



LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE		
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV		
ELECTRIC		
FIBER OPTIC		
GAS MAIN		
IRRIGATION MAIN		
OIL/PETRO. MAIN		
OVERHEAD UTILITY		
SANITARY SEWER		
STORM DRAIN		
TELEPHONE		
WATER MAIN		
RAW WATER LINE		
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR		
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)		
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		
SILT FENCE		
100 YEAR FLOODPLAIN		
500 YEAR FLOODPLAIN		
FLOODWAY		
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
<b>STORM SEWER</b>		
MANHOLE		
STORM INLET		
AREA INLET - SQUARE		
AREA INLET - ROUND		
FLARED END SECTION		
RIPRAP		
<b>SANITARY SEWER</b>		
LINE MARKER		
SERVICE MARKER		
CLEAN-OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
<b>WATER LINE</b>		
LINE MARKER		
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW-OFF VALVE		
WELL		
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW-OFF ASSEMBLY		
<b>GAS LINE</b>		
MARKER		
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
<b>DRY UTILITIES</b>		
CABLE TV MARKER		
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER		
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER-OPTIC MARKER		
IRRIGATION PEDESTAL		
TELEPHONE MARKER		
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
<b>MISC. UTILITIES</b>		
VENT PIPE		
TEST HOLE DESIGNATOR		

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 SOIL 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 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 VERSIONS 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 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 PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD 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 ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, 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.

GENERAL CONSTRUCTION NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 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.
- ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED PER THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PCD.
- ALL STATIONING IS CENTERLINE OF IMPROVEMENTS UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED AS TOP BACK OF CURB (TBC), ASPHALT (ASP), OR TOP OF INLET OR BOX (TOB).
- ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO EPC ECM APPENDIX K - 1.2C.
- ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" VERTICAL IN THIS AREA.
- ALL CULVERTS AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 - CULVERTS.
- 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 THE 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 EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.

SIGNING AND STRIPING NOTES:

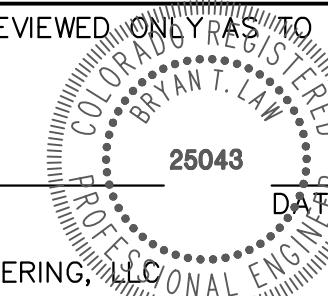
- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT 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-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE 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 PLANNING AND COMMUNITY DEVELOPMENT (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 DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.



Know what's below.  
Call before you dig.

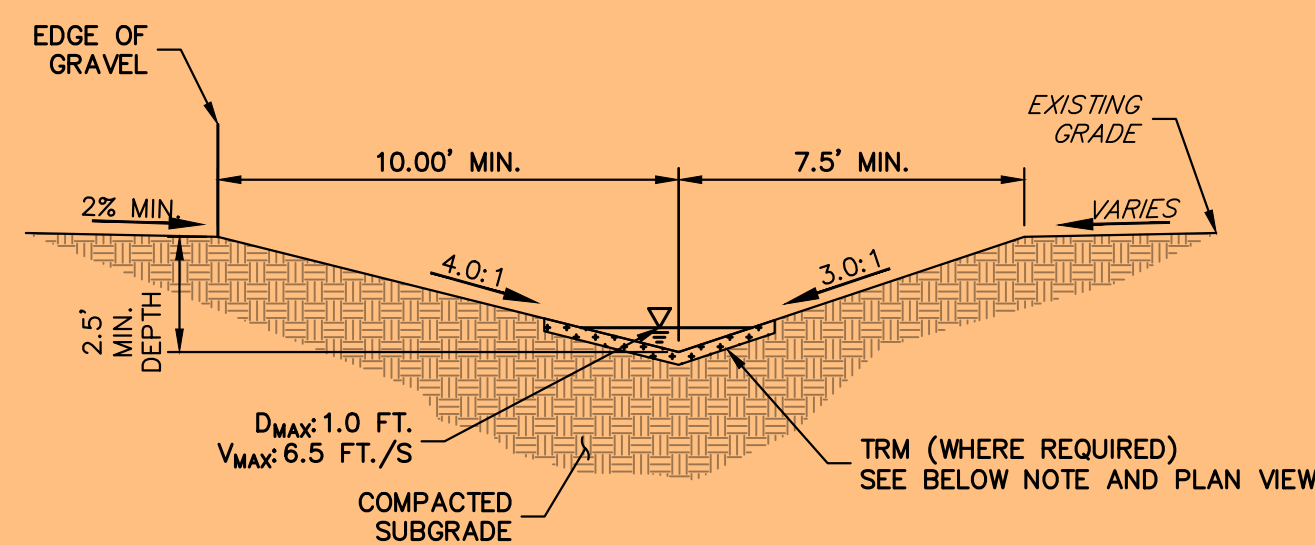
ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT



BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

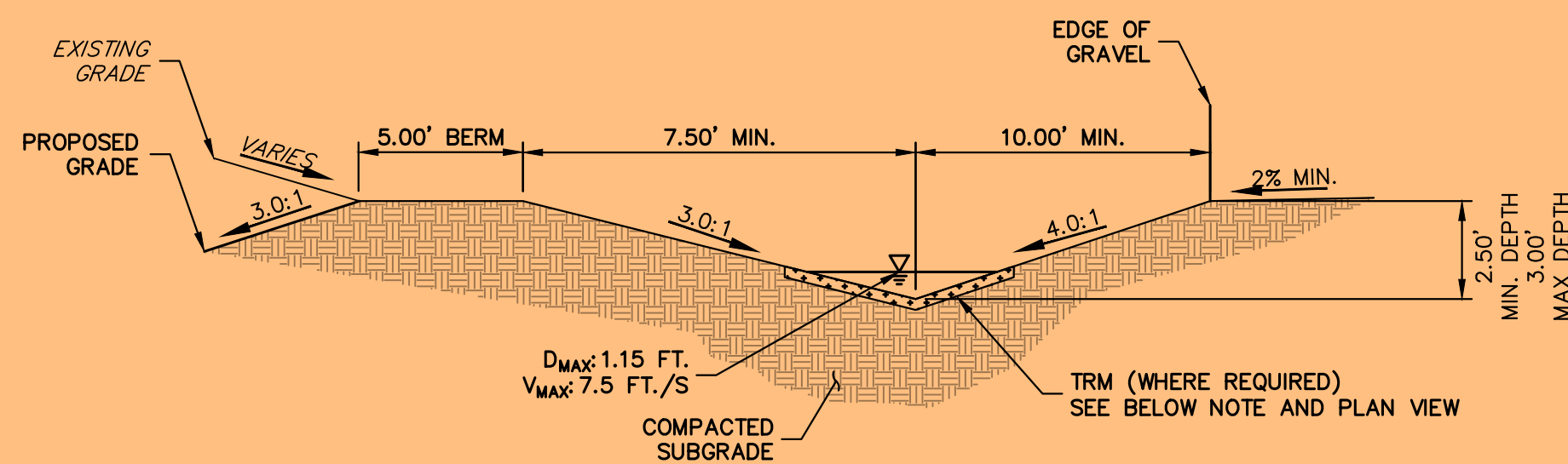
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE DESIGNATED BY WRITTEN AUTHORIZATION.	PREPARED FOR <b>VILLAGREE DEVELOPMENT LLC</b> 5710 VESSEY RD COLORADO SPRINGS, CO 80908 GREGG & ELAINE CAWFIELD (719) 413-6900	 J.R. ENGINEERING A Westman Company Centennial 303-740-9888 • Colorado Springs 719-583-2583 Fort Collins 970-491-9888 • www.jrengineering.com	BY:	DATE:
			NO.	REVISION:
H-SCALE V-SCALE DATE DESIGNED BY DRAWN BY CHECKED BY	N/A N/A 10/30/23 SAM SAM	ESTATES AT CATHEDRAL PINES LEGEND AND GENERAL NOTES	SHEET 2 OF 8 JOB NO. 25260.00	



SWALE SECTION BASIN D

N.T.S.

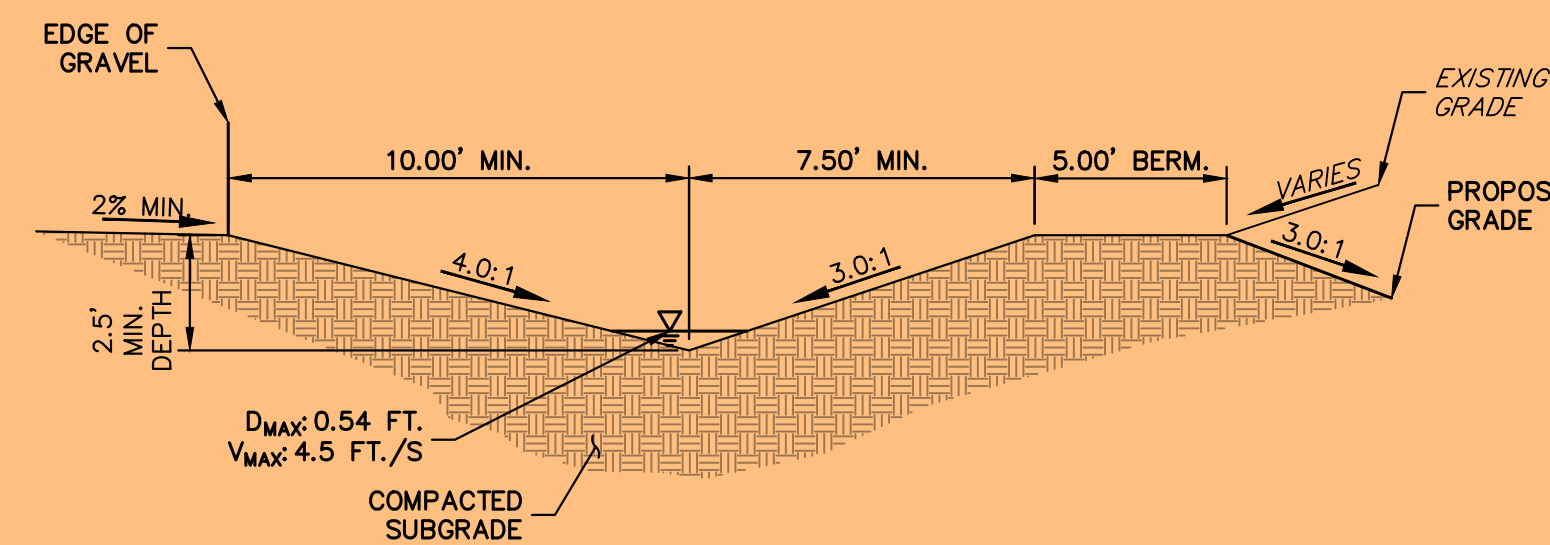
SC250 VMAX (OR APPROVED EQUIVALENT) PERMANENT TURF REINFORCEMENT MAT (TRM) IS REQUIRED TO BE INSTALLED 70' NORTH OF THE ROAD HIGH POINT AND CONTINUE FOR 400' (SEE GEC PLAN FOR LOCATIONS)



SWALE SECTION BASIN L

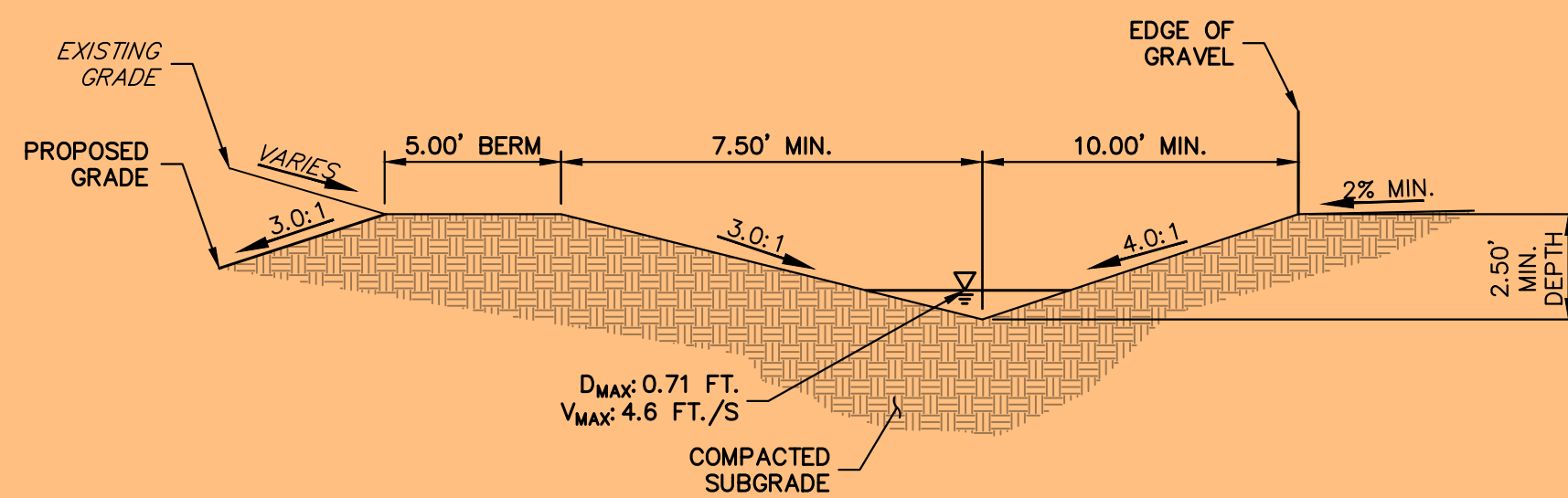
N.T.S.

SC250 VMAX (OR APPROVED EQUIVALENT) PERMANENT TURF REINFORCEMENT MAT (TRM) IS REQUIRED TO BE INSTALLED 60' SOUTH OF THE ROAD HIGH POINT AND CONTINUE FOR 280' (SEE GEC PLAN FOR LOCATIONS)



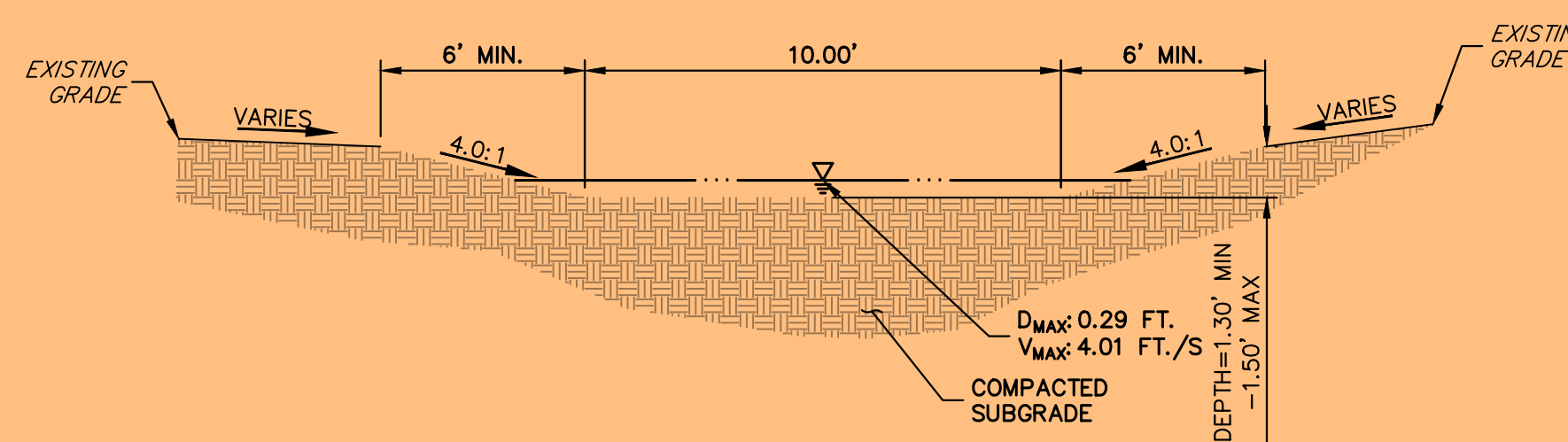
SWALE SECTION BASIN M

N.T.S.



SWALE SECTION BASIN E

N.T.S.



SWALE SECTION BASIN G

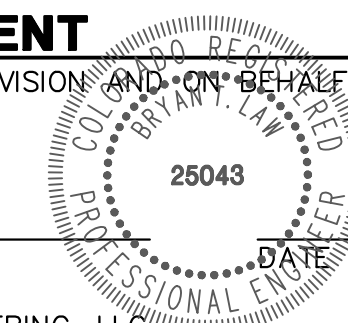
SCALE: N.T.S.

These don't match the V2 GEC Plan swale sections. Update and ensure the swale sections from both plans match.



**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING



BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

ESTATES AT CATHEDRAL PINES

TYPICAL SECTIONS

SHEET 3 OF 8

JOB NO. 25260.00

BY DATE

No. REVISION

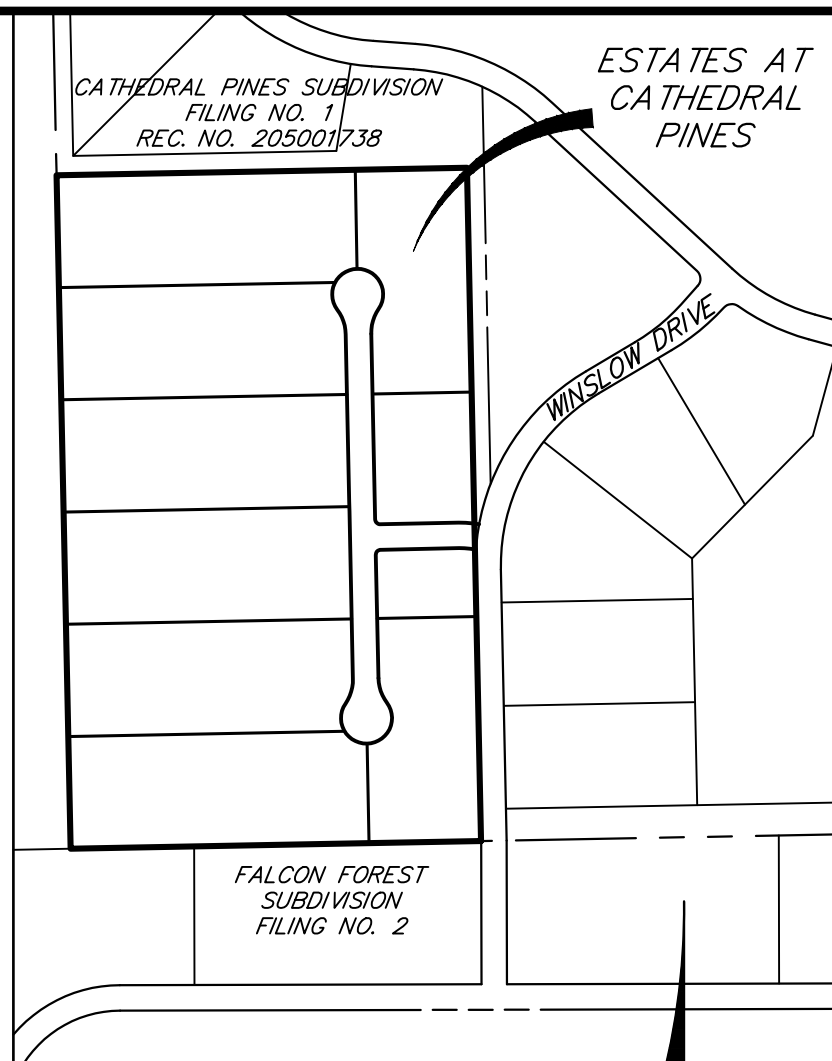
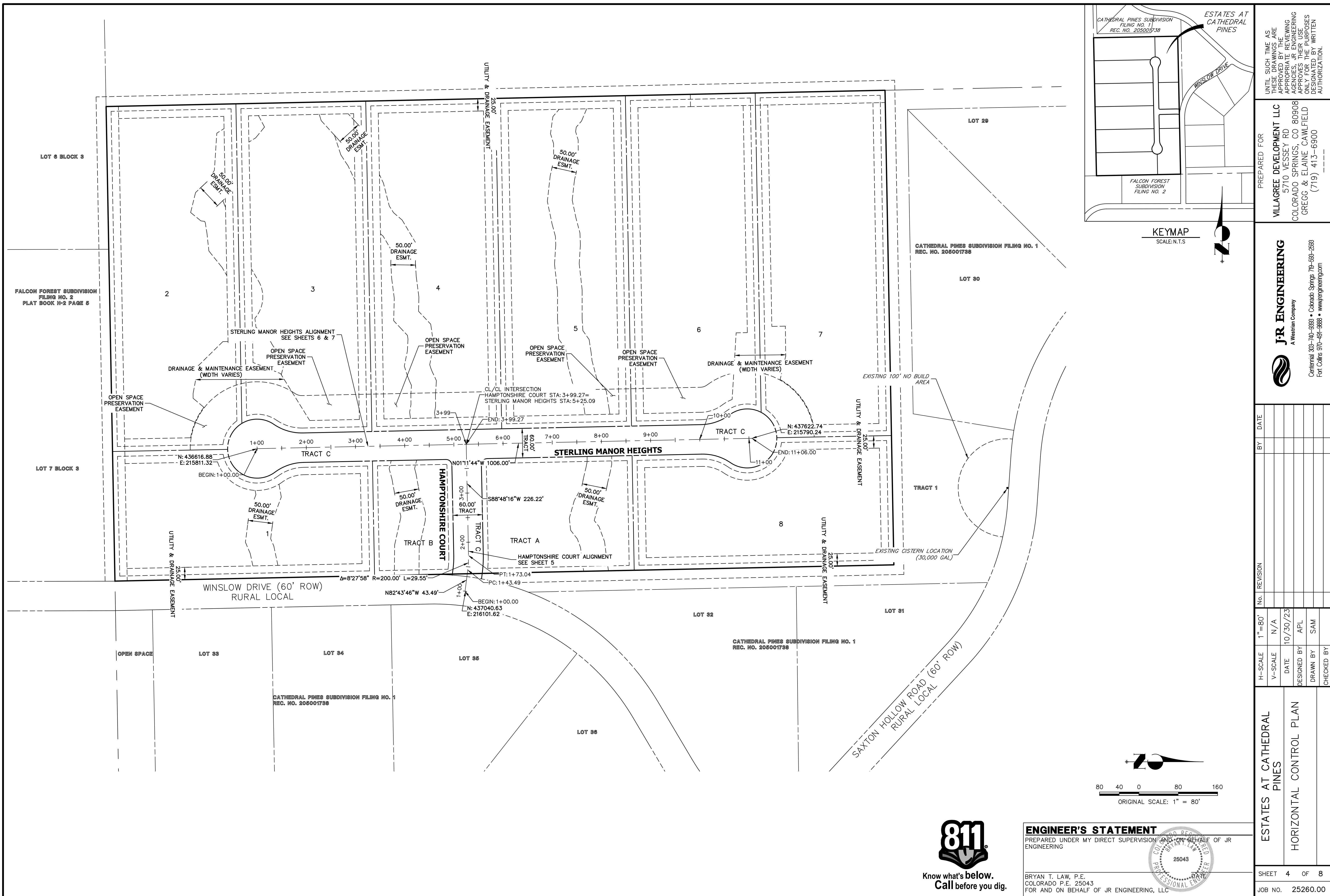
H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
NTS	N/A	10/30/23	PAL	PAL	

**J.R. ENGINEERING**  
A Westman Company  
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Fort Collins 970-491-9888 • www.jrengineering.com

PREPARED FOR  
**VILLAGREE DEVELOPMENT LLC**  
5710 VESSEY RD  
COLORADO SPRINGS, CO 80908  
GREGG & ELAINE CAWFIELD  
(719) 413-6900

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.





UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

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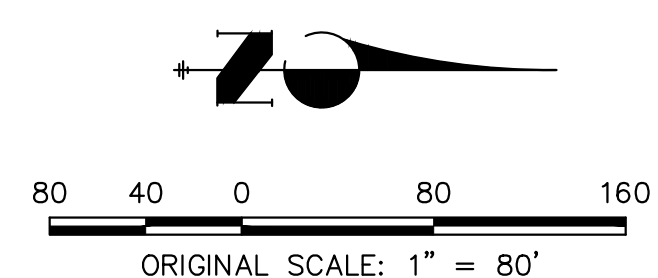
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No.	REVISION	BY	DATE

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=80'	N/A	10/30/23	APL	SAM	

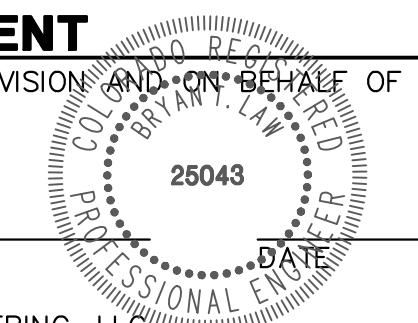
**ESTATES AT CATHEDRAL PINES**  
HORIZONTAL CONTROL PLAN

SHEET 4 OF 8  
JOB NO. 25260.00

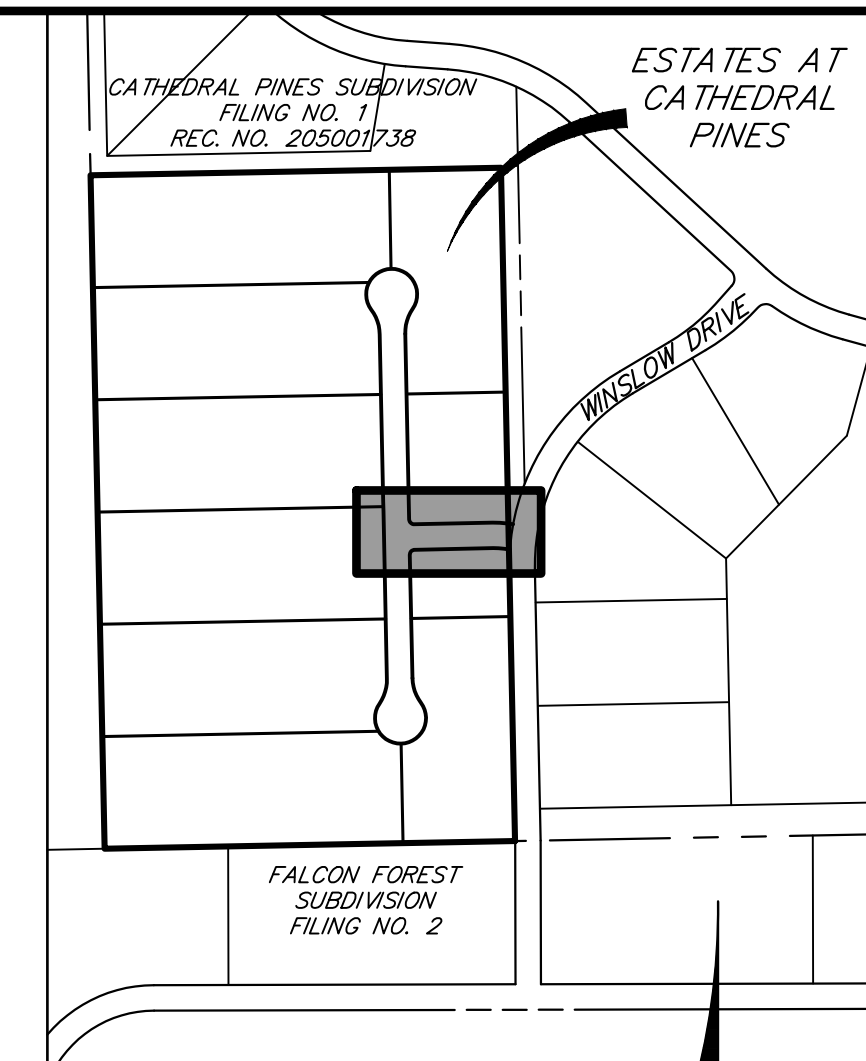
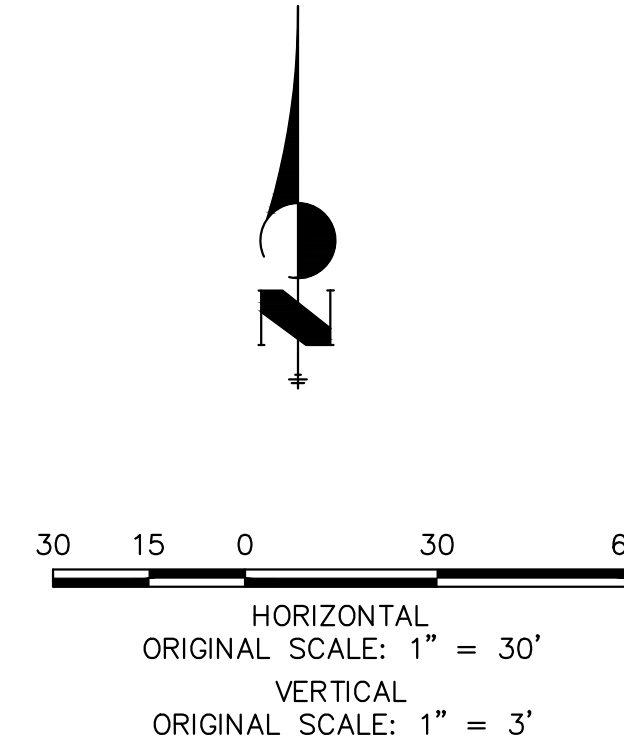
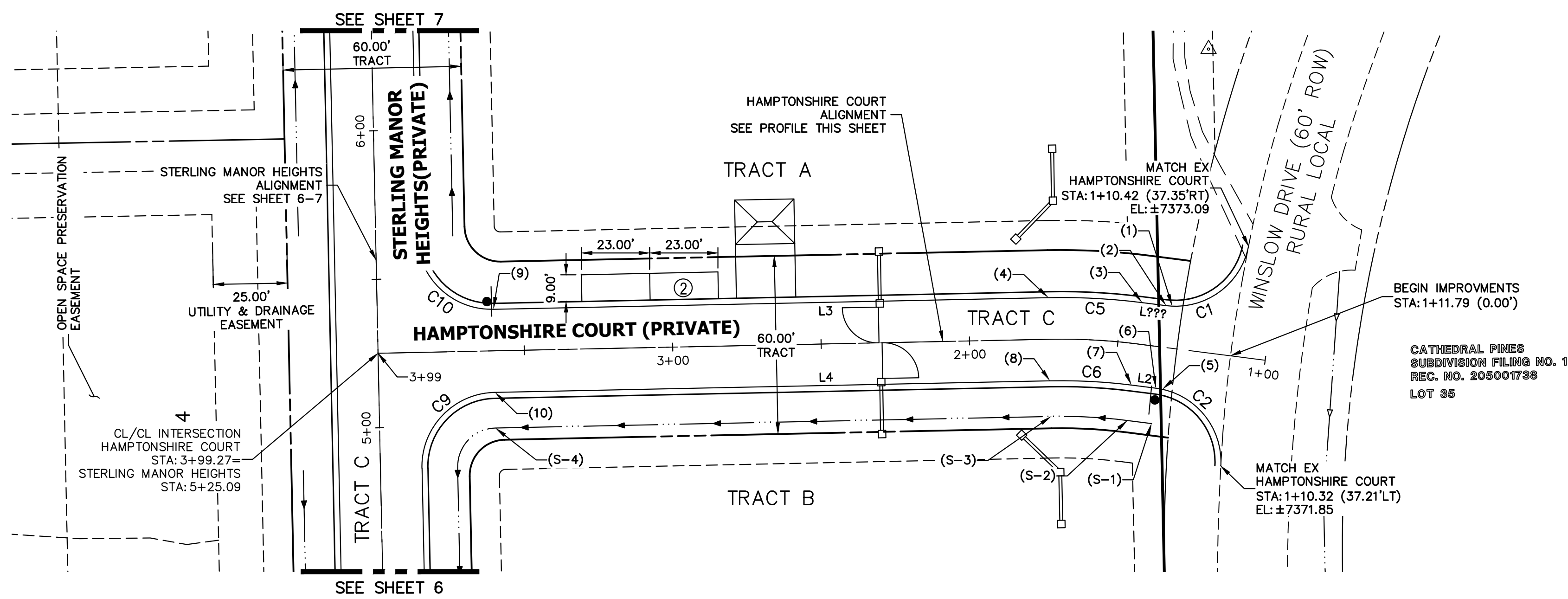


