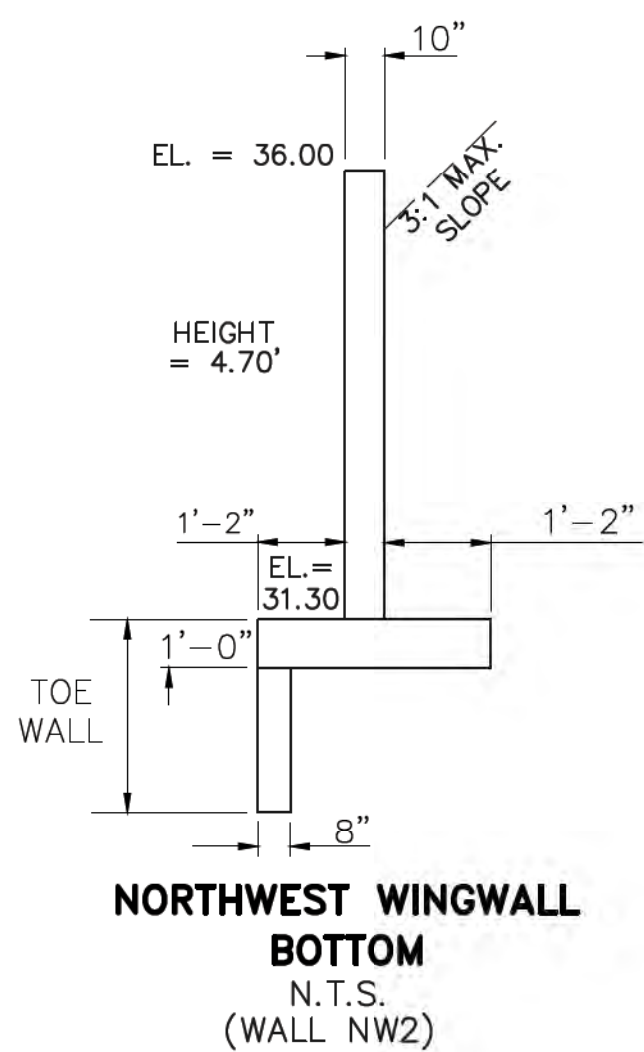
FLYING HORSE NORTH
IRRIGATION RESERVOIR EMBANKMENT
EMBANKMENT SPILLWAY PLAN
DAM ID - 080459

DESIGNED BY	MAW	SCALE	DATE	1-4-18
DRAWN BY	MAW	(H) 1" = 20'	SHEET	5 OF 14
CHECKED BY	(V) 1" = 5'	JOB NO.	1096.11	

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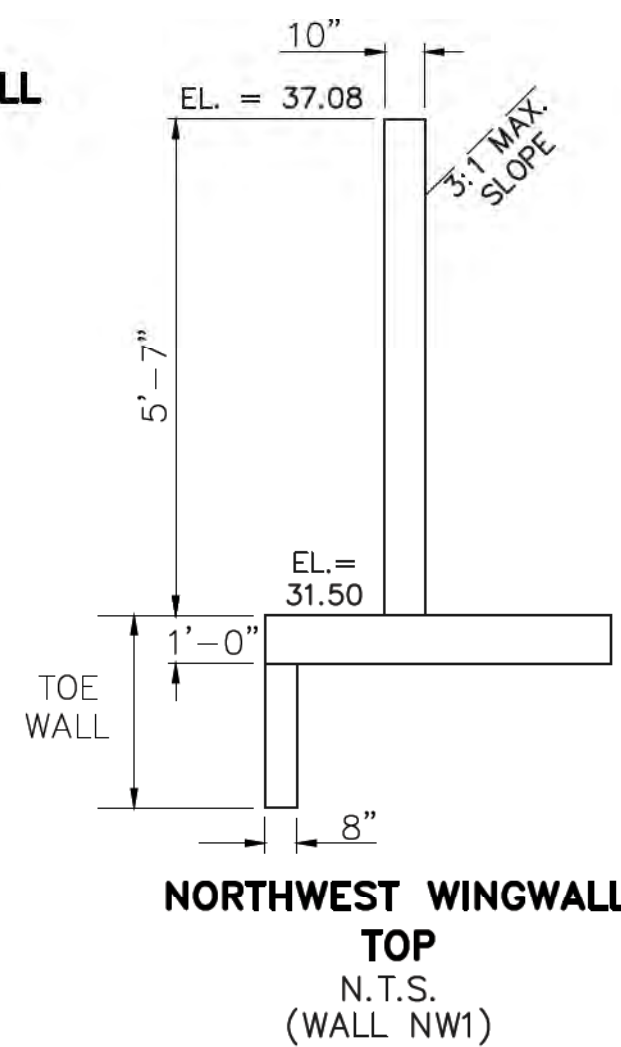
STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

EPC 9/25/18

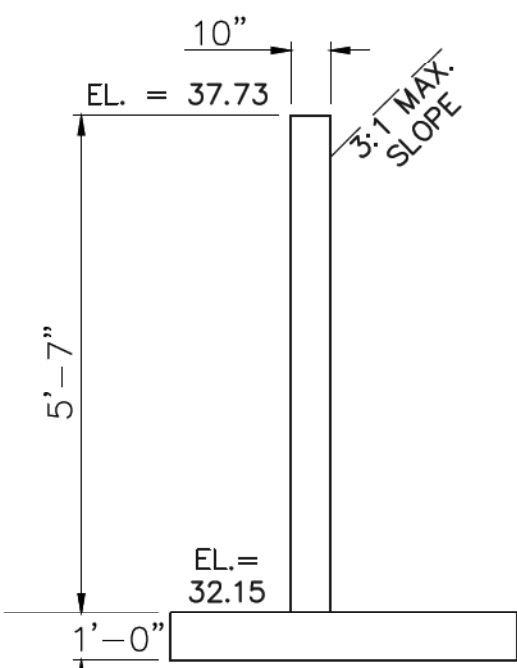


NORTHWEST WINGWALLS
CBC INV. EL = 7531.50
EL AT TOP OF CBC = 7537.58

FOR WINGWALL STRUCTURAL DETAILS
SEE DETAIL E-E SHEET 13



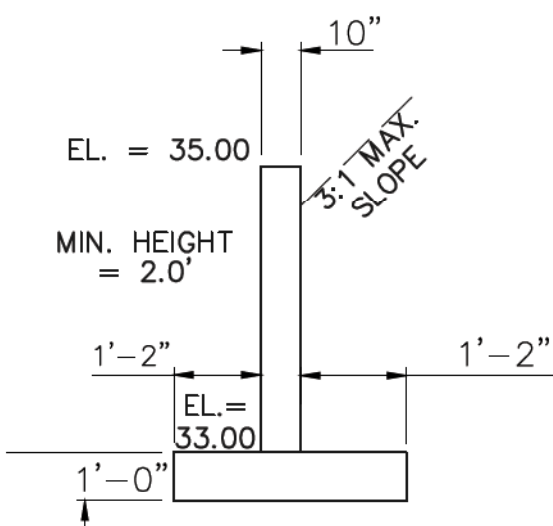
**NORTHWEST WINGWALL
TOP**
N.T.S.
(WALL NW1)



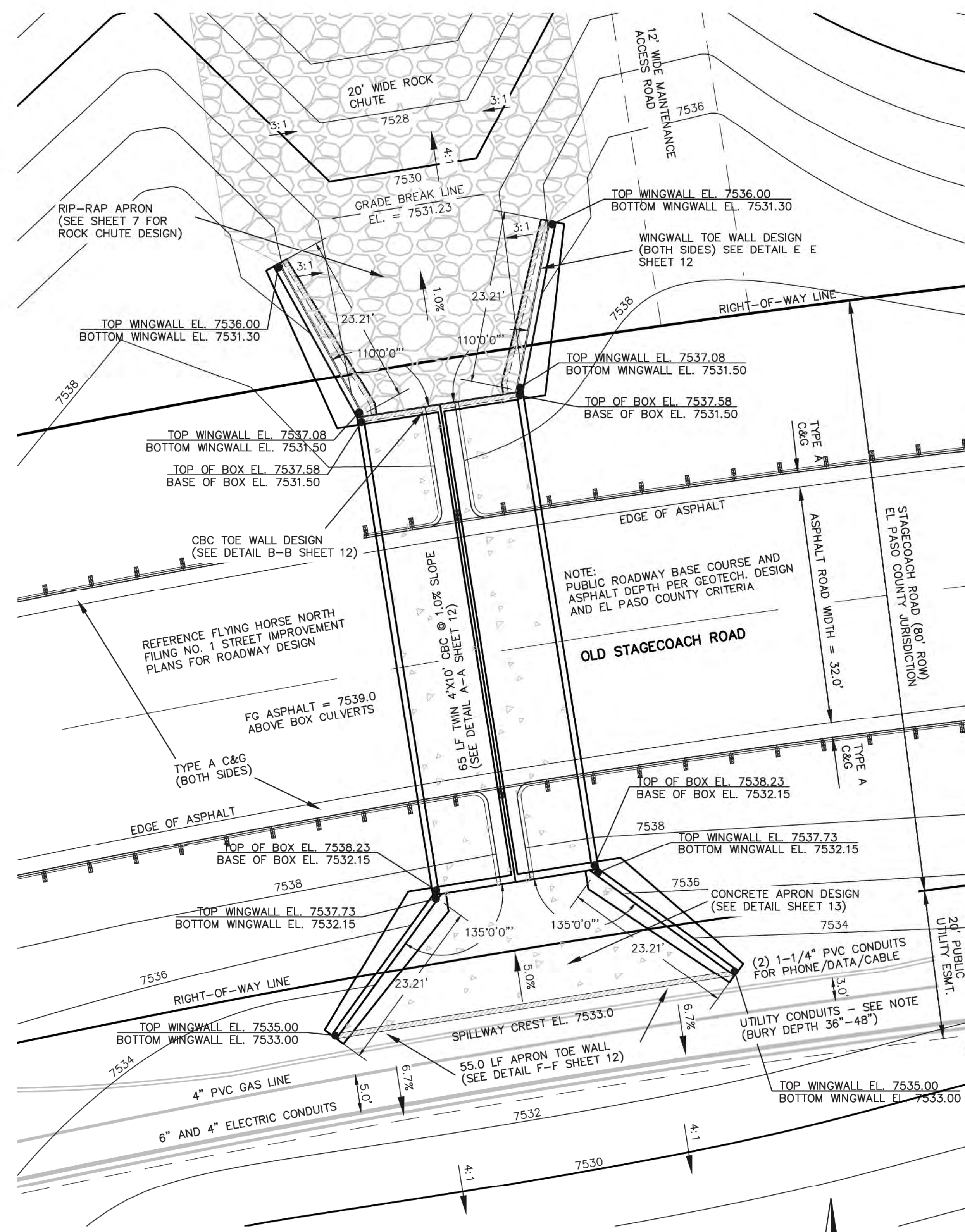
**SOUTHWEST WINGWALL
TOP**
N.T.S.
(WALL SW1)

SOUTHWEST WINGWALLS
CBC INV. EL = 7532.15
EL AT TOP OF CBC = 7538.23

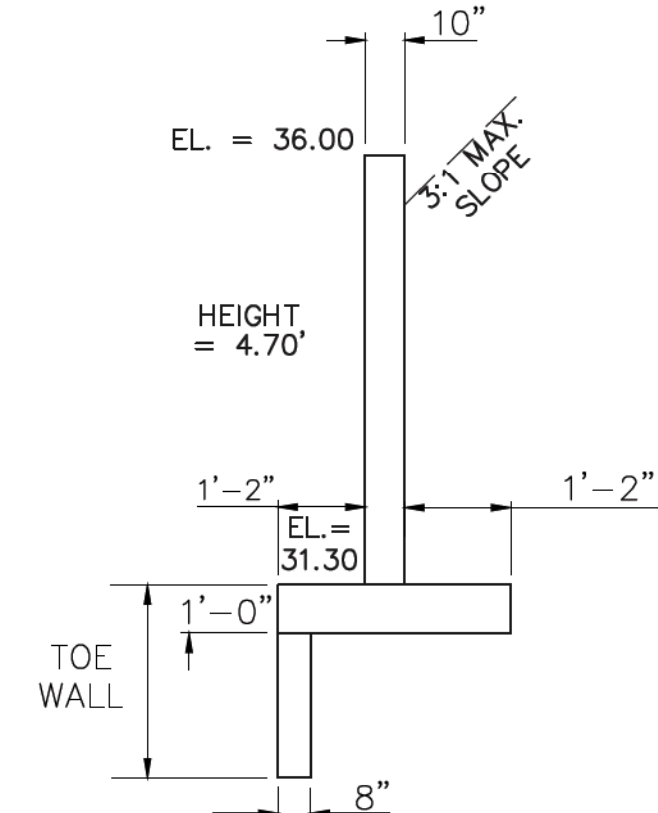
FOR WINGWALL STRUCTURAL DETAILS
SEE DETAIL D-D SHEET 13



**SOUTHWEST WINGWALL
BOTTOM**
N.T.S.
(WALL SW2)



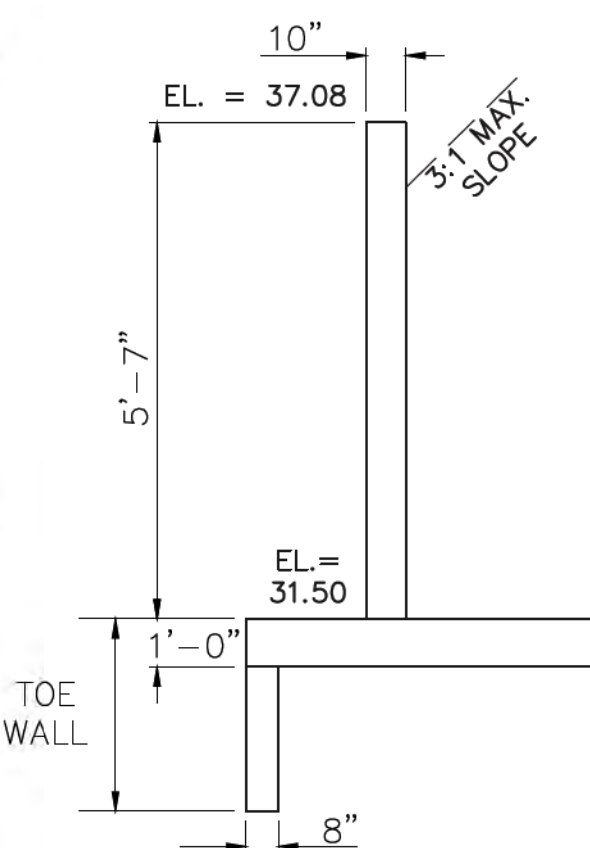
EMBANKMENT SPILLWAY DESIGN



**NORTHEAST WINGWALL
BOTTOM**
N.T.S.
(WALL NE2)

NORTHEAST WINGWALLS
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EL AT TOP OF CBC = 7537.58

