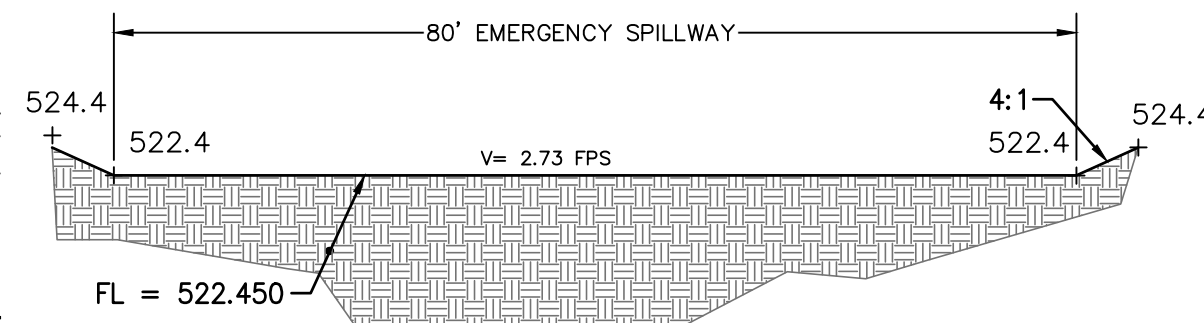
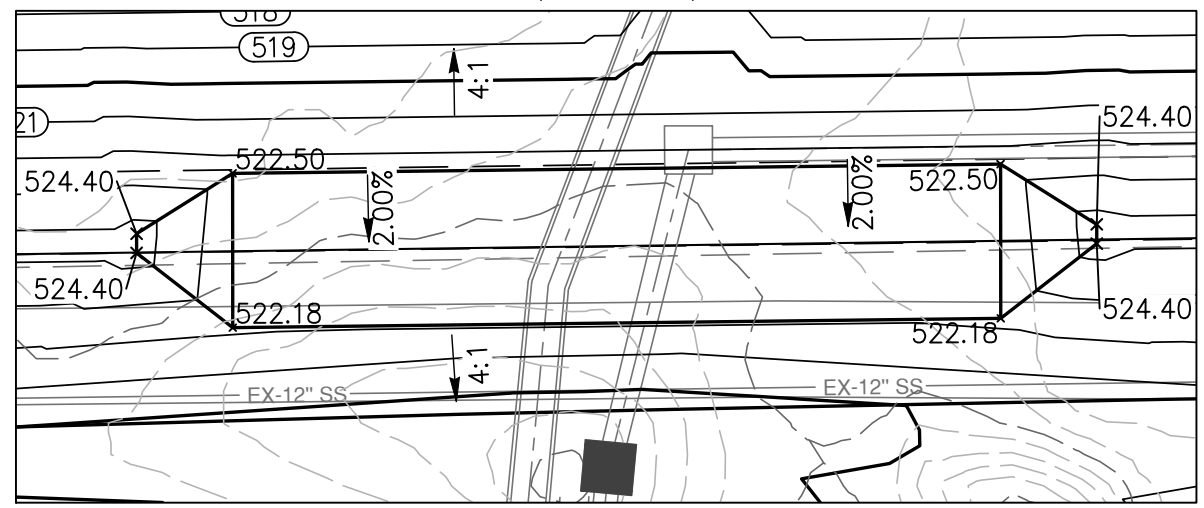