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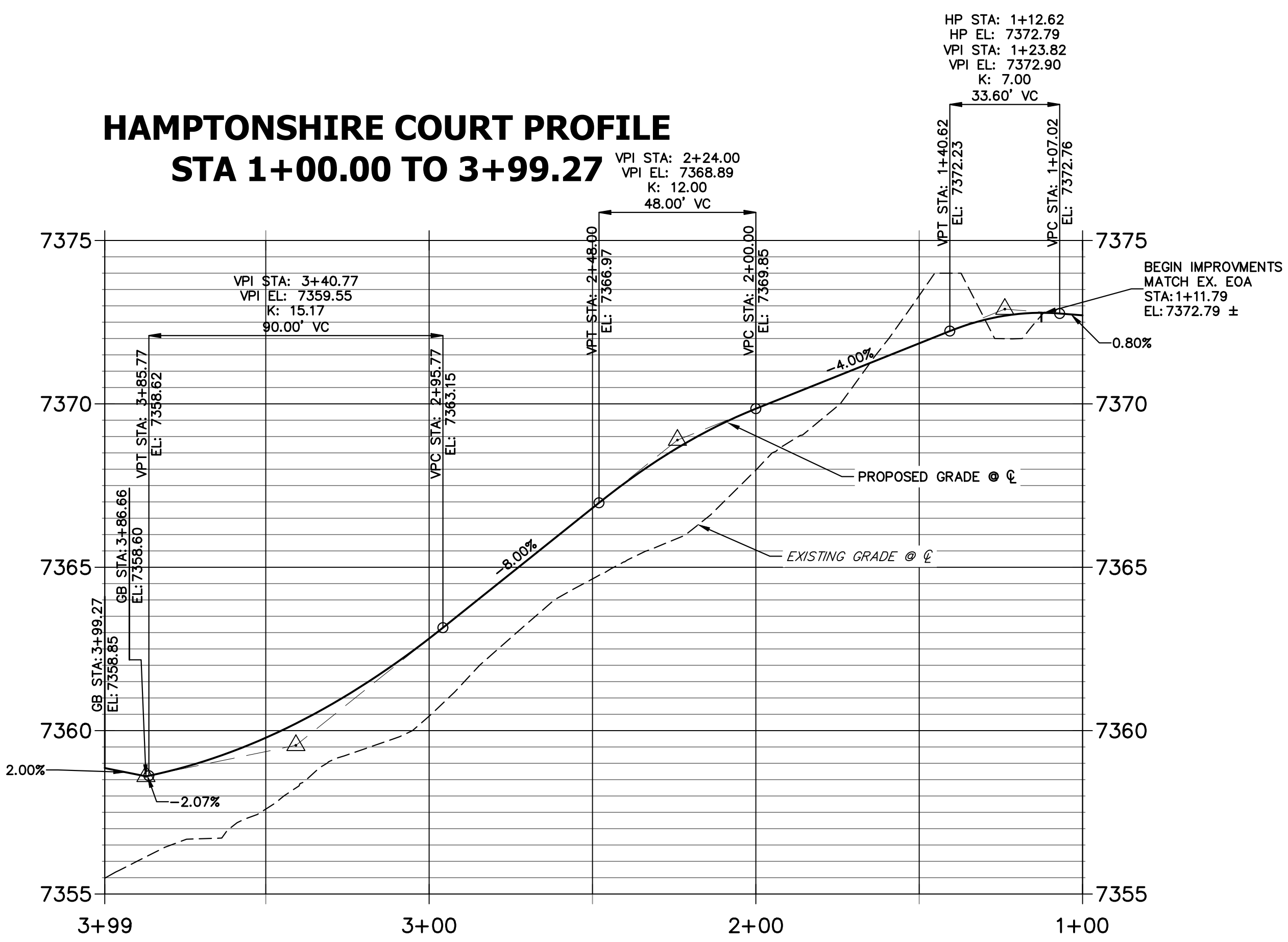
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PREPARED FOR

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**HAMPTONSHIRE COURT PROFILE  
STA 1+00.00 TO 3+99.27**



LINE	BEARING	DISTANCE
L???	N82°43'46"W	8.12'
L2	S82°43'46"E	8.23'
L3	S88°48'16"W	187.22'
L4	N88°48'16"E	187.04'

CURVE	DELTA	RADIUS	LENGTH
C1	86°12'34"	25.00'	37.62'
C2	85°54'02"	25.00'	37.48'
C5	8°27'58"	214.00'	31.62'
C6	8°27'58"	186.00'	27.48'
C9	90°25'32"	25.00'	39.46'
C10	85°45'49"	25.00'	37.42'

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
(1)	1+33.30	14.09' (RT)	HAMPTONSHIRE COURT	7372.79	HIGH PT
(2)	1+35.37	14.00' (RT)	HAMPTONSHIRE COURT	7372.14	PT
(3)	1+43.49	14.00' (RT)	HAMPTONSHIRE COURT	7371.83	PC
(4)	1+73.04	14.00' (RT)	HAMPTONSHIRE COURT	7370.65	PT
(5)	1+33.21	14.08' (LT)	HAMPTONSHIRE COURT	7372.73	HIGH PT
(6)	1+35.26	14.00' (LT)	HAMPTONSHIRE COURT	7372.14	PT
(7)	1+43.49	14.00' (LT)	HAMPTONSHIRE COURT	7371.83	PC
(8)	1+73.04	14.00' (LT)	HAMPTONSHIRE COURT	7370.65	PT
(9)	3+60.27	14.00' (RT)	HAMPTONSHIRE COURT	7359.08	PC
(10)	3+60.27	14.00' (LT)	HAMPTONSHIRE COURT	7359.08	PC
(S-1)	1+35.26	26.00' (LT)	HAMPTONSHIRE COURT	7369.60	BEGIN SWALE SECTION L
(S-2)	1+43.49	26.00' (LT)	HAMPTONSHIRE COURT	7369.29	SWALE PC
(S-3)	1+73.04	26.00' (LT)	HAMPTONSHIRE COURT	7368.11	SWALE PT

- NOTES**
- SEE SHEET 3 FOR TYPICAL SWALE SECTIONS.
  - SEE STORM & POND PLANS BY JR ENGINEERING FOR ALL CULVERT & STORM SEWER INFORMATION.
  - ALL POINTS ARE EDGE OF ASPHALT (EOA) UNLESS OTHERWISE SPECIFIED.

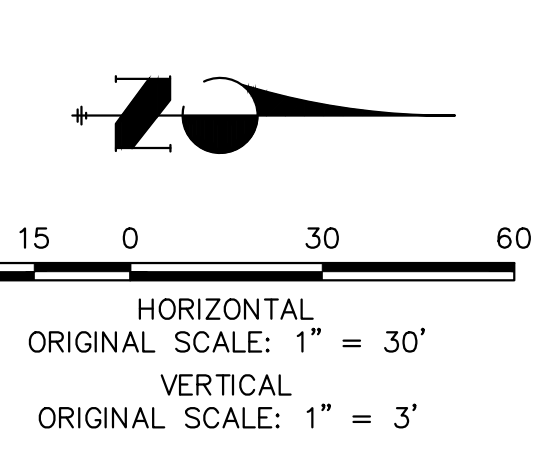
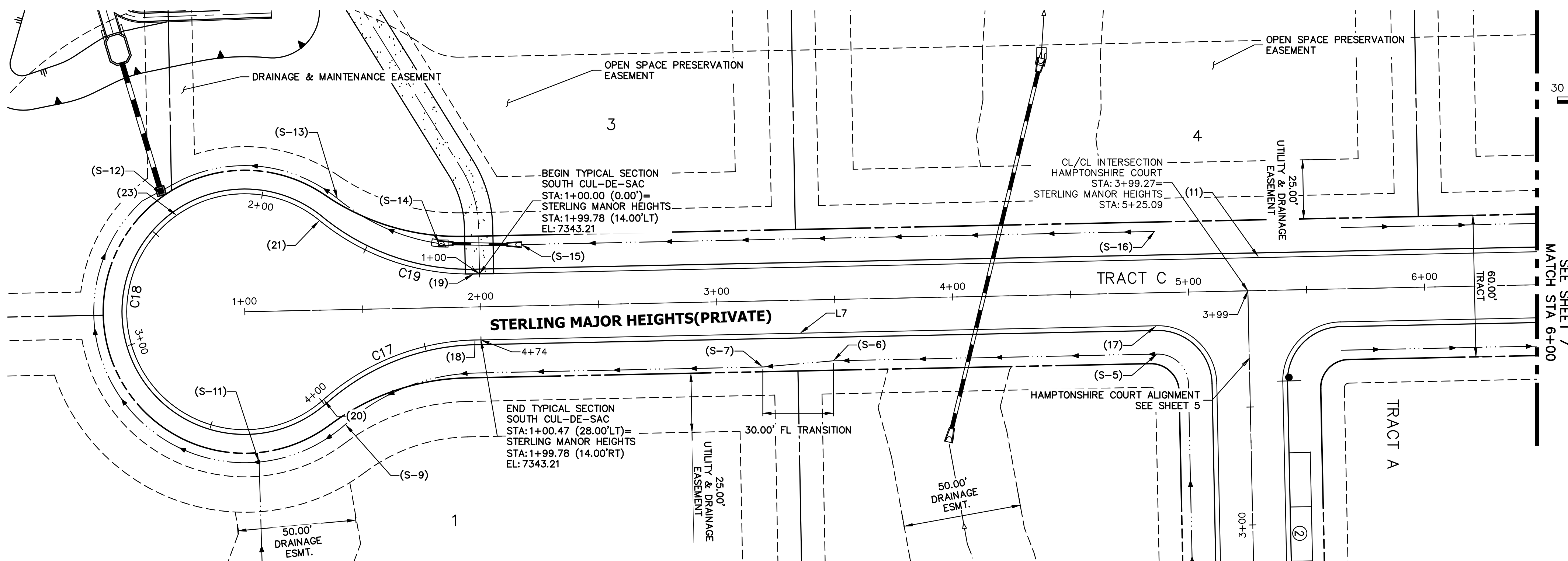


**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

25043

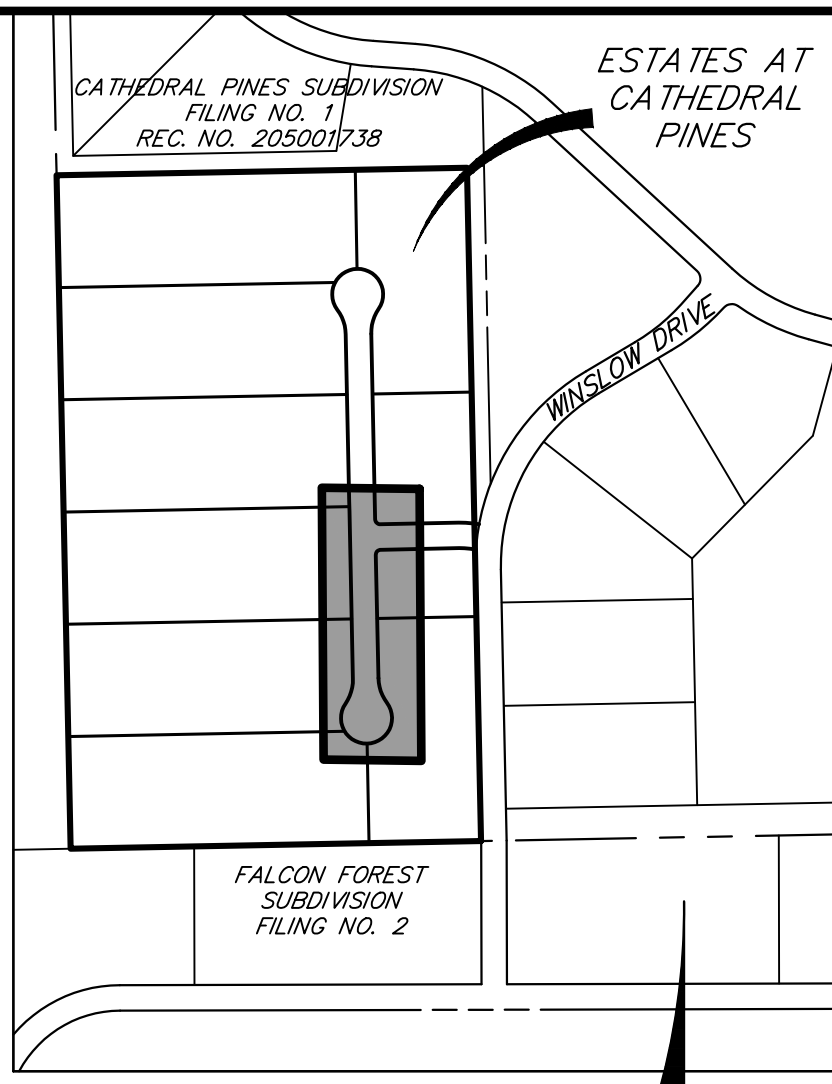
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COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

BY	DATE	No.	REVISION	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				1"=30'	1"=3'	10/30/23	APL	SAM	
ESTATES AT CATHEDRAL PINES									
STREET IMPROVEMENT PLANS									
SHEET	5	OF	8						
JOB NO.	25260.00								



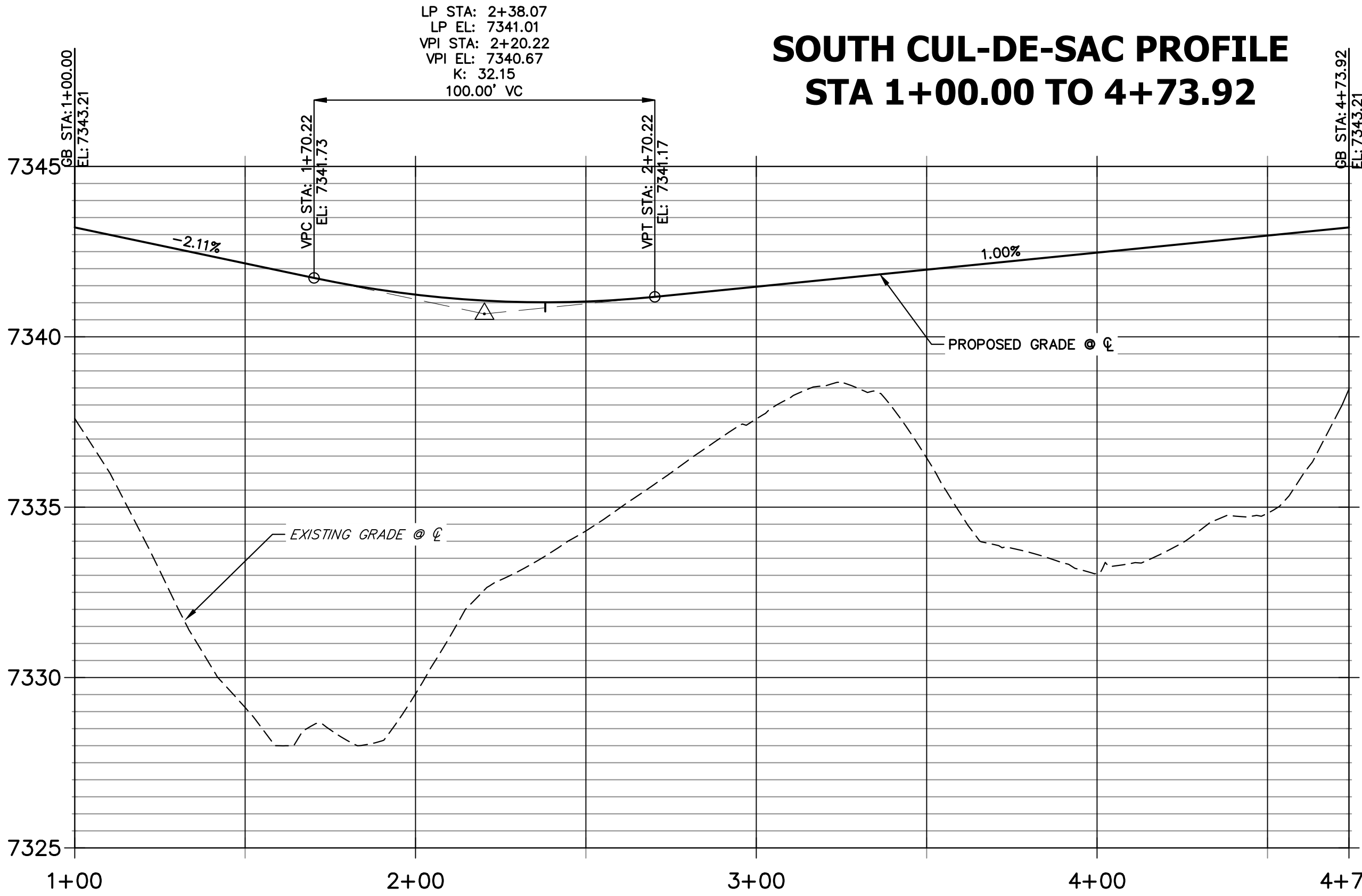
LINE	BEARING	DISTANCE
L7	N01°11'44"W	288.60'

CURVE	DELTA	RADIUS	LENGTH
C17	40°32'04"	100.00'	70.75'
C18	261°04'24"	50.00'	227.83'
C19	40°32'00"	100.00'	70.75'

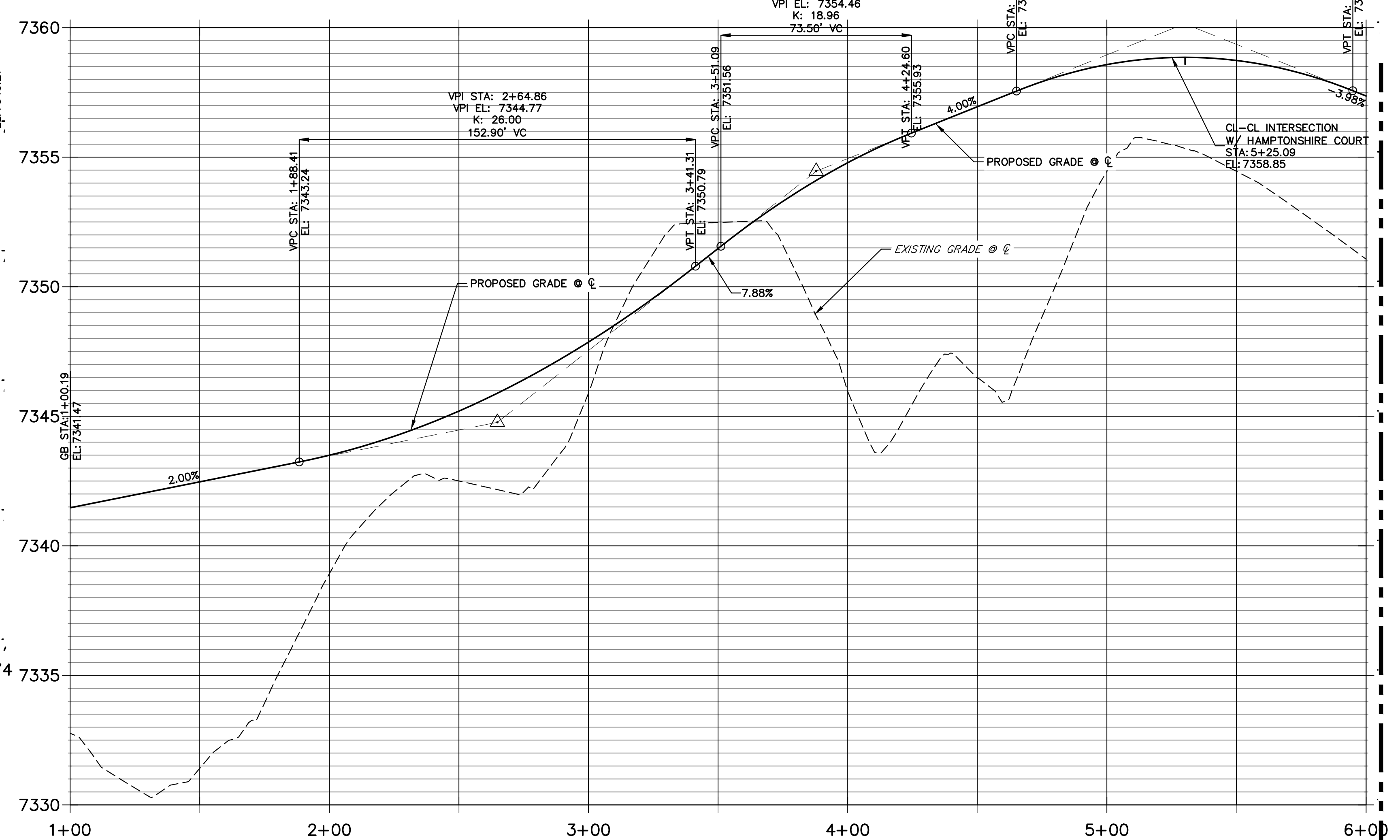


**STERLING MANOR HEIGHTS PROFILE (1)**  
STA 1+00.00 TO 6+00.00

HP STA: 5+30.17  
HP EL: 7358.85  
VPI STA: 5+30.01  
VPI EL: 7360.15  
K: 16.24  
129.76' VC



**SOUTH CUL-DE-SAC PROFILE**  
STA 1+00.00 TO 4+73.92



POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
(11)	5+30.08	14.00' (LT)	STERLING MANOR HEIGHTS	7358.55	HIGH PT
(17)	4+86.09	14.00' (RT)	STERLING MANOR HEIGHTS	7357.98	PC
(18)	1+97.49	14.00' (RT)	STERLING MANOR HEIGHTS	7343.19	PT
(19)	1+97.49	14.00' (LT)	STERLING MANOR HEIGHTS	7343.12	PT
(20)	1+32.50	38.00' (RT)	STERLING MANOR HEIGHTS	7342.48	PRC
(21)	1+32.50	38.00' (LT)	STERLING MANOR HEIGHTS	7341.67	PRC
(23)	2+38.07	0.00' (I)	SOUTH CUL-DE-SAC	7341.03	LOW POINT
(S-5)	4+86.09	26.00' (RT)	STERLING MANOR HEIGHTS	7355.44	SWALE PT
(S-6)	3+48.80	26.00' (RT)	STERLING MANOR HEIGHTS	7348.56	SWALE TRANSION END 2.5' DEPTH
(S-7)	3+18.94	28.00' (RT)	STERLING MANOR HEIGHTS	7345.81	SWALE TRANSION BEGIN 3.0' DEPTH
(S-8)	1+97.49	28.00' (RT)	STERLING MANOR HEIGHTS	7340.15	SWALE PC
(S-9)	1+41.60	48.64' (RT)	STERLING MANOR HEIGHTS	7339.44	SWALE PCC

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
(S-11)	1+04.74	63.82' (RT)	STERLING MANOR HEIGHTS	7339.12	SWALE INTERSECTION
(S-12)	2+38.15	10.95' (RT)	SOUTH CUL-DE-SAC	7337.97	SWALE LOW POINT
(S-13)	1+40.30	47.12' (LT)	STERLING MANOR HEIGHTS	7339.14	SWALE PCC
(S-14)	1+82.74	27.25' (LT)	STERLING MANOR HEIGHTS	7340.27	CULVERT INVERT
(S-15)	2+17.70	26.00' (LT)	STERLING MANOR HEIGHTS	7341.17	CULVERT INVERT
(S-16)	4+86.09	26.00' (LT)	STERLING MANOR HEIGHTS	7355.44	BEGIN SWALE SECTION M

- NOTES**
- SEE SHEET 3 FOR TYPICAL SWALE SECTIONS.
  - SEE STORM & POND PLANS BY JR ENGINEERING FOR ALL CULVERT & STORM SEWER INFORMATION.
  - ALL POINTS ARE EDGE OF ASPHALT (EOA) UNLESS OTHERWISE SPECIFIED.



**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

ESTATES AT CATHEDRAL PINES  
STREET IMPROVEMENT PLANS

BY DATE

No. REVISION

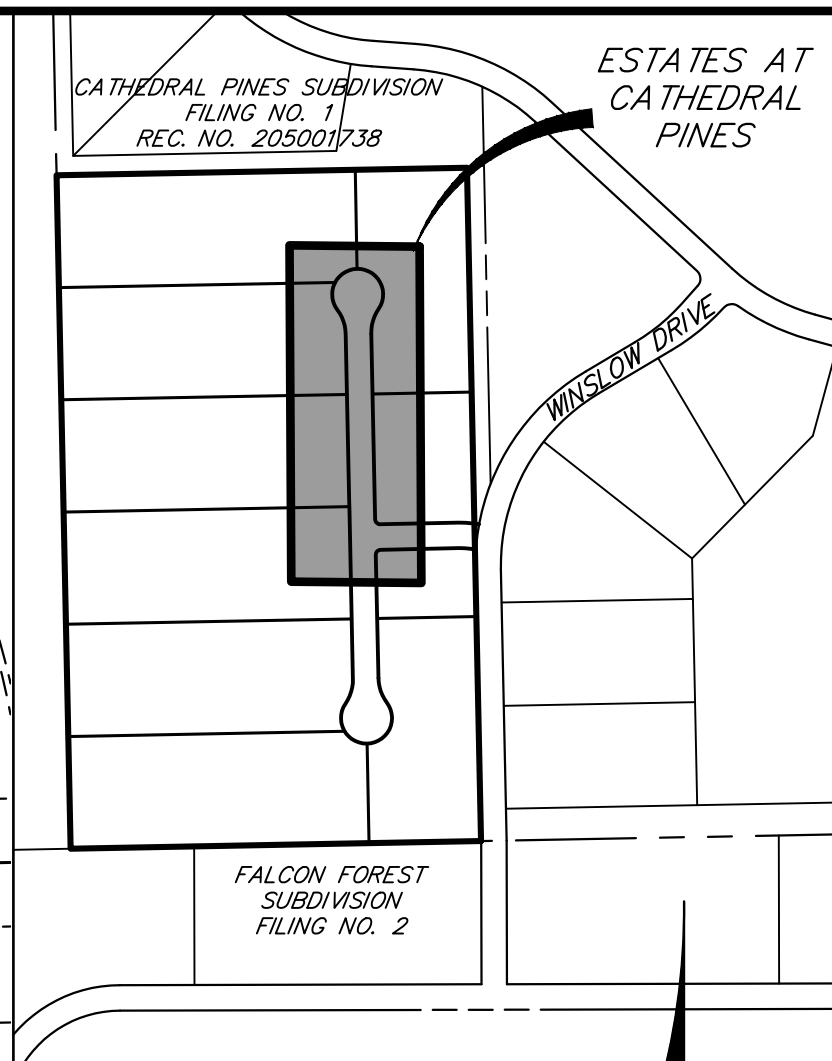
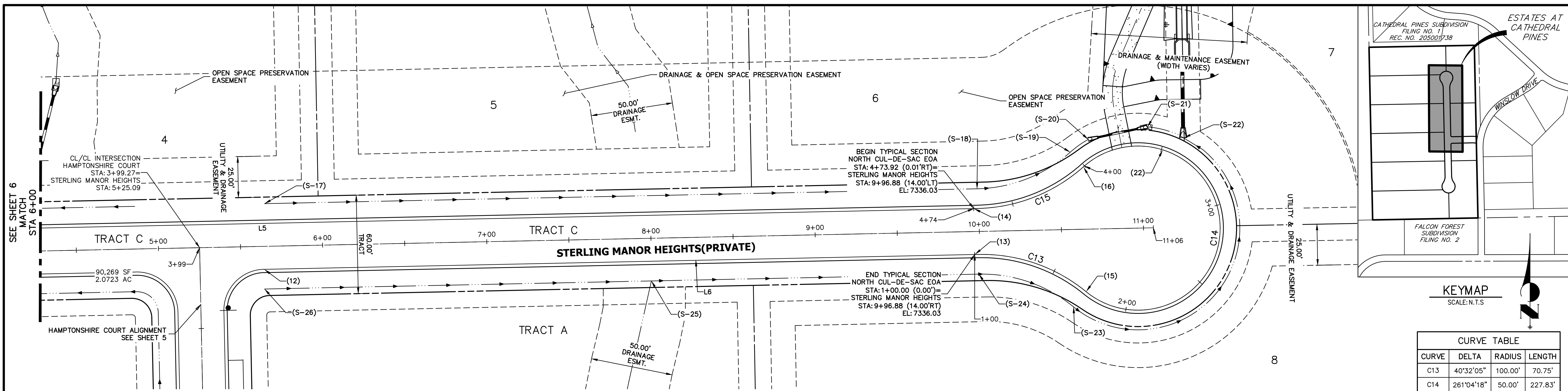
H-SCALE 1"=30'  
V-SCALE 1"=3'  
DATE 10/30/23  
DESIGNED BY APL  
DRAWN BY SAM  
CHECKED BY