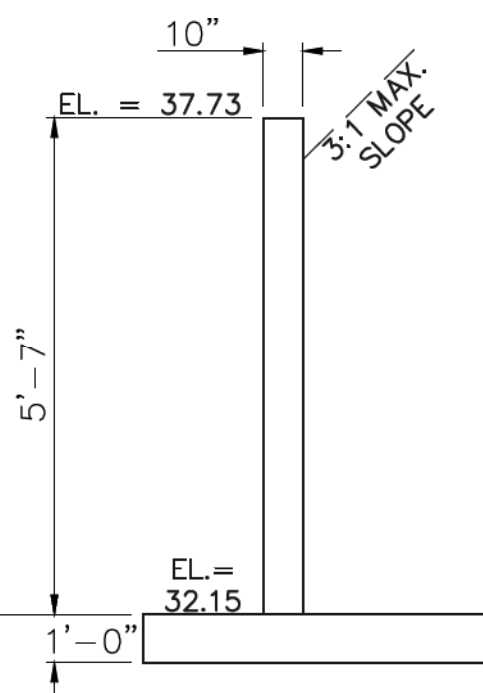
FOR WINGWALL STRUCTURAL DETAILS
SEE DETAIL E-E SHEET 13



**NORTHEAST WINGWALL
TOP**
N.T.S.
(WALL NE1)

UTILITY CONDUIT NOTE:
BURIED CONDUITS WITHIN THE 20' PUBLIC UTILITY ESMT.
INCLUDE THE FOLLOWING:

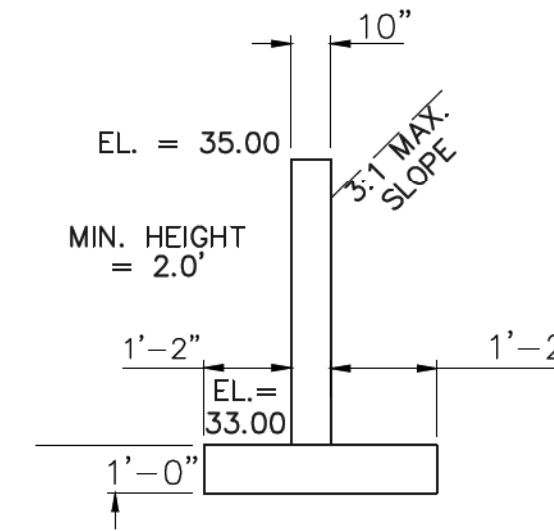
- (1) 6" SCHEDULE 40 PVC FOR 3 PHASE ELECTRIC
- (1) 4" PVC FOR SINGLE PHASE ELECTRIC
- (1) 4" PVC NATURAL GAS LINE
- (2) 1-1/4" PVC CONDUIT FOR PHONE/DATA/CABLE



**SOUTHEAST WINGWALL
TOP**
N.T.S.
(WALL SE1)

SOUTHEAST WINGWALLS
CBC INV. IN EL = 7532.15
EL AT TOP OF CBC = 7538.23

FOR WINGWALL STRUCTURAL DETAILS
SEE DETAIL D-D SHEET 13



**SOUTHEAST WINGWALL
BOTTOM**
N.T.S.
(WALL SE2)

STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

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NO.	REVISION	DATE
1	REVISED PER STATE COMMENTS	5-2-18

REVIEW:	DATE: 9/17/18
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC	
MARC A. WILSON, COLORADO P.E. #37155	

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CONSULTING
ENGINEERS & SURVEYORS

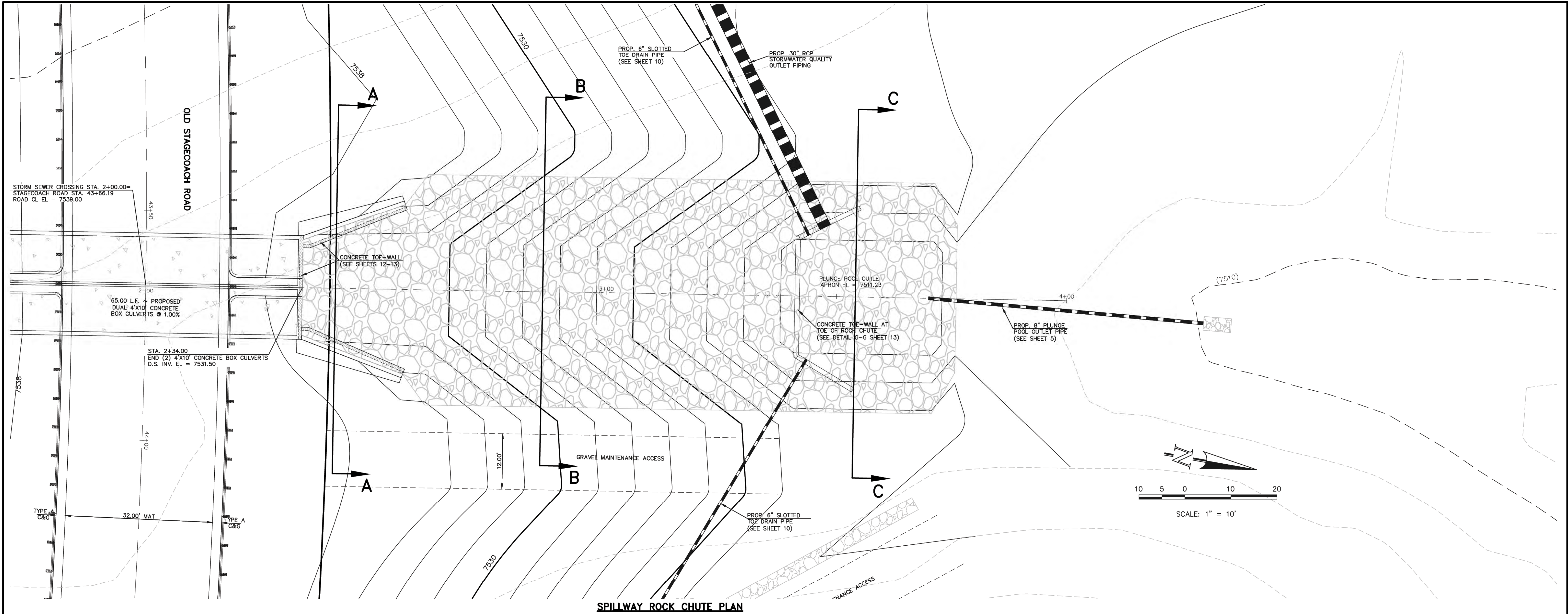
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903

(719) 785-0790
(719) 785-0799 (Fax)

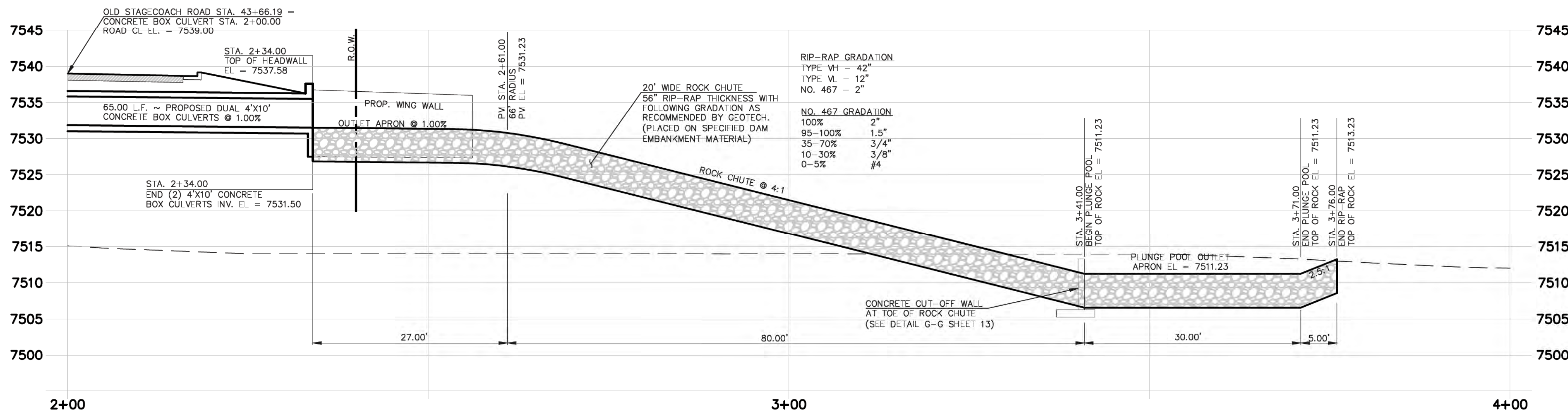
FLYING HORSE NORTH IRRIGATION RESERVOIR EMBANKMENT			
EMBANKMENT SPILLWAY DETAILS DAM ID - 080459			
DESIGNED BY	MAW	SCALE	DATE 1-4-18
DRAWN BY	MAW	(H) 1" = 20'	SHEET 6 OF 14
CHECKED BY		(V) 1" = N/A	JOB NO. 1096.11



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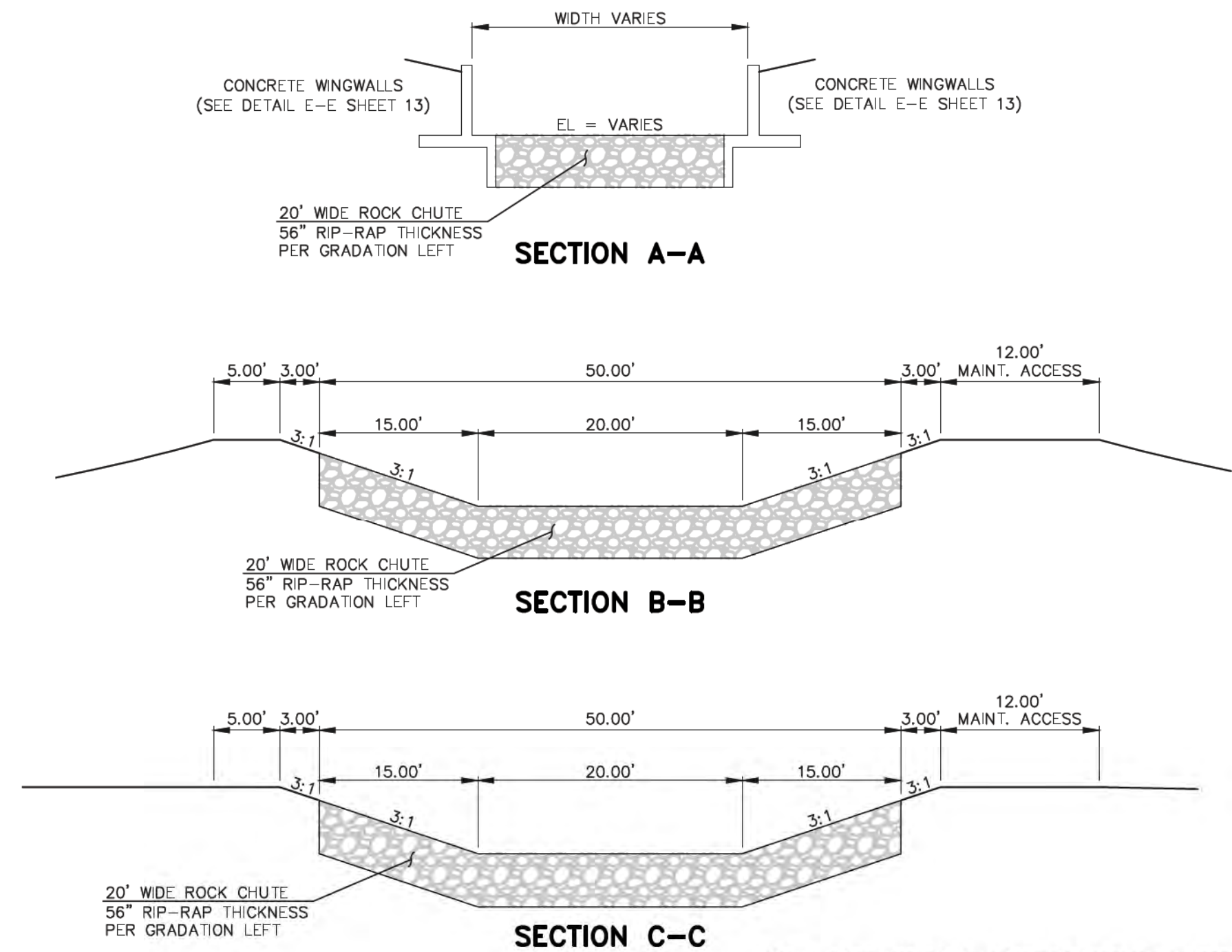