$Q_{100} = 150$ CFS
 $n = 0.035$
 $V = 5.21$ FPS
 $S = 1.0\%$
 $S_B = 9.4$ FT
 $d_b = 1.95$ FT

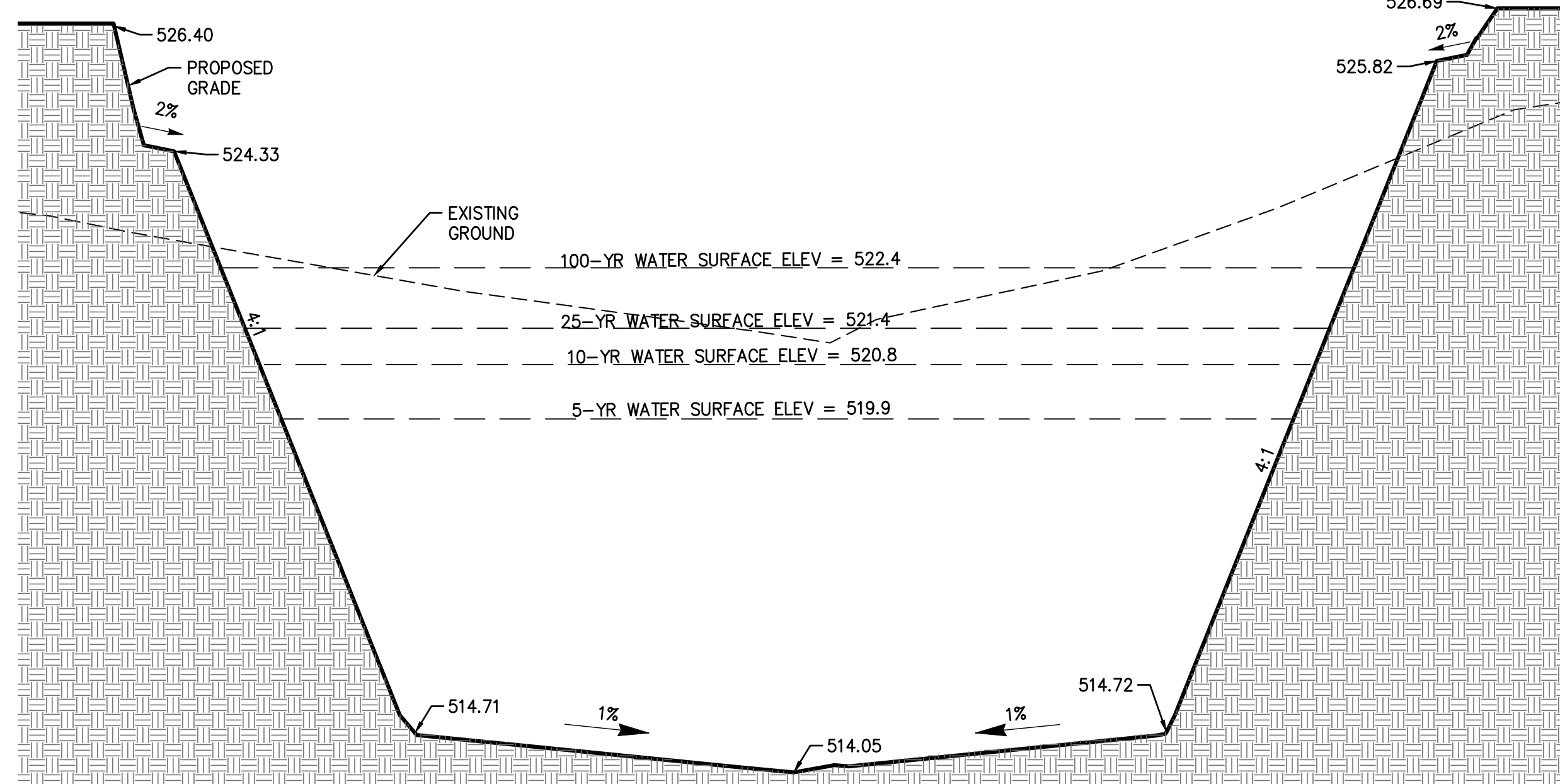
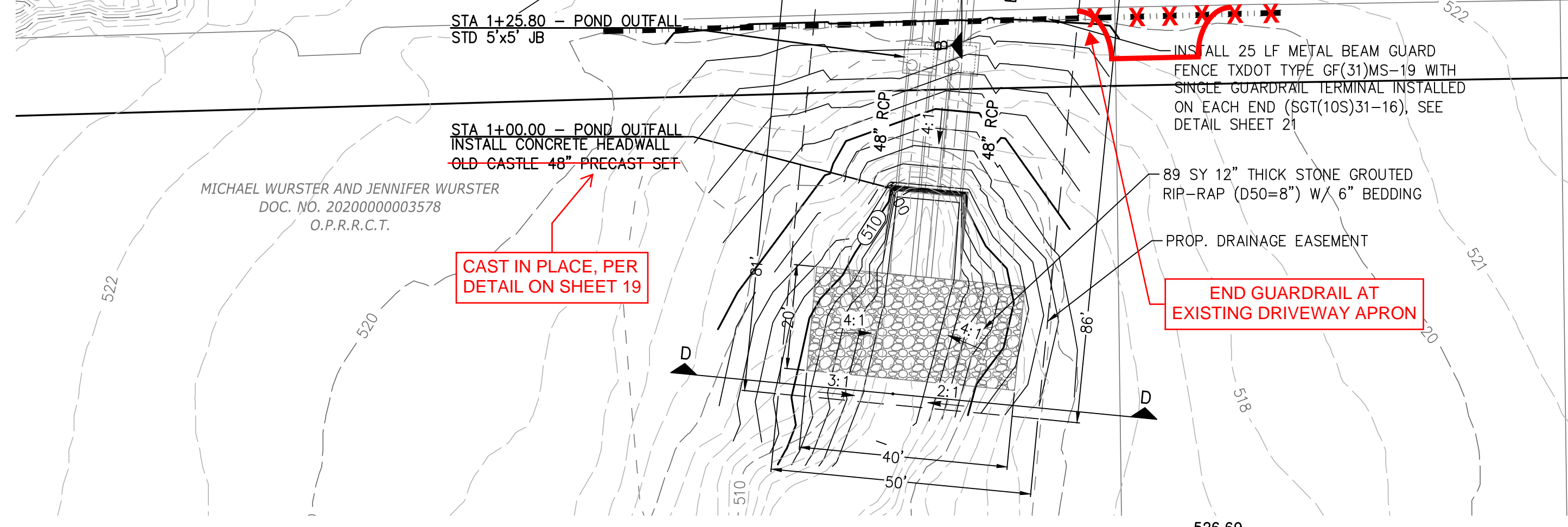
SECTION D-D
DOWNSTREAM CHANNEL
(NOT TO SCALE)