PREPARED FOR  
VILLAGREE DEVELOPMENT LLC  
5710 VESSEY RD  
COLORADO SPRINGS, CO 80908  
GREGG & ELAINE CAWFIELD  
(719) 413-6900

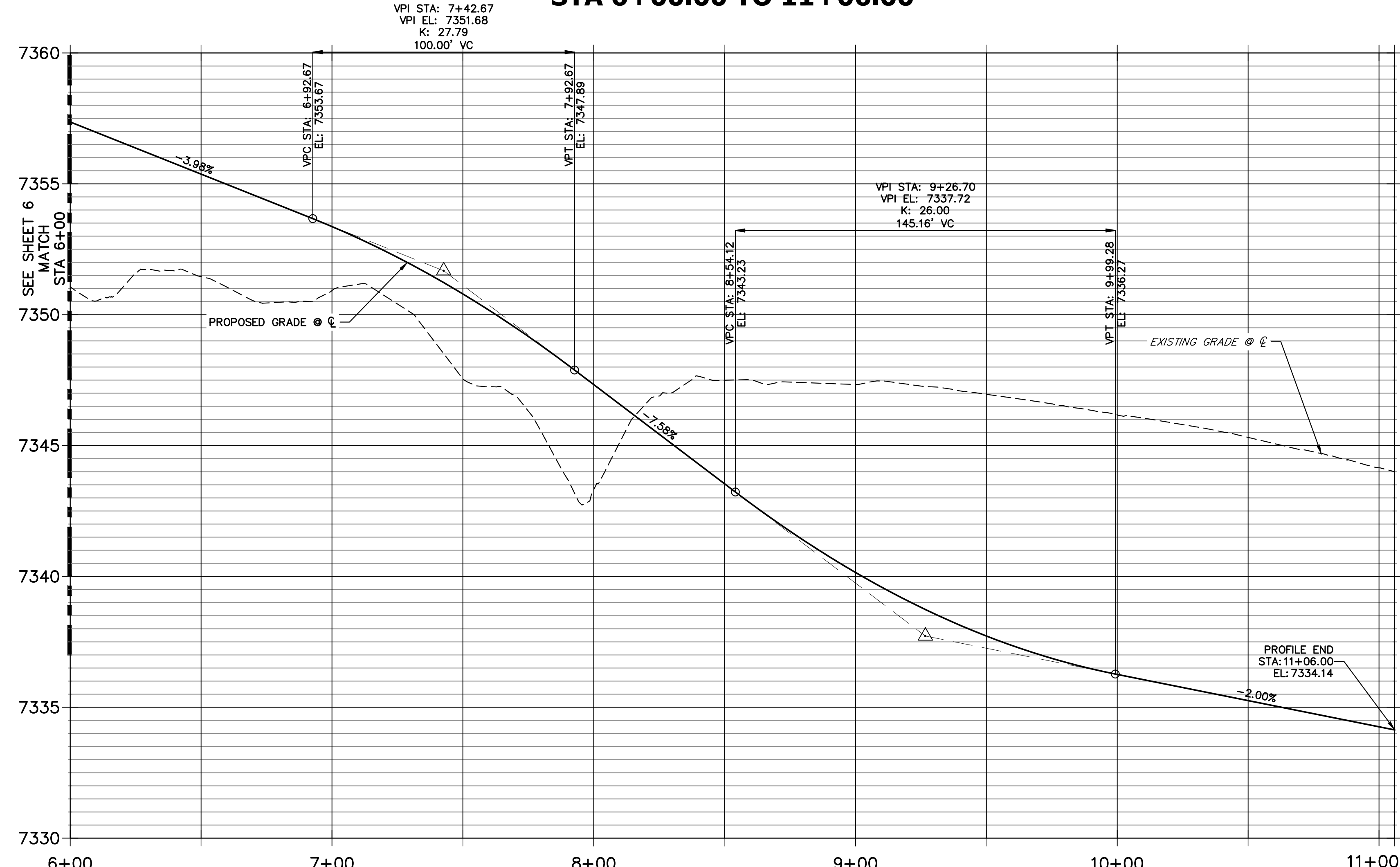
UNLESS OTHERWISE SPECIFIED, THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE AS DESIGNATED BY WRITTEN AUTHORIZATION.

J.R. ENGINEERING  
A Westman Company  
Central 303-740-9888 • Colorado Springs 719-588-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

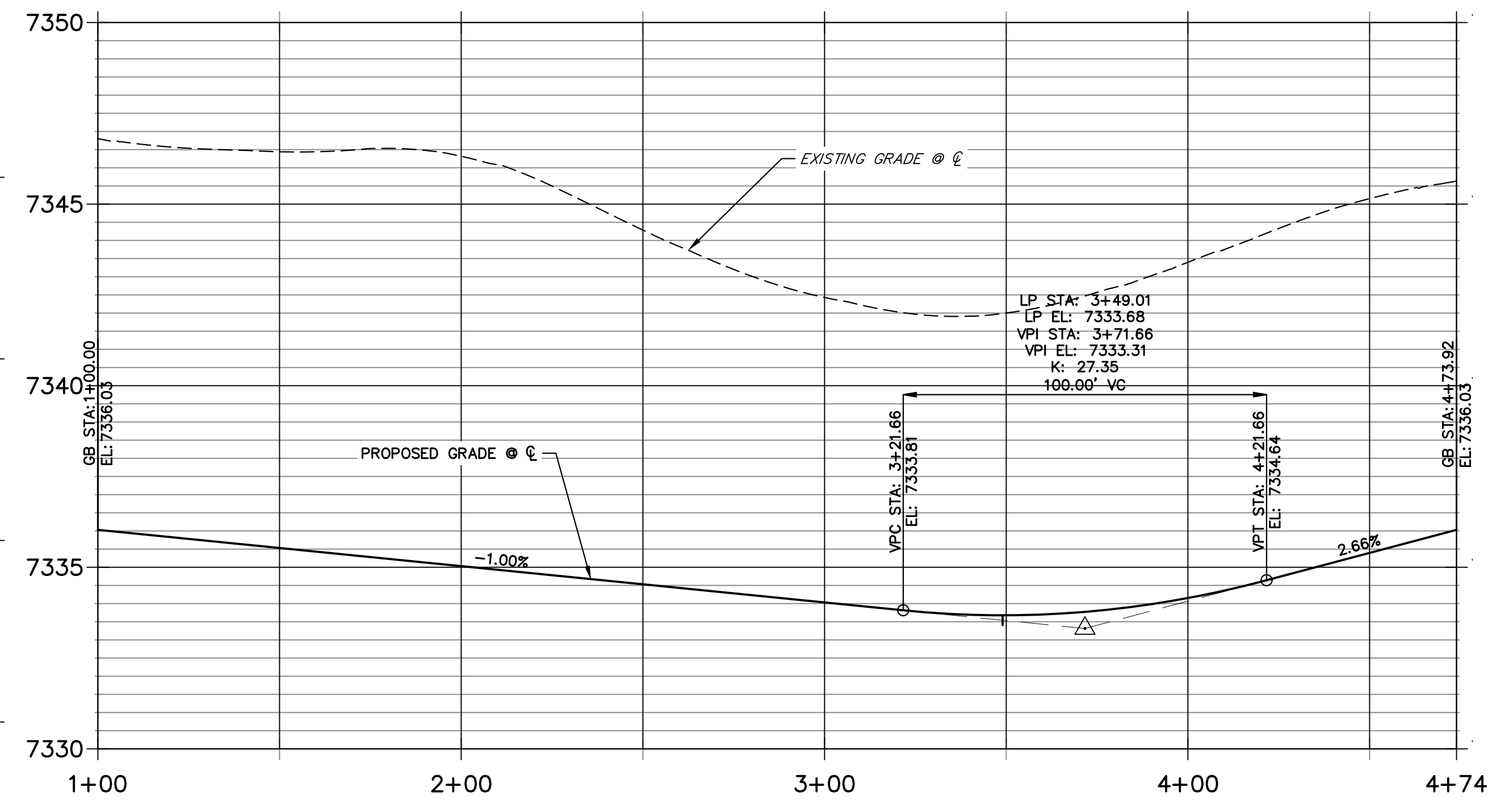
SHEET 6 OF 8  
JOB NO. 25260.00



**STERLING MANOR HEIGHTS PROFILE  
STA 6+00.00 TO 11+06.00**



**NORTH CUL-DE-SAC EOA PROFILE  
STA 1+00.00 TO 4+73.92**

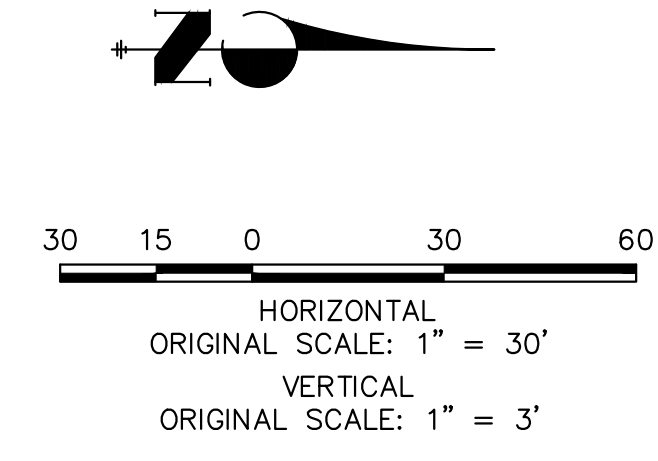


CURVE	DELTA	RADIUS	LENGTH
C13	40°32'05"	100.00'	70.75'
C14	261°04'18"	50.00'	227.83'
C15	40°32'13"	100.00'	70.75'

LINE	BEARING	DISTANCE
L5	S01°11'44"E	801.68'
L6	N01°12'16"W	436.93'

- NOTES**
- SEE SHEET 3 FOR TYPICAL SWALE SECTIONS.
  - SEE STORM & POND PLANS BY JR ENGINEERING FOR ALL CULVERT & STORM SEWER INFORMATION.
  - ALL POINTS ARE EDGE OF ASPHALT (EOA) UNLESS OTHERWISE SPECIFIED.



POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
(12)	5+64.09	14.00' (RT)	STERLING MANOR HEIGHTS	7358.22	PT
(13)	9+96.87	13.95' (RT)	STERLING MANOR HEIGHTS	7336.03	PC
(14)	9+96.88	13.99' (LT)	STERLING MANOR HEIGHTS	7336.03	PC
(15)	10+64.16	38.00' (RT)	STERLING MANOR HEIGHTS	7335.30	PRC
(16)	10+64.16	38.00' (LT)	STERLING MANOR HEIGHTS	7334.17	PRC
(22)	3+49.08	0.00' ( )	NORTH CUL-DE-SAC EOA	7333.69	LOW PT

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
(S-17)	5+65.17	26.00' (LT)	STERLING MANOR HEIGHTS	7355.65	BEGIN SWALE SECTION E
(S-18)	9+99.17	26.00' (LT)	STERLING MANOR HEIGHTS	7333.43	SWALE PC
(S-19)	10+56.36	47.12' (LT)	STERLING MANOR HEIGHTS	7331.63	SWALE PCC
(S-20)	3+90.00	12.00' (RT)	NORTH CUL-DE-SAC EOA	7331.49	CULVERT INVERT
(S-21)	3+59.82	12.00' (RT)	NORTH CUL-DE-SAC EOA	7331.16	CULVERT INVERT
(S-22)	3+40.89	11.85' (RT)	NORTH CUL-DE-SAC EOA	7331.11	SWALE LOW POINT

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
(S-23)	10+56.36	47.12' (RT)	STERLING MANOR HEIGHTS	7332.77	SWALE PCC
(S-24)	9+99.17	26.00' (RT)	STERLING MANOR HEIGHTS	7333.47	SWALE PC
(S-25)	7+99.69	26.00' (RT)	STERLING MANOR HEIGHTS	7344.53	SWALE INTERSECTION
(S-26)	5+64.09	26.00' (RT)	STERLING MANOR HEIGHTS	7355.68	BEGIN SWALE SECTION D

**ENGINEER'S STATEMENT**  
 PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E.  
 COLORADO P.E. 25043  
 FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**VILLAGREE DEVELOPMENT LLC**  
 5710 VESSEY RD  
 COLORADO SPRINGS, CO 80908  
 GREGG & ELAINE CAWFIELD  
 (719) 413-6900

**J.R. ENGINEERING**  
 A Westman Company  
 Centennial 300-740-9888 • Colorado Springs 719-588-2583  
 Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION

H-Scale: 1" = 30'  
 V-Scale: 1" = 3'  
 DATE: 10/30/23  
 DESIGNED BY: APL  
 DRAWN BY: SAM  
 CHECKED BY:  

**ESTATES AT CATHEDRAL PINES**  
**STREET IMPROVEMENT PLANS**

SHEET 7 OF 8  
 JOB NO. 25260.00





# ESTATES AT CATHEDRAL PINES

## COUNTY OF EL PASO, STATE OF COLORADO

### STORM SEWER AND POND PLANS

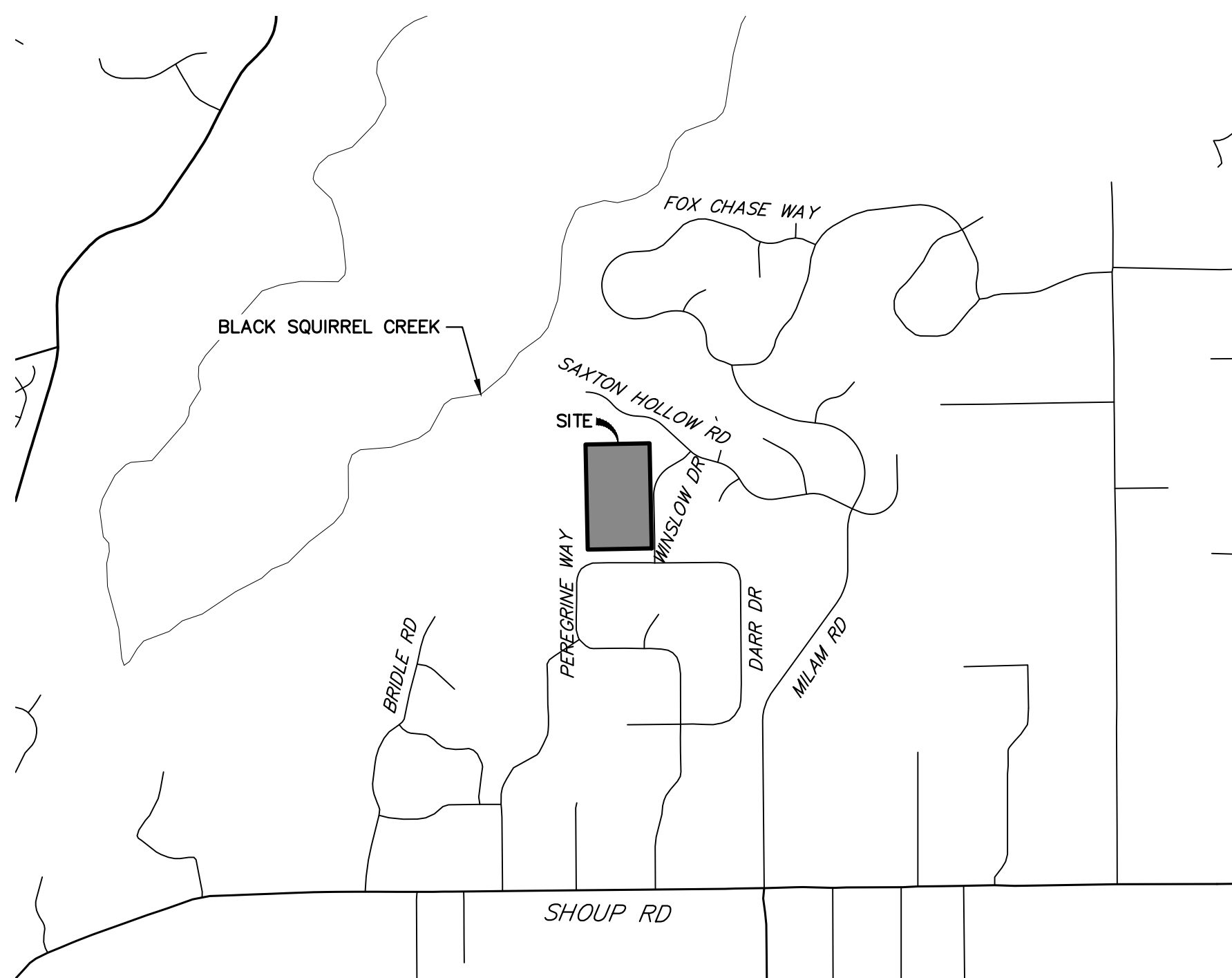


Know what's below.  
Call before you dig.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
VILLAGREE DEVELOPMENT LLC  
5710 VESSEY RD  
COLORADO SPRINGS, CO 80908  
GREGG & ELAINE CRAWFIELD  
(719) 413-6900

**J.R. ENGINEERING**  
A Westman Company  
Central 303-740-9888 • Colorado Springs 719-583-2583  
Fort Collins 970-491-9888 • www.jrengineering.com



VICINITY MAP  
SCALE: 1"=2000'



#### AGENCIES

OWNER/DEVELOPER:	VILLAGREE DEVELOPMENT LLC 5710 VESSEY RD COLORADO SPRINGS, CO 80908 GREGG & ELAINE CRAWFIELD (719) 413-6900	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 RYAN BURNS P.E. (303) 267-6178	GAS DEPARTMENT:	BLACK HILLS ENERGY 7080 ALEGRE STREET FOUNTAIN, CO 80817 (719) 393-6625
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 CHARLENE DURHAM, P.E. (719) 520-7951	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JOSHUA PALMER, P.E. (719) 520-6460	COMMUNICATIONS:	U.S. WEST COMMUNICATIONS (LOCATORS) (800) 922-1987

#### BASIS OF BEARINGS

THE WEST LINE OF THE SOUTHEAST 1/4 OF SECTION 2, TOWNSHIP 12 SOUTH, RANGE 66 WEST OF THE 6TH P.M. BEING MONUMENTED BY A 3-1/4" ALUMINUM CAP STAMPED "LS 9132" AT THE SOUTH 1/4 CORNER AND A 2-1/2" ALUMINUM CAP STAMPED "LS 9132" AT THE CENTER 1/4 CORNER, SAID LINE BEARING N00°11'44"W AS SHOWN ON THE PLAT OF CATHEDRAL PINES SUBDIVISION FILING NO. 1 RECORDED UNDER RECEPTION NO. 205001738 IN THE RECORDERS OF THE EL PASO COUNTY CLERK AND RECORDER.

#### BENCHMARKS

1. SITE VERTICAL DATUM NGVD88 FROM PLANS BY LEIGH-WHITEHEAD ELEVATION 7436.65  
NO. 4 REBAR 23' NORTH AND 20' EAST OF THE SOUTHEAST CORNER OF SECTION 2, TOWNSHIP 12 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY COLORADO, SAID SECTION CORNER BEING A 3-1/4" ALUMINUM SURVEYORS CAP STAMPED "PLS 9132" BEING APPROPRIATELY MARKED

2. 1" IRON PIPE AT SOUTHEAST CORNER OF SITE BEING 367' +/- NORTH OF THE INTERSECTION OF PEREGRINE WAY AND WINSLOW DRIVE AND 30' WESTERLY OF THE CENTERLINE OF WINSLOW DRIVE ELEVATION = 7347.65

3. THE NORTHWEST CORNER OF AN AREA INLET BEING EASTERLY OF WINSLOW DRIVE AND BEING 900' +/- NORTH OF THE INTERSECTION OF PEREGRINE WAY AND WINSLOW DRIVE ELEVATION = 7347.47

#### SHEET INDEX:

1	-	COVER SHEET
2	-	LEGEND AND GENERAL NOTES
3-5	-	STORM SEWER PLAN & PROFILE
6-13	-	POND PLANS AND DETAILS
14-16	-	DETAILS
16	-	TOTAL SHEETS

THE LOCATIONS OF EXISTING ABOVE GROUND AND 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 ABOVE GROUND AND UNDERGROUND UTILITIES.

#### OWNER/DEVELOPER STATEMENT

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

GREGG CRAWFIELD, OWNER \_\_\_\_\_ DATE \_\_\_\_\_

VILLAGREE DEVELOPMENT  
5710 VESSEY ROAD  
COLORADO SPRINGS, CO 80908

#### EL PASO COUNTY STATEMENT

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.

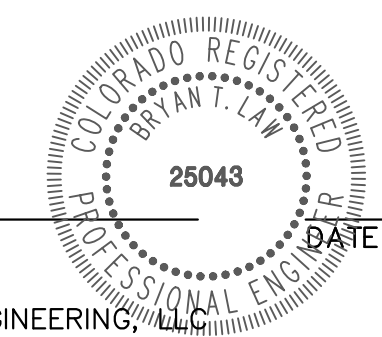
IN ACCORDANCE WITH EOM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JOSHUA PALMER, P.E. \_\_\_\_\_ DATE \_\_\_\_\_

COUNTY ENGINEER/ECM ADMINISTRATOR

#### ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT 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 PLAN 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 CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.



BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

PCD FILE NO. SF-2234

BY	DATE	No.	REVISION	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				N/A	N/A	03/29/24	GAG	GAG	

ESTATES AT CATHEDRAL PINES

COVER SHEET

SHEET 1 OF 16  
JOB NO. 25260.00

**LAYER LINETYPE LEGEND**

	EXISTING	PROPOSED
PHASE LINE	---	---
MATCH LINE	---	---
SECTION LINE	---	---
BOUNDARY LINE	---	---
PROPERTY LINE	---	---
EASEMENT LINE	---	---
RIGHT OF WAY	---	---
R.O.W. A LINE	---	---
CENTERLINE	---	---
CITY LIMITS	---	---
WIRE FENCE	---	---
CHAIN LINK FENCE	---	---
WOOD FENCE	---	---
MASONRY FENCE	---	---
GUARDRAIL	---	---
CONC. BARRIER	---	---
CABLE TV	---	---
ELECTRIC	---	---
FIBER OPTIC	---	---
GAS MAIN	---	---
IRRIGATION MAIN	---	---
OIL/PETRO. MAIN	---	---
OVERHEAD UTILITY	---	---
SANITARY SEWER	---	---
STORM DRAIN	---	---
TELEPHONE	---	---
WATER MAIN	---	---
RAW WATER LINE	---	---
SWALE/WATERWAY FLOWLINE	---	---
DIVERSION DITCH	---	---
DIVERSION CHANNEL	---	---
MAJOR DRAINAGE BASIN	---	---
MINOR DRAINAGE BASIN	---	---
TOP OF SLOPE	---	---
TOE OF SLOPE	---	---
EDGE OF WATER	---	---
INDEX CONTOUR	---	---
INTERMEDIATE CONTOUR	---	---
DEPRESSION CONT. (INDEX)	---	---
DEPRESSION CONT. (INTER)	---	---
TOP OF CUTS	---	---
TOE OF FILLS	---	---
CUT AND FILL LINE	---	---
SILT FENCE	---	---
100 YEAR FLOODPLAIN	---	---
500 YEAR FLOODPLAIN	---	---
FLOODWAY	---	---
BASE FLOOD ELEVATION	---	---
EDGE OF WETLANDS	---	---
STONE WALL	---	---

**UTILITIES LEGEND**

	EXISTING	PROPOSED
<b>STORM SEWER</b>		
MANHOLE	⊙	●
STORM INLET	⊠	⊠
AREA INLET - SQUARE	□	□
AREA INLET - ROUND	○	○
FLARED END SECTION	▷	▷
RIPRAP	▨	▨
<b>SANITARY SEWER</b>		
LINE MARKER	Mkr San <sup>o</sup>	
SERVICE MARKER	△	
CLEAN-OUT	○	
MANHOLE W/ DIRECTIONAL FLOW ARROW	⊙	⊙
<b>WATER LINE</b>		
LINE MARKER	Mkr W <sup>o</sup>	
SERVICE MARKER	△	
FIRE HYDRANT	⊕	⊕
FIRE CONNECTION	⊕	⊕
MANHOLE	⊙	●
BEND	⊕	⊕
BLOW-OFF VALVE	⊕	⊕
WELL	⊙	●
METER	⊕	⊕
VALVE	⊕	⊕
REDUCER	⊕	⊕
THRUST BLOCK	⊕	⊕
CROSS	⊕	⊕
PLUG W/ THRUST BLOCK	⊕	⊕
TEE	⊕	⊕
REVERSE ANCHOR	⊕	⊕
ANODE	⊕	⊕
AIR & VACUUM VALVE ASSEMBLY	⊕	⊕
TRANSMISSION BLOW-OFF ASSEMBLY	⊕	⊕
<b>GAS LINE</b>		
MARKER	Mkr G <sup>o</sup>	
SERVICE MARKER	△	
METER	⊕	⊕
VALVE	⊕	⊕
PLUG	⊕	⊕
TEE	⊕	⊕
<b>DRY UTILITIES</b>		
CABLE TV MARKER	Mkr TV <sup>o</sup>	
CABLE TELEVISION PEDESTAL	⊕	
ELECTRIC MARKER	Mkr E <sup>o</sup>	
ELECTRIC SERVICE MARKER	△	
ELECTRICAL PEDESTAL	⊕	
ELECTRICAL METER	⊕	
ELECTRICAL MANHOLE	⊕	
FIBER-OPTIC MARKER	Mkr FO <sup>o</sup>	
IRRIGATION PEDESTAL	⊕	
TELEPHONE MARKER	Mkr T <sup>o</sup>	
TELEPHONE PEDESTAL	⊕	
TELEPHONE MANHOLE	⊕	
UTILITY POLE	⊕	⊕
GUY ANCHOR	⊕	⊕
GUY POLE	⊕	⊕
<b>MISC. UTILITIES</b>		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH	TH

**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 SOIL 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 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 VERSIONS 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 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 PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD 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 ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, 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.

**STORM SEWER NOTES**

- SEE SHEET 1 FOR BENCHMARK. SEE SHEET 2 FOR LEGEND.
- ALL STORM SEWER PIPES, INLETS, MANHOLES, AND APPURTENANCES WITHIN THE R.O.W. ARE PUBLIC. STORM FACILITIES OUTSIDE OF THE PUBLIC R.O.W. ARE PRIVATE, UNLESS OTHERWISE NOTED.
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- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH MANUFACTURERS SPECIFICATIONS AND EL PASO COUNTY STANDARDS AND SPECIFICATION.
- SEE DETAIL SHEET 14 FOR APPLICABLE DETAILS.

**POND NOTES**

- ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
- SEE SHEETS 3-5 FOR PROPOSED STORM SEWER DESIGN.
- SEE PRIVATE STREET IMPROVEMENT PLANS BY JR ENGINEERING FOR PROPOSED PRIVATE STREET DESIGN.
- SEE GRADING AND EROSION CONTROL PLAN BY JR ENGINEERING.

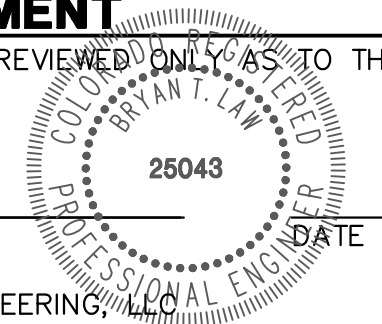


Know what's below. Call before you dig.

