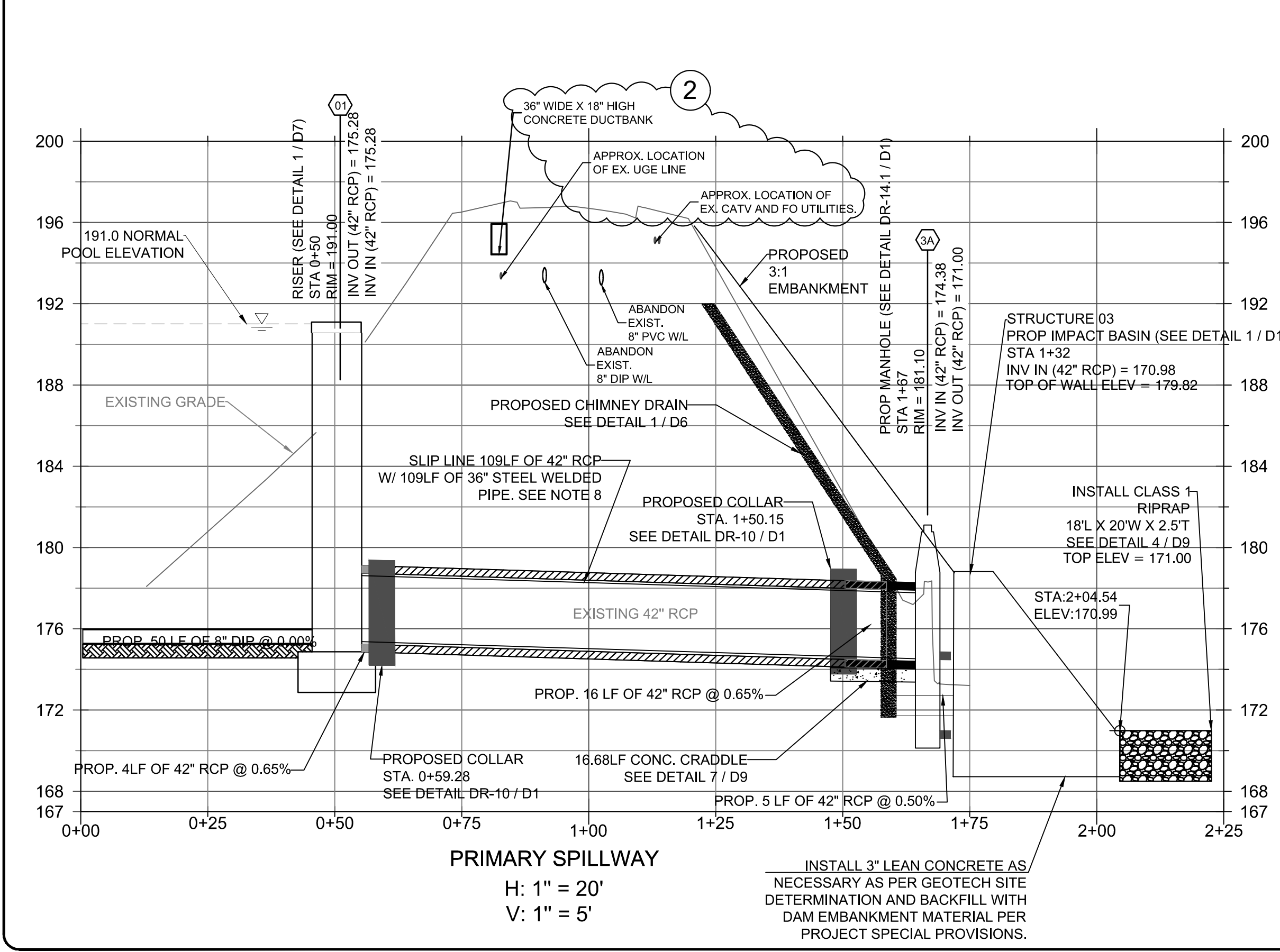
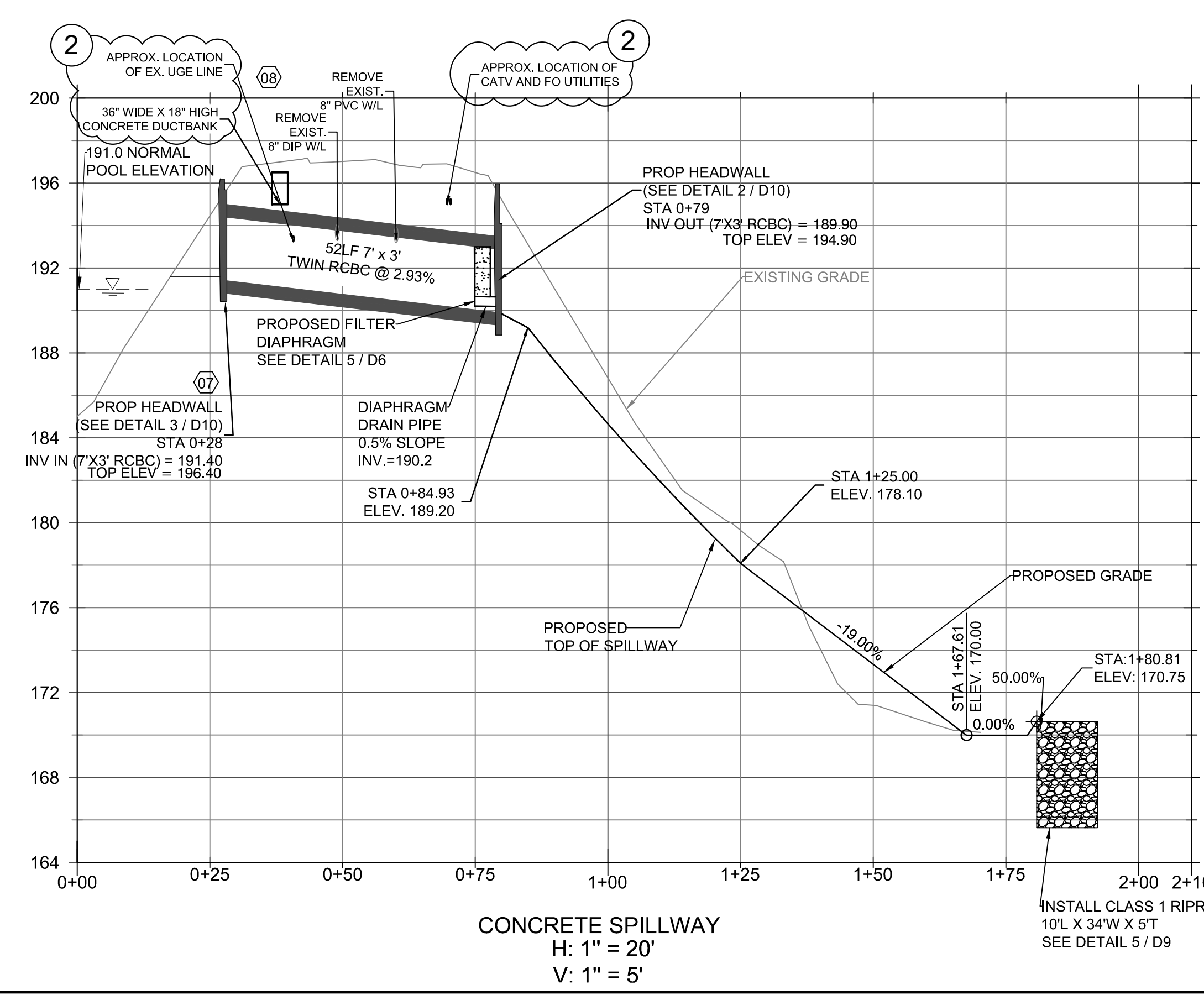