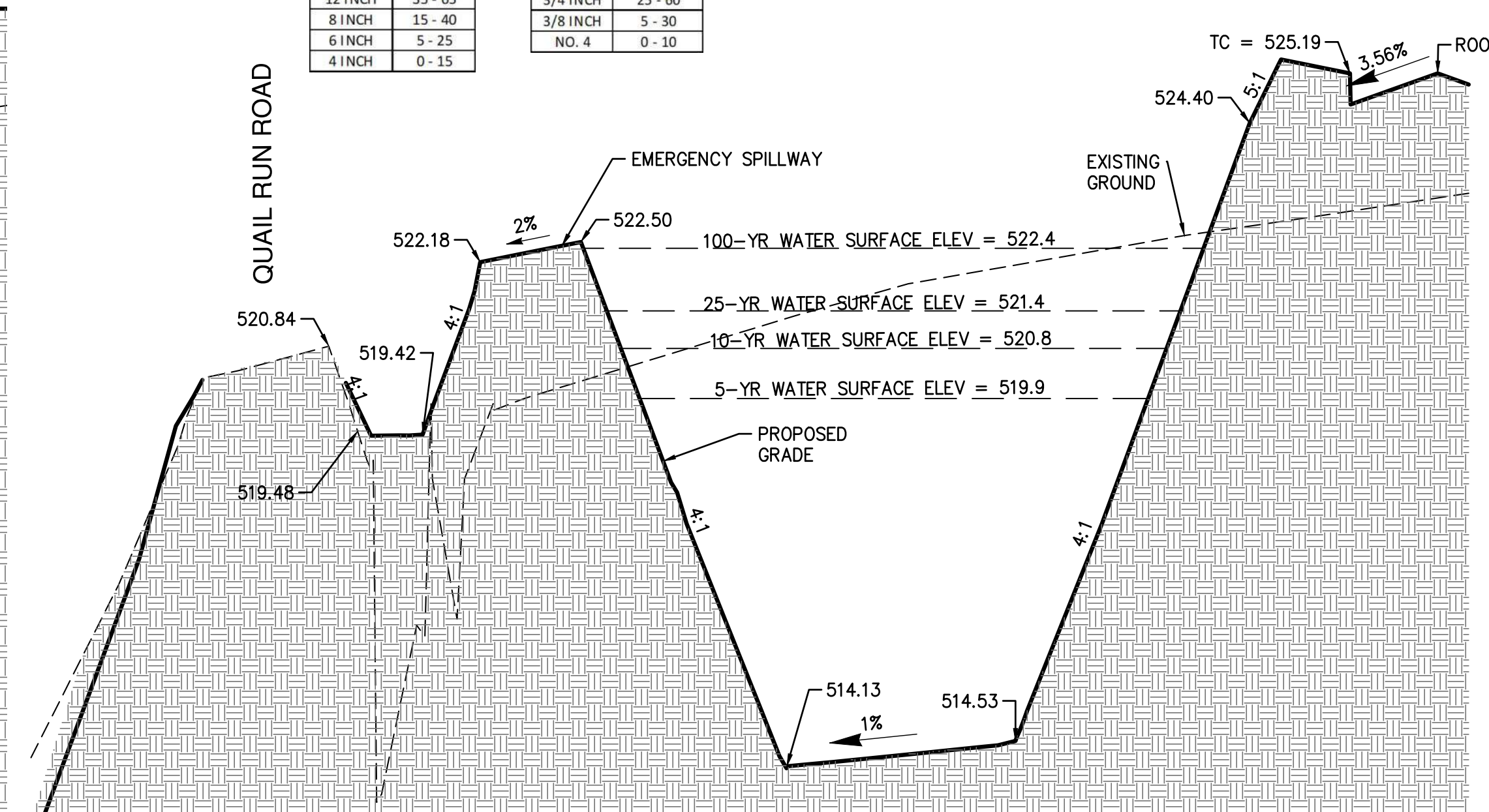
SECTION C-C
EMERGENCY SPILLWAY
(NOT TO SCALE)