SPILLWAY ROCK CHUTE PLAN



SPILLWAY ROCK CHUTE PROFILE

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 1'



STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

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NO.	REVISION	DATE
1	REVISED PER STATE COMMENTS	5-4-18

REVIEW:

PREPARED UNDER DIRECT SUPERVISION FOR AND ON BEHALF OF
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHITTON, COLORADO P.E. #37155

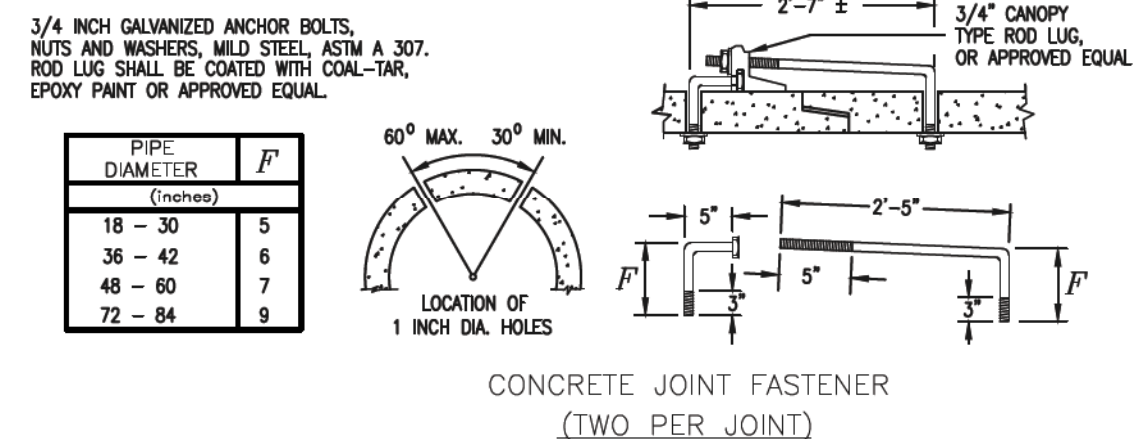
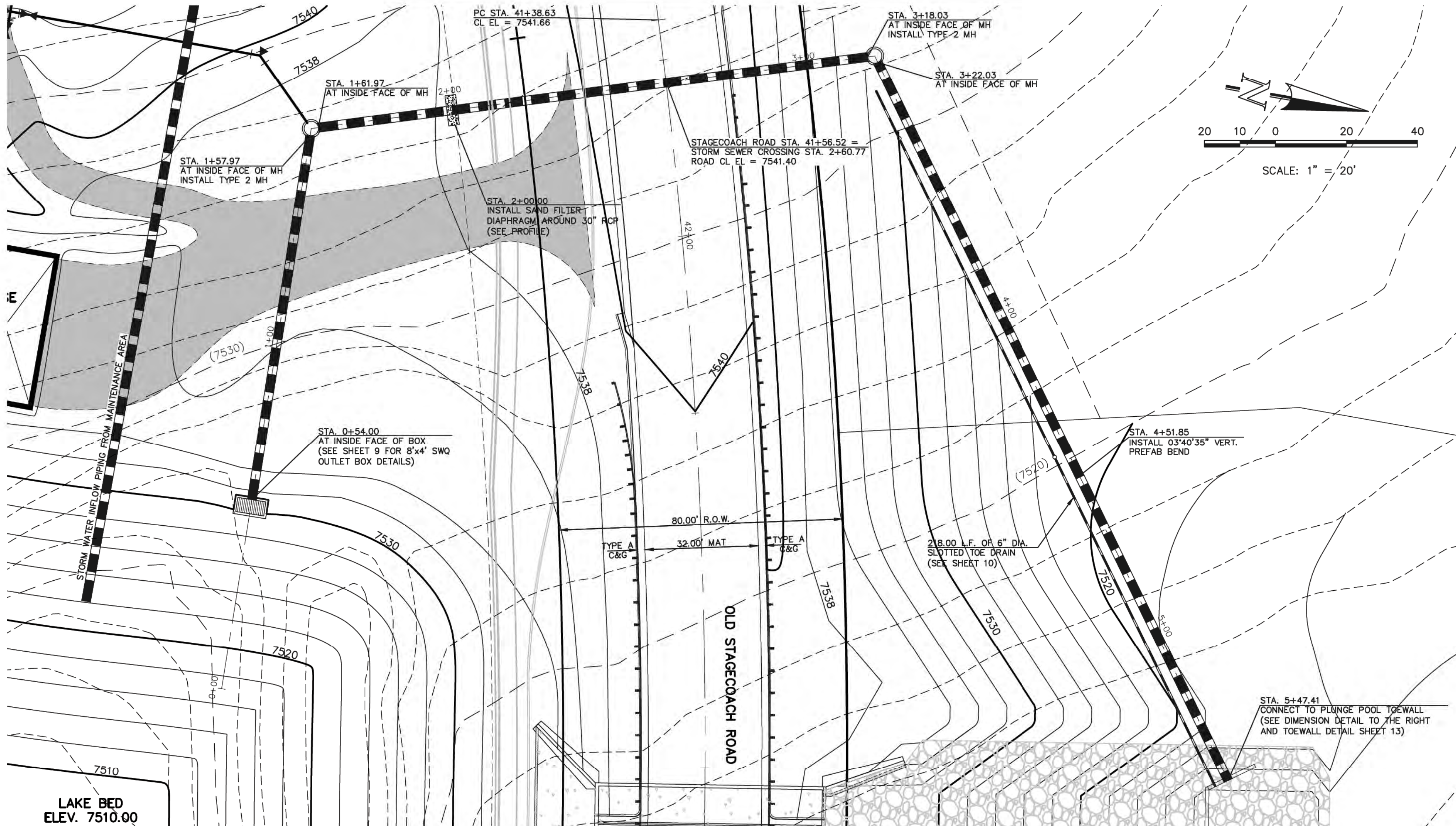
9/17/18
DATE

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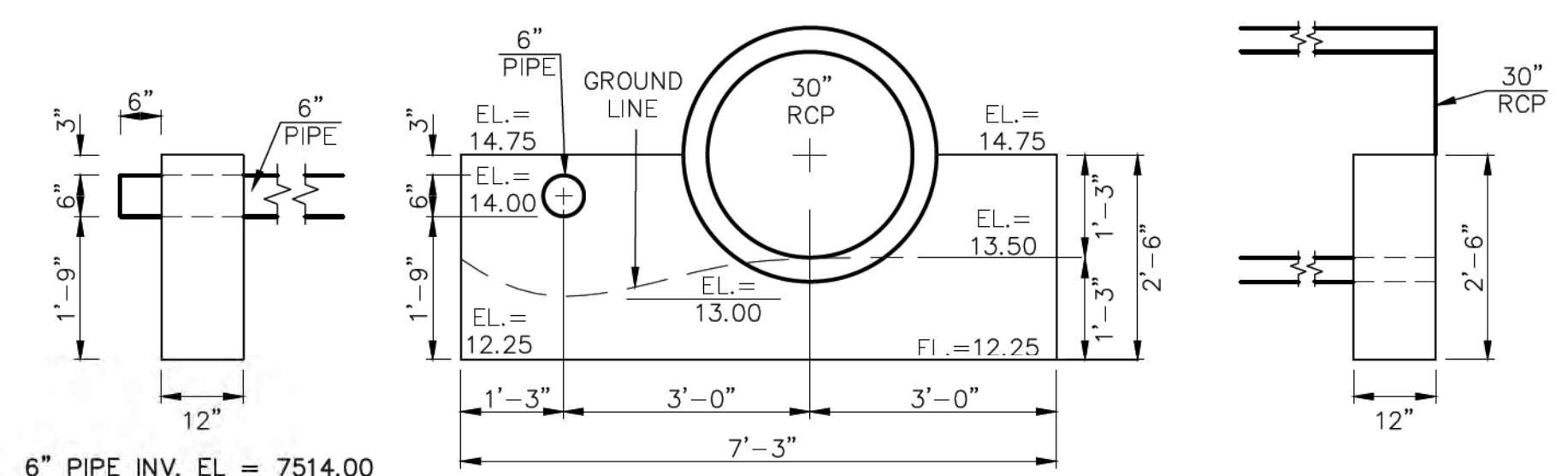
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Colorado Springs, Colorado 80903
(719)785-0790
(719)785-0799(Fax)

FLYING HORSE NORTH
IRRIGATION RESERVOIR EMBANKMENT
SPILLWAY ROCK CHUTE DESIGN
DAM ID - 080459

DESIGNED BY	MAW	SCALE	DATE	1-4-18
DRAWN BY	MAW	(H) 1" = 10'	SHEET	7 OF 14
CHECKED BY		(V) 1" = 1'	JOB NO.	1096.11



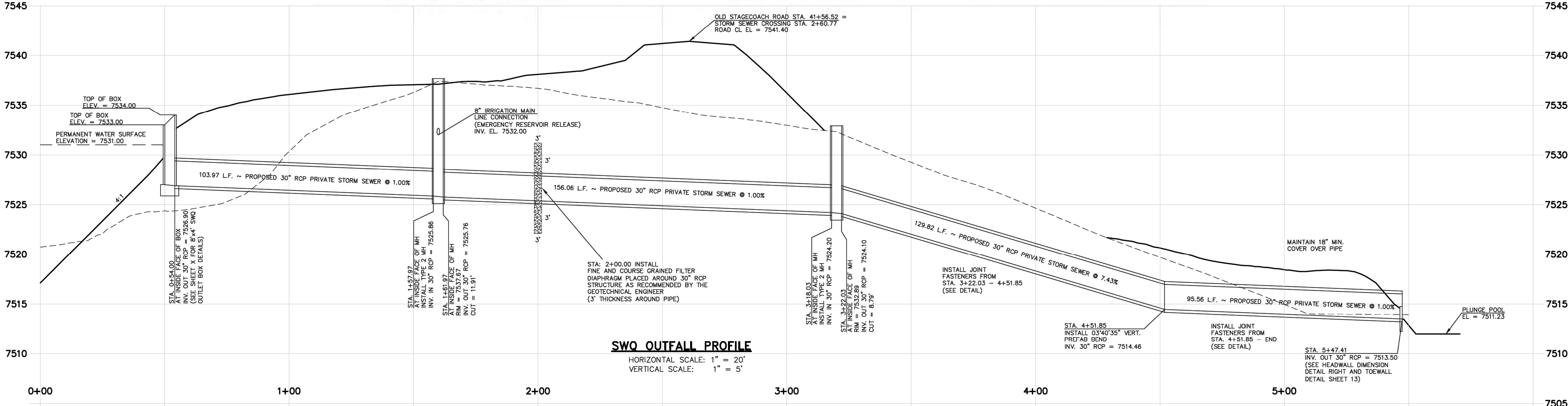
CONCRETE JOINT FASTENER
(TWO PER JOINT)



WESTERLY OUTLET HEADWALL

6" PIPE INV. OUT EL = 7514.00
30" RCP INV. OUT EL = 7513.50
EL AT TOP OF SADDLEWALL = 7514.75
EL AT BOTTOM SADDLEWALL = 7512.25

SWQ OUTFALL PLAN



SWQ OUTFALL PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

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NO.	REVISION	DATE
1	REVISED PER STATE COMMENTS	5-8-18
2	REVISED PER COUNTY COMMENTS	7-31-18

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF:
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, "COLORADO" P.E. #37155

9/17/18

STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

FLYING HORSE NORTH
IRRIGATION RESERVOIR EMBANKMENT
SWQ OUTFALL PLAN & PROFILE
DAM ID - 080459

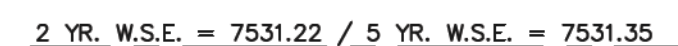
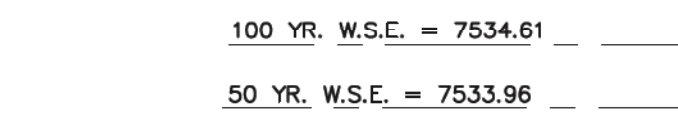
DESIGNED BY: MAW
DRAWN BY: MAW
CHECKED BY:

SCALE: (H) 1" = 20'
(V) 1" = 5'

DATE: 9/25/18
SHEET: 8 OF 14
JOB NO.: 1096.11

CLASSIC CONSULTING ENGINEERS & SURVEYORS
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719) 785-0790
(719) 785-0799 (Fax)

N:\090611\DRAWINGS\CONSTRUCTION\Jurisdictional Plans\8-JD FOND - SWQ BOX OUTFALL PLAN & PROFILE.dwg, 8/21/2018 12:59:34 PM, 1:1



SCALE: 1"=2'



SCALE: 1"=2'

- (ALL MATERIALS PER EL PASO COUNTY SPECIFICATIONS)
- ORIFICE PLATE NOTES:

1. INSTALL HOLES AS SHOWN ON DETAIL TO RIGHT.
2. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE

EURV AND WQCV TRASH RACKS:

3. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
4. BAR GRATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
5. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF RACK

OVERFLOW TRASH RACKS:

1. ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS
2. TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWER COATED AFTER GALVANIZING.
3. TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
4. STRUCTURAL DESIGN OF THE TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.



STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS

UTILITY NOTIFICATION OF COLORADO
IT'S THE LAW

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

37155

MARC A WHORTON, COLORADO P.E. #37155

9/17/18

DATE _____


CLASSICSM
CONSULTING
ENGINEERS & SURVEYORS

619 N. Cascade Avenue, Suite 200 (719)785-0790
Colorado Springs, Colorado 80903 (719)785-0799(Fax)

FLYING HORSE NORTH
IRRIGATION RESERVOIR EMBANKMENT

DAM ID - 080459

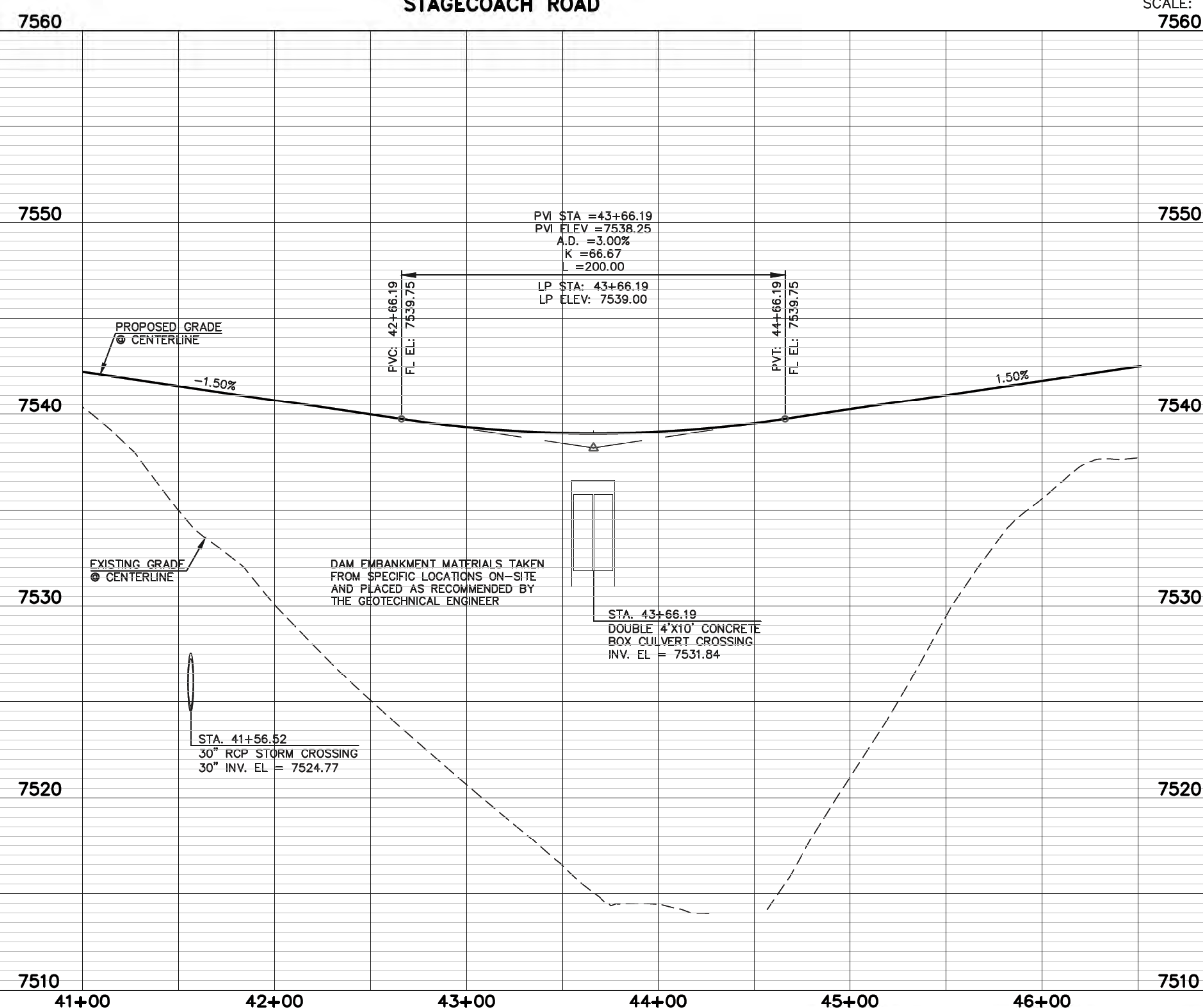
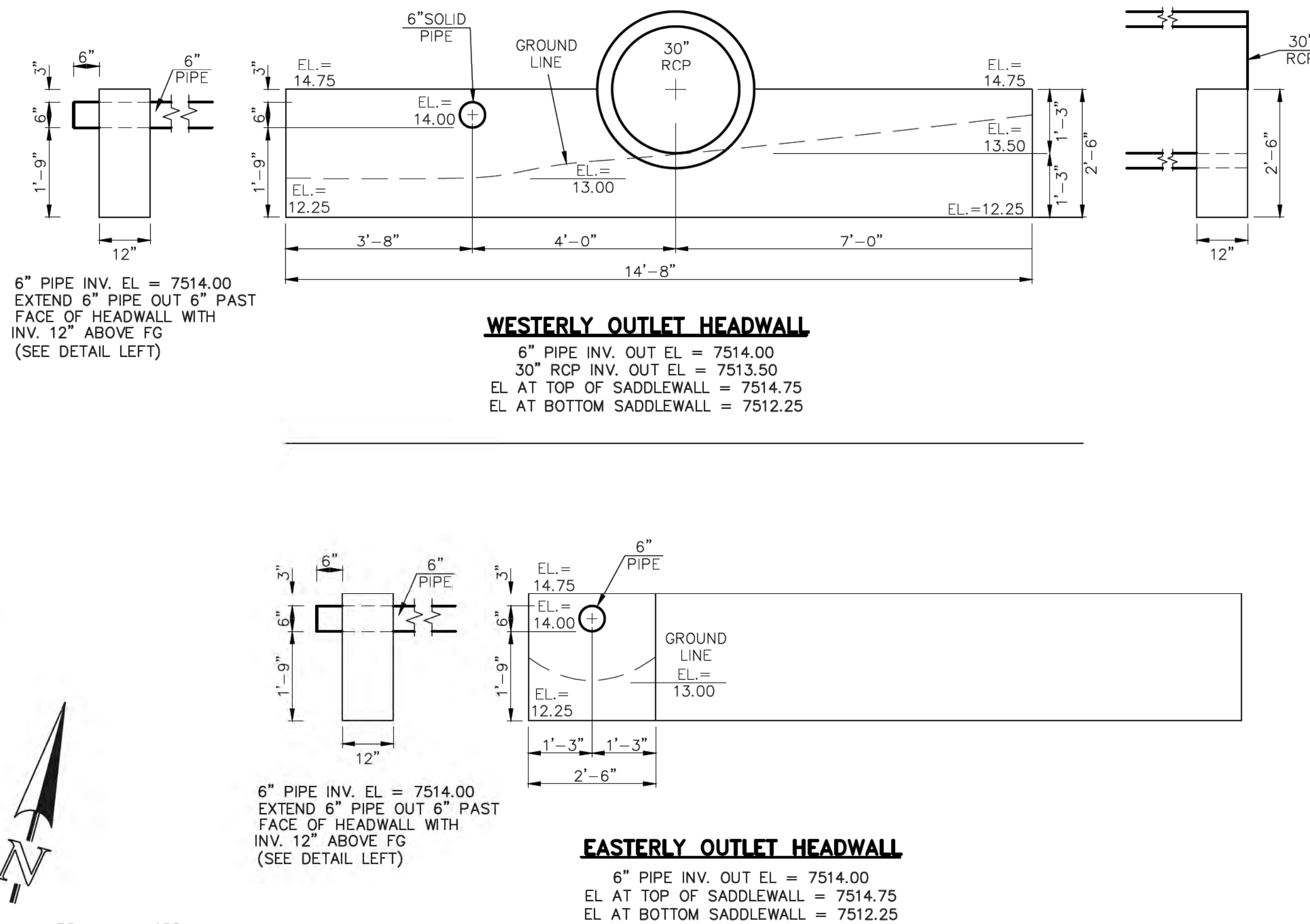
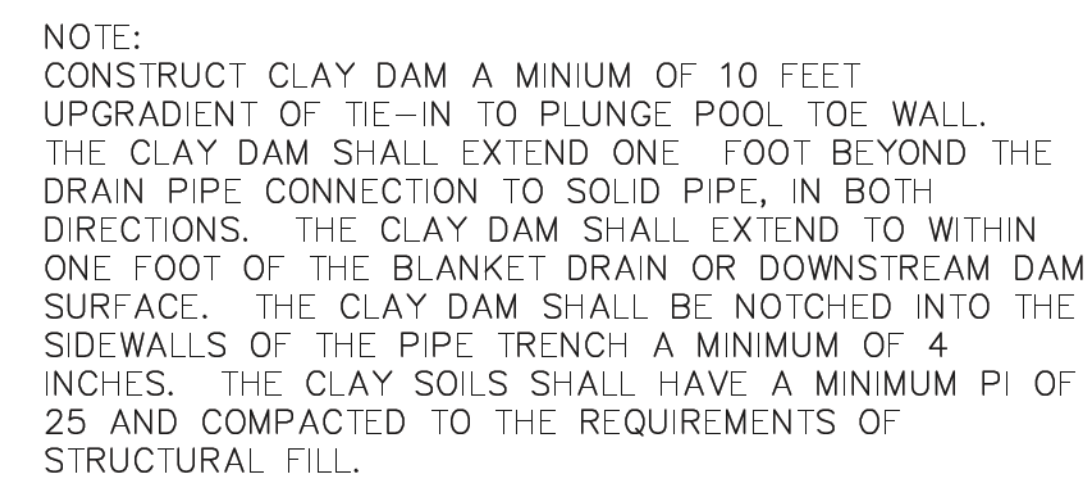
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EPC 9/25/18


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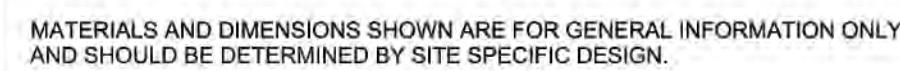
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NO.	REVISION	DATE
1	REVISED PER STATE COMMENTS	5-14-18
2	REVISED PER COUNTY COMMENTS	7-31-18


 9/17/18
 MARC A. WHORTON, COLORADO P.E. #37155 DATE

FLYING HORSE NORTH				
IRRIGATION RESERVOIR EMBANKMENT				
ROAD EMBANKMENT / TOE DRAIN DESIGN				
DAM ID - 080459				EPC 9/25/18
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DRAWN BY	MAW	(H) 1"= 50'	SHEET	01 OF 14
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Consolidated Divisions Inc.
5855 W. Airport Road
Sedalia, CO 80135
Phone: 303-471-1522
Fax: 303-470-3197

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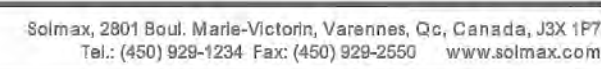
Consolidated Divisions Inc.
 5585 W. Airport Road
 Sedalia, CO 80135
 Phone: 303-471-1522
 Fax: 303-470-3197

Est. 1975





LINER ANCHOR TRENCH DETAIL



NOTES

1. Testing frequency based on standard rail dimensions and one batch is approximately 180,000 ft (or one railcar).
2. Machine Direction (MD) and Cross Machine Direction (MD or TD) average values should be on the basis of 5 specimens each direction.
3. Correlation table is available for ASTM D1792 vs ASTM D1505. Both methods are equally valid for the same results.
4. Correlation table is available for ASTM D1603 vs ASTM D4218 (MD/TH). Both methods give the same results.
5. The minimum average thickness is 10% of the nominal value.

* All values are nominal test results, except when specified as minimum or maximum.

* The information contained herein is provided for reference purposes only and is not intended as a warranty of guarantee. Final determination of suitability for use contemplated is the sole responsibility of the user. SOLMAX assumes no liability in connection with the use of this information.


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Revision Date : 2016-03-02

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REVIEW: _____

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF
CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

A circular professional engineer seal for the State of Colorado. The outer ring contains the text "COLORADO" at the top and "PROFESSIONAL ENGINEER" at the bottom. Inside the ring, the name "MARC A. WHORTON" is written in a semi-circle. In the center, the license number "37155" is displayed. The seal is stamped in blue ink.