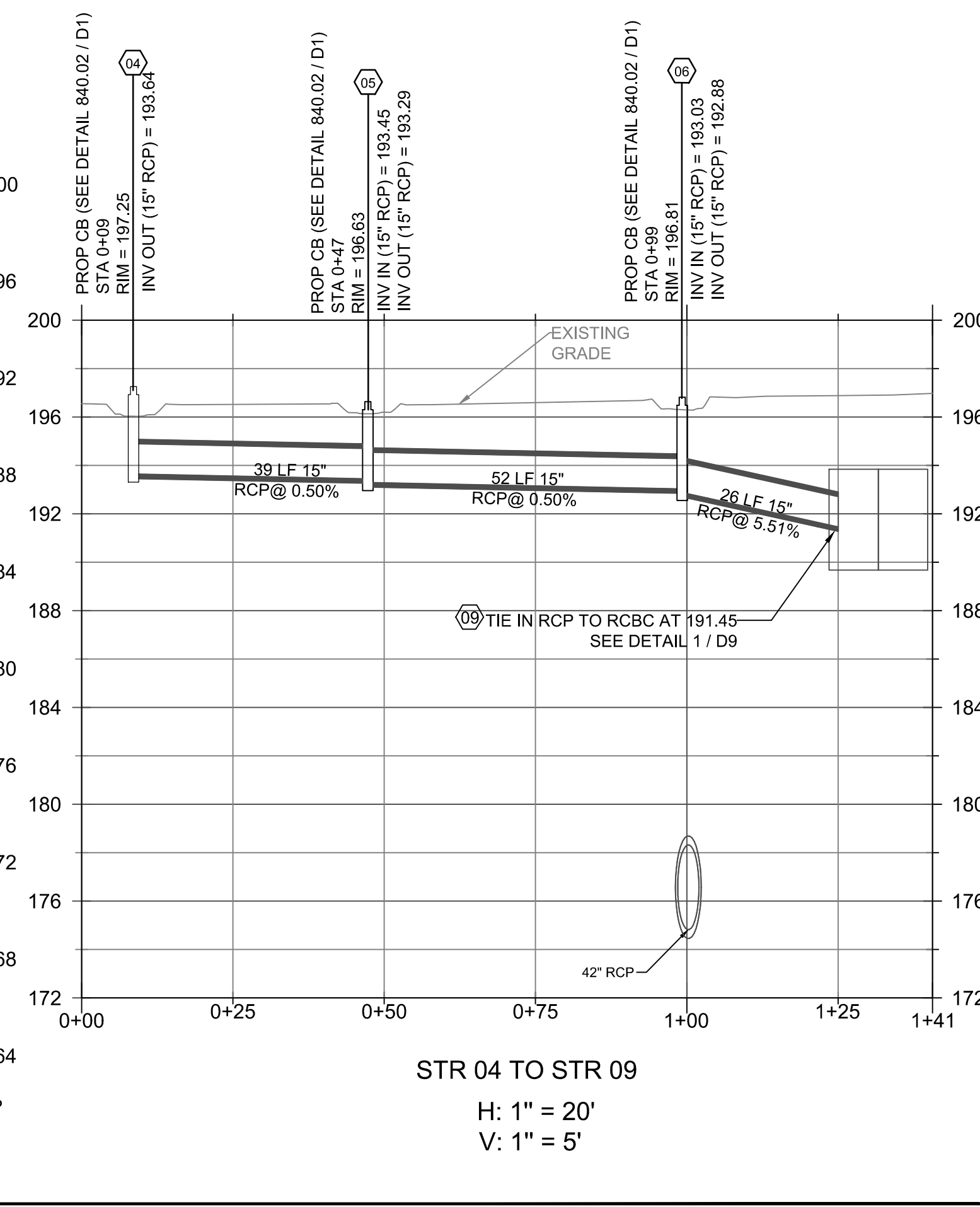
- NOTES
- CONTRACTOR SHALL COORDINATE ALL WATER AND SEWER INTERRUPTIONS WITH THE FAYETTEVILLE PUBLIC WORKS COMMISSION.
 - CONTRACTOR SHALL VERIFY SIZE, LOCATION, AND MATERIAL OF EXISTING UTILITIES PRIOR TO ORDERING ANY MATERIALS FOR PROPOSED CONSTRUCTION. ANY DISCREPANCIES FROM THE PLANS SHALL BE COMMUNICATED IMMEDIATELY TO THE CITY. WATERLINE SHALL BE ABANDONED PER PWC STANDARDS.
 - ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OF FAYETTEVILLE STANDARDS AND SPECIFICATIONS.
 - UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR.
 - INSTALL CONSTRUCTION SAFETY FENCE ALONG AND TWO FEET INSIDE OF THE LIMITS OF DISTURBANCE/CONSTRUCTION LIMITS. CONTRACTOR TO COORDINATE WITH CITY INSPECTOR IF THE SAFETY FENCE CANNOT BE INSTALLED TWO FEET INSIDE THE LIMITS OF DISTURBANCE. FENCE SHALL BE ORANGE AND FOUR FEET IN HEIGHT. REMOVE FENCE UPON COMPLETION OF PROJECT.
 - DISTURBED AREAS SHALL BE STABILIZED PER SP-10 WITH THE EXCEPTION OF AREAS SHOWN ON SHEETS U1-U4 WHICH SHALL BE STABILIZED WITH CENTIPEDE SOD.
 - CONTRACTOR SHALL REMOVE AND DISPOSE OF ANY ABANDONED UTILITIES IN CONFLICT WITH PROPOSED INFRASTRUCTURE.
 - USE 36" WELDED STEEL PIPE THAT CONFORMS TO SECTION 330 OF THE NCDOT STANDARD SPECIFICATIONS. GRADE B. THE LAB WELDED JOINTS ARE TO BE CONFIGURED FOR THE APPLICATION OF A SINGLE FILLET WELD INSIDE THE PIPE. TACK WELDS ON THE EXTERIOR JOINT SURFACES MAY BE MADE DURING THE INSTALLATION OF THE PIPE. THE ULTERIOR AND EXTERIOR SURFACES OF ALL PIPE AND FITTINGS SHALL BE CLEANED AND PAINTED WITH TWO COATS OF A HEAVY-BODIED COAL TAR EPOXY COATING. THE COATING SHALL CONSIST OF TWO (2) COATS OF TME6C 46H*13HB TME-TAR, RUFF STUFF 2100, AS MANUFACTURED BY INDURALL COATINGS, INC. KOP-COAT BITUMASTIC 300M, OR APPROVED EQUAL. EACH COAT SHALL HAVE A MINIMUM THICKNESS OF 12 MILS DRY FILM. THE COAL TAR EPOXY SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURER. THE TOTAL DRY FILM THICKNESS OF THE LINING SHALL BE 24 MILS MINIMUM.
 - CONTRACTOR TO GROUT THE ANNULUS OF THE EXISTING PIPE AND LINED PIPE PER SP-21
 - SEE SHEET 5 FOR CONSTRUCTION SEQUENCE.