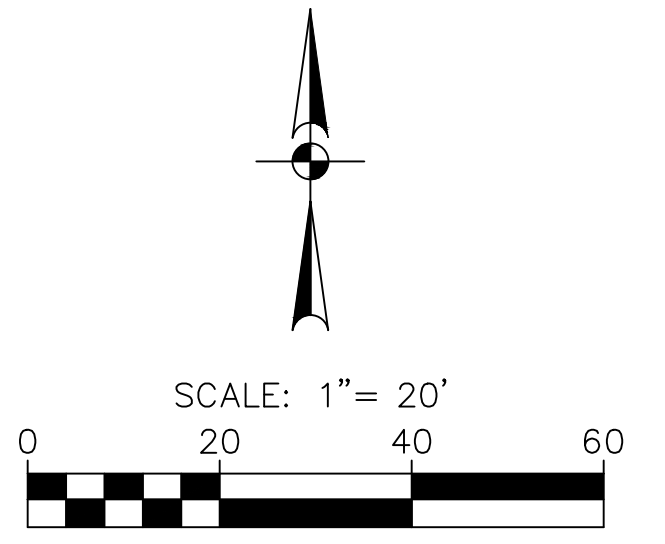
INSET A
EMERGENCY SPILLWAY
(1" = 20")



CROSS-SECTION "A-A"
(NOT TO SCALE)



CROSS-SECTION "B-B"
(NOT TO SCALE)



BENCHMARKS

BM NO. 1
 4'-OUT SET IN CONCRETE LOCATED IN THE CENTER OF A CURB INLET IN THE WEST SOUTHWESTERLY CURB LINE OF NORTH JOHN KING BOULEVARD AND BEING +/- 235' SOUTHWEST OF THE NORTHWEST CORNER OF THE SUBJECT TRACT AND +/- 535' NORTHWEST OF THE INTERSECTION OF N. JOHN KING BOULEVARD AND EAST QUAIL RUN ROAD. ELEV. 546.16'