**ENGINEER'S STATEMENT**

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

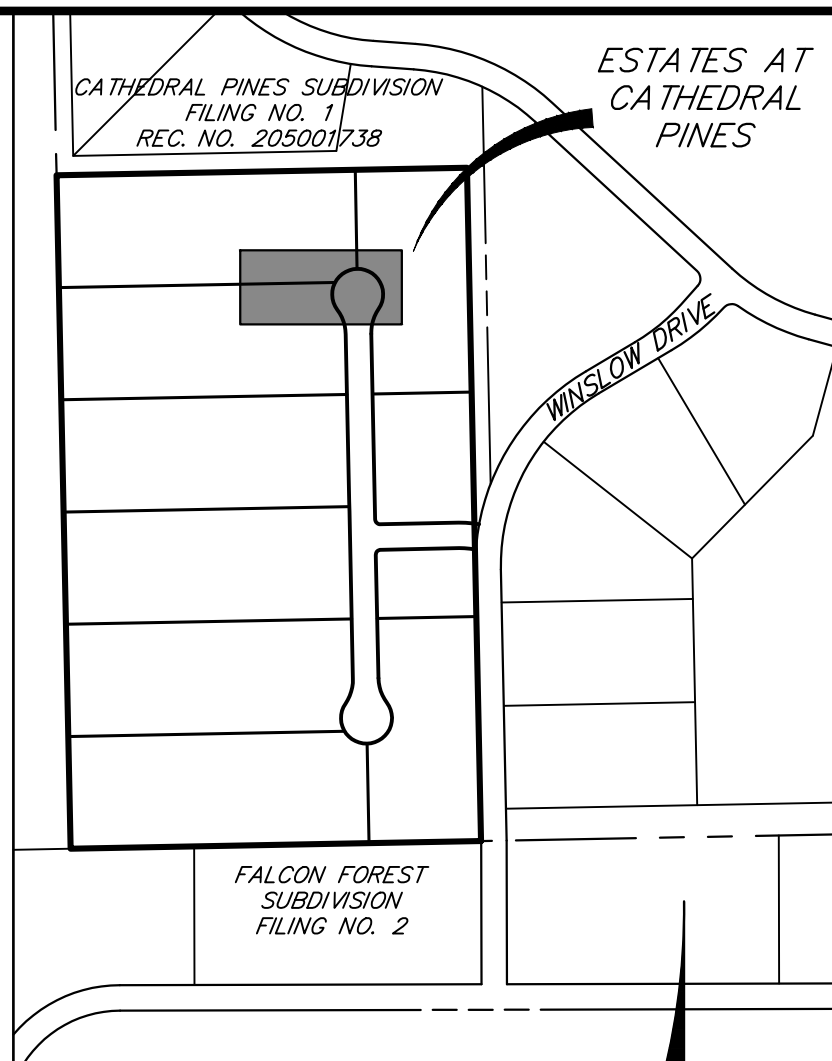
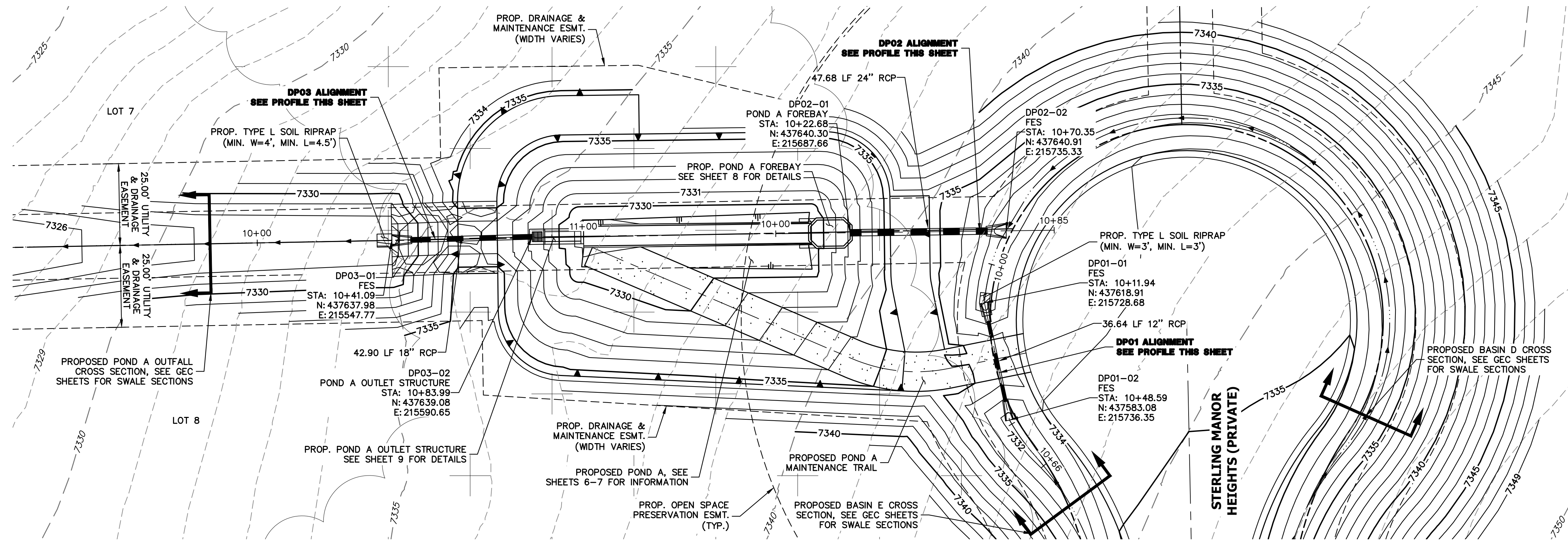
BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING



UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE. ANY CHANGES DESIGNATED BY WRITTEN AUTHORIZATION.	PREPARED FOR <b>VILLAGREE DEVELOPMENT LLC</b> 5710 VESSEY RD COLORADO SPRINGS, CO 80908 GREGG & ELAINE CAWFIELD (719) 413-6900
	<b>J.R. ENGINEERING</b> A Westman Company Centennial 303-740-9888 • Colorado Springs 719-583-2583 Fort Collins 970-491-9888 • www.jrengineering.com
BY _____ DATE _____	No. REVISION _____
H-SCALE _____ V-SCALE _____ DATE 03/29/24	N/A N/A GAG GAG
DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____	ESTATES AT CATHEDRAL PINES LEGEND AND GENERAL NOTES
SHEET 2 OF 16 JOB NO. 25260.00	811 logo and text

X:\25260000\25260000\Drawings\Sheet\Drawings\CD\Storm and Pond Plans\25260000\_CV01\_Storm.dwg, LG & CN, 3/29/2024 8:10:29 AM, CS



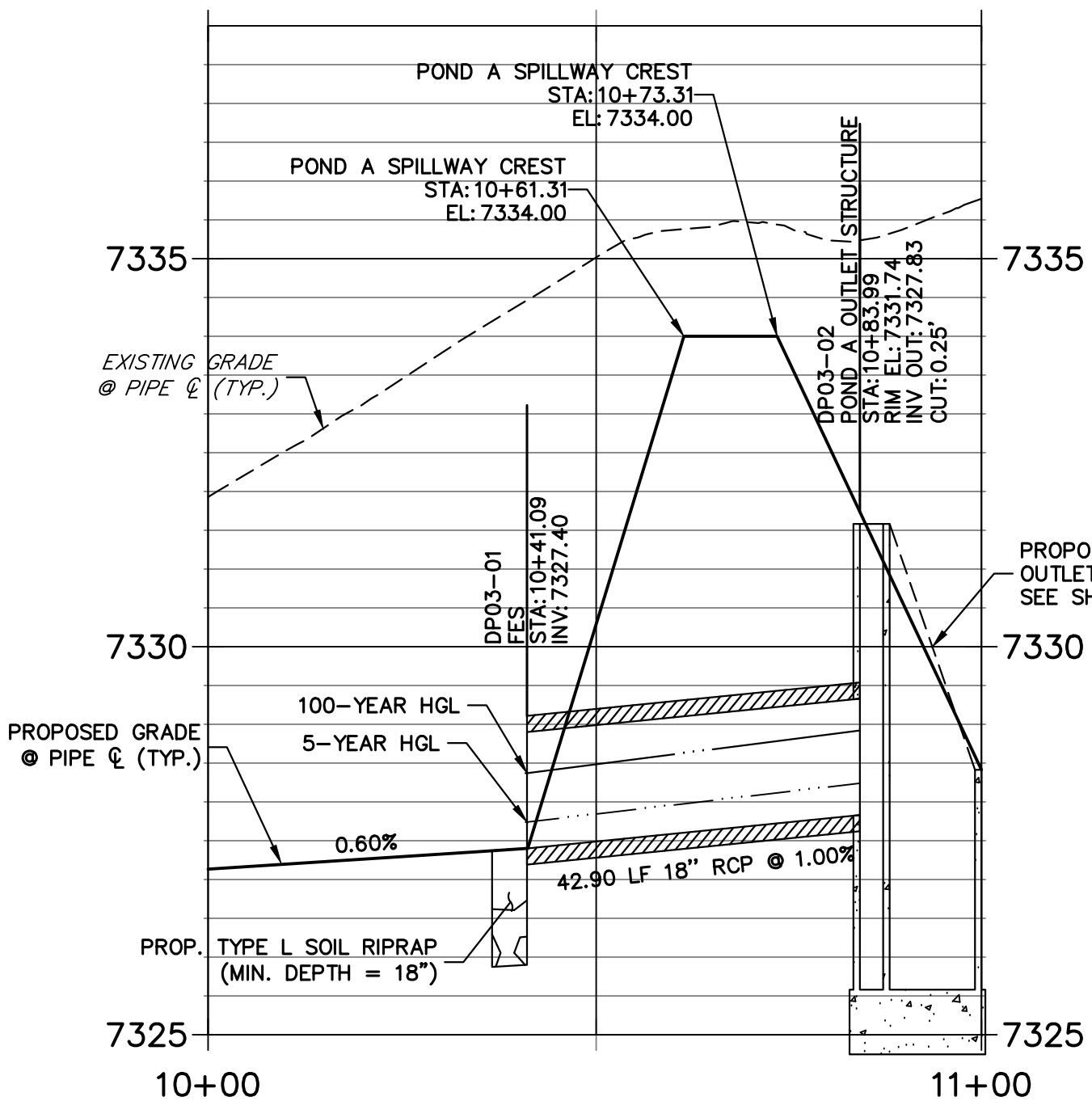


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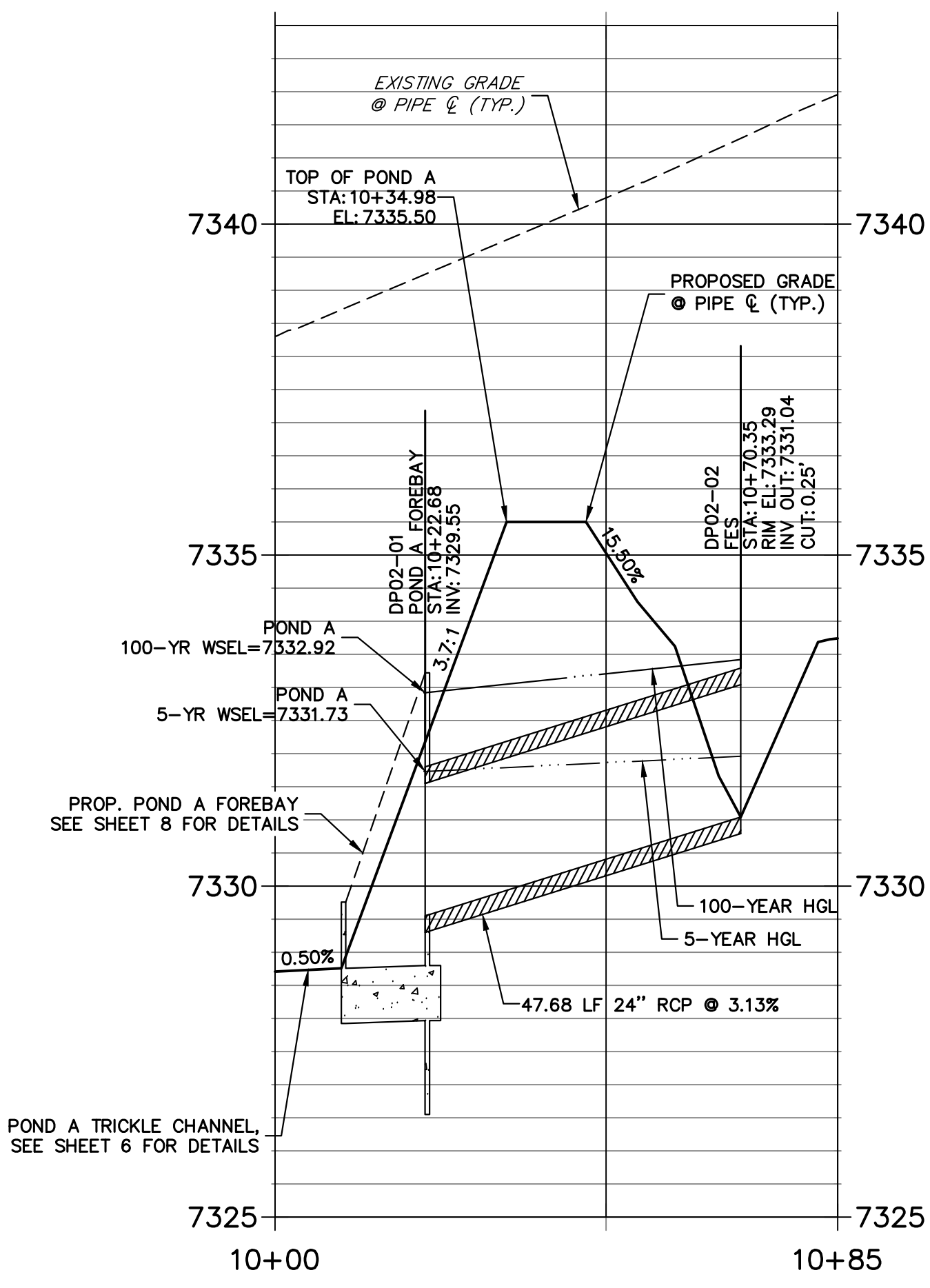
PREPARED FOR  
**VILLAGREE DEVELOPMENT LLC**  
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 COLORADO SPRINGS, CO 80908  
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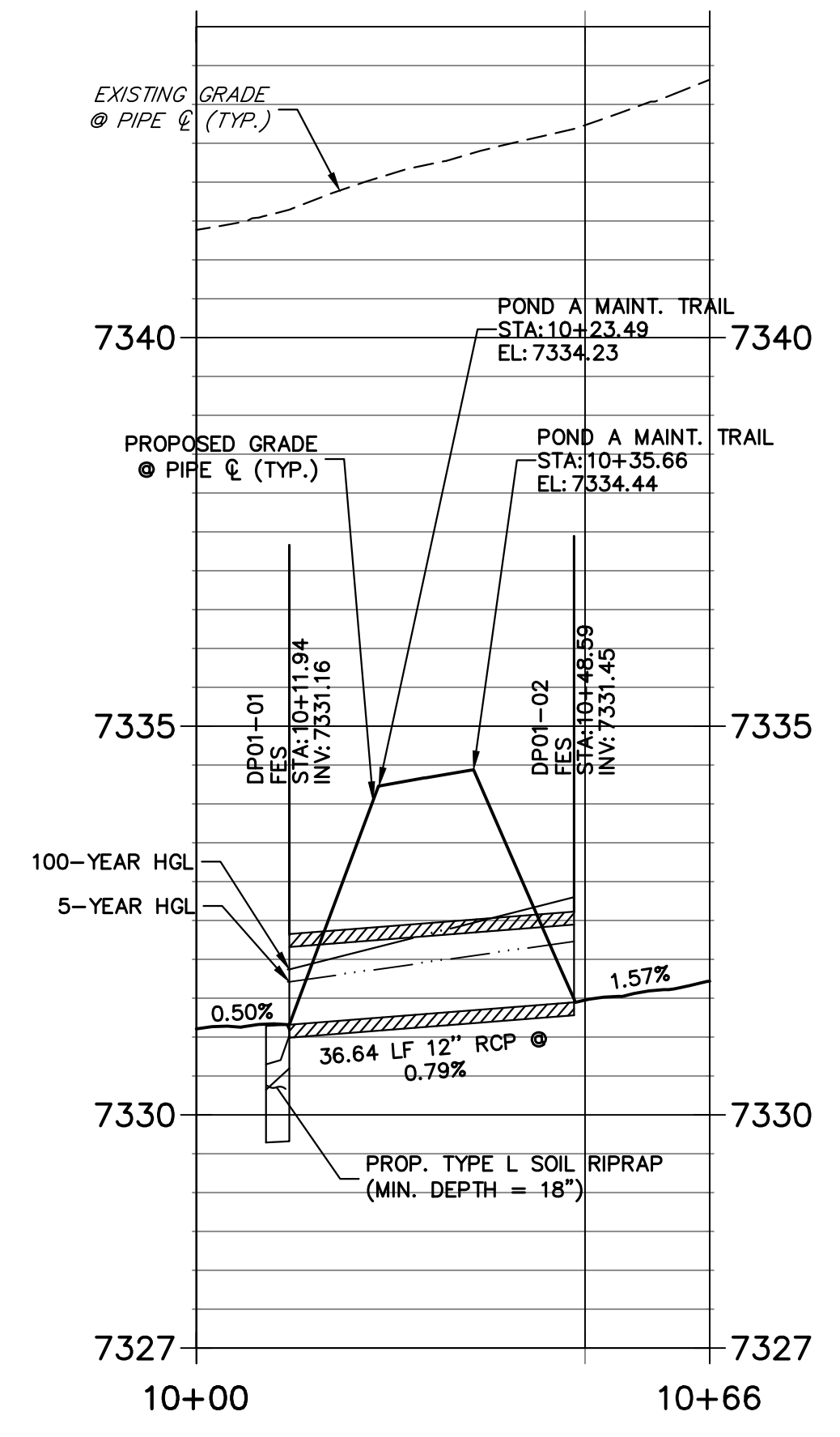
**DP03 PROFILE  
 STA 10+00.00 TO 10+99.66**



**DP02 PROFILE  
 STA 10+00.00 TO 10+85.01**

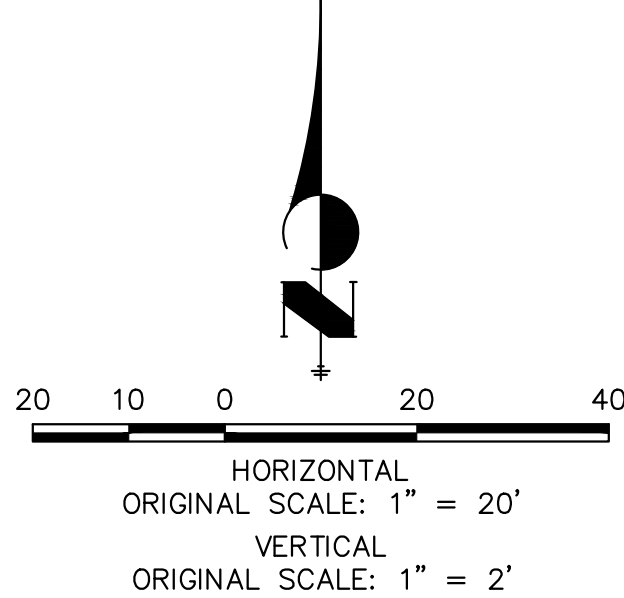


**DP01 PROFILE  
 STA 9+99.98 TO 10+66.06**



**STORM SEWER NOTES**

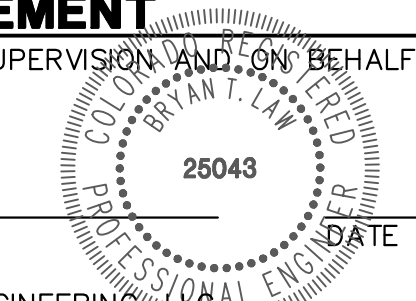
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**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E.  
 COLORADO P.E. 25043  
 FOR AND ON BEHALF OF JR ENGINEERING

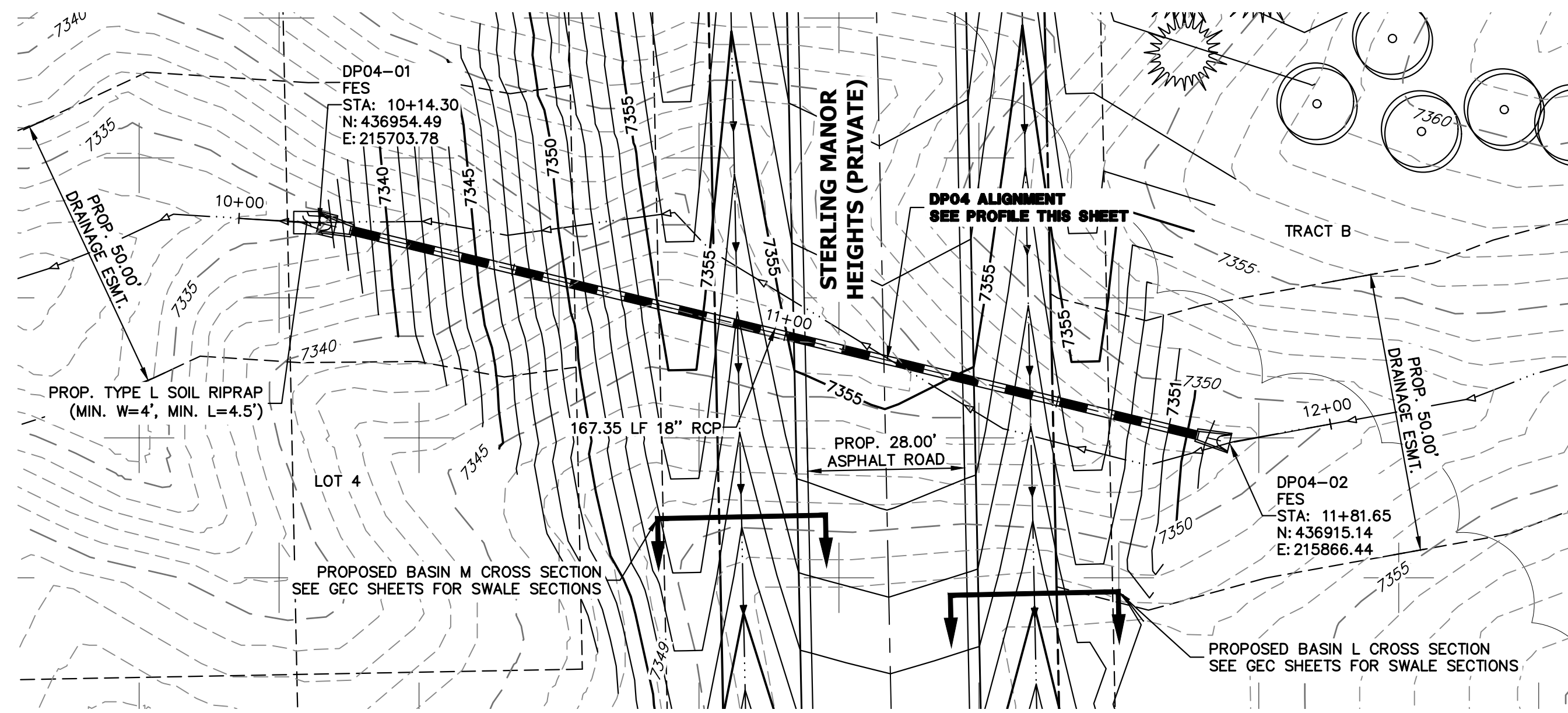


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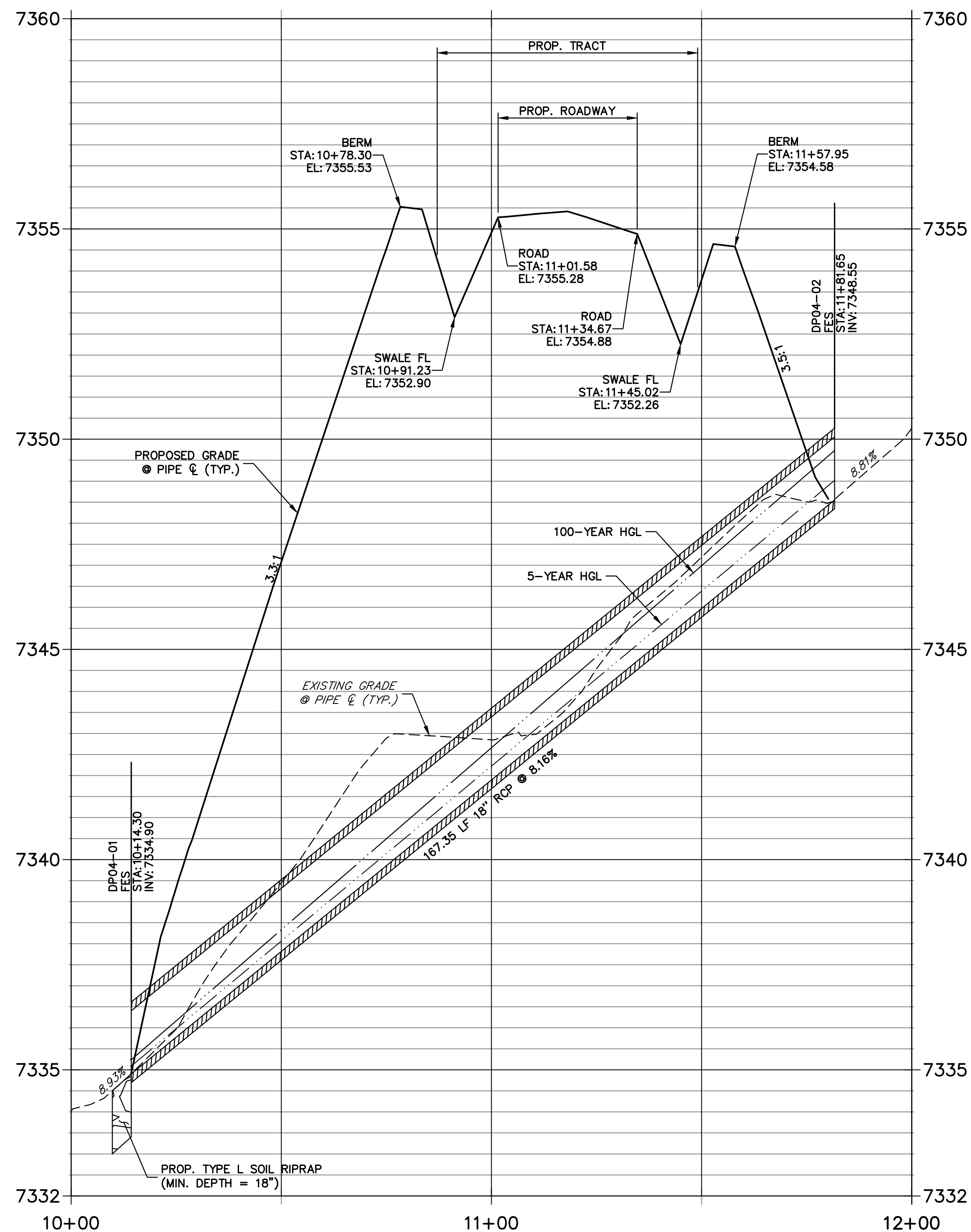
No.	REVISION	BY	DATE	DESIGNED BY		DRAWN BY		CHECKED BY	
				GAG	GAG	GAG	GAG		

ESTATES AT CATHEDRAL PINES  
 STORM SEWER PLAN & PROFILE

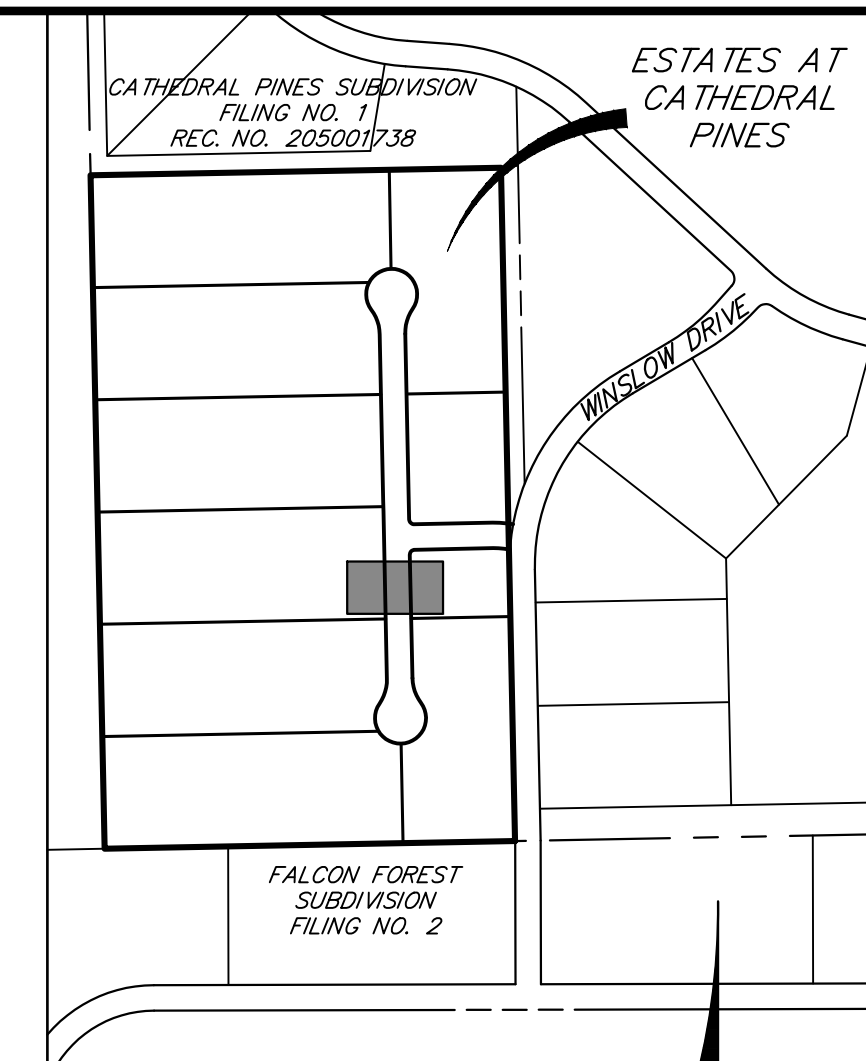
SHEET 3 OF 16  
 JOB NO. 25260.00



**DP04 PROFILE  
STA 10+00.00 TO 12+00.00**



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**811**  
Know what's below.  
Call before you dig.