PRIMARY SPILLWAY
 H: 1" = 20'
 V: 1" = 5'



CONCRETE SPILLWAY
 H: 1" = 20'
 V: 1" = 5'



STR 04 TO STR 09
 H: 1" = 20'
 V: 1" = 5'

RELEASED FOR CONSTRUCTION

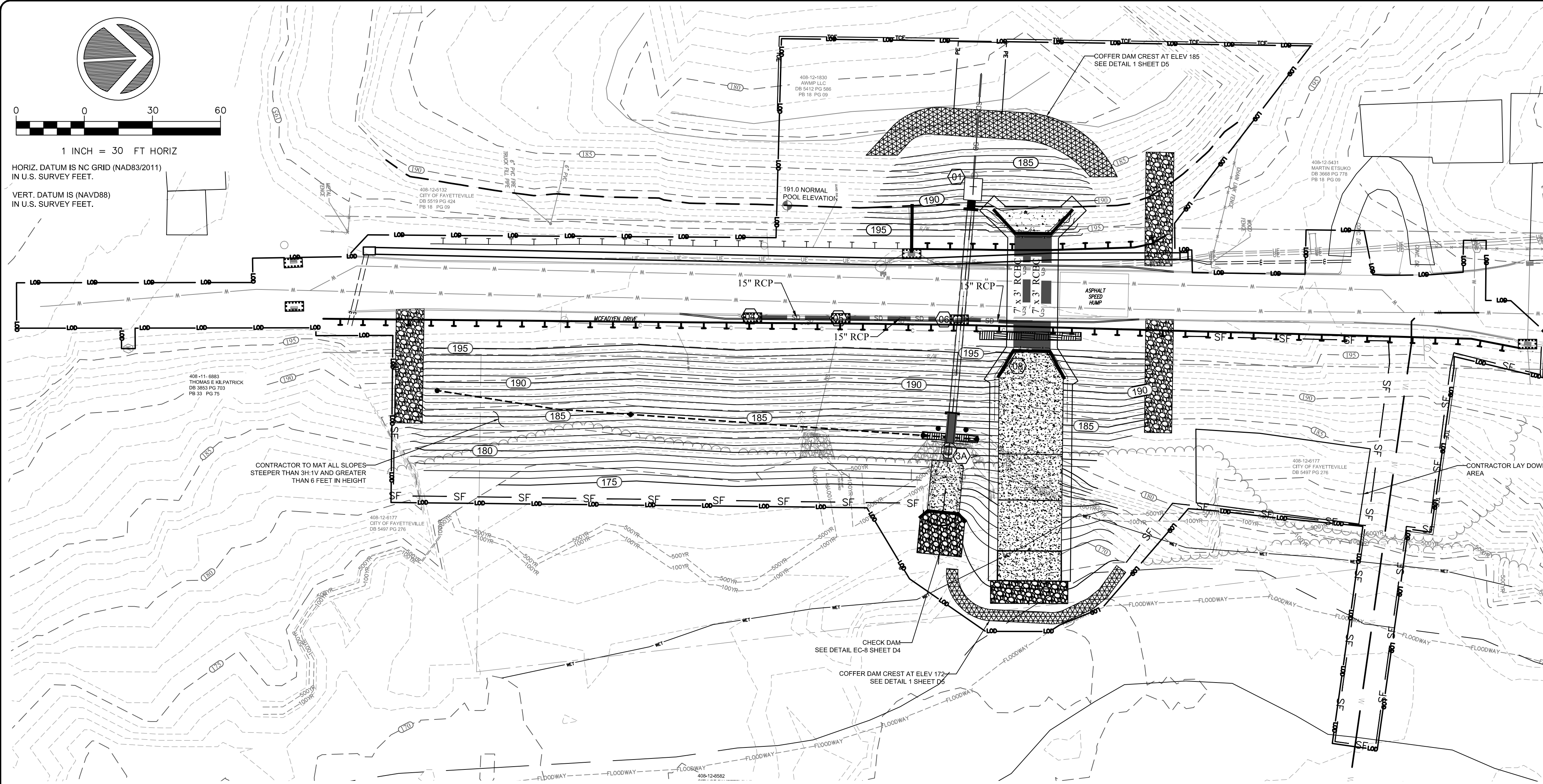
Wickson
 community infrastructure consultants
 720 CORPORATE CENTER DRIVE
 RALEIGH, NC 27607
 Office Locations: North Carolina, South Carolina, Georgia
 NC License No. F-0374

City of Fayetteville
 ENGINEERING DIVISION
 ENGINEER: J. MURRAY
 433 HAY STREET, FAYETTEVILLE, NC 28301

DRAFT

REVISIONS		REVISED BY	DATE
1	REVISION TO EX. UTILITIES IN DAM	T. MURRAY	4/29/21
2	BULLETIN DRAWING 2	T. MURRAY	8/20/21

PROJECT NO.:	2018012500RA
DESIGNER:	T. MURRAY
CHECKER:	T. MURRAY
APPROVED:	T. MURRAY
DATE:	APR-19
PROJECT NAME:	DEVONWOOD LOWER DAM
SCALE:	1" = 20'
PROJECT NO.:	2018012500RA
SUB-LEADER NO.:	



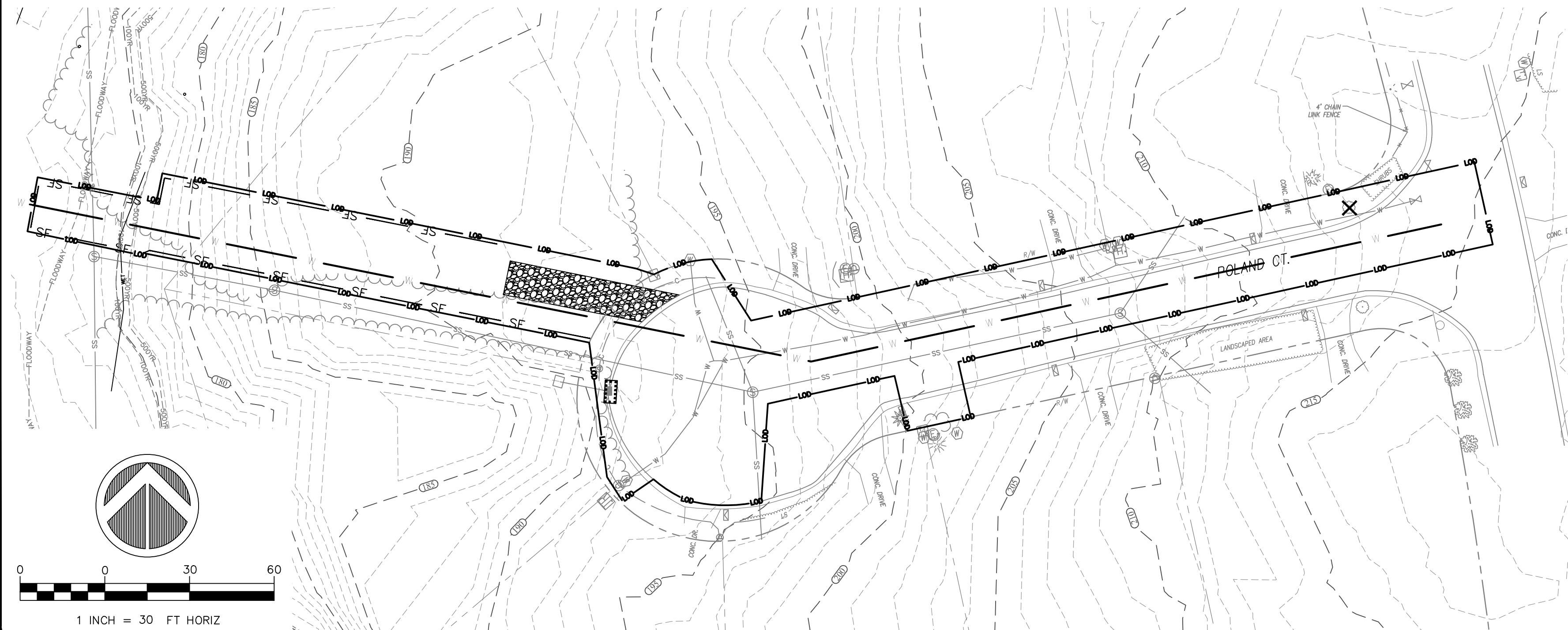
VEGETATIVE PLAN:

- EROSION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO INSURE MEASURES ARE FUNCTIONING PROPERLY.
- DISTURBED AREAS NOT AT FINAL GRADE, LEFT IDLE FOR TWO OR MORE WEEKS, SHALL BE TEMPORARILY VEGETATED PER THE TABLE BELOW. SEEDING SHALL BE IN ACCORDANCE WITH SEEDING DETAIL EC-8 ON SHEET D4.
- ALL DISTURBED AREAS AS PART OF WATERLINE WORK SHOWN ON SHT U1-U4 WILL BE STABILIZED PERMANENTLY WITH CENTIPEDE SOD AS RECOMMENDED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER).
- ALL REMAINING DISTURBED AREAS WILL BE STABILIZED PERMANENTLY PER SP-10.
- ONCE PERMANENT VEGETATION AND EROSION CONTROL MEASURES ARE ESTABLISHED, THE CONTRACTOR SHALL SCHEDULE A FINAL INSPECTION IN ORDER TO OBTAIN A CERTIFICATE OF COMPLETION. AFTER APPROVAL, ALL REMAINING TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED.

MAINTENANCE PLAN:

- ALL TEMPORARY EROSION CONTROL AND SEDIMENT CONTROL PRACTICES WILL BE INSTALLED AS NOTED ON THE EROSION CONTROL DETAILS.
- ALL SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE CHECKED FOR STABILITY AND OPERATION ON A WEEKLY BASIS AND FOLLOWING EVERY RUNOFF PRODUCING RAINFALL EVENT. ANY REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN THE FUNCTION OF THE PRACTICE.
- TRAPPED SEDIMENT SHALL BE PROPERLY REMOVED FROM THE UPSLOPE SIDE OF SEDIMENT FENCE WHEN SEDIMENT BUILDS UP TO A DEPTH OF 0.5 FEET. SEDIMENT FENCE SHALL BE REPAIRED AS NECESSARY TO MAINTAIN ITS FUNCTION.
- REFER TO DETAIL SHEETS D4 & D5 FOR ADDITIONAL MAINTENANCE NOTES ON EROSION CONTROL STRUCTURES.

GROUND STABILIZATION TIMEFRAMES		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales and slopes	7 Days	None
High Quality Water (HQW) Zones	7 Days	None
Slopes Steeper than 3:1	7 Days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 4:1 or flatter	14 Days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 Days	None, except for perimeters and HQW Zones



EROSION CONTROL NOTES:

- REFER TO GENERAL NOTES ON SHEET 3.
- DISTURBED AREAS:
TOTAL = 2.31 ACRES
- ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE SEALED PER THE SPECIFICATION SHOWN BELOW.

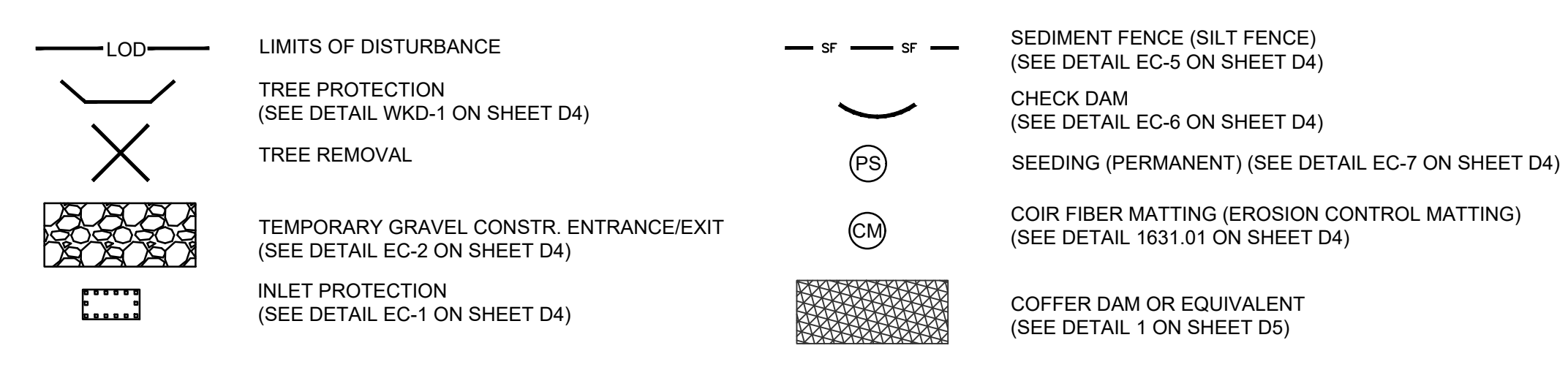
EROSION CONTROL:

- INSTALL PERMANENT VEGETATIVE COVER AND THE LONG-TERM EROSION PROTECTION MEASURES OR STRUCTURES AS SOON AS PRACTICAL IN THE CONSTRUCTION PROCESS. APPROPRIATE EROSION CONTROL MEASURES MUST BE PLACED BETWEEN THE DISTURBED AREA AND AFFECTED WATERWAY AND MAINTAINED UNTIL PERMANENTLY VEGETATED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES RELATED TO THE CONSTRUCTION SITE.
- AT A MINIMUM, EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY LOCAL GOVERNING AGENCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF ANY SOIL TRACKED INTO THE PUBLIC RIGHT-OF-WAY.
- THE LOCATIONS OF SOME EROSION CONTROL MEASURES MAY HAVE TO BE ALTERED FROM THOSE SHOWN ON THE PLANS IF DRAINAGE PATTERNS CHANGE DURING CONSTRUCTION.
- PROVIDE FOR HANDLING THE INCREASED RUNOFF CAUSED BY CHANGED SOIL AND SURFACE CONDITIONS. USE EFFECTIVE MEANS TO CONSERVE EXISTING ON-SITE SOIL INCLUDING THE USE OF DIVERSION DITCHES.
- ALL DISTURBED AREAS SHALL BE SEEDED. USE TEMPORARY PLANT COVER, MULCHING, AND/OR STRUCTURES TO CONTROL RUNOFF AND PROTECT AREAS SUBJECT TO EROSION DURING CONSTRUCTION. CHANNEL BANKS SHALL BE SEEDED DAILY UPON COMPLETION OF FINAL GRADING.
- ALL SEDIMENT AND EROSION CONTROLS ARE TO BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. MAINTENANCE OF SEDIMENT TRAPPING STRUCTURES SHALL BE PERFORMED AS NECESSARY PER THESE INSPECTIONS. SILT FENCING AND DIVERSION DITCHES SHALL BE INSTALLED AS SHOWN ON PLANS.
- STABILIZATION MEASURES SHALL BE INITIATED AT THE END OF EACH DAY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. EXCEPT WHERE CONSTRUCTION ACTIVITIES SHALL BE REINITIATED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS, WHICHEVER IS SHORTER.
- CONTRACTOR MUST TAKE THE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS. DAILY REMOVAL OF MUD/SOIL MAY BE REQUIRED.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. CONTRACTOR SHALL REMOVE ALL TEMPORARY CONTROL DEVICES ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED. SILT FENCING TO BE INSTALLED AROUND INDICATED SPOILS AREAS TO PREVENT LOSS OF SEDIMENT.
- ASPHALT TACKIFIER SHALL NOT BE USED.
- ALL NECESSARY MEASURES MUST BE TAKEN TO PREVENT OIL, TAR, TRASH, AND OTHER POLLUTANTS FROM ENTERING THE ADJACENT OFFSITE AREAS.
- CONSTRUCTION ACTIVITIES MUST AVOID TO THE GREATEST EXTENT PRACTICABLE, ENCROACHMENT INTO ANY WETLAND/STREAM AREAS NOT DESIGNATED AS IMPACT AREAS.
- ACTIVITIES MUST AVOID DISTURBANCE OF WOODY RIPARIAN VEGETATION WITHIN THE PROJECT AREA TO THE GREATEST EXTENT PRACTICABLE. REMOVAL OF VEGETATION MUST BE LIMITED TO ONLY THAT NECESSARY FOR CONSTRUCTION OF THE CHANNEL.
- NO ON-SITE BURIAL OF VEGETATION OR CONSTRUCTION DEBRIS WILL BE PERMITTED.
- ANY GRADING BEYOND THE CONSTRUCTION LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE NORTH CAROLINA EROSION CONTROL ORDINANCE, AND IS SUBJECT TO A FINE.
- PLEASE REFERENCE PLAN SHEET DETAILS AND NCDENR STANDARDS FOR CONSTRUCTION OF EROSION CONTROL MEASURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES RELATED TO THE CONSTRUCTION SITE.
- MAINTAIN WRITTEN SELF-INSPECTION RECORDS IN ACCORDANCE WITH GS 113A-54.1 (E) AND NCG 010000 SEC. II.B. 3).

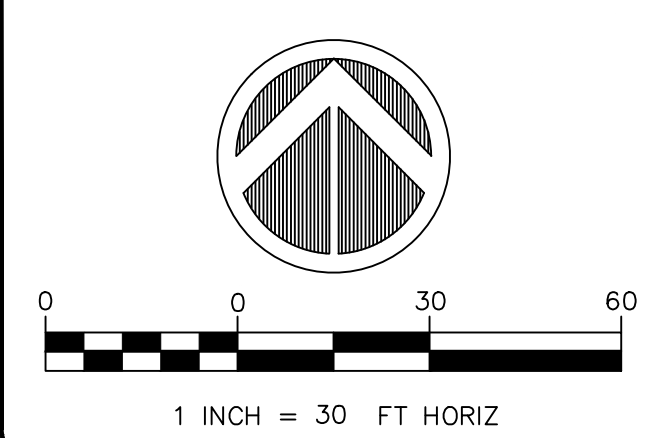
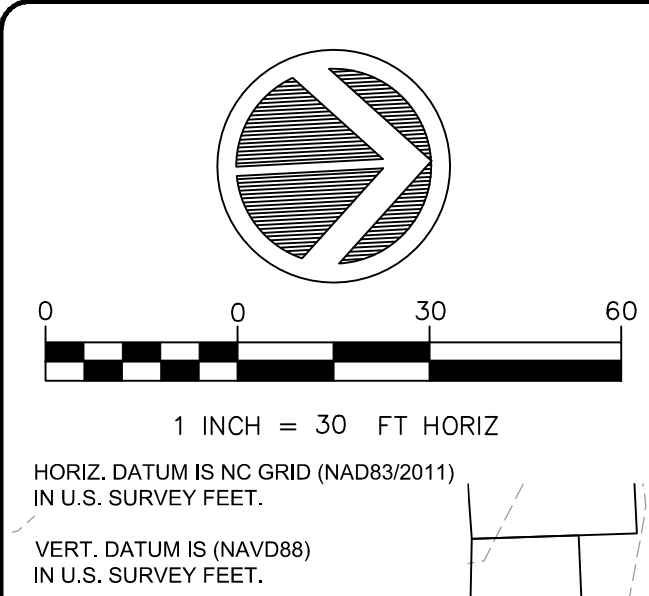
EROSION CONTROL SEQUENCE

- SEE EROSION CONTROL NOTES THIS SHEET.
- CONDUCT PRE-CONSTRUCTION MEETING INCLUDING OWNER/ENGINEER, ASSOCIATED CONTRACTORS AND OTHER AFFECTED PARTIES.
- ALL EROSION CONTROL MEASURES (CHECK DAMS AND SILT FENCES) SHALL BE INSTALLED PRIOR TO CLEARING AND GRUBBING. CLEAR ONLY AS NECESSARY TO INSTALL SEDIMENT AND EROSION CONTROL MEASURES.
- CONTRACTOR TO INSTALL IMPERVIOUS DIKES OR APPROVED EQUIVALENT TO PROVIDE DRY WORK AREA. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PUMPING OPERATION AS NEEDED TO MAINTAIN DRY WORK AREA. WATER SHALL BE PUMPED AND OR DIRECTED TO EITHER SEDIMENT BASINS OR TO AN APPROVED SEDIMENT BAG PLACED INSIDE THE LIMITS OF CONSTRUCTION.
- PRIOR TO CLEARING AND GRUBBING, THE CONTRACTOR SHALL REQUEST AN ON-SITE INSPECTION. UPON RECEIPT OF CERTIFICATE OF COMPLIANCE, GRUBBING/CONSTRUCTION MAY BEGIN.
- PERFORM GRADING OPERATIONS IN A MANNER AND SEQUENCE SO AS TO REDUCE UNNECESSARY DISTURBANCE OF SURFACE COVER.
- DURING EXCAVATION DE-WATERING SHALL BE CONDUCTED AS NEEDED. DE-WATERING SHALL BE COMPLETED THROUGH USE OF PUMPS. WATER SHALL BE PUMPED AND OR DIRECTED TO EITHER SEDIMENT BASINS OR TO AN APPROVED SEDIMENT BAG PLACED INSIDE THE LIMITS OF CONSTRUCTION.
- UPON COMPLETION OF GRADING OPERATIONS, INSTALL PERMANENT STABILIZATION MEASURES. SEE VEGETATION NOTES THIS SHEET.
- ONCE FINAL VEGETATION IS ESTABLISHED CALL FOR FINAL APPROVAL. FINAL APPROVAL MUST BE GRANTED PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.
- UPON FINAL APPROVAL, REMOVE TEMPORARY EROSION CONTROL MEASURES.