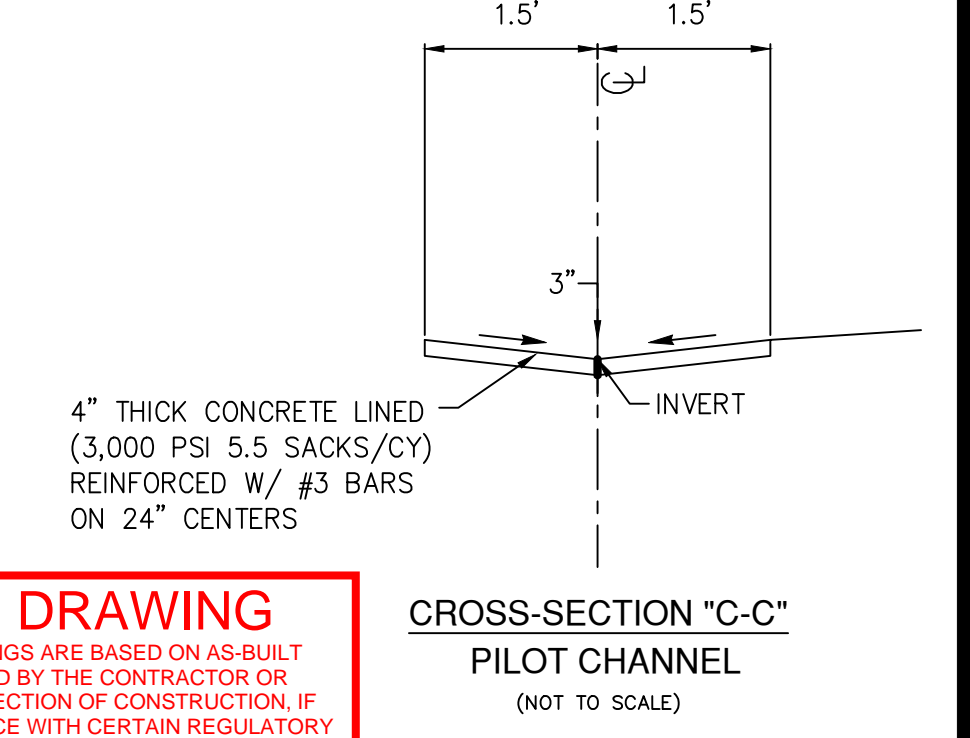
BM NO. 2
 4'-OUT SET IN CONCRETE LOCATED IN THE CENTER OF A CURB INLET IN THE WEST SOUTHWESTERLY CURB LINE OF NORTH JOHN KING BOULEVARD AND BEING +/- 662' NORTH OF THE INTERSECTION NORTH JOHN KING BOULEVARD AND WEST QUAIL RUN ROAD AND +/- 723' SOUTHWEST OF THE INTERSECTION OF N. JOHN KING BOULEVARD AND EAST QUAIL RUN ROAD. ELEV. 546.38'

LEGEND

- 600 --- EXISTING MAJOR CONTOUR
- 601 --- EXISTING MINOR CONTOUR
- 600 --- PROPOSED MAJOR CONTOUR
- 601 --- PROPOSED MINOR CONTOUR
- --- EXISTING STORM DRAIN
- --- PROPOSED STORM DRAIN
- --- EXISTING CURB INLET
- --- PROPOSED CURB INLET
- --- EXISTING AREA DRAIN
- --- PROPOSED AREA DRAIN

NOTES

1. CONTRACTOR SHALL PROTECT ALL EXISTING TREES, FENCES, RETAINING WALLS AND STRUCTURES UNLESS OTHERWISE NOTED.
2. THE SOIL USED A STRUCTURAL FILL FOR THE DETENTION POND SHALL HAVE A PLASTICITY INDEX RANGING BETWEEN 4 TO 15, WITH A MINIMUM OF 80 PERCENT PASSING THE NO. 200 SIEVE, AND CLASSIFIED AS A SANDY CLAY TO CLAYEY SAND.
3. VEGETATION AND ALL LOOSE OR ORGANIC MATERIAL SHALL BE STRIPPED AND REMOVED FROM THE SITE. SUBSEQUENT TO STRIPPING OPERATIONS, THE SUBGRADE SHALL BE PROFFROLLED TO IDENTIFY SOFT ZONES. ANY SOFT ZONE DETECTED SHALL BE REMOVED TO A FIRM SUBGRADE SOILS AND REPLACED WITH COMPACTED SATISFACTORY SOILS TO REACH SUBGRADE LEVEL. UPON THE ACCEPTANCE OF PROFFROLLING OPERATIONS THE SUBGRADE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 8 INCHES, MOISTURE CONDITIONED AND COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698, THE STANDARD PROCTOR, BETWEEN OPTIMUM AND 4 PERCENTAGE POINTS ABOVE OF THE OPTIMUM MOISTURE CONTENT. THE EXPOSED SUBGRADE SHALL NOT BE ALLOWED TO DRY OUT PRIOR TO PLACING STRUCTURAL FILL.
4. CONTRACTOR SHALL COORDINATE WITH GEOTECHNICAL ENGINEER FOR COMPACTION TESTING AND INSPECTION OF BERM CONSTRUCTION.
5. DETENTION SYSTEM MUST BE FUNCTIONAL WITH EROSION PROTECTION ON SIDES AND BOTTOM PRIOR TO ANY PAVING OPERATIONS (INCLUDING SLAB).
6. FOR DETENTION POND, REFER TO PAPE-DAWSON DRAINAGE STUDY DATED MARCH 2021.