HORIZONTAL ORIGINAL SCALE: 1" = 20'  
VERTICAL ORIGINAL SCALE: 1" = 2'

**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING

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PREPARED FOR  
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COLORADO SPRINGS, CO 80908  
GREGG & ELAINE CAWLFIELD  
(719) 413-6900

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No.	REVISION	BY	DATE

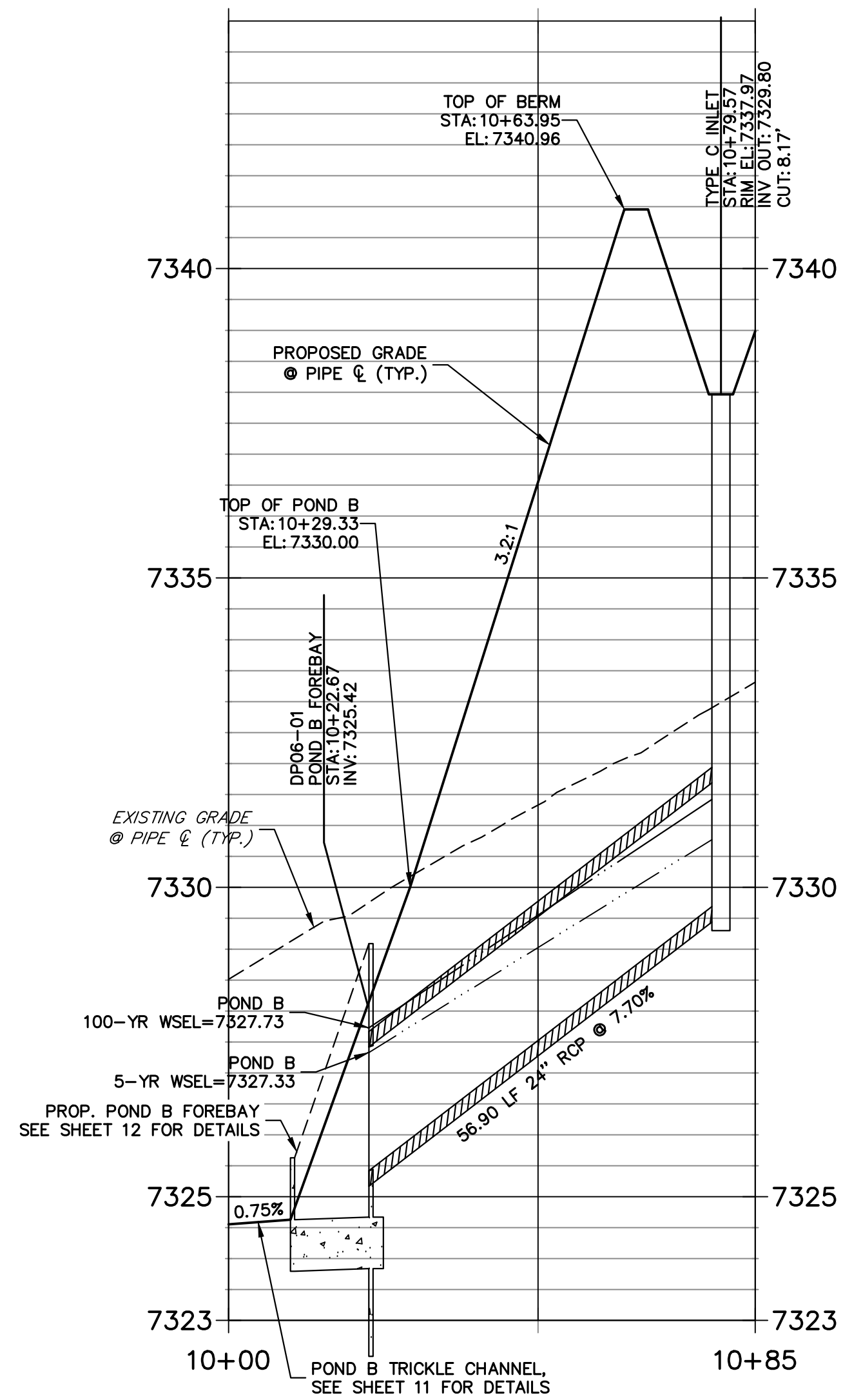
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1"=20'	1"=2'	03/29/24	GAG	GAG	

ESTATES AT CATHEDRAL PINES  
STORM SEWER PLAN & PROFILE

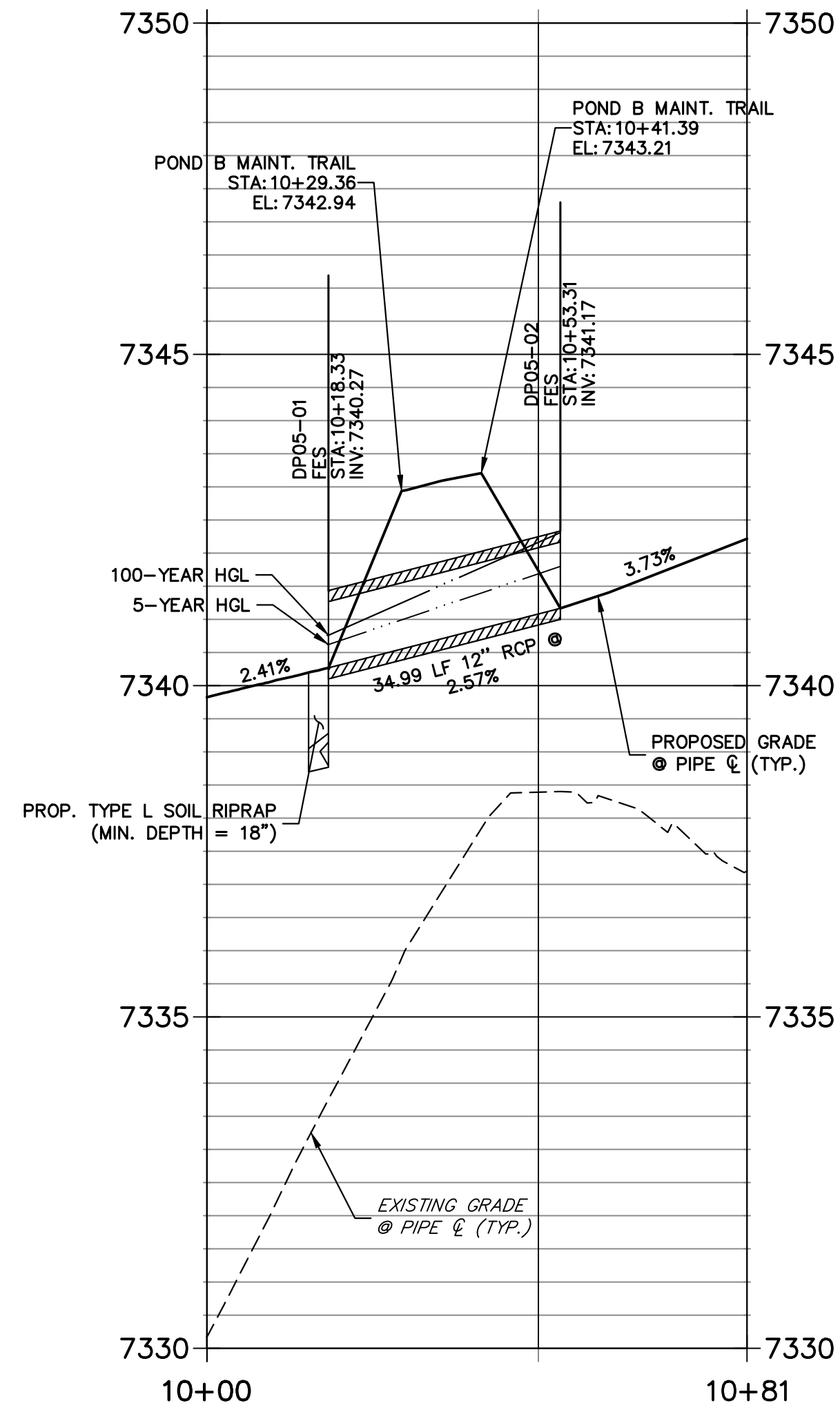
SHEET 4 OF 16  
JOB NO. 25260.00



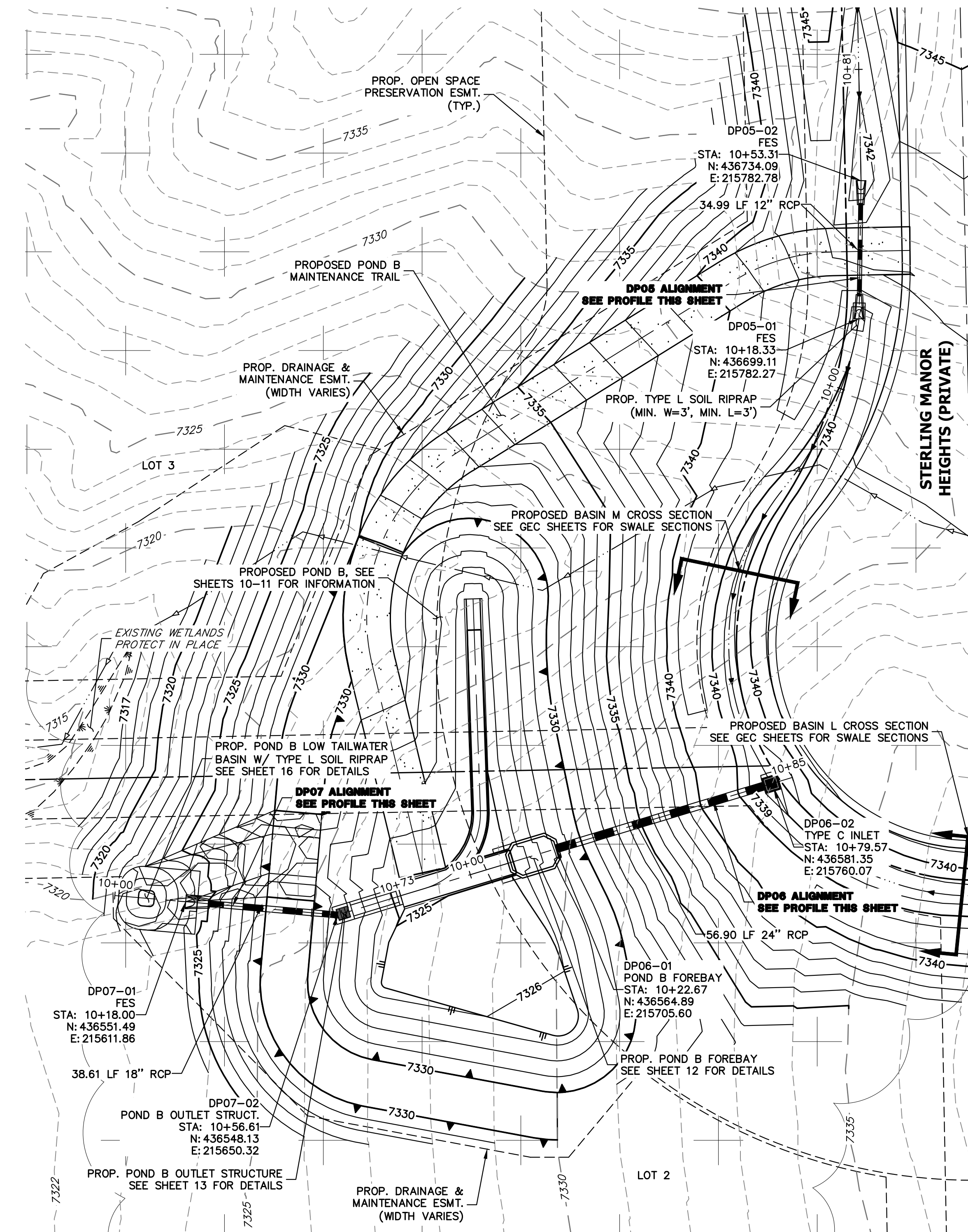
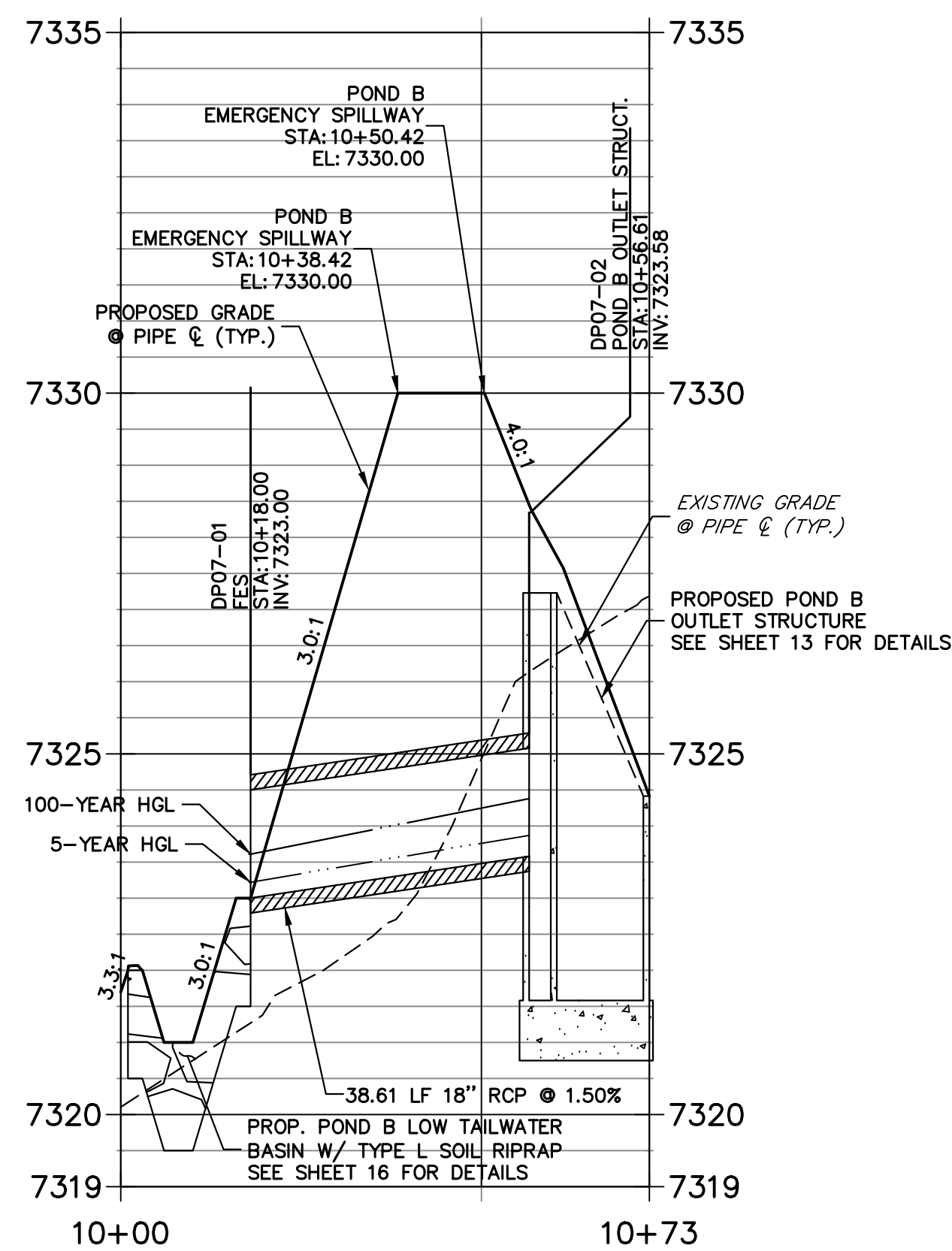
**DP06 PROFILE  
STA 10+00.00 TO 10+85.11**



**DP05 PROFILE  
STA 9+99.97 TO 10+81.48**



**DP07 PROFILE  
STA 10+00.00 TO 10+73.28**



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**KEYMAP**  
SCALE: N.T.S.

ESTATES AT CATHEDRAL PINES  
CATHEDRAL PINES SUBDIVISION  
FILING NO. 1  
REC. NO. 205001738

FALCON FOREST SUBDIVISION  
FILING NO. 2

STERLING MANOR HEIGHTS (PRIVATE)

WINDSOR DRIVE

PREPARED FOR  
VILLAGREE DEVELOPMENT LLC  
5710 VESSEY RD  
COLORADO SPRINGS, CO 80908  
GREGG & ELAINE CAWFIELD  
(719) 413-6900

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE DESIGNATED BY WRITTEN AUTHORIZATION.

**J.R. ENGINEERING**  
A Westman Company

Central 303-740-9888 • Colorado Springs 719-583-2583  
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No.	REVISION	BY	DATE

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=20'	1"=2'	03/29/24	GAG	GAG	GAG

**ESTATES AT CATHEDRAL PINES**

**STORM SEWER PLAN & PROFILE**

SHEET 5 OF 16

JOB NO. 25260.00

**811**  
Know what's below.  
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**ENGINEER'S STATEMENT**  
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E.  
COLORADO P.E. 25043

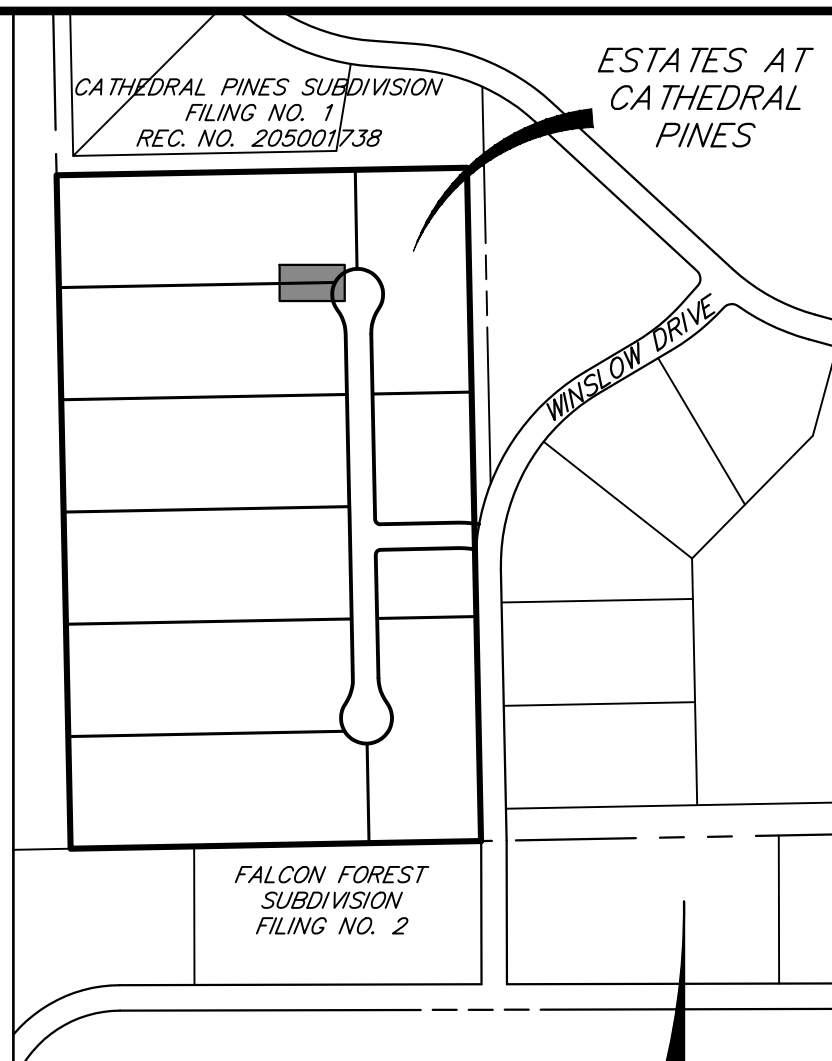
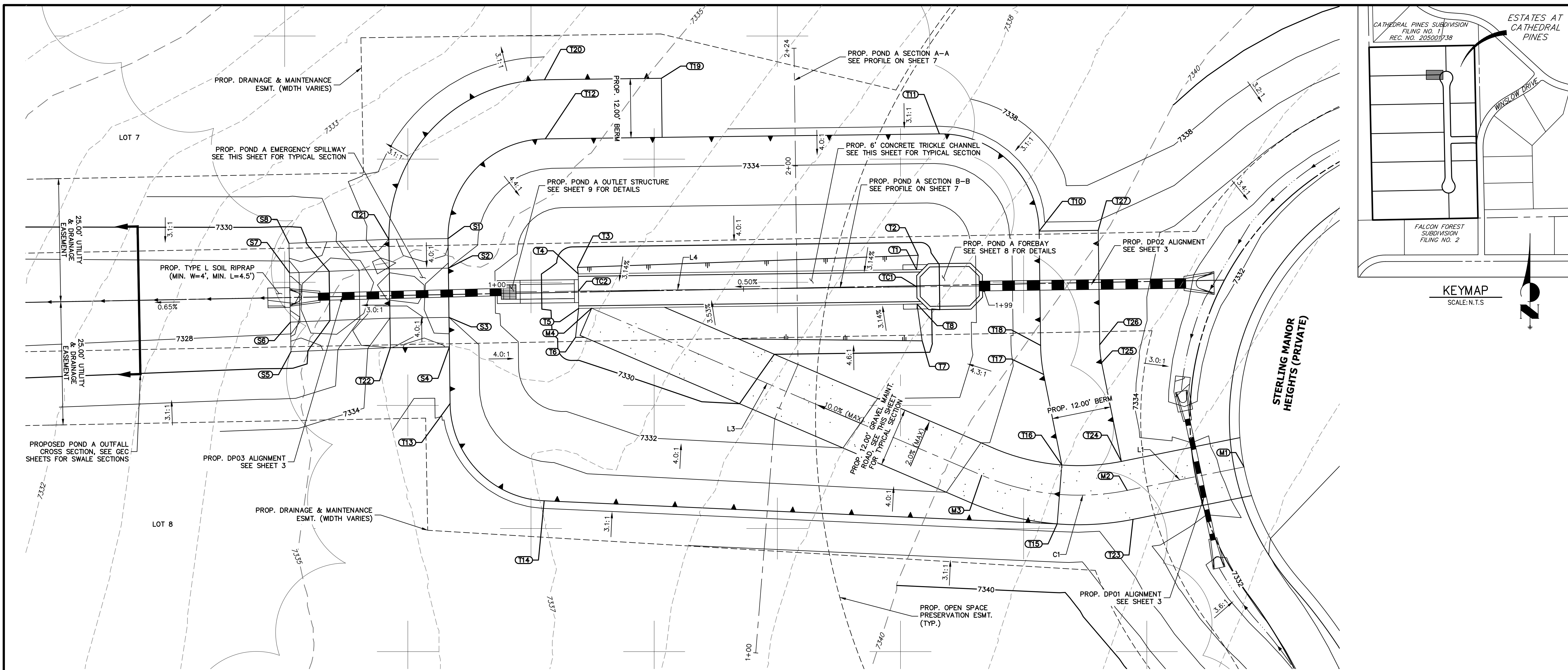
FOR AND ON BEHALF OF JR ENGINEERING

DATE

25043

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VERTICAL ORIGINAL SCALE: 1" = 2'





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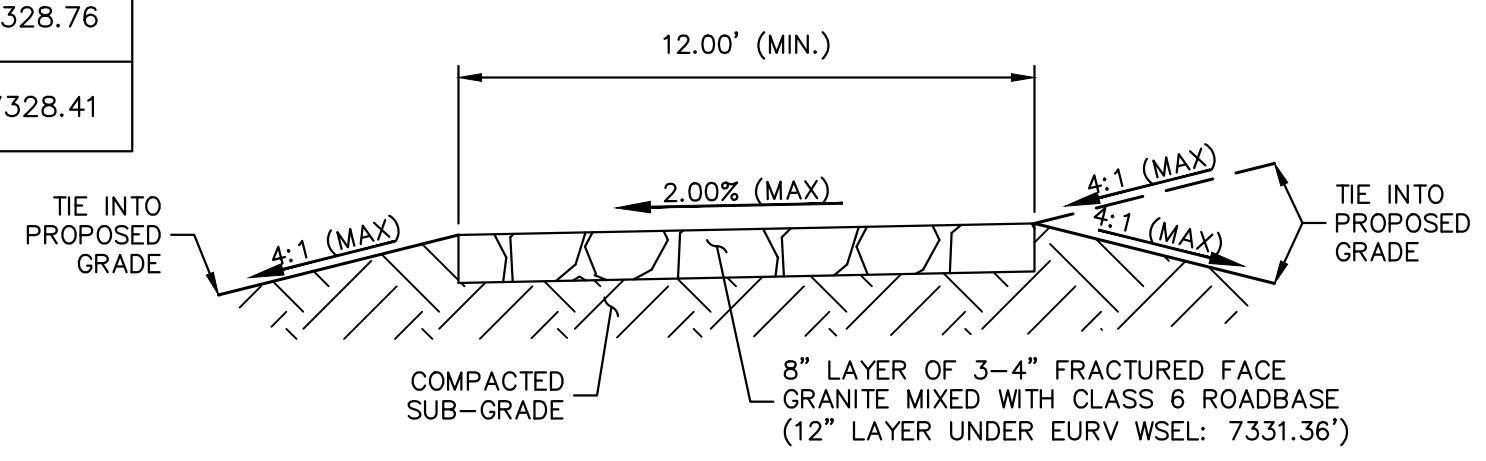
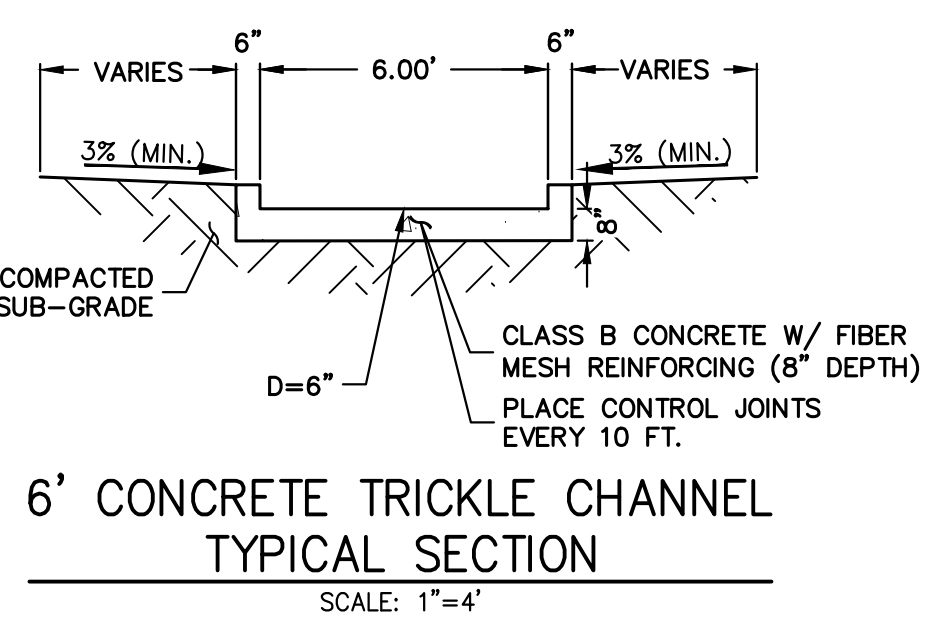
POND GRADING PLAN			
STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION
M1	MAINT. ROAD CL	N: 437603.57 E: 215741.41	7333.81
M2	MAINT. ROAD CL	N: 437598.81 E: 215717.70	7335.50
M3	MAINT. ROAD CL	N: 437601.88 E: 215688.18	7334.35
M4	MAINT. ROAD CL	N: 437635.81 E: 215608.99	7328.93
S1	SPILLWAY/ TOP	N: 437649.94 E: 215579.84	7335.50
S2	SPILLWAY CREST	N: 437643.94 E: 215579.91	7334.00
S3	SPILLWAY CREST	N: 437633.94 E: 215580.04	7334.00
S4	SPILLWAY/ TOP	N: 437627.94 E: 215580.11	7335.50
S5	SPILLWAY MATCH EX.	N: 437626.98 E: 215547.97	±7328.90
S6	SPILLWAY MATCH EX.	N: 437632.98 E: 215547.86	±7327.40
S7	SPILLWAY MATCH EX.	N: 437642.98 E: 215547.67	±7327.40
S8	SPILLWAY MATCH EX.	N: 437648.98 E: 215547.56	±7328.90
T1	TOE	N: 437603.97 E: 215674.95	7329.26
T2	TOE	N: 437646.54 E: 215675.28	7329.35

POND GRADING PLAN			
STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION
T3	TOE	N: 437644.09 E: 215606.10	7328.95
T4	TOE	N: 437642.77 E: 215606.27	7328.91
T5	TOE	N: 437635.77 E: 215606.36	7328.91
T6	TOE	N: 437629.89 E: 215605.72	7329.09
T7	TOE	N: 437629.18 E: 215676.08	7329.49
T8	TOE	N: 437636.64 E: 215675.04	7329.26
T10	TOP	N: 437651.46 E: 215699.83	7335.50
T11	TOP	N: 437671.20 E: 215679.57	7335.50
T12	TOP/ BERM	N: 437670.19 E: 215599.58	7335.50
T13	TOP	N: 437616.43 E: 215580.26	7335.50
T14	TOP	N: 437596.70 E: 215599.36	7335.50
T15	TOP/ TRAIL	N: 437592.01 E: 215703.49	7335.50
T16	TOP/ TRAIL	N: 437603.97 E: 215704.43	7335.50
T17	TOP/ BERM	N: 437622.36 E: 215700.74	7335.50

POND GRADING PLAN			
STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION
T18	TOP/ BERM	N: 437628.25 E: 215700.12	7335.50
T19	TOP/ BERM	N: 437682.49 E: 215623.15	7335.50
T20	TOP/ BERM	N: 437682.19 E: 215599.43	7335.50
T21	TOP/ BERM	N: 437649.79 E: 215567.84	7335.50
T22	TOP/ BERM	N: 437627.79 E: 215568.14	7335.50
T23	TOP/ TRAIL	N: 437592.93 E: 215718.88	7335.50
T24	TOP/ BERM	N: 437604.70 E: 215716.52	7335.50
T25	TOP/ BERM	N: 437624.72 E: 215712.51	7335.50
T26	TOP/ BERM	N: 437628.40 E: 215712.12	7335.50
T27	TOP/ BERM	N: 437651.61 E: 215711.83	7335.50
TC1	TC CL FLOWLINE	N: 437640.14 E: 215675.00	7328.76
TC2	TC CL FLOWLINE	N: 437639.27 E: 215606.32	7328.41

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N78°39'42"E	24.18'
L3	S66°48'29"E	86.15'
L4	N89°16'28"E	68.69'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	34°31'50"	50.00'	30.13'



- POND NOTES**
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  - SEE GRADING AND EROSION CONTROL PLAN BY JR ENGINEERING.