EC LEGEND



RELEASED FOR CONSTRUCTION



DEVONWOOD LOWER DAM
SHEET NUMBER: ECI

Wickson
community infrastructure consultants
730 CORPORATE CENTER DRIVE
RALEIGH, NC 27607
Office Locations:
North Carolina
South Carolina
Georgia
NC License No. F-0374

City of Fayetteville
ENGINEERING DIVISION
ENGINEERING & CONSTRUCTION DEPARTMENT
433 HAY STREET, FAYETTEVILLE, NC 28301

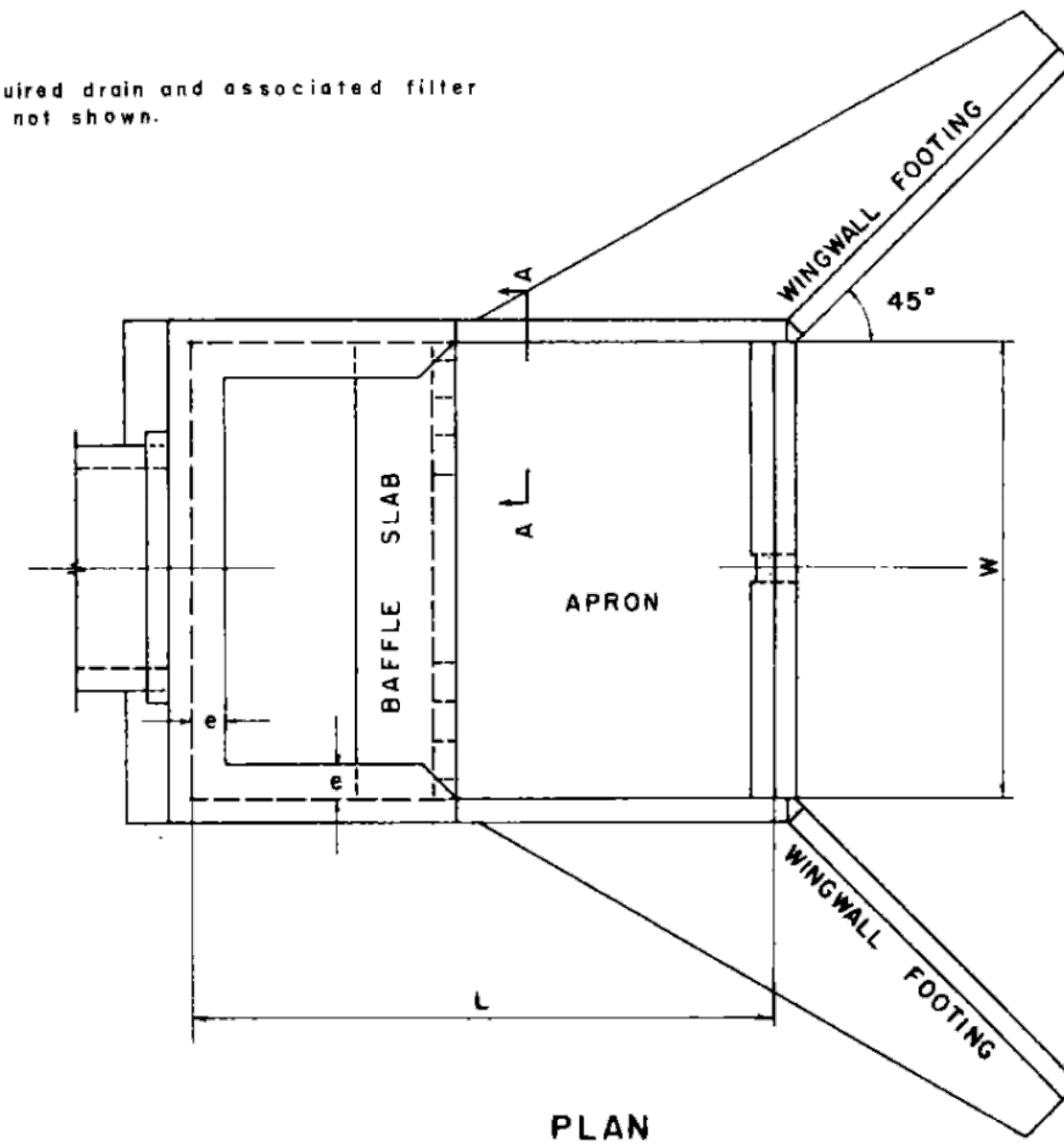
DRAFT

REVISIONS
BULLETIN DRAWING 2
REV. 1
REV. BY: ATM
DATE: 8/20/21

PROJECT NO.: 2018012500RA
SUB-LEDGER NO.:
DRAWN: R. SMITH
DESIGN: T. MURRAY
CHECK: T. MURRAY
APPROVED: T. MURRAY
PROJECT NAME: DEVONWOOD LOWER DAM
SCALE: 1" = 20'
DATE: APR-19

IMPACT BASINS: General Layout and Hydraulic Design

Required drain and associated filter are not shown.

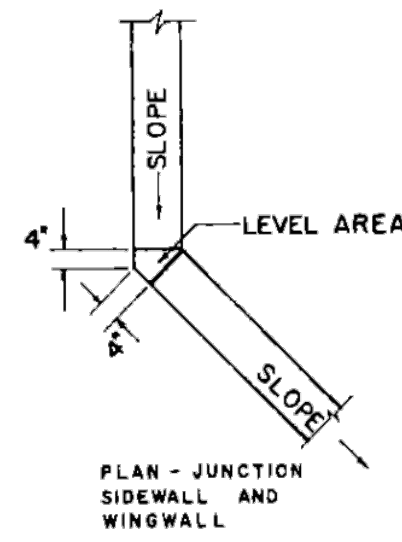


PLAN

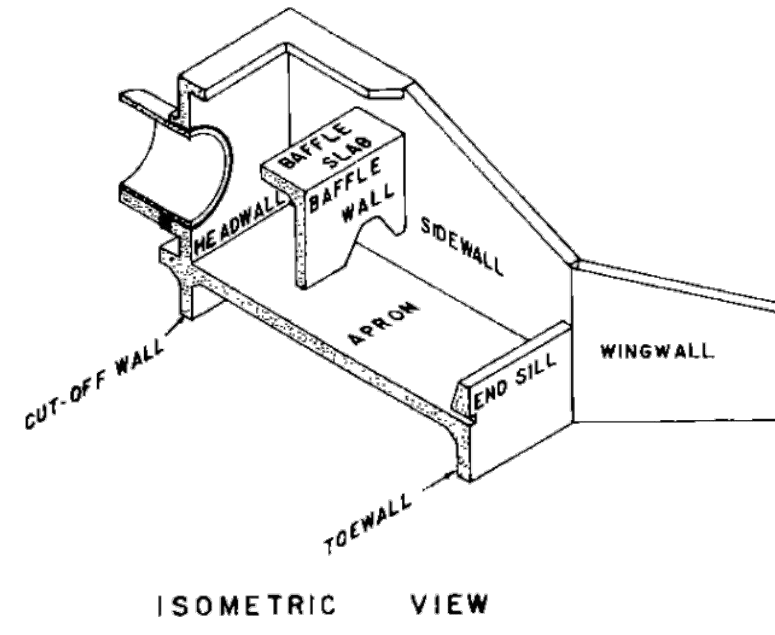
SYMBOLS

W	Width of basin	= 14'-0"
L	Length of basin	= 4/3 W = 18'-8"
H	Depth of basin	= 3/4 W = 10'-6"
d	Height of end sill and height of pipe insert above apron slab	= 1/6 W = 2'-4"
f	Height of baffle wall	= 3/8 W = 5'-3"
e	Distance to upstream face of baffle wall	= 1/2 W = 7'-0"
c	Height of sidewall and wingwall of junction	= 1/2 W = 7'-0"
a	Width of splash brim	= 1/12 W = 1'-2"