MARC A. WHORTON, COLORADO P.E. #37155

9/17/18
DATE

STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

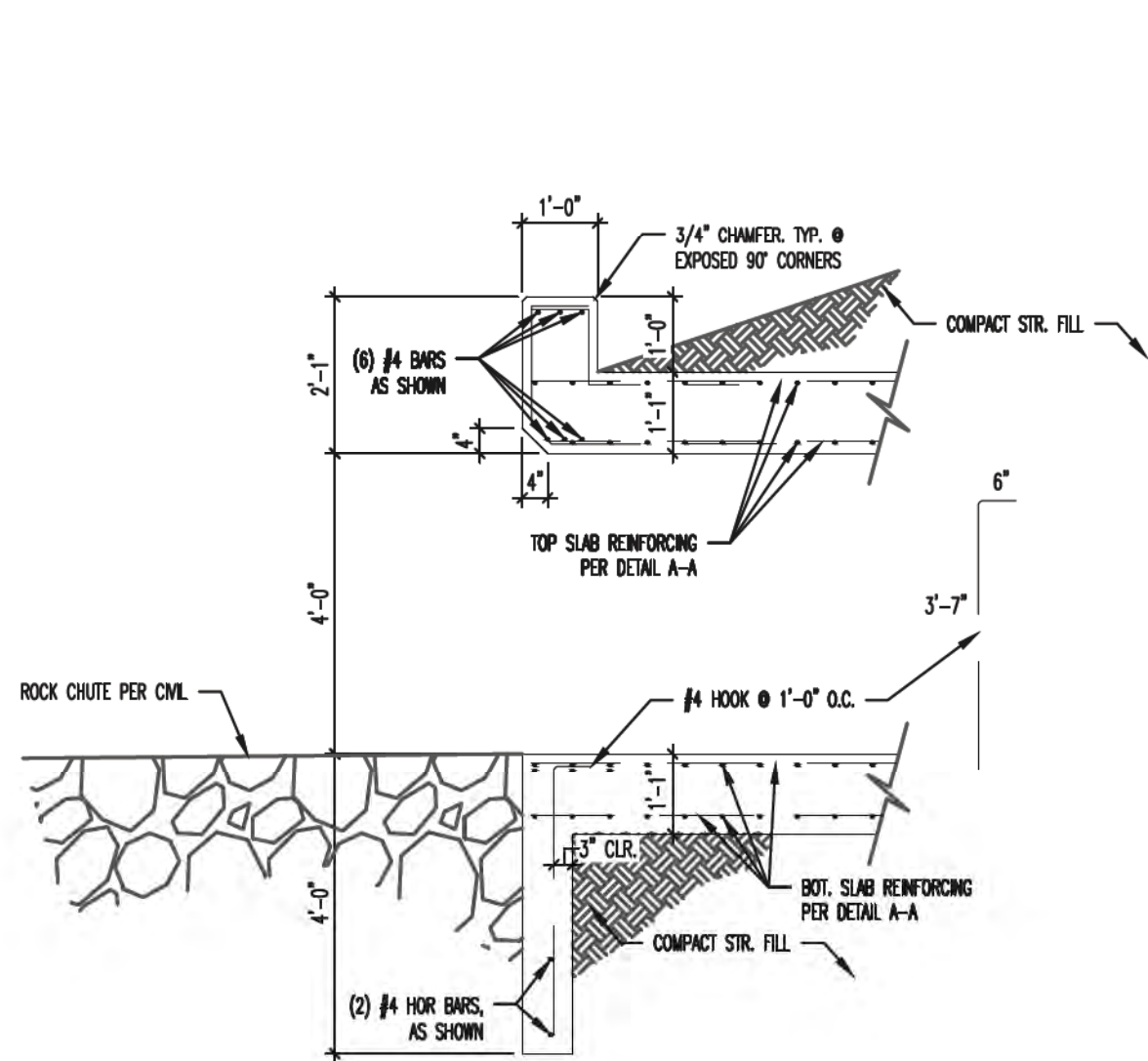
EPC 9/25/18

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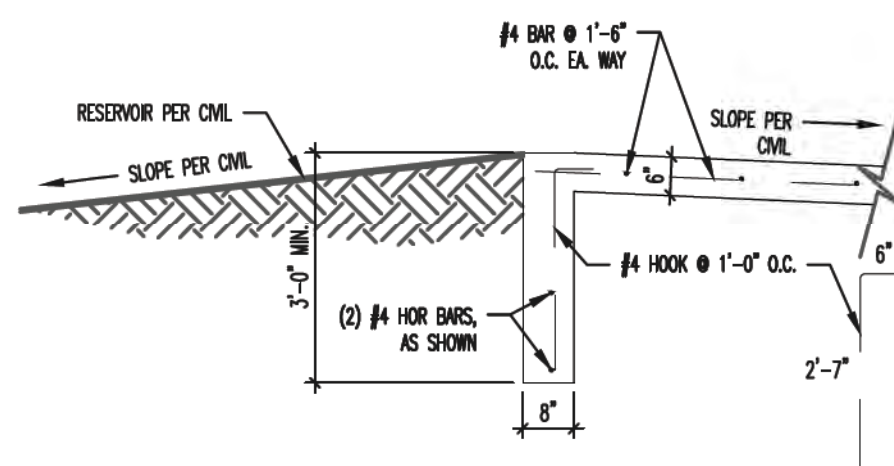
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Colorado Springs, Colorado 80903 (719)785-0799(Ea

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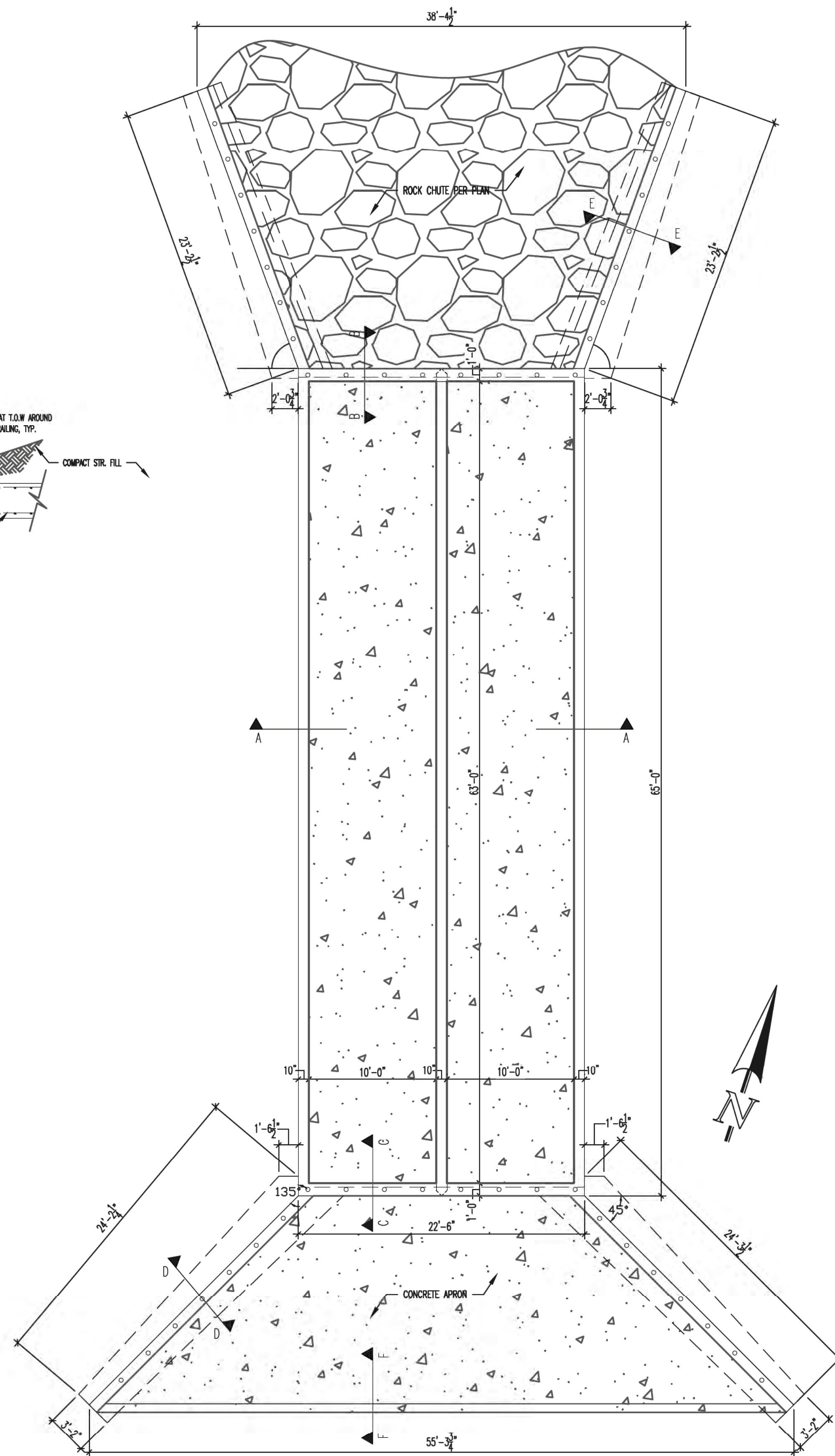
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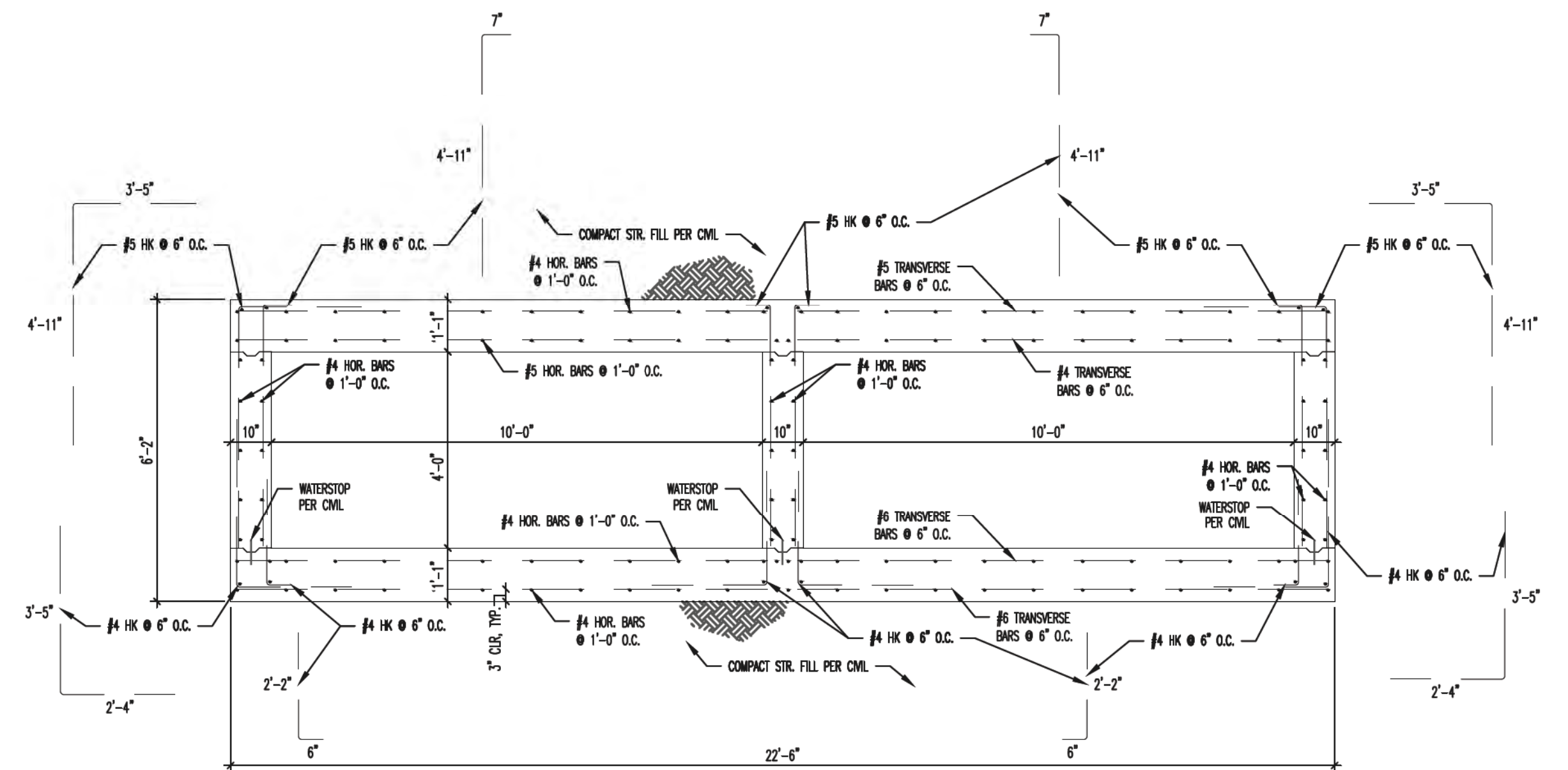
B-B DOUBLE BOX CULVERT
CROSS-SECTION AT OUTLET
NOT TO SCALE