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ORIGINAL SCALE: 1" = 10'

**ENGINEER'S STATEMENT**  
 PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E.  
 COLORADO P.E. 25043  
 FOR AND ON BEHALF OF JR ENGINEERING

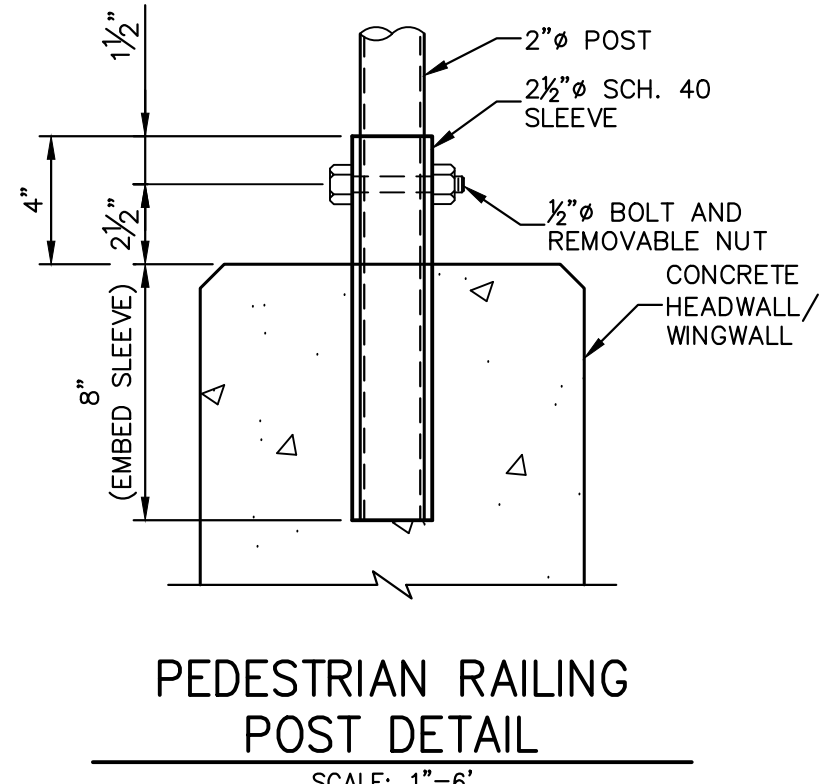
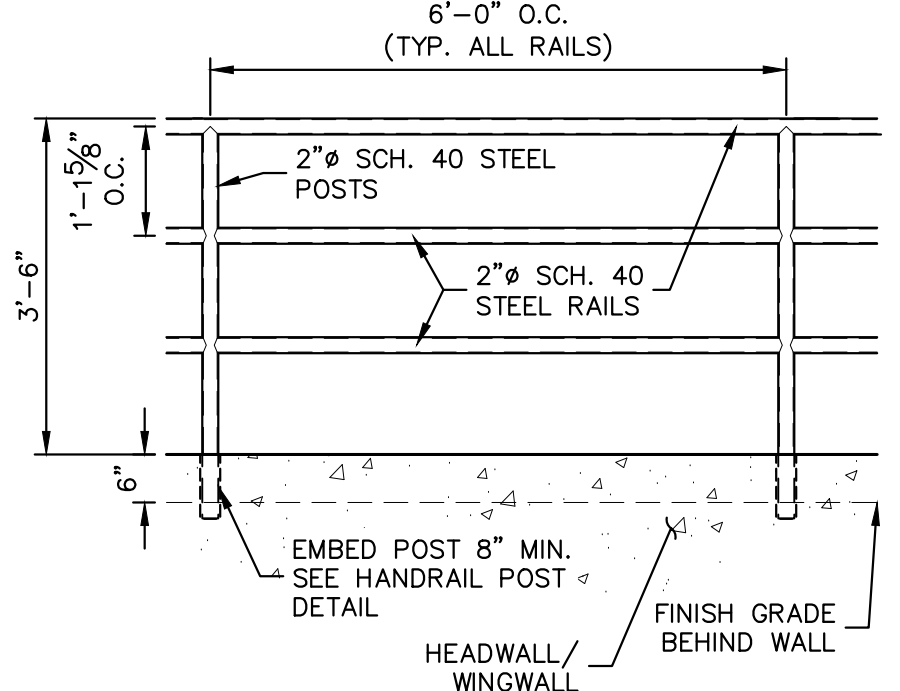
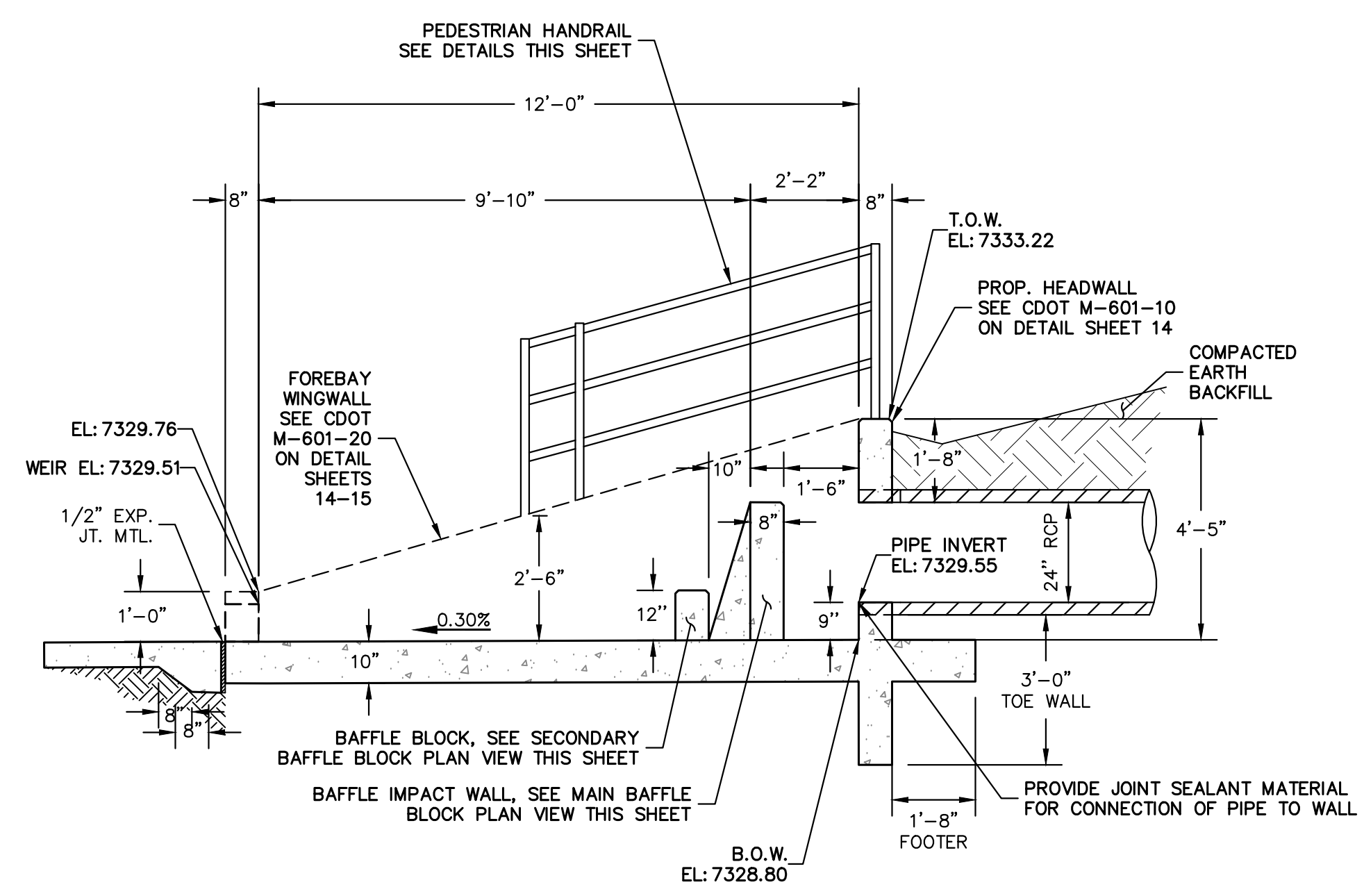
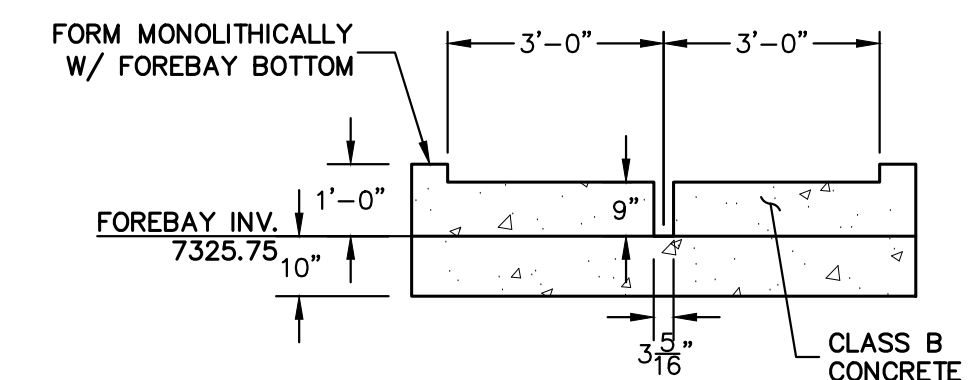
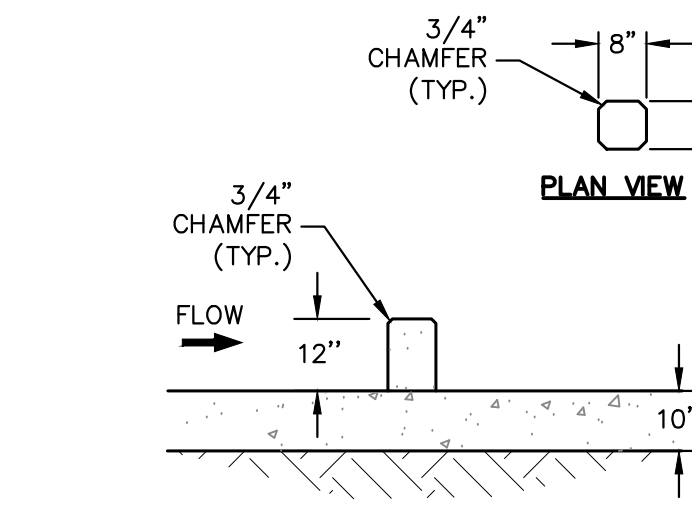
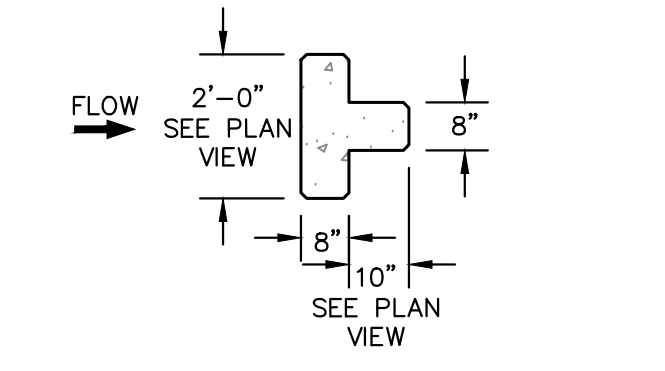
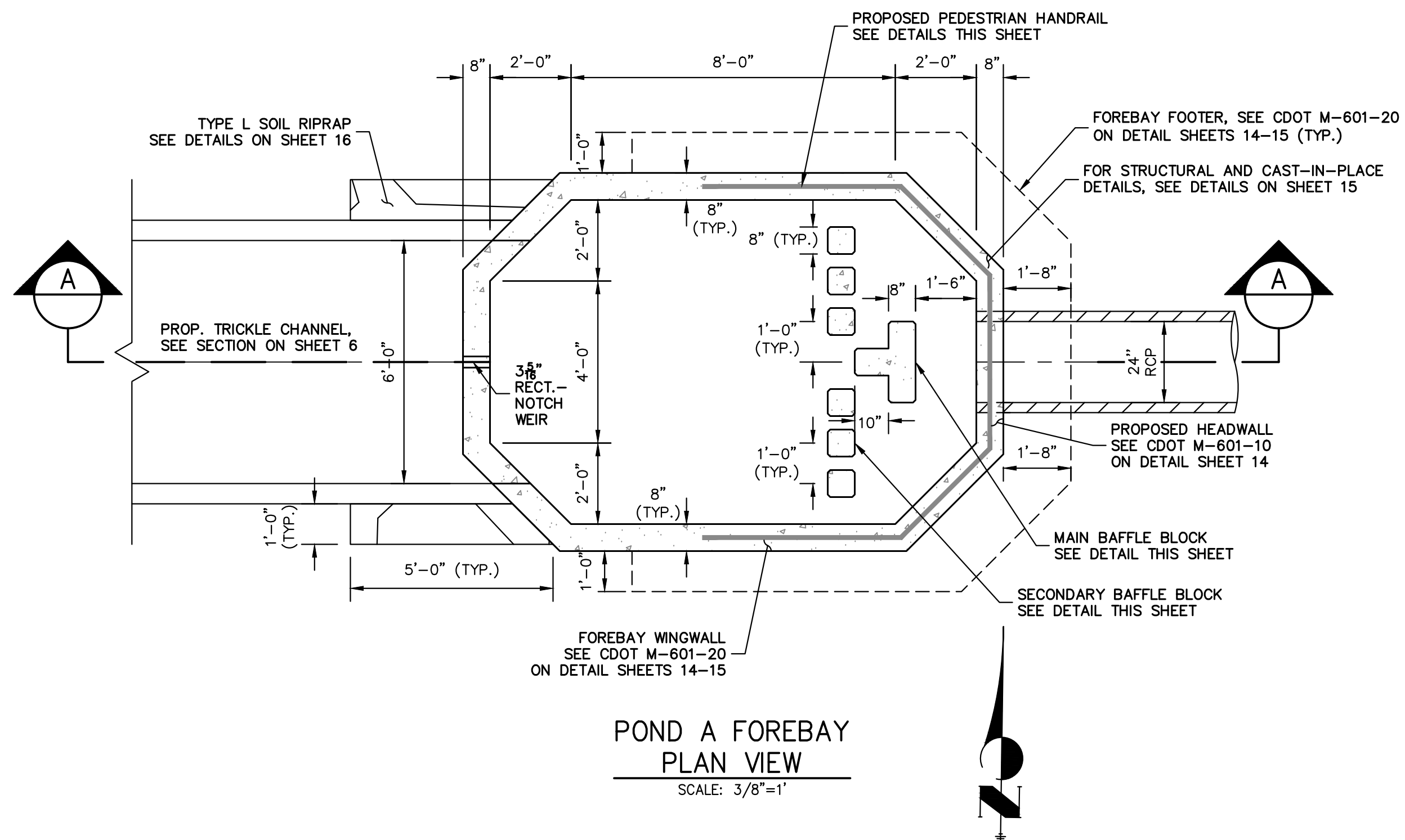
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BY	DATE	REVISION	SCALE		DESIGNED BY	DRAWN BY	CHECKED BY
			H-SCALE	V-SCALE			
			1"=10'	N/A	03/29/24	GAG	GAG

ESTATES AT CATHEDRAL PINES  
 POND PLANS AND DETAILS

SHEET 6 OF 16  
 JOB NO. 25260.00

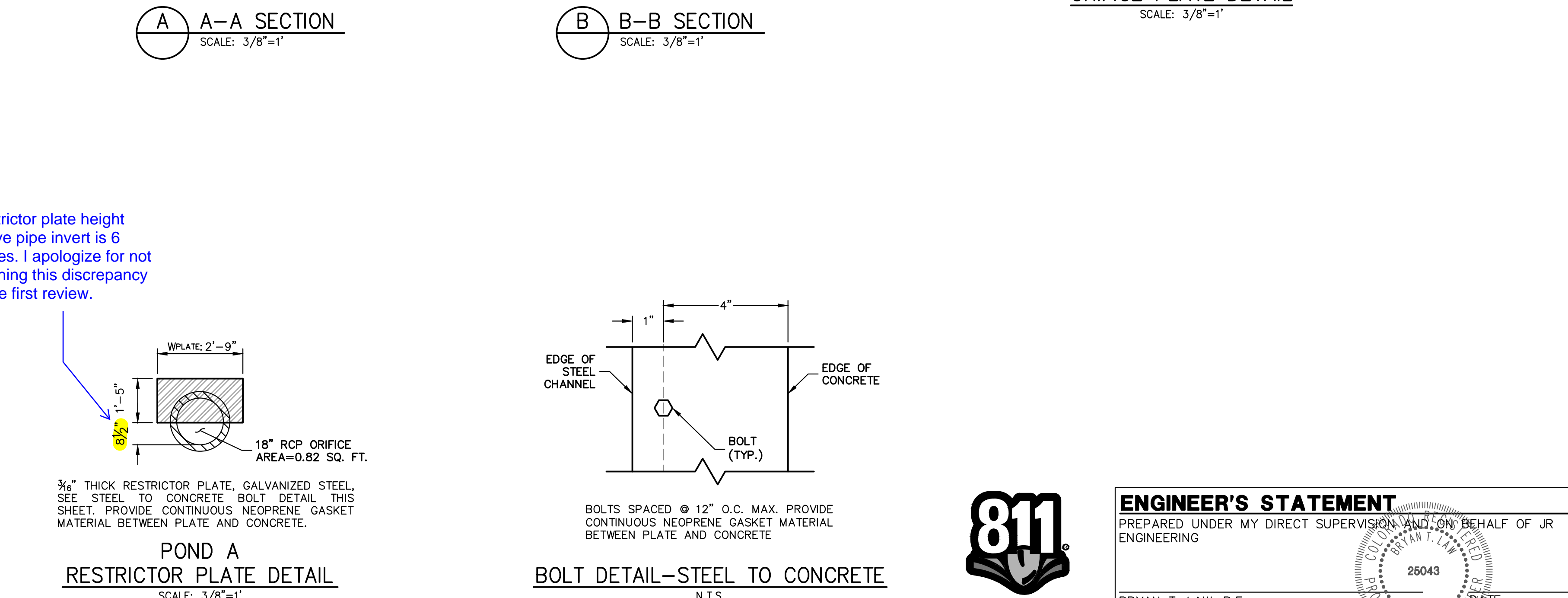
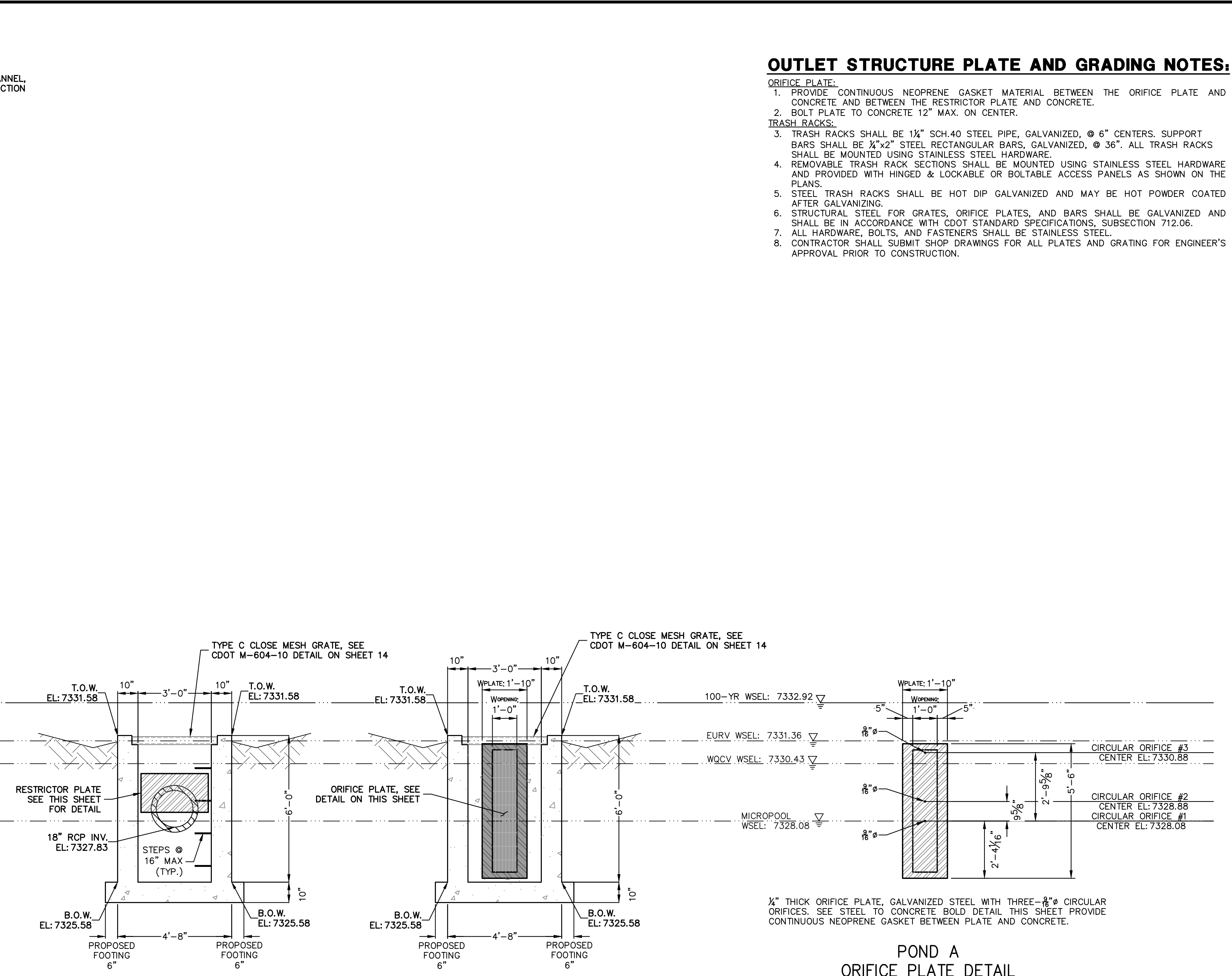
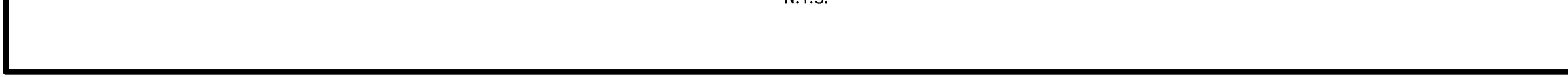
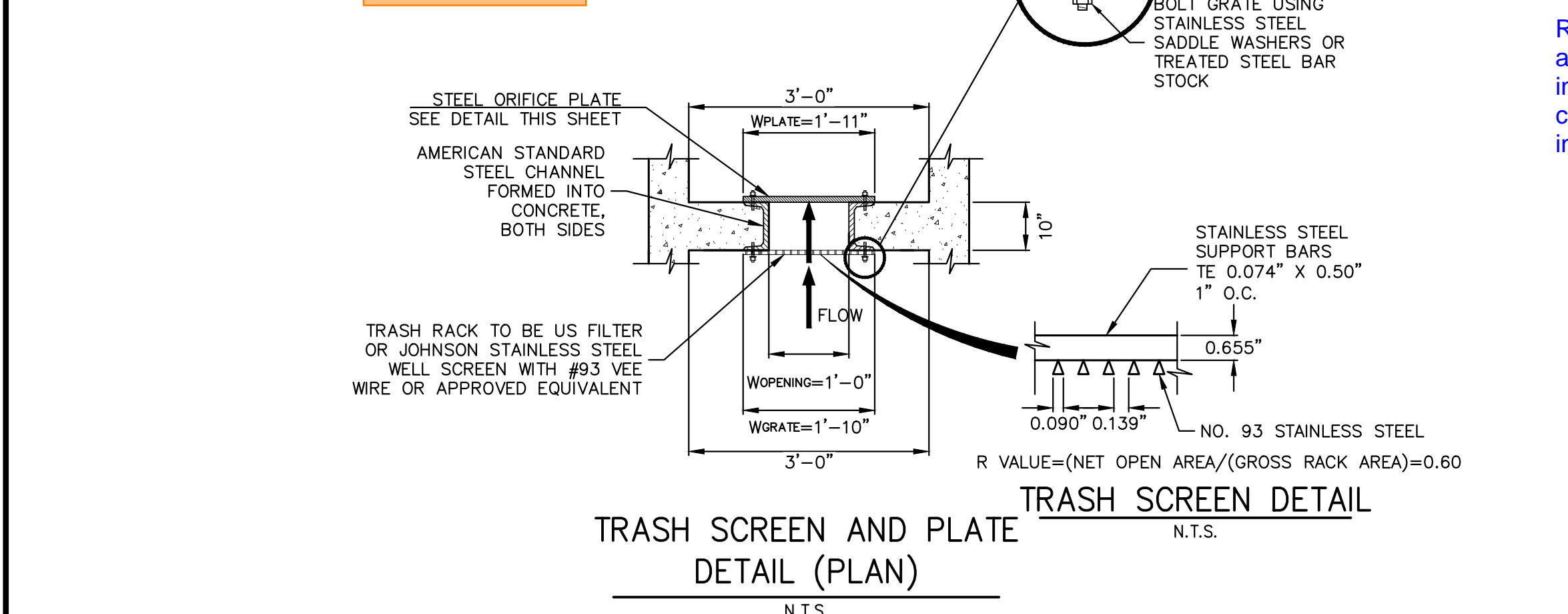
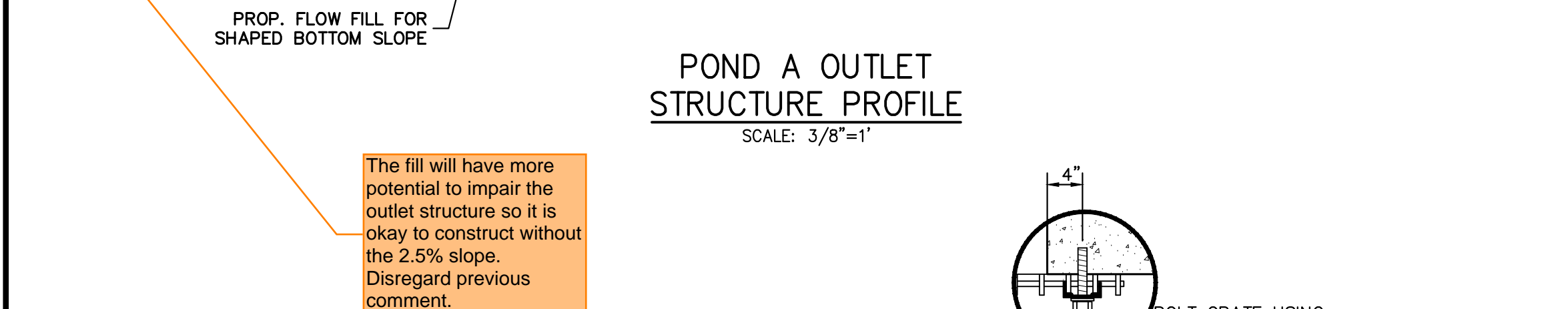
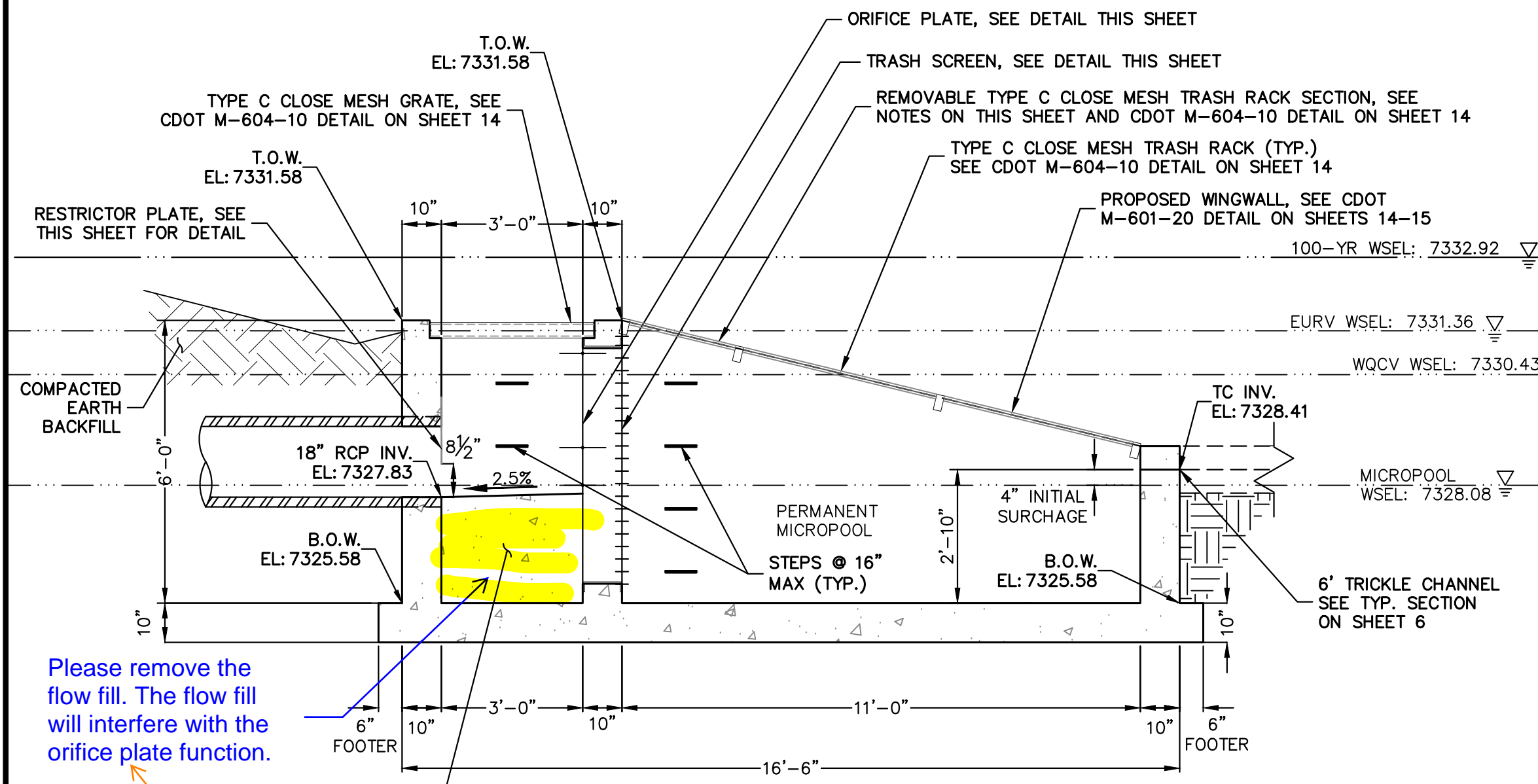
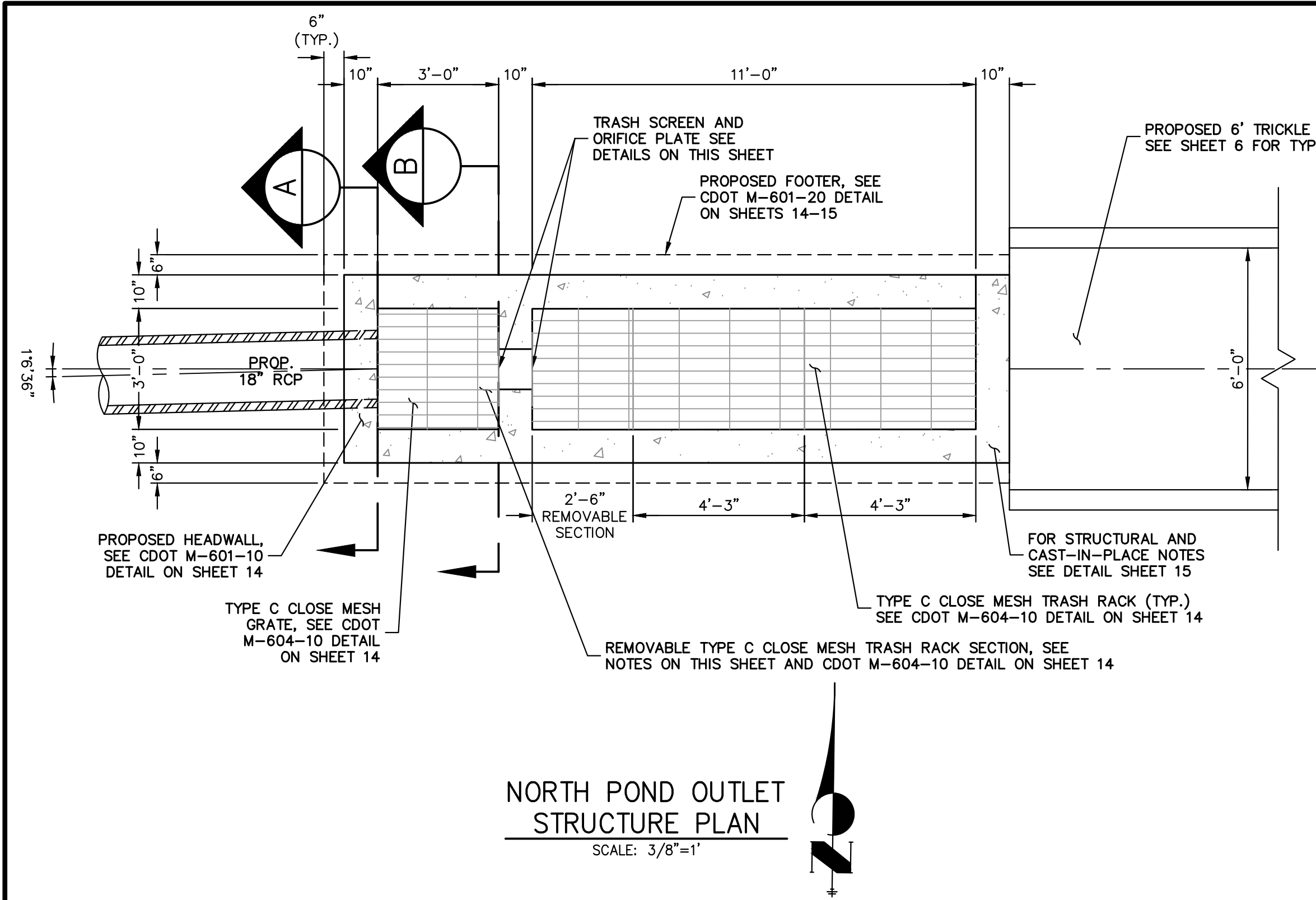




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 BRYAN T. LAW, P.E.  
 COLORADO P.E. 25043  
 FOR AND ON BEHALF OF JR ENGINEERING

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.	
PREPARED FOR	VILLAGREE DEVELOPMENT LLC 5710 VESSEY RD COLORADO SPRINGS, CO 80908 GREGG & ELAINE CAWFIELD (719) 413-6900
BY	DATE
NO.	REVISION
H-SCALE	3/8"=1'
V-SCALE	3/8"=1'
DATE	03/29/24
DESIGNED BY	GAG
DRAWN BY	GAG
CHECKED BY	
ESTATES AT CATHEDRAL PINES	
POND PLANS AND DETAILS	
SHEET	8 OF 16
JOB NO.	25260.00





**OUTLET STRUCTURE PLATE AND GRADING NOTES:**

- ORIFICE PLATE:**
1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE AND BETWEEN THE RESTRICTOR PLATE AND CONCRETE.
  2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.
- TRASH RACKS:**
3. TRASH RACKS SHALL BE 1/2" SCH.40 STEEL PIPE, GALVANIZED, @ 6" CENTERS. SUPPORT BARS SHALL BE 1/2"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 36". ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.
  4. REMOVABLE TRASH RACK SECTIONS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED & LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.
  5. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
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  7. ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.
  8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.