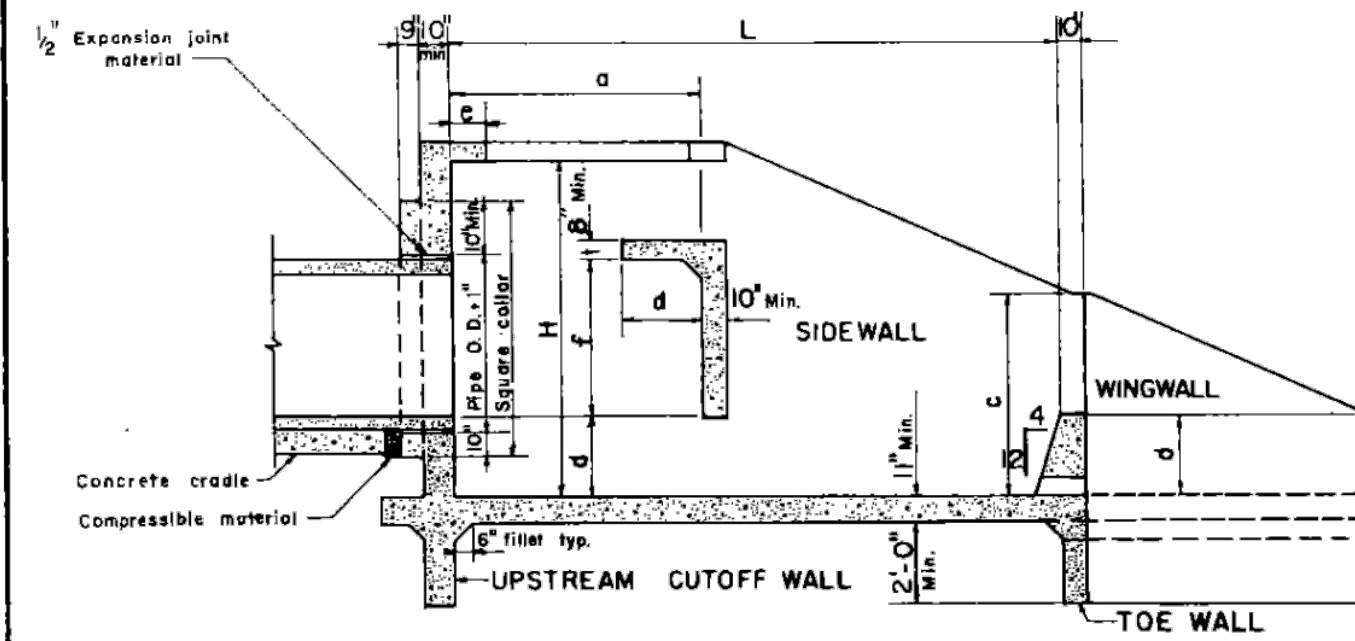
SECTION "A-A"