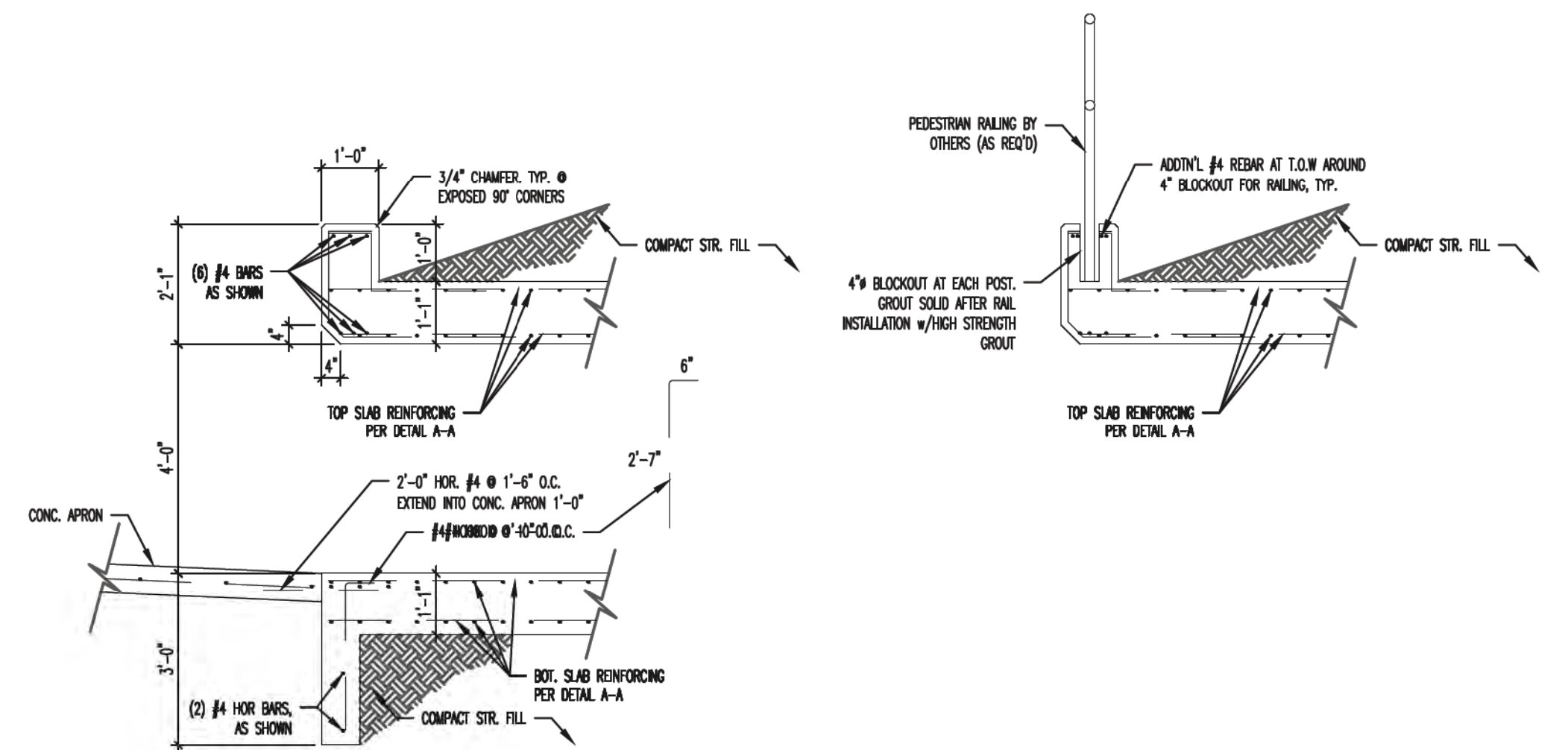
F-F CONCRETE APRON TOE WALL
AT INLET
NOT TO SCALE



DOUBLE BOX CULVERT PLAN
NOT TO SCALE





A-A DOUBLE BOX CULVERT
CROSS-SECTION
NOT TO SCALE

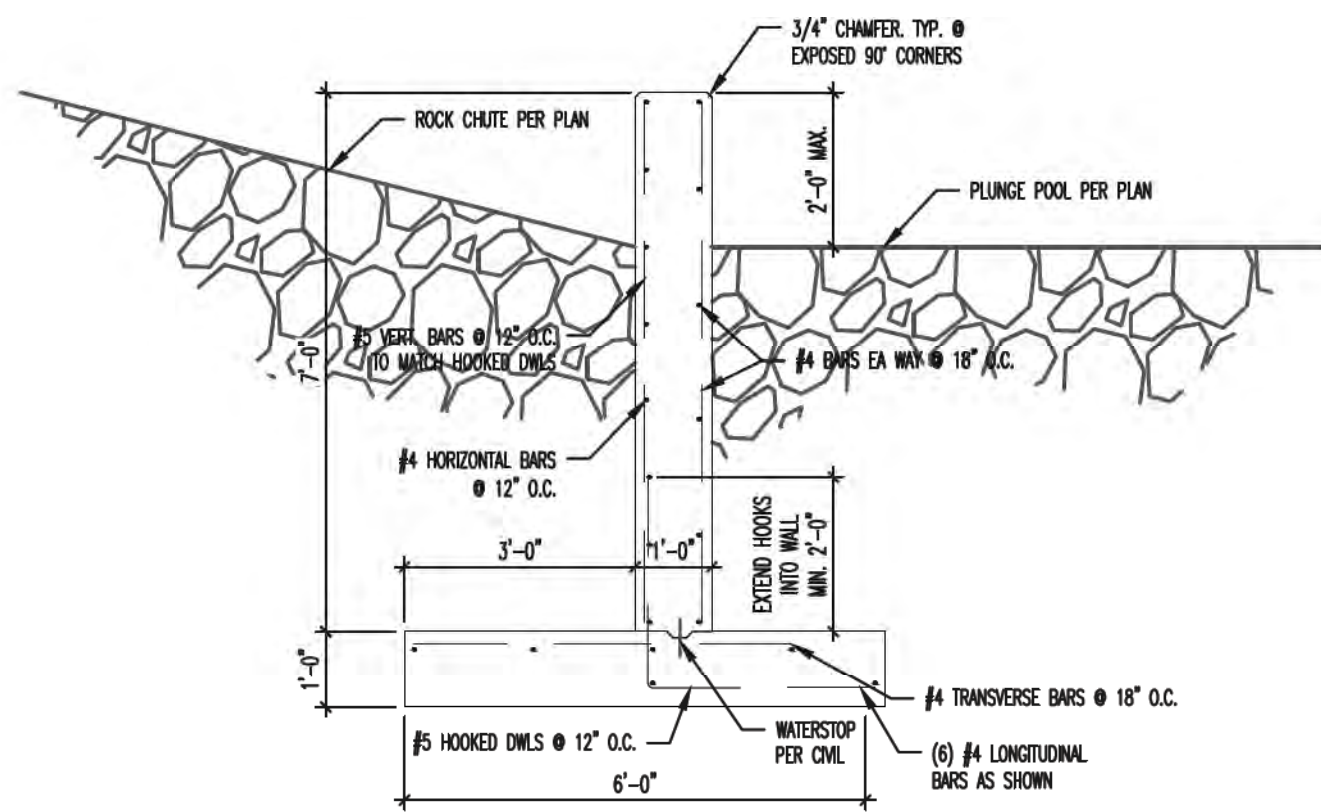
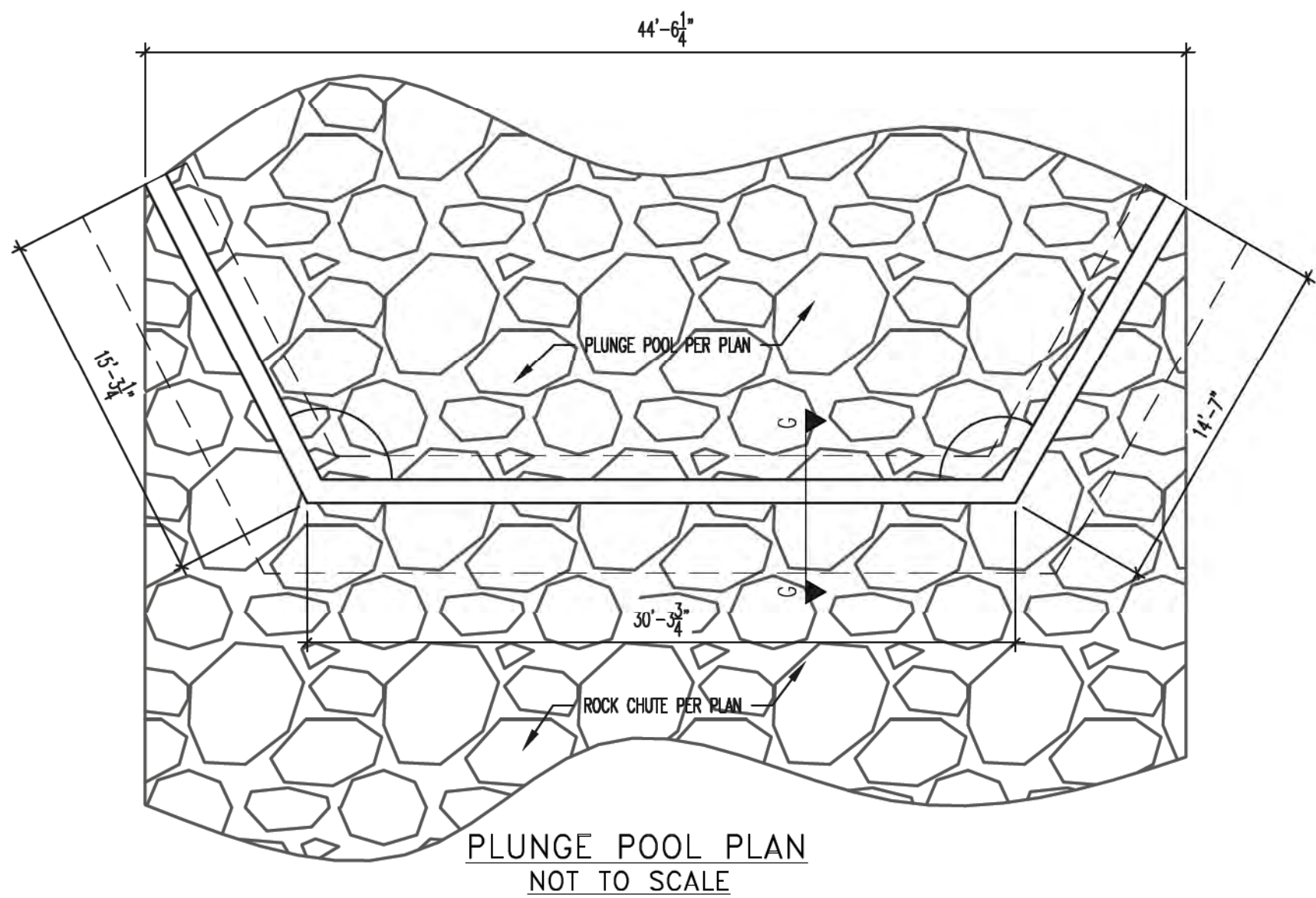