CROSS-SECTION "C-C"
PILOT CHANNEL
(NOT TO SCALE)

RECORD DRAWING
 THESE RECORD DRAWINGS ARE BASED ON AS-BUILT DOCUMENTS PROVIDED BY THE CONTRACTOR OR DEVELOPER. FIELD INSPECTION OF CONSTRUCTION, IF REQUIRED FOR COMPLIANCE WITH CERTAIN REGULATORY STANDARDS, WAS NOT PERFORMED BY THE DESIGN ENGINEER. IT IS NOT GUARANTEED THAT THIS DOCUMENT REPRESENTS "AS-BUILT CONDITIONS."
 03/22/2022

UTILITY NOTE

THE EXISTING UTILITIES SHOWN ON THESE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF THE UTILITY INFORMATION ON THE PLANS. THE CONTRACTOR SHALL CONTACT A UTILITY LOCATING SERVICE 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND OF ALL EXISTING UTILITIES AND DETERMINE IF THERE ARE ANY CONFLICTS WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

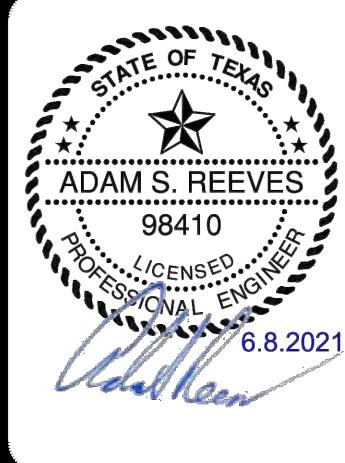
RESPONSIBILITY NOTE

ALL RESPONSIBILITY FOR THE ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR THE ADEQUACY OR ACCURACY OF DESIGN.

Gregory Method Riprap Sizing	Pond Outfall
Vel (fps) =	7.00
g (ft/s ²) =	32.2
Ts (pcf) =	160
Tw (pcf) =	62.4
C =	1.8
D ₅₀ (m) =	7.5
D ₉₀ Used =	8
Riprap Thickness (in) =	12
Bedding Thickness (in) =	6
Total Thickness (in) =	18

RIPRAP GRADATION		BEDDING GRADATION	
18" THICKNESS OF RIPRAP		6" THICKNESS OF BEDDING	
SEIVE SIZE	PERCENT PASSING	SEIVE SIZE	PERCENT PASSING
21 INCH	100	3 INCH	100
18 INCH	65 - 100	1 1/2 INCH	55 - 100
12 INCH	35 - 65	3/4 INCH	25 - 60
8 INCH	15 - 40	3/8 INCH	5 - 30
6 INCH	5 - 25	NO. 4	0 - 10
4 INCH	0 - 15		

DATE	NO.	REVISION



PAPE-DAWSON ENGINEERS
 FORT WORTH | SAN ANTONIO | AUSTIN | HOUSTON | DALLAS
 6500 W HWY. STE 700 | FT. WORTH, TX 76102 | 817.870.8868
 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION #470

GIDEON GROVE - PHASE 2
 CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS
 DETENTION POND

PLAT NO.	#
JOB NO.	6126300
DATE	June 21
DESIGNER	DEK
CHECKED	ASR DRAWN DEK
SHEET	17