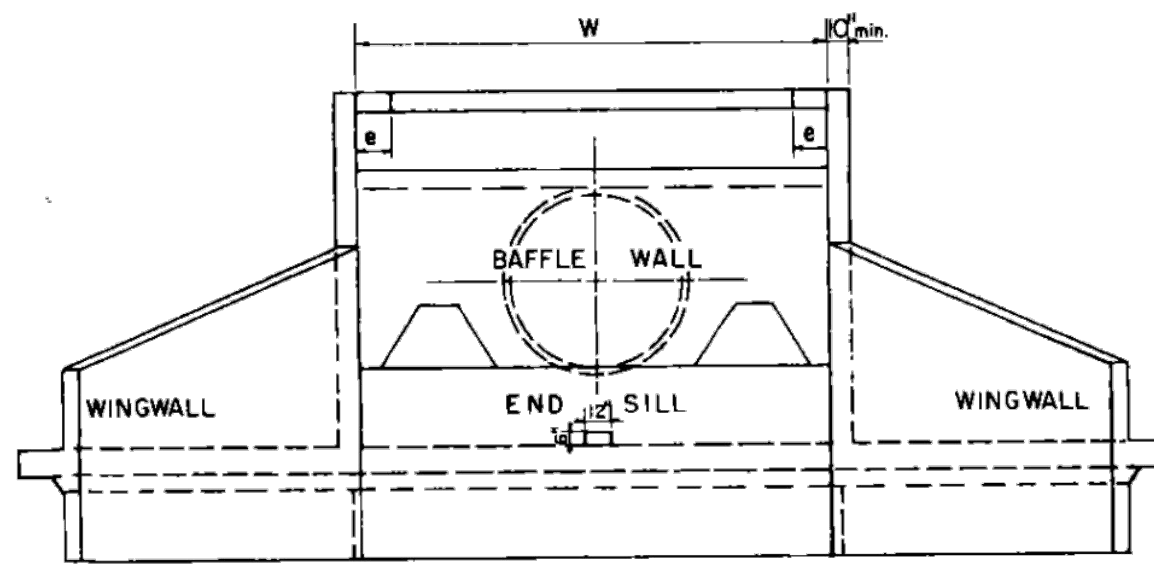
PLAN - JUNCTION SIDEWALL AND WINGWALL



ISOMETRIC VIEW



SECTION ON CENTER LINE



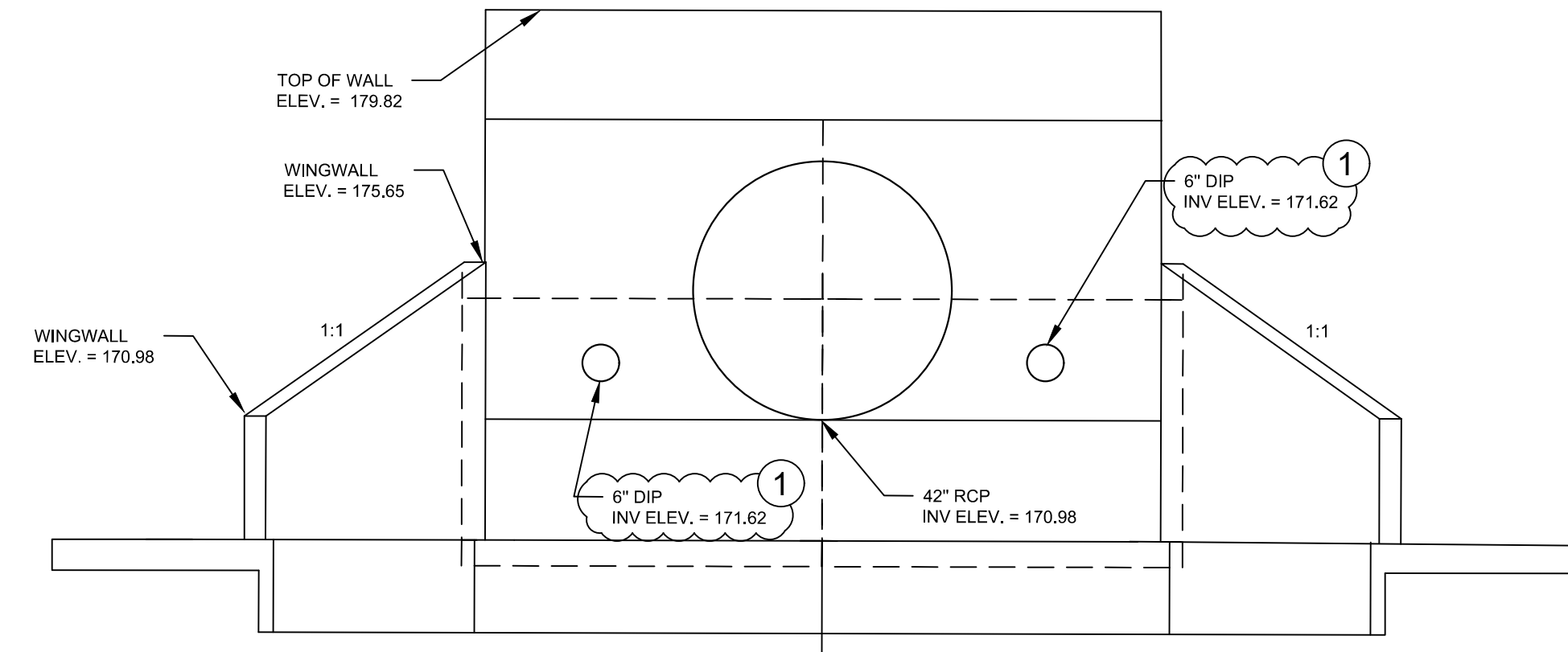
DOWNSTREAM ELEVATION

REFERENCE
Bureau of Reclamation, Report No. HYD-572, Progress Report No. XIII—Research Study on Stilling Basins, Energy Dissipators, and Associated Appurtenances—Section 14, Modification of Section 6 (Stilling Basin for Pipe or Open Channel Outlets—Basin XI) by G. L. Belchley

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ENGINEERING DIVISION - DESIGN UNIT

STANDARD DWG. NO.
ES-187
SHEET 1 OF 1
DATE 12-70

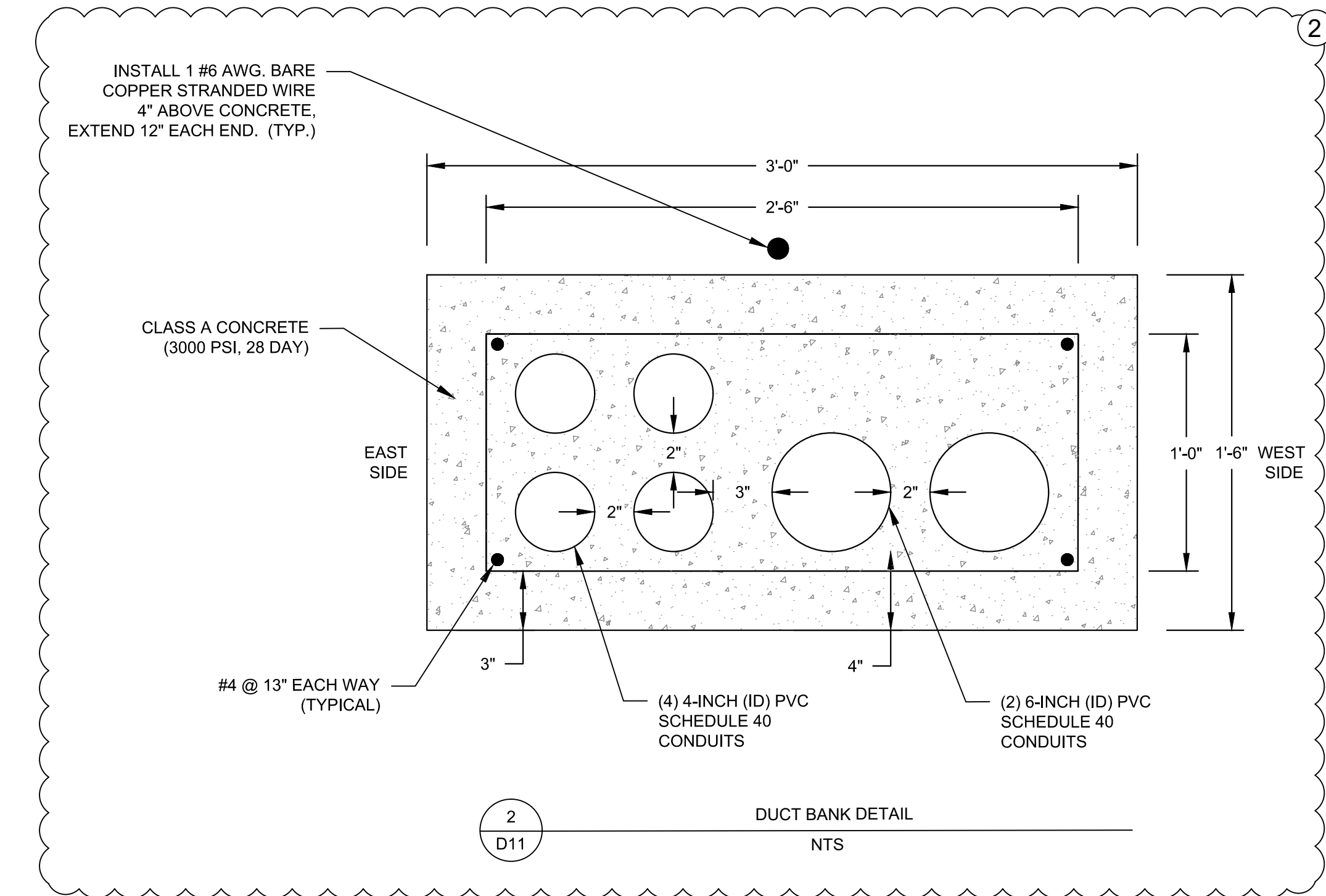
1
D11 IMPACT BASIN DETAIL
NTS



NOTE:
SEE SHEET S6 FOR STRUCTURAL DETAILING

DEVONWOOD IMPACT BASIN WINGWALL
NTS

1
D11 IMPACT BASIN DETAIL
NTS



INSTALL 1 #6 AWG. BARE COPPER STRANDED WIRE 4" ABOVE CONCRETE. EXTEND 12" EACH END. (TYP.)

CLASS A CONCRETE (3000 PSI, 28 DAY)

#4 @ 13" EACH WAY (TYPICAL)

(4) 4-INCH (ID) PVC SCHEDULE 40 CONDUITS

(2) 6-INCH (ID) PVC SCHEDULE 40 CONDUITS

2
D11 DUCT BANK DETAIL
NTS

RELEASED FOR CONSTRUCTION

Wickson
community infrastructure consultants
720 CORPORATE CENTER DRIVE
RALEIGH, NC 27607
Office Locations:
North Carolina
South Carolina
Georgia
NC License No. F-0374

City of Fayetteville
ENGINEERING DIVISION
100 EAST MAIN STREET, DEPARTMENT
433 HAY STREET, FAYETTEVILLE, NC 28301

DRAFT

REV.	REVISIONS	REV. BY	DATE	ATM
1	BULLETIN DRAWING 3	BULLETIN DRAWING 3	8/20/21	ATM
2	BULLETIN DRAWING 2	BULLETIN DRAWING 2	8/20/21	ATM

DRAWN: R. SMITH
DESIGN: T. MURRAY
CHECK: T. MURRAY
APPROVED: T. MURRAY
PROJECT NO. 2018012500RA
SUB-LEDGER NO. APR-19

DEVONWOOD LOWER DAM

PLAN TYPE: DETAILS
SHEET NUMBER: D11