C-C DOUBLE BOX CULVERT
CROSS-SECTION AT INLET
NOT TO SCALE

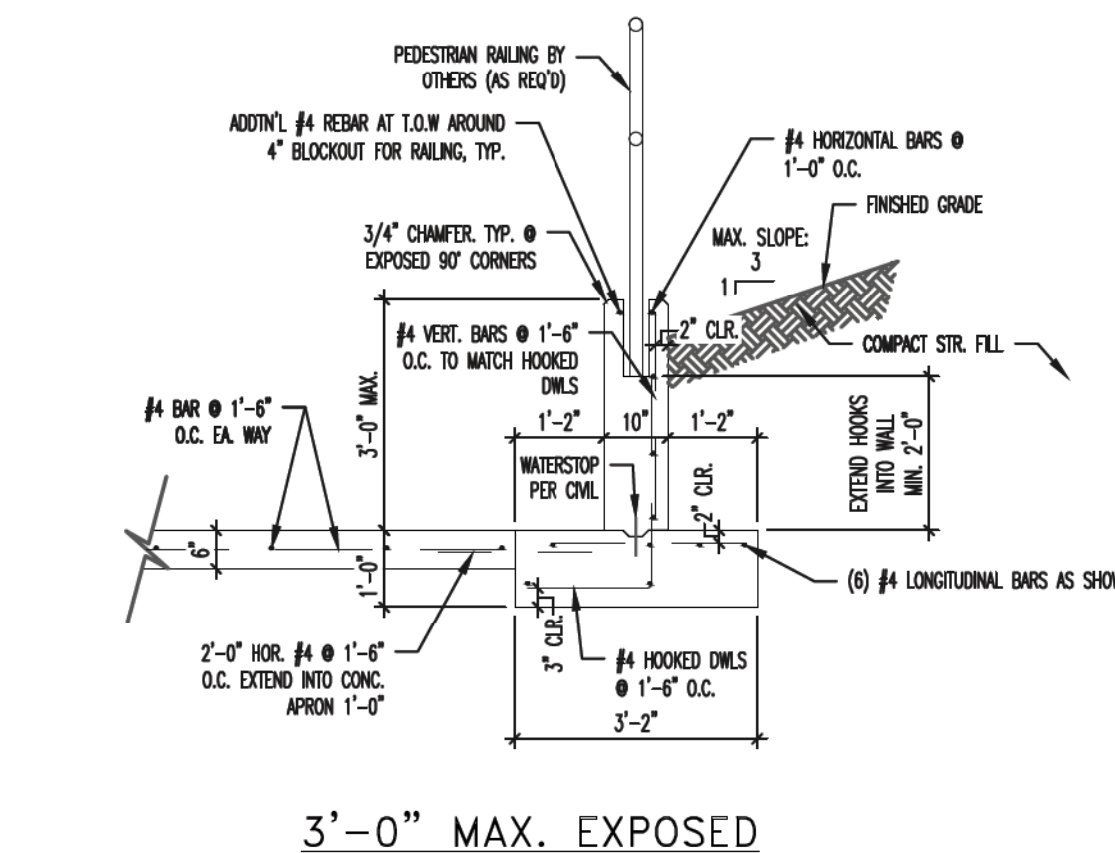
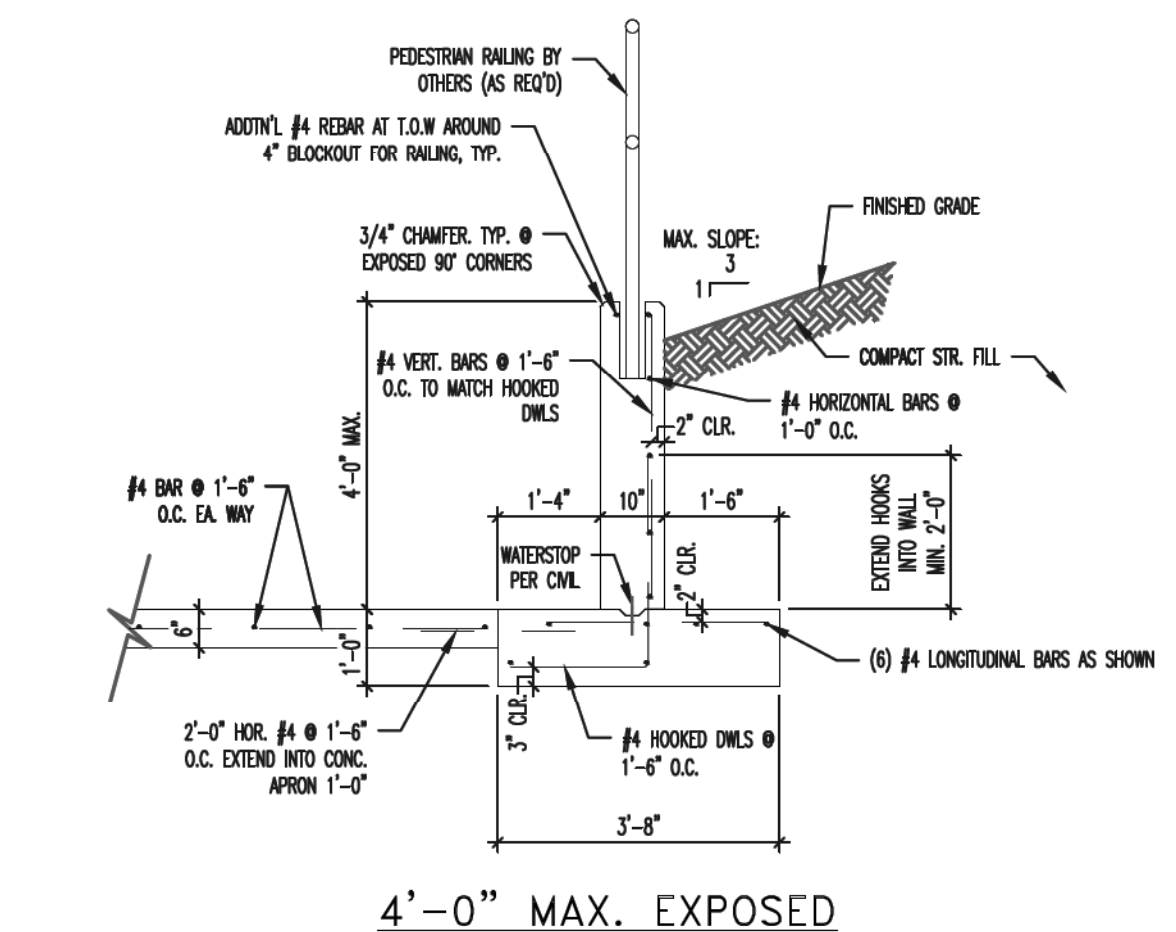
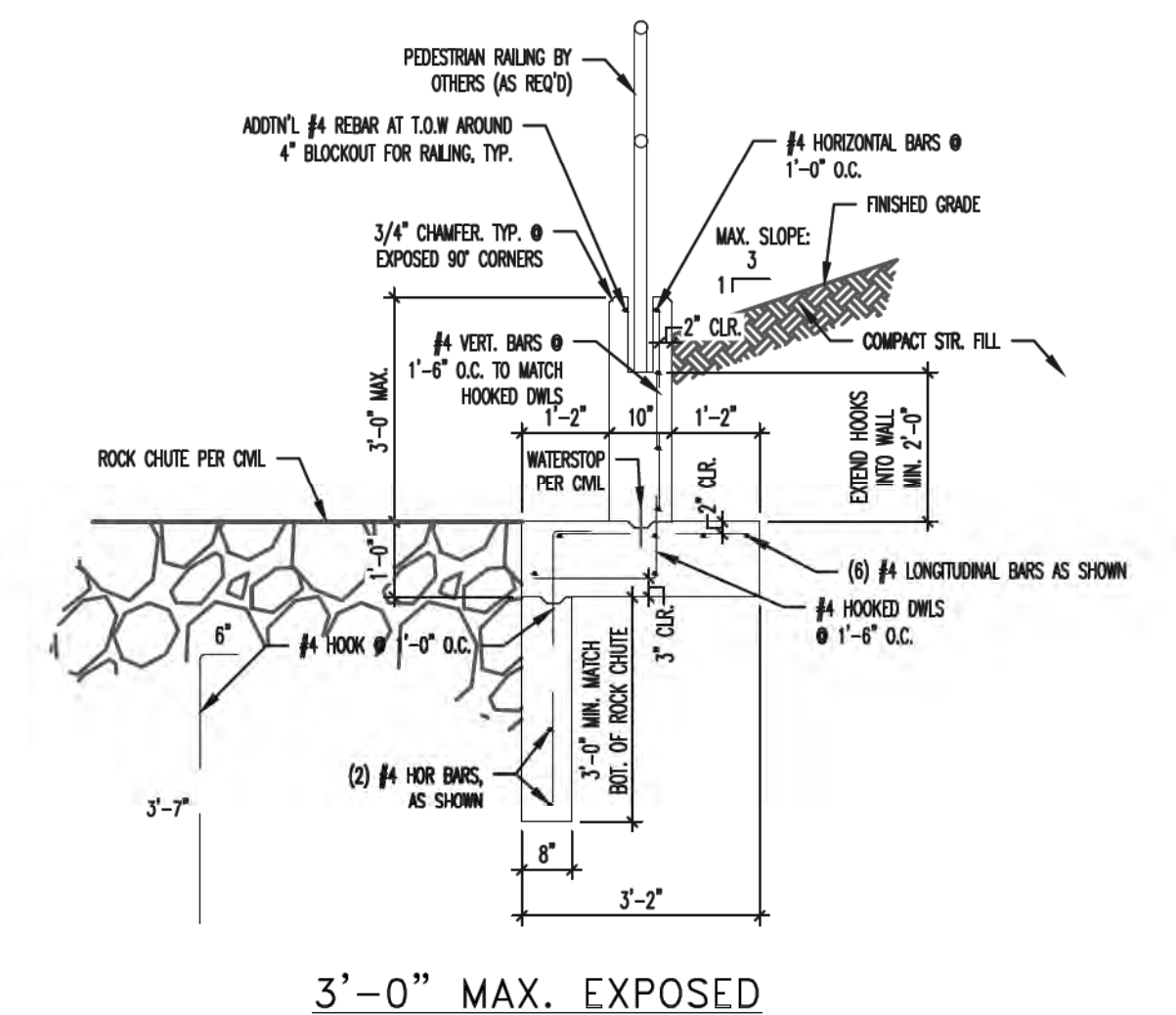
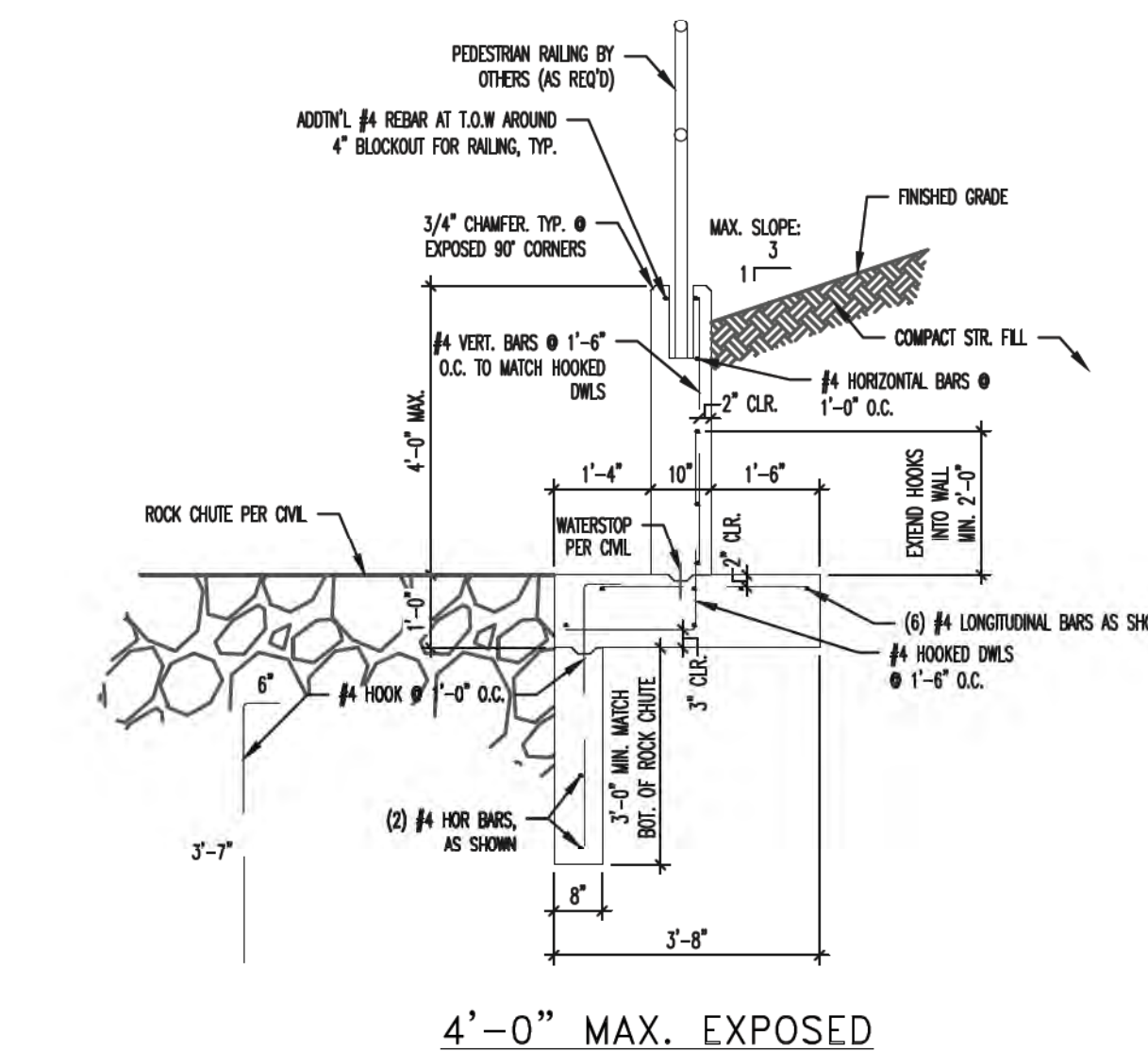
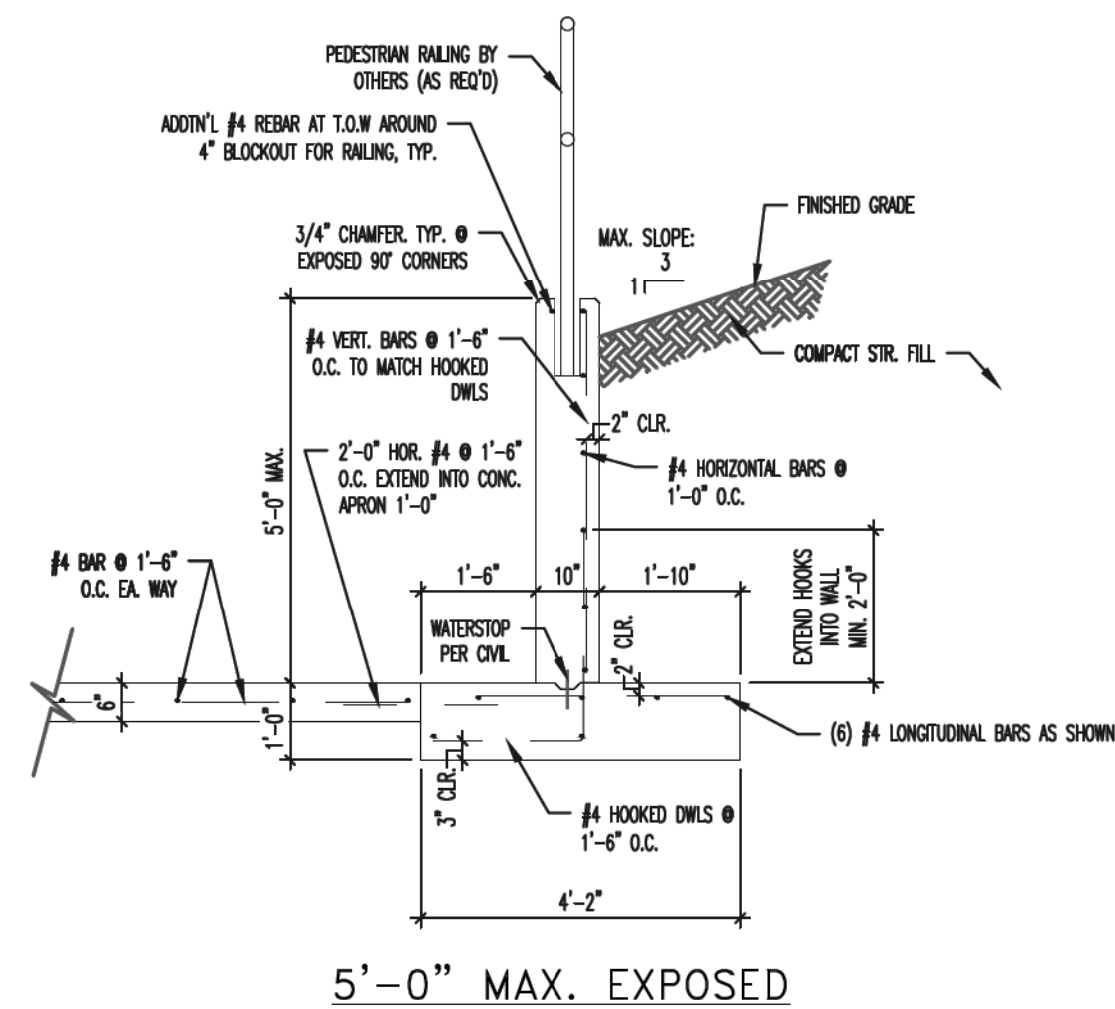
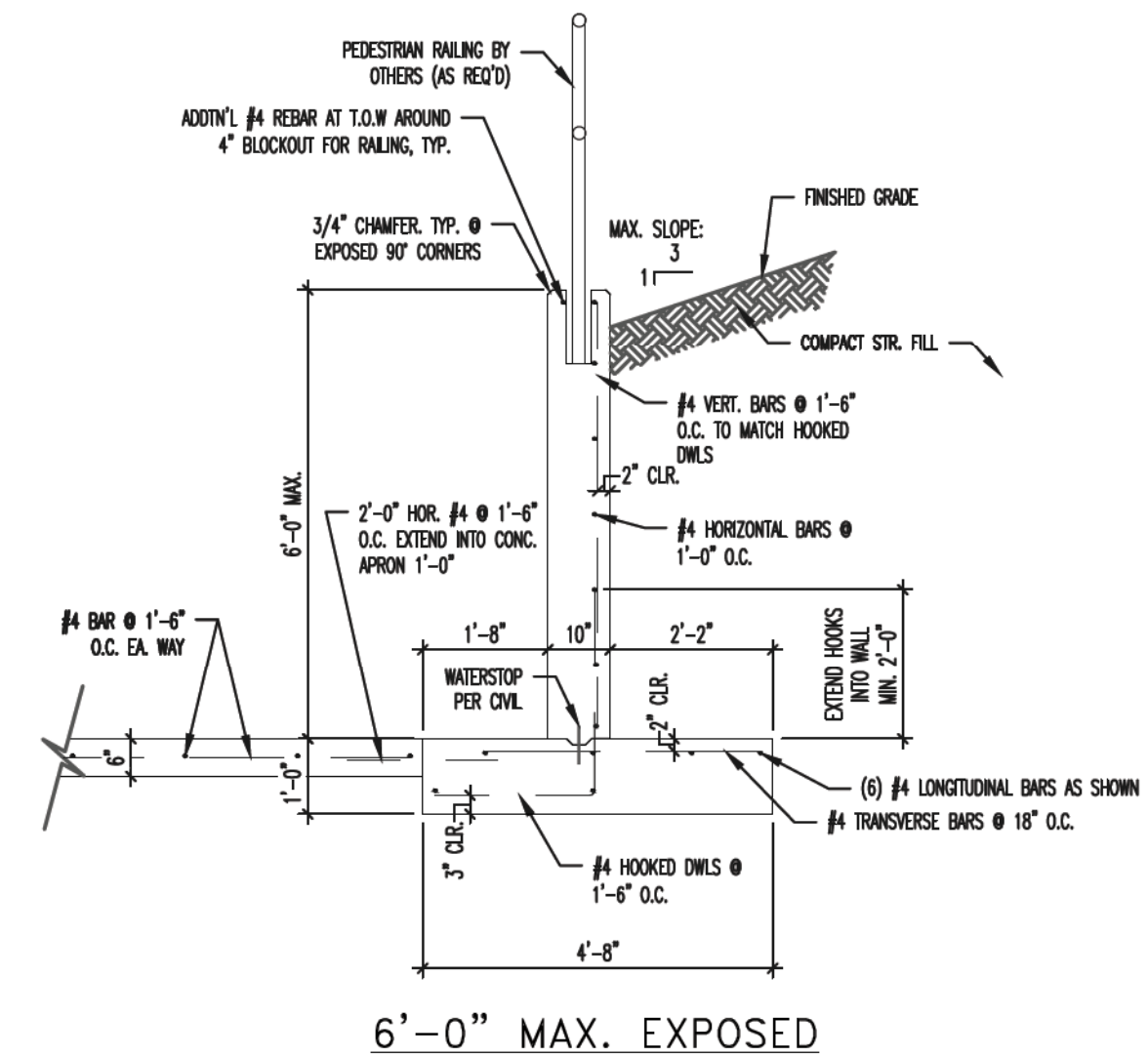
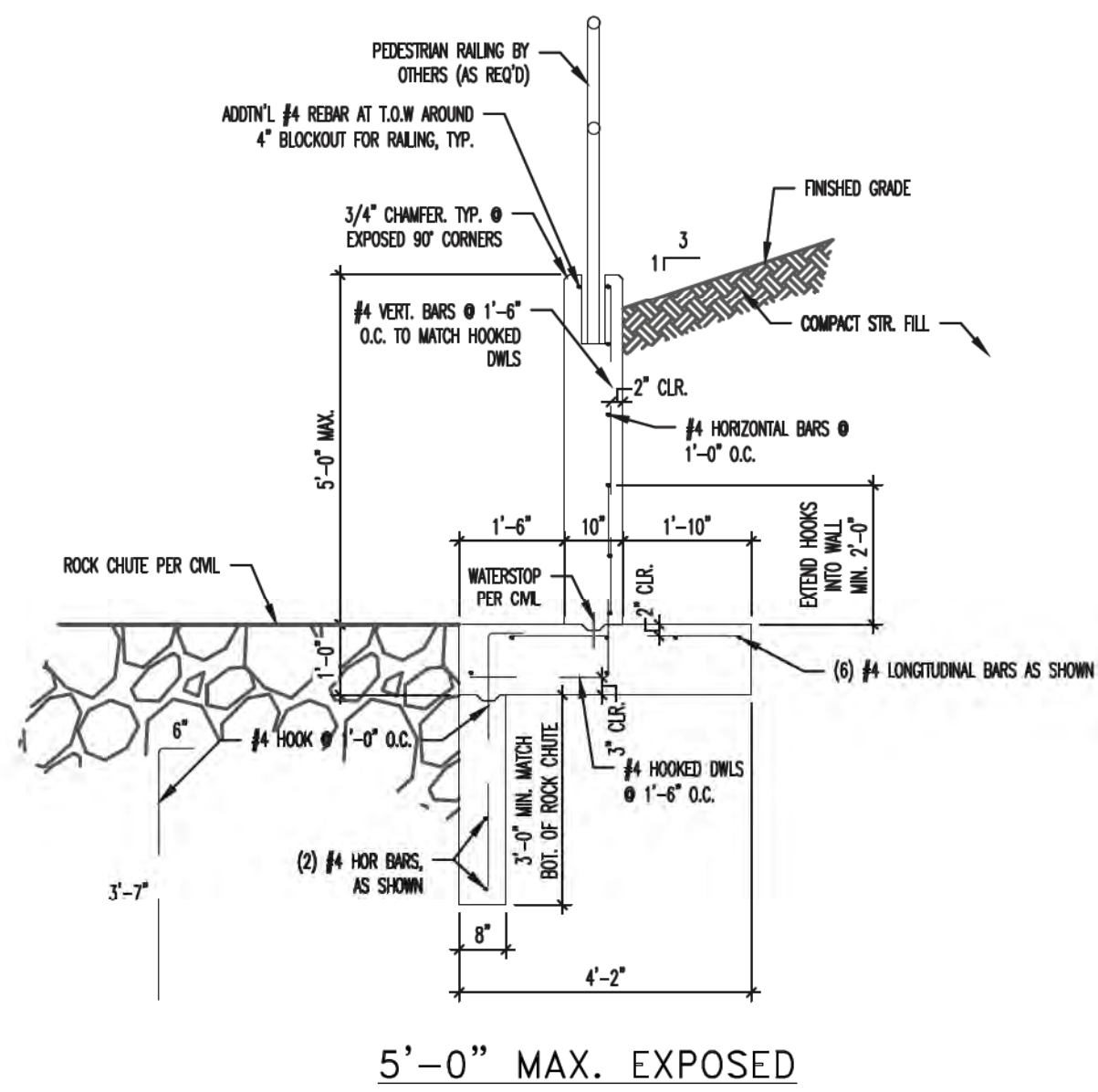
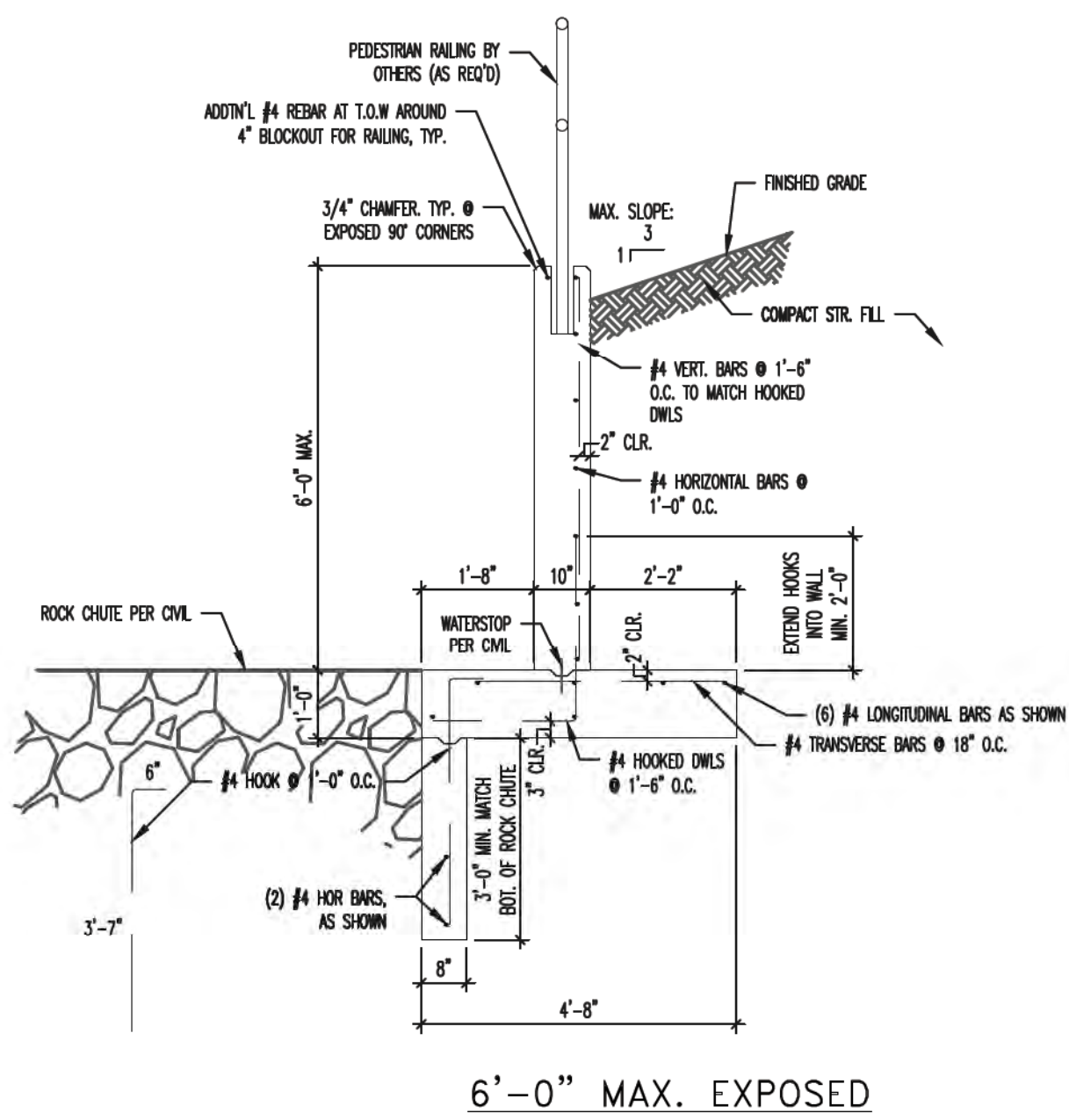
ALL STRUCTURAL DETAILS SHOWN HEREON
PROVIDED BY:
ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
719-531-5599