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ESTATES AT CATHEDRAL PINES	POND PLANS AND DETAILS	NO.	REVISION	BY	DATE		
		H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
		3/8"=1'	3/8"=1'	03/29/24	GAG	GAG	
SHEET 9 OF 16		JOB NO. 25260.00					

PREPARED FOR  
**VILLAGREE DEVELOPMENT LLC**  
 5710 VESSEY RD  
 COLORADO SPRINGS, CO 80908  
 GREGG & ELAINE CAWFIELD  
 (719) 413-6900

**J.R. ENGINEERING**  
 A Westman Company  
 Centennial 303-740-9888 • Colorado Springs 719-583-2583  
 Fort Collins 970-491-9888 • www.jrengineering.com

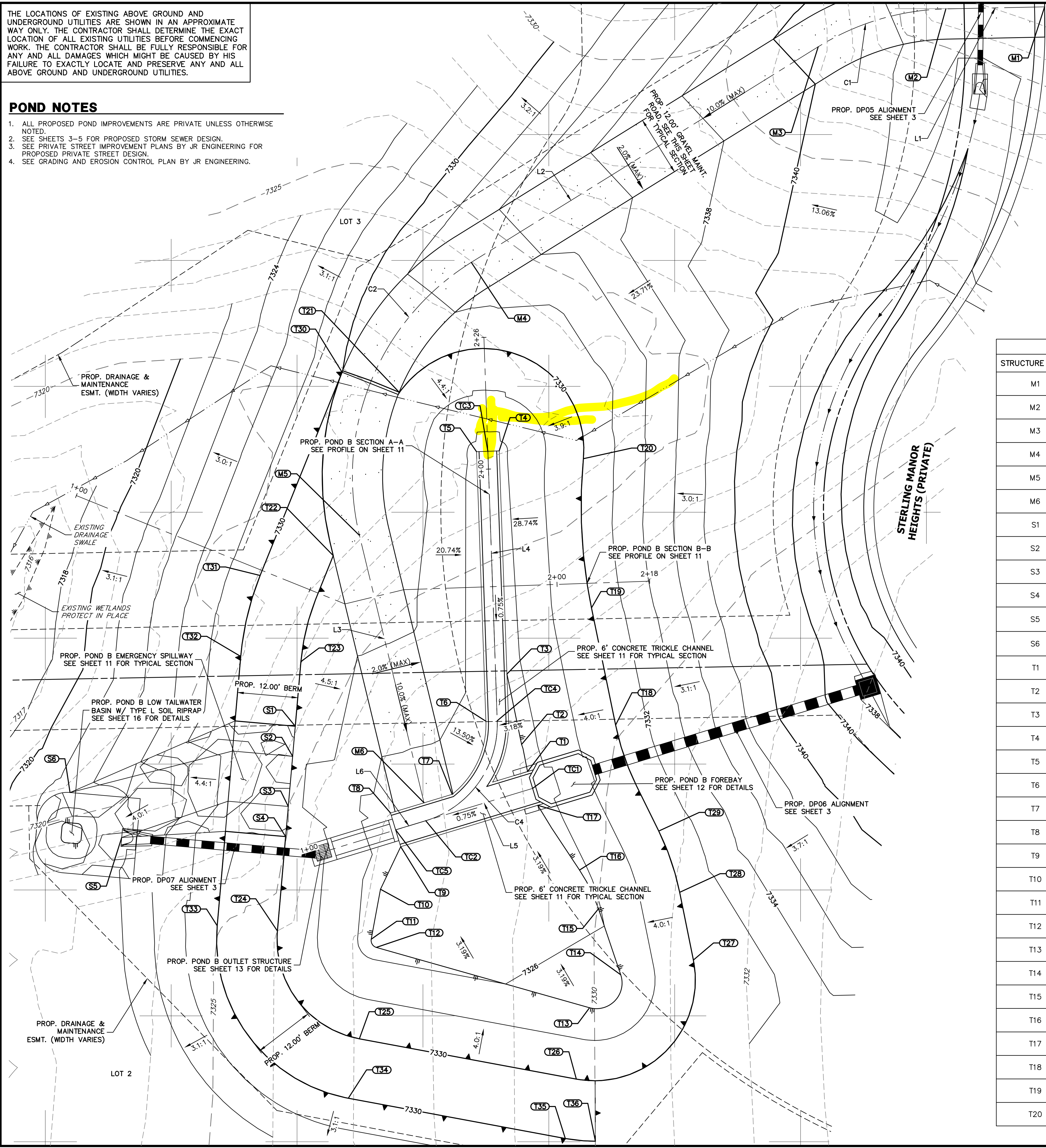
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**POND NOTES**

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 3-5 FOR PROPOSED STORM SEWER DESIGN.
3. SEE PRIVATE STREET IMPROVEMENT PLANS BY JR ENGINEERING FOR PROPOSED PRIVATE STREET DESIGN.
4. SEE GRADING AND EROSION CONTROL PLAN BY JR ENGINEERING.

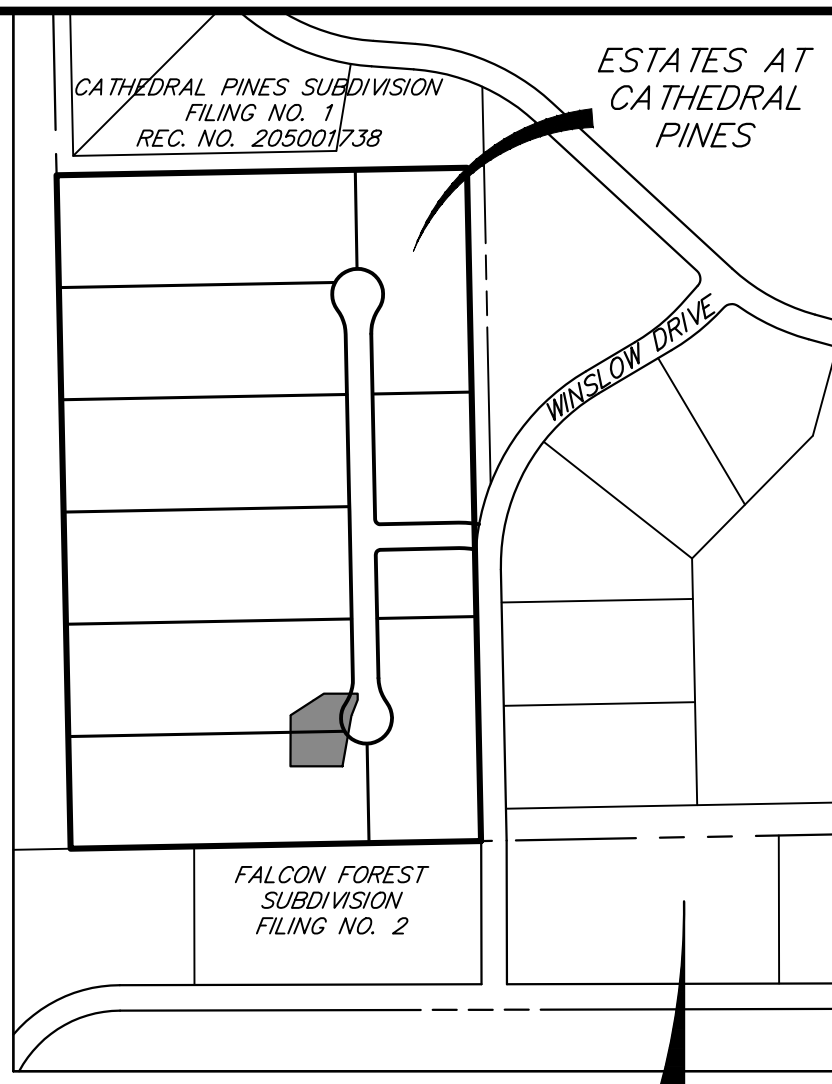


**LINE TABLE**

LINE	BEARING	DISTANCE
L1	S88°48'16"W	19.62'
L2	S58°08'56"W	81.12'
L3	S13°34'54"E	54.64'
L4	N01°59'19"W	53.56'
L5	N73°11'18"E	22.18'
L6	N73°11'18"E	6.24'

**CURVE TABLE**

CURVE	DELTA	RADIUS	LENGTH
C1	30°39'20"	50.00'	26.75'
C2	71°43'51"	50.00'	62.60'
C4	75°10'37"	20.00'	26.24'

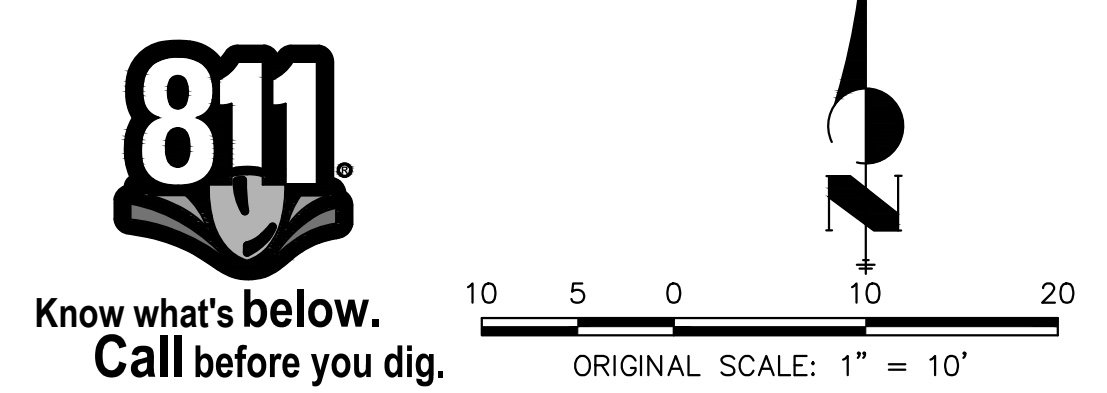


**POND GRADING PLAN**

STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION
M1	MAINT. ROAD CL	N: 436716.43 E: 215795.15	7343.21
M2	MAINT. ROAD CL	N: 436716.02 E: 215775.54	7343.03
M3	MAINT. ROAD CL	N: 436708.50 E: 215647.19	7340.52
M4	MAINT. ROAD CL	N: 436665.69 E: 215681.29	7332.93
M5	MAINT. ROAD CL	N: 436611.48 E: 215659.07	7329.90
M6	MAINT. ROAD CL	N: 436558.38 E: 215671.90	7324.97
S1	SPILLWAY/ TOP	N: 436573.58 E: 215646.33	7330.00
S2	SPILLWAY CREST	N: 436567.61 E: 215645.81	7328.50
S3	SPILLWAY CREST	N: 436557.64 E: 215644.94	7328.50
S4	SPILLWAY/ TOP	N: 436643.87 E: 215644.42	7330.00
S5	SPILLWAY/ LOW TAILWATER BASIN	N: 436551.49 E: 215611.86	7323.00
S6	SPILLWAY/ LOW TAILWATER BASIN	N: 436560.42 E: 215601.59	7319.20
T1	TOE	N: 436564.58 E: 215692.46	7325.13
T2	TOE	N: 436569.97 E: 215691.28	7325.23
T3	TOE	N: 436583.95 E: 215688.37	7325.23
T4	TOE	N: 436628.25 E: 215686.83	7325.56
T5	TOE	N: 436628.10 E: 215682.33	7325.56
T6	TOE	N: 436574.57 E: 215684.19	7325.16
T7	TOE	N: 436560.06 E: 215677.49	7325.02
T8	TOE	N: 436556.36 E: 215686.25	7324.91
T9	TOE	N: 436549.66 E: 215667.27	7324.91
T10	TOE	N: 436541.21 E: 215663.25	7325.08
T11	TOE	N: 436531.29 E: 215661.41	7325.32
T12	TOE	N: 436529.66 E: 215662.42	7325.39
T13	TOE	N: 436517.67 E: 215704.78	7326.40
T14	TOE	N: 436524.22 E: 215710.97	7326.32
T15	TOE	N: 436537.33 E: 215706.55	7325.89
T16	TOE	N: 436545.01 E: 215702.79	7325.61
T17	TOE	N: 436557.88 E: 215694.48	7325.13
T18	TOP	N: 436573.82 E: 215709.95	7330.00
T19	TOP	N: 436597.08 E: 215705.16	7330.00
T20	TOP	N: 436626.70 E: 215703.55	7330.00

**POND GRADING PLAN**

STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION
T21	TOP/ TRAIL	N: 436639.90 E: 215666.96	7330.00
T22	TOP/ TRAIL	N: 436607.45 E: 215653.87	7330.00
T23	TOP/ BERM	N: 436586.40 E: 215647.45	7330.00
T24	TOP/ BERM	N: 436532.91 E: 215642.78	7330.00
T25	TOP/ BERM	N: 436511.51 E: 215659.05	7330.00
T26	TOP/ BERM	N: 436503.51 E: 215702.15	7330.00
T27	TOP	N: 436527.15 E: 215725.40	7330.00
T28	TOP	N: 436540.60 E: 215722.67	7330.00
T29	TOP	N: 436552.77 E: 215718.52	7330.00
T30	TOP/ BERM	N: 436643.87 E: 215655.62	7330.00
T31	TOP/ BERM	N: 436603.51 E: 215639.35	7330.00
T32	TOP/ BERM	N: 436587.44 E: 215635.49	7330.00
T33	TOP/ BERM	N: 436533.96 E: 215630.82	7330.00
T34	TOP/ BERM	N: 436499.71 E: 215656.86	7330.00
T35	TOP/ BERM	N: 436491.71 E: 215699.96	7330.00
T36	TOP/ BERM	N: 436491.18 E: 215705.93	7330.00
TC1	TC CL FLOWLINE	N: 436561.23 E: 215693.47	7324.63
TC2	TC CL FLOWLINE	N: 436554.81 E: 215672.23	7324.46
TC3	TC CL FLOWLINE	N: 436628.18 E: 215684.58	7325.06
TC4	TC CL FLOWLINE	N: 436574.65 E: 215686.44	7324.66
TC5	TC CL FLOWLINE	N: 436553.01 E: 215666.26	7324.41



**ENGINEER'S STATEMENT**  
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BRYAN T. LAW, P.E.  
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DATE

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**VILLAGREE DEVELOPMENT LLC**  
5710 VESSEY RD  
COLORADO SPRINGS, CO 80908  
GREGG & ELAINE CAWFIELD  
(719) 413-6900

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Central 303-740-9888 • Colorado Springs 719-583-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

ESTATES AT CATHEDRAL PINES  
POND PLANS AND DETAILS

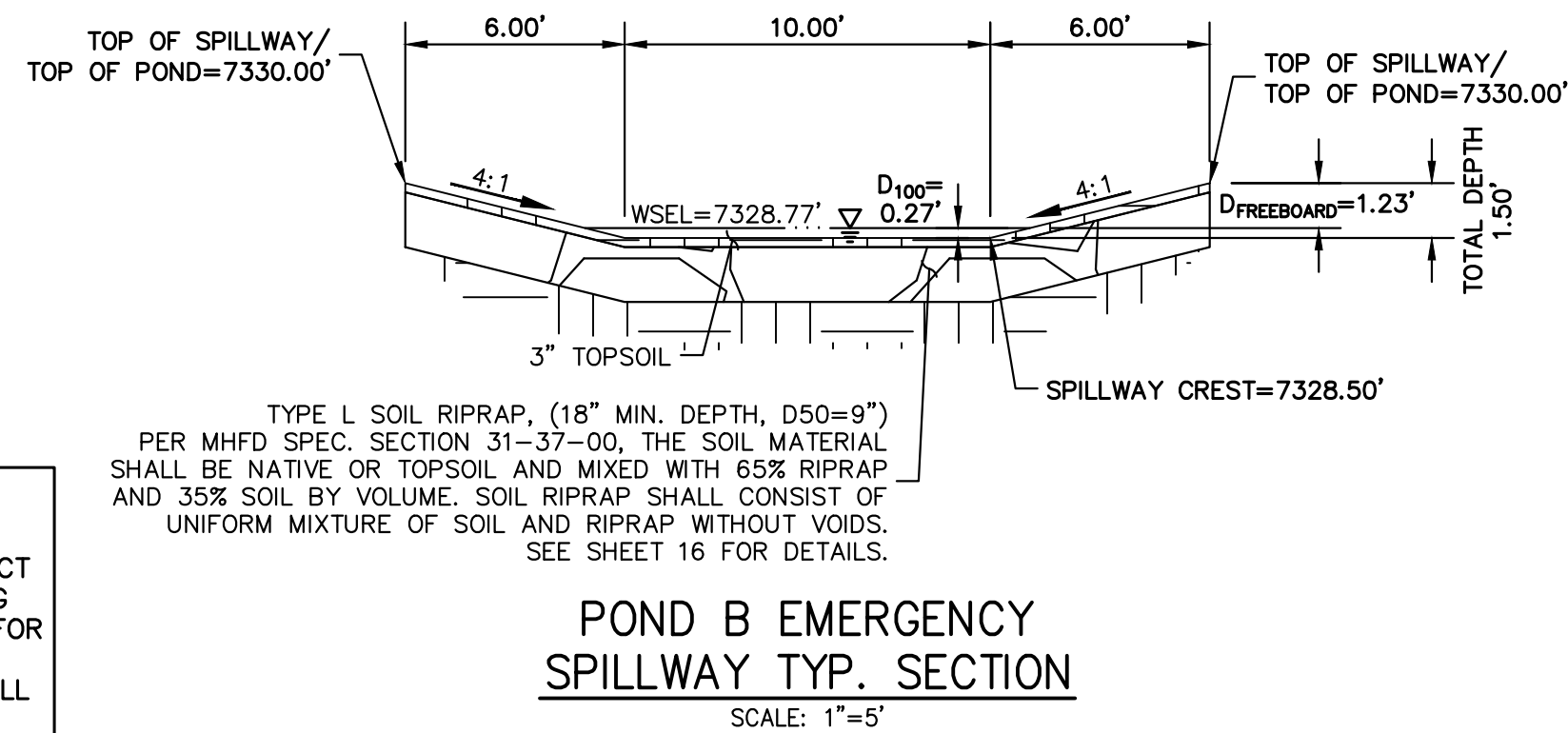
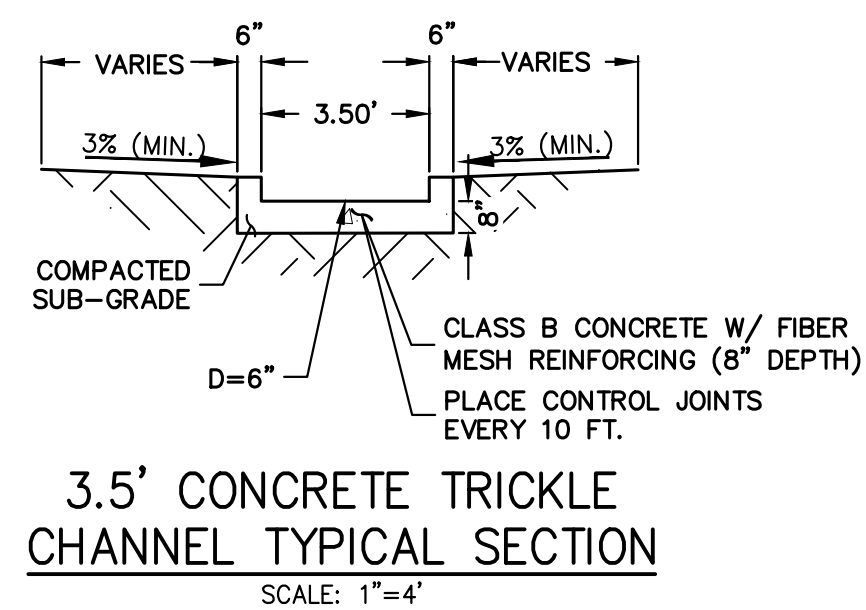
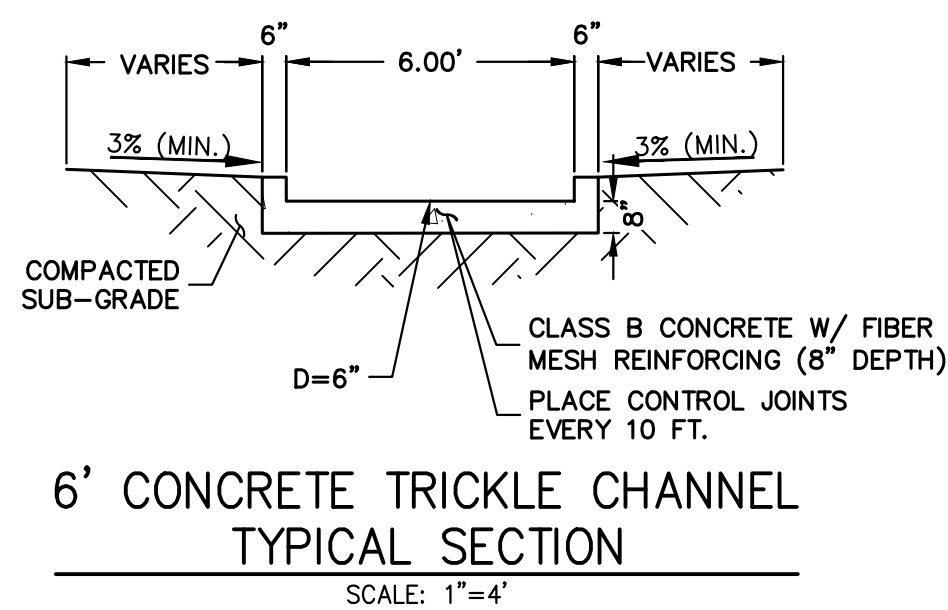
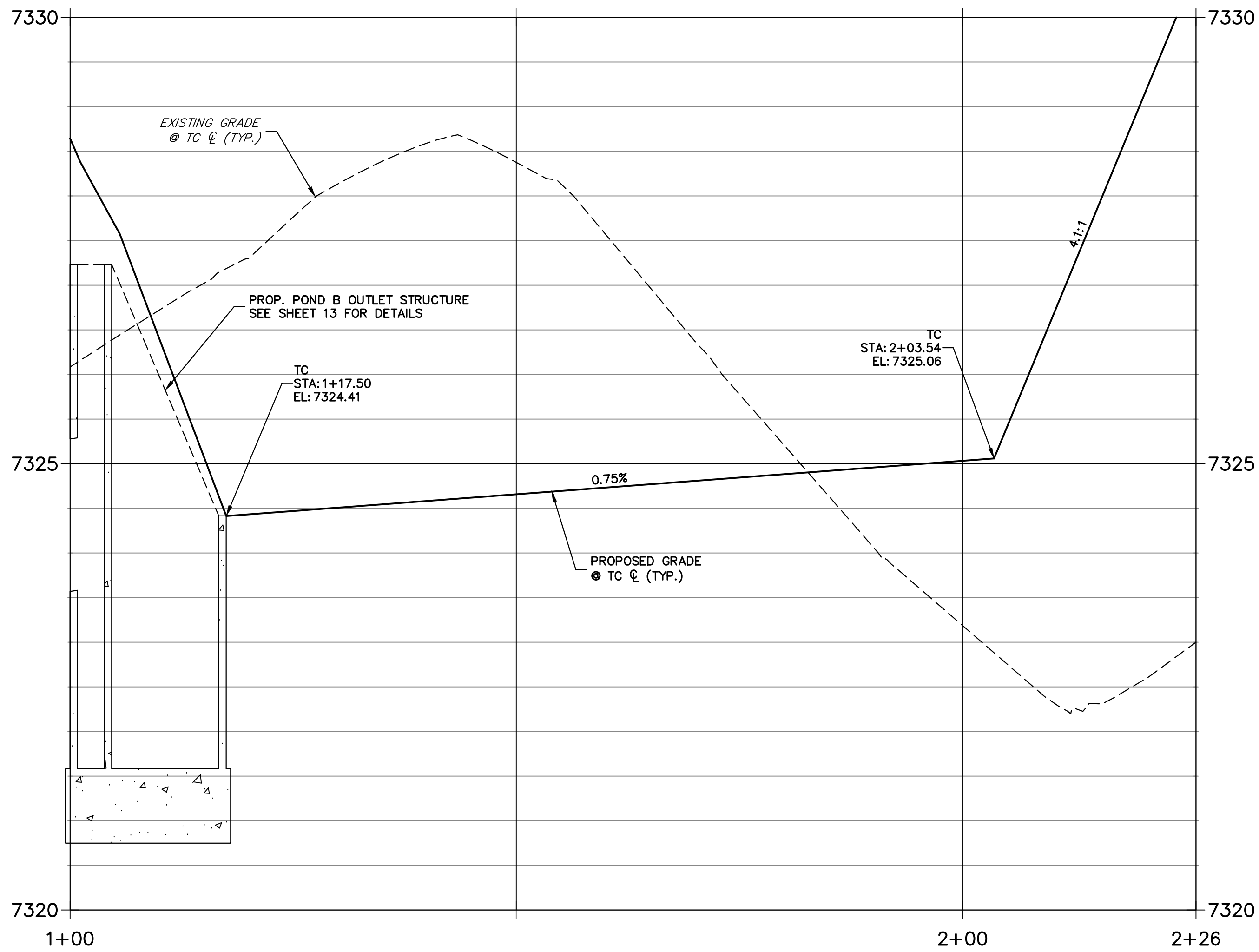
SHEET 10 OF 16  
JOB NO. 25260.00