STATE ENGINEER'S CONSTRUCTION FILE NUMBER: C-2085

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION OF COLORADO IT'S THE LAW THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.		NO. REVISION	DATE	REVIEW:	PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC  MARC A. WHORTON/COLORADO P.E. #37155	9/17/18	DATE	 CLASSIC CONSULTING ENGINEERS & SURVEYORS 619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903 (719) 785-0790 (719) 785-0799 (Fax)		FLYING HORSE NORTH IRRIGATION RESERVOIR EMBANKMENT EMBANKMENT SPILLWAY STRUCTURAL DETAILS DAM ID - 080459 DESIGNED BY MAW SCALE DATE 1-4-18 DRAWN BY MAW (H) 1"= N/A SHEET 12 OF 14 CHECKED BY (V) 1"= N/A JOB NO. 1096.11	
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G-G PLUNGE POOL TOE WALL
NOT TO SCALE



E-E WING WALL CROSS-SECTIONS
AT OUTLET
NOT TO SCALE

D-D WING WALL CROSS-SECTIONS
AT INLET
NOT TO SCALE

ALL STRUCTURAL DETAILS SHOWN HEREON
PROVIDED BY:
ENTECH ENGINEERING, INC.
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COLORADO SPRINGS, CO 80907
719-531-5599

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