**POND NOTES**

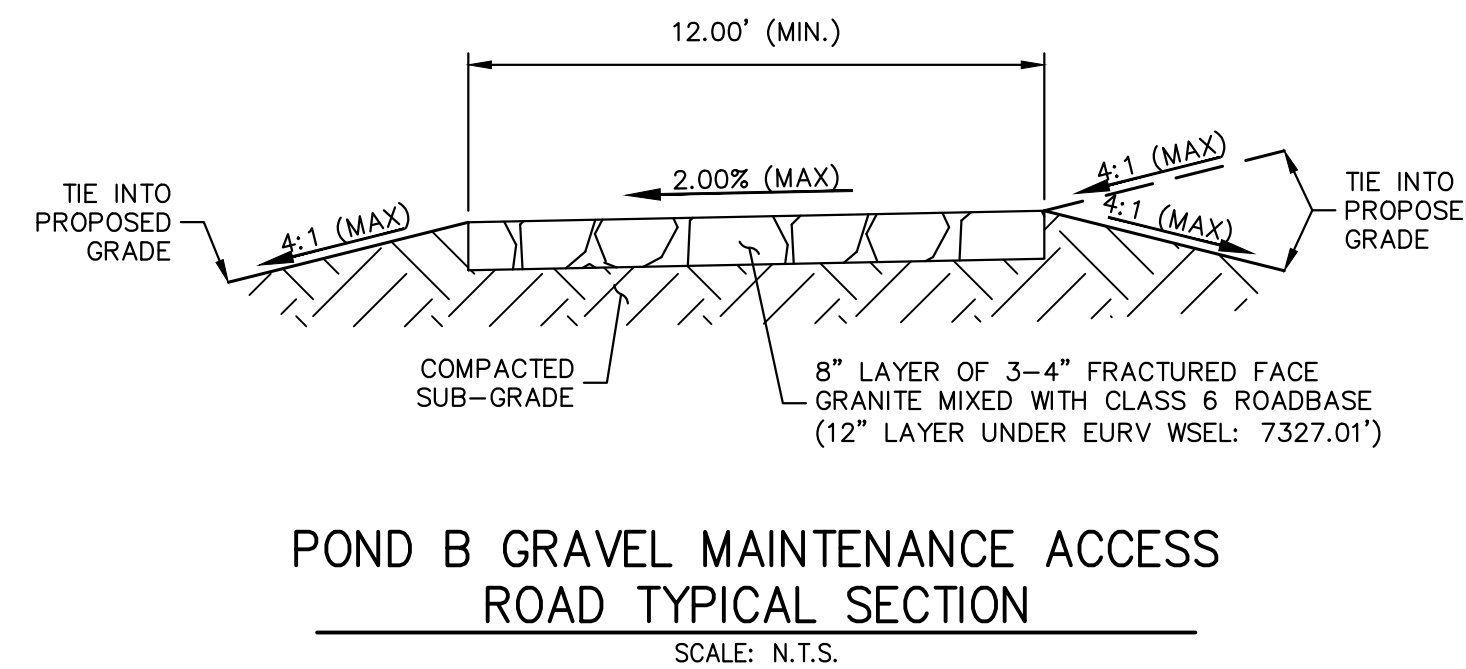
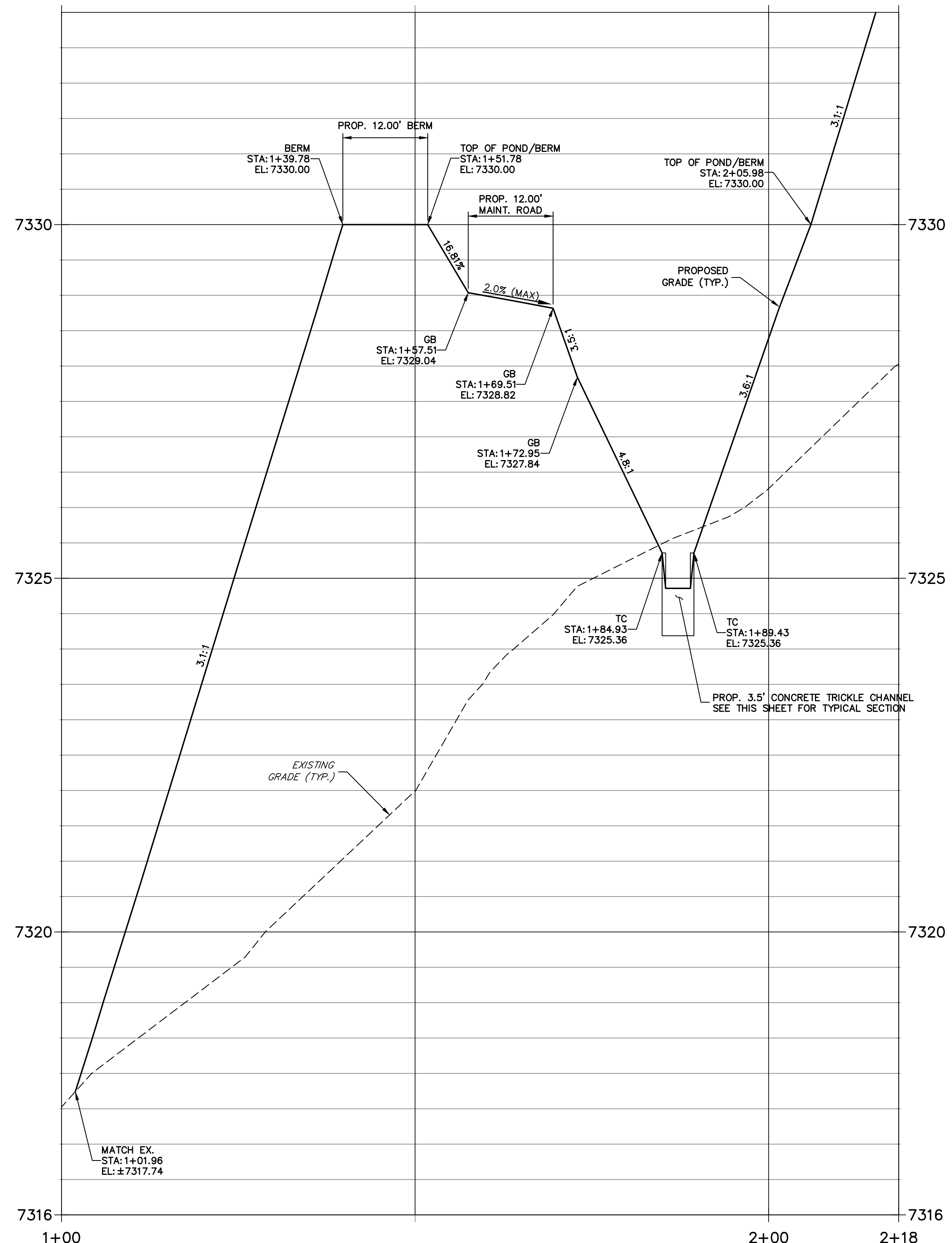
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**POND B SECTION A-A PROFILE  
STA 1+00.00 TO 2+26.17**



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**POND B SECTION B-B PROFILE  
STA 1+00.00 TO 2+18.39**



**811**  
Know what's below.  
Call before you dig.

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

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BY	DATE	No.	REVISION

H-SCALE 1"=10'  
V-SCALE 1"=1'  
DATE 03/29/24  
DESIGNED BY GAG  
DRAWN BY GAG  
CHECKED BY

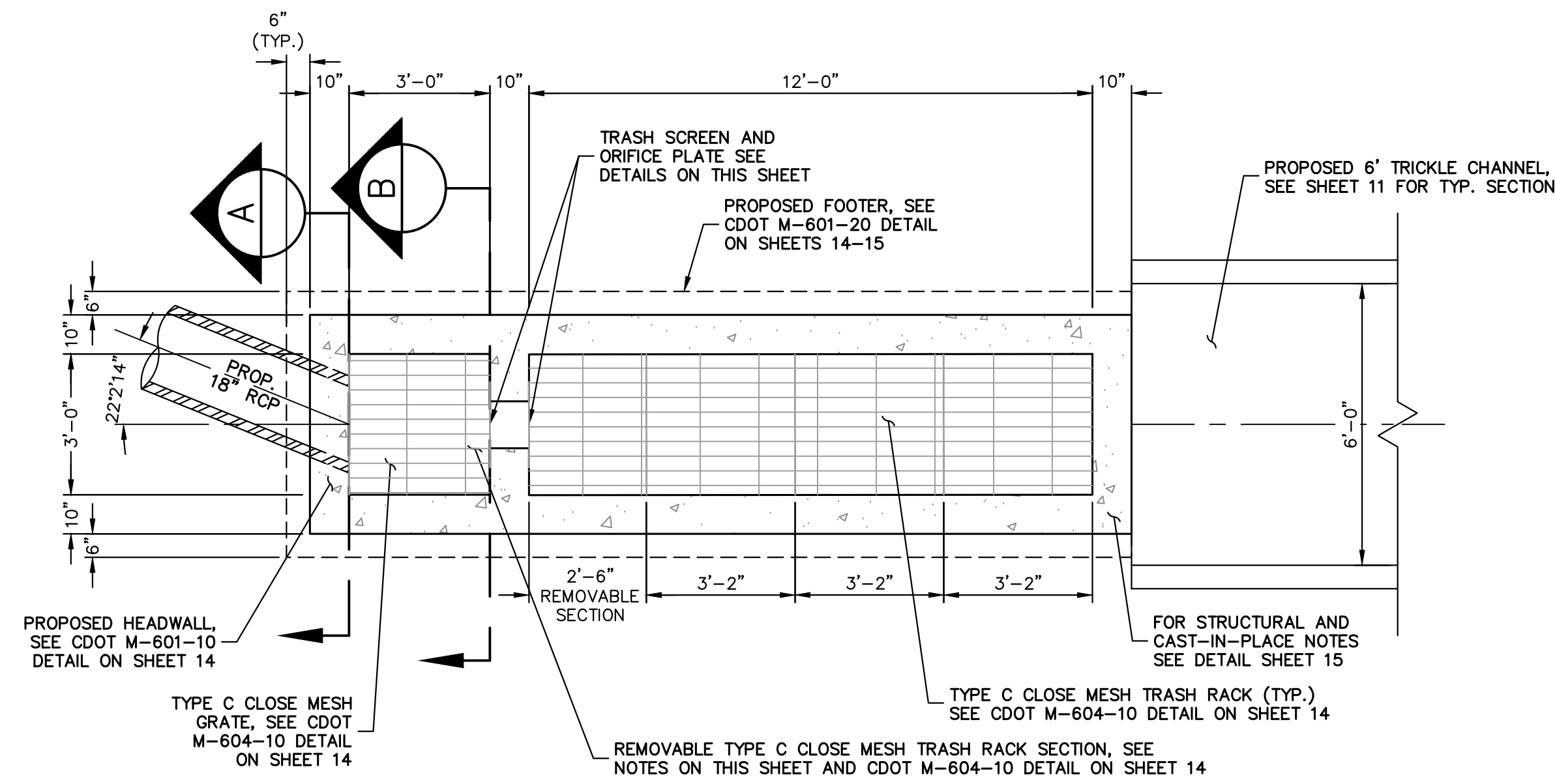
**ESTATES AT CATHEDRAL PINES**  
**POND PLANS AND DETAILS**

SHEET 11 OF 16  
JOB NO. 25260.00





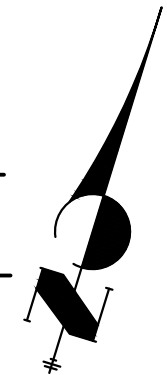




Please label this details for Pond B

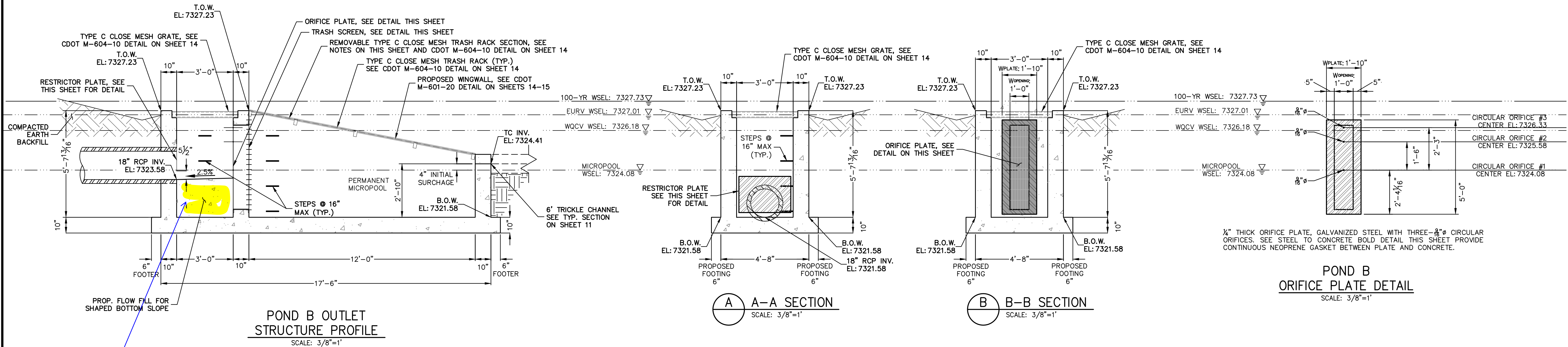
**SOUTH POND OUTLET STRUCTURE PLAN**

SCALE: 3/8"=1'



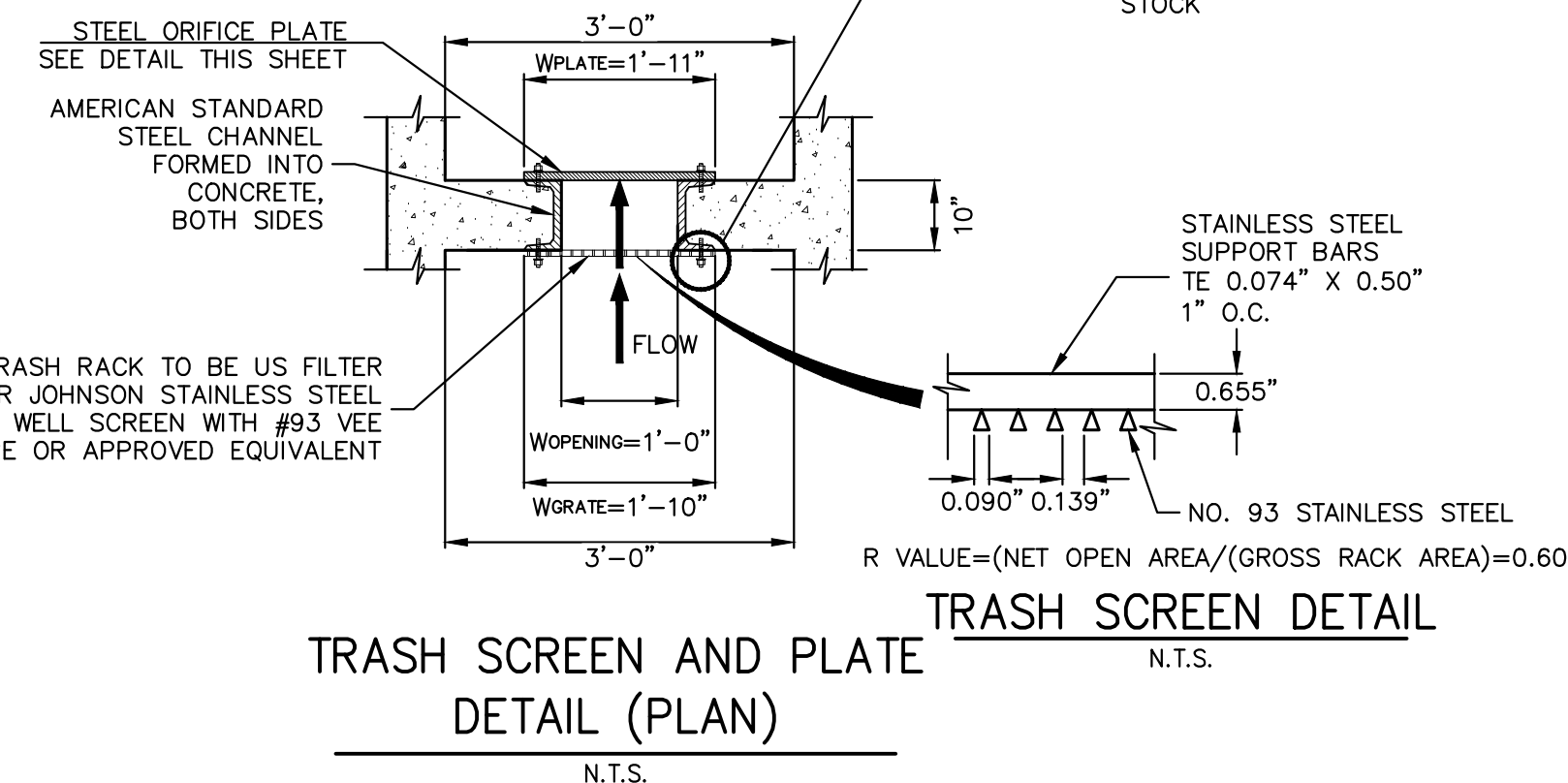
**OUTLET STRUCTURE PLATE AND GRADING NOTES:**

- ORIFICE PLATE:**
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  2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.
- TRASH RACKS:**
3. TRASH RACKS SHALL BE 1 1/2" SCH.40 STEEL PIPE, GALVANIZED, @ 6" CENTERS. SUPPORT BARS SHALL BE 1/2"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 36". ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.
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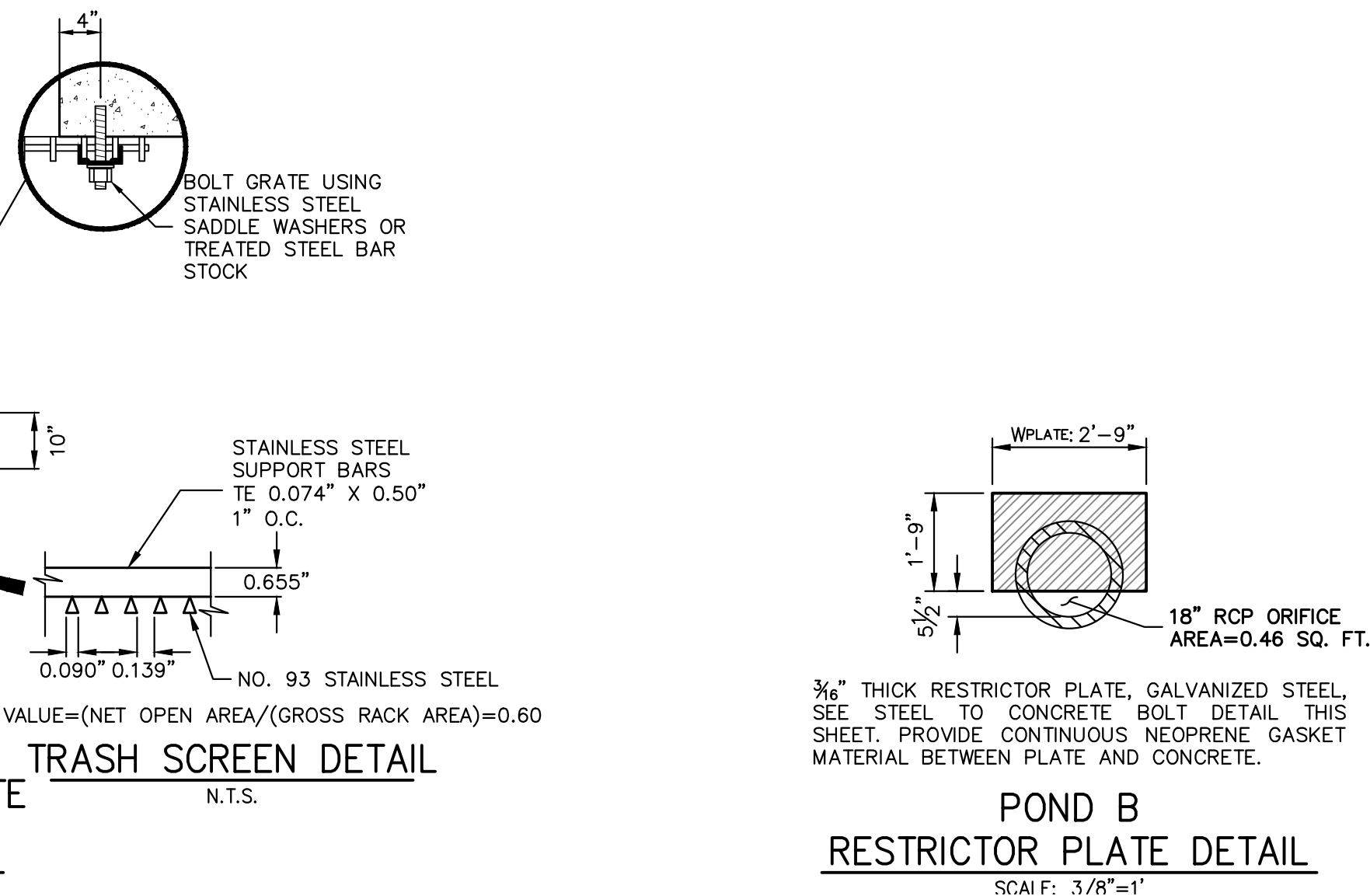
Please remove the flow fill. The flow fill will interfere with the orifice plate function.

The fill will have more potential to impair the outlet structure so it is okay to construct without the 2.5% slope. Disregard previous comment.



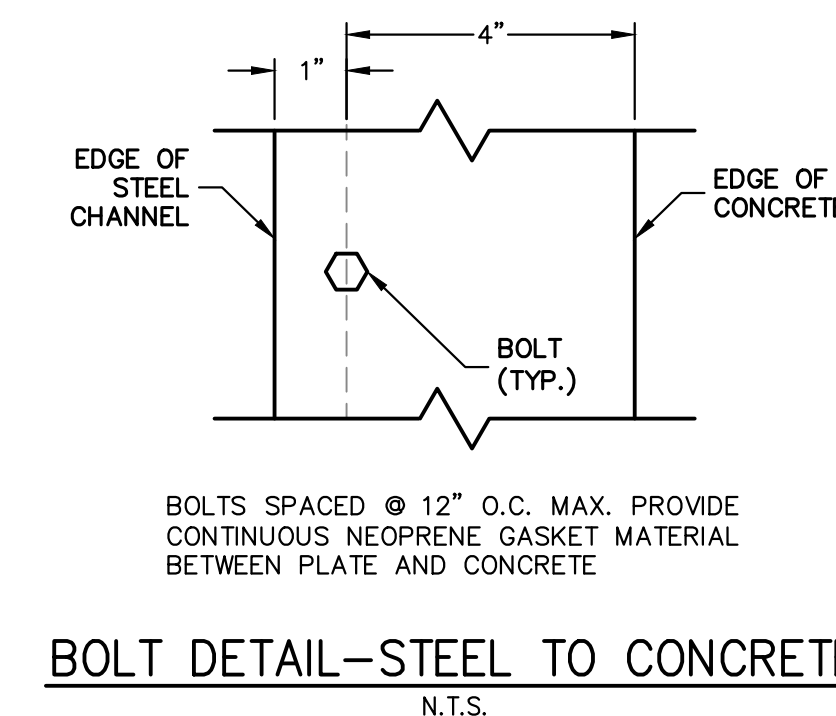
**TRASH SCREEN AND PLATE DETAIL (PLAN)**

N.T.S.



**POND B RESTRICTOR PLATE DETAIL**

SCALE: 3/8"=1'



**BOLT DETAIL-STEEL TO CONCRETE**

N.T.S.

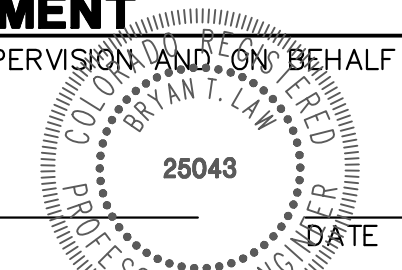


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FOR AND ON BEHALF OF JR ENGINEERING



No.	REVISION	BY	DATE

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
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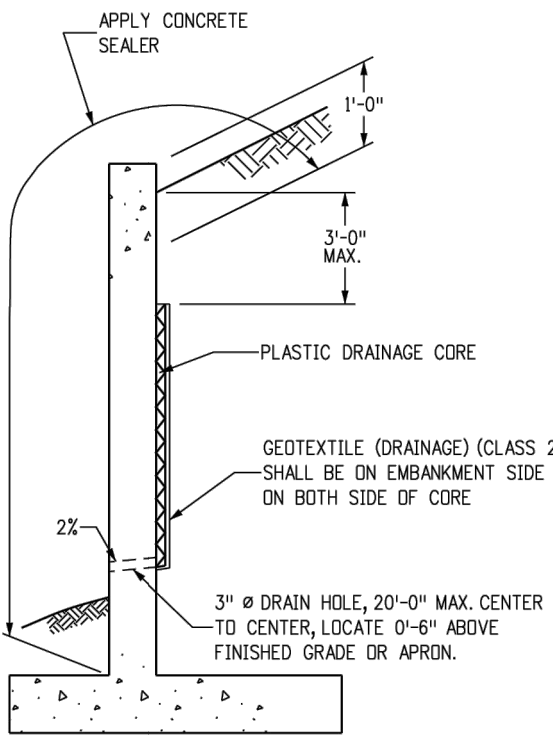




c-BARS AND REINFORCING STEEL QUANTITY (EXCLUDE TOE WALL)		* REINFORCING STEEL QUANTITY INCLUDES STEM AND FOOTING QUANTITIES, BUT DOES NOT INCLUDE TOE WALL QUANTITIES.													
m (FT)	k (FT)	≤ (1.0 x m)		≤ (1.25 x m)		≤ (1.5 x m)		≤ (1.75 x m)		≤ (2.0 x m)		≤ (2.25 x m)		≤ (2.5 x m)	
		* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.	* REIN. LB./L.F.
4	5	58.86	58.86	58.86	58.86	58.86	58.86	58.86	58.86	58.86	58.86	58.86	58.86	58.86	58.86

**EXAMPLE:**  
SELECT THE c-BARS SIZE, SPACING AND STEEL QUANTITY FOR A 25.0 FEET LONG WINGWALL WITH m = 11.8 FT. AND k = 6.3 FT.

**SOLUTION:**  
1. DETERMINE WINGWALL LENGTH IN MULTIPLE OF 'm'  
L / m = 25.0 / 11.8 = 2.12  
L = (2.12 x m), USE L ≤ (2.25 x m)  
2. ROUND TO NEAREST WHOLE NUMBER FOR m AND k:  
m = 11.8 FT., USE m = 12.0 FT.  
k = 6.3 FT., USE k = 6.0 FT.  
3. DETERMINE c-BARS BY USING THE TABLE:  
L ≤ (2.25 x m)  
m = 12  
k = 6  
c-BARS: #6 @ 10"  
REIN. STEEL = 60.60 LB / LF  
4. DETERMINE REINFORCING STEEL QUANTITY OF WHOLE WINGWALL:  
REINFORCING STEEL QUANTITY = 25.0 x 60.60 = 1,515 LB.



**LIMITS OF CONCRETE SEALER AND WINGWALL DRAIN DETAILS**

NOTES: 1. THE GEOTEXTILE SHALL BE SECURED TO THE WALL TO PREVENT MOVEMENT DURING BACKFILLING.  
2. COST OF GEOTEXTILE DRAIN AND CONCRETE SEALER SHALL BE INCLUDED IN THE WORK.

**CAST-IN-PLACE STRUCTURAL NOTES:**

- ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
- ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
- DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F<sub>c</sub>.
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.
- HEADWALLS FOR PIPES SHALL BE CONSTRUCTED PER CDDT M-601-10.
- WINGWALLS SHALL BE CONSTRUCTED PER CDDT M-601-20.

<b>Computer File Information</b>	<b>Sheet Revisions</b>	<b>Colorado Department of Transportation</b>	<b>WINGWALLS FOR PIPE OR BOX CULVERTS</b>	<b>STANDARD PLAN NO.</b>
Creation Date: 07/31/19	Date: _____	2829 West Howard Place CDDT HQ, 3rd Floor Denver, CO 80204 Phone: 303-757-9021 FAX: 303-757-9868		M-601-20
Designer Initials: JBK	Comments	<b>Project Development Branch</b>		Standard Sheet No. 2 of 2
Lost Modification Date: 07/31/19		JBK	Issued by the Project Development Branch: July 31, 2019	Project Sheet Number:
Detailer Initials: LTA				
CRD Ver.: MicroStation V8	Scale: Not to Scale			

**GENERAL STRUCTURE NOTES:**

ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OR COUNTY STANDARD CONSTRUCTION SPECIFICATIONS. EXCEPT AS SHOWN IN THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDDT M-206-1, AND M-206-2 EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO A 1-800-922-1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OF OTHER.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND PROVIDING ALL BRACING AND SHORING AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXCAVATION PROCEDURES INCLUDING ANY SHORING REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL METHODS AND MEANS OF CONSTRUCTION AS WELL AS ALL JOB SITE SAFETY & HEALTH PRECAUTIONS.

ALL SOILS WORK INCLUDING (BUT NOT LIMITED TO) PIER DRILLING AND CONSTRUCTION, SOILS EXCAVATION, FILL PLACEMENT, AND STRUCTURE BACKFILL SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT, UNLESS MORE STRINGENT REQUIREMENTS ARE PRINTED ON THE "IRRIGATION NOTES".

BACKFILL SHALL NOT BEGIN UNTIL CONCRETE WALLS REACH COMPRESSION STRENGTH AT LEAST 80 PERCENT OF THE REQUIRED 28 DAY STRENGTH, 0.8f<sub>c</sub>'.

REINFORCED CONCRETE:  
CLASS D CONCRETE: f<sub>c</sub>'=4,500 psi  
REINFORCING STEEL: f<sub>y</sub>=60,000 psi  
ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS D UNLESS NOTED OTHERWISE.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 U.N.O.  
REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.  
ALL REINFORCING, EXCEPT PIER REINFORCING, SHALL BE EPOXY COATED AND SHALL CONFORM TO ASTM A775.  
ALL REINFORCING SHALL HAVE 2" CONCRETE COVER, U.N.O. ON PLANS, 3" AGAINST GROUND (BOTTOM SLAB)  
ALL REINFORCING SHALL BE HOOKED AROUND CORNERS AND LAPPED, SEE DETAILS.  
ALL LAP SPLICE LOCATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

THE FOLLOWING TABLE GIVES THE MINIMUM CLASS B (STAGGERED) LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACE IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER. INCREASED BY 40% FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW (TOP BARS.), AND INCREASED BY 75% IF BOTH CONDITIONS EXIST. THE INCREASES ABOVE FOR #6 THRU #11 BARS MAY BE 25%, 13%, AND 42% RESPECTIVELY.

#	1'-3"	#5	1'-10"
#6	2'-5"	#7	2'-10"
#8	3'-8"	#9	4'-8"
#10	5'-11"	#11	7'-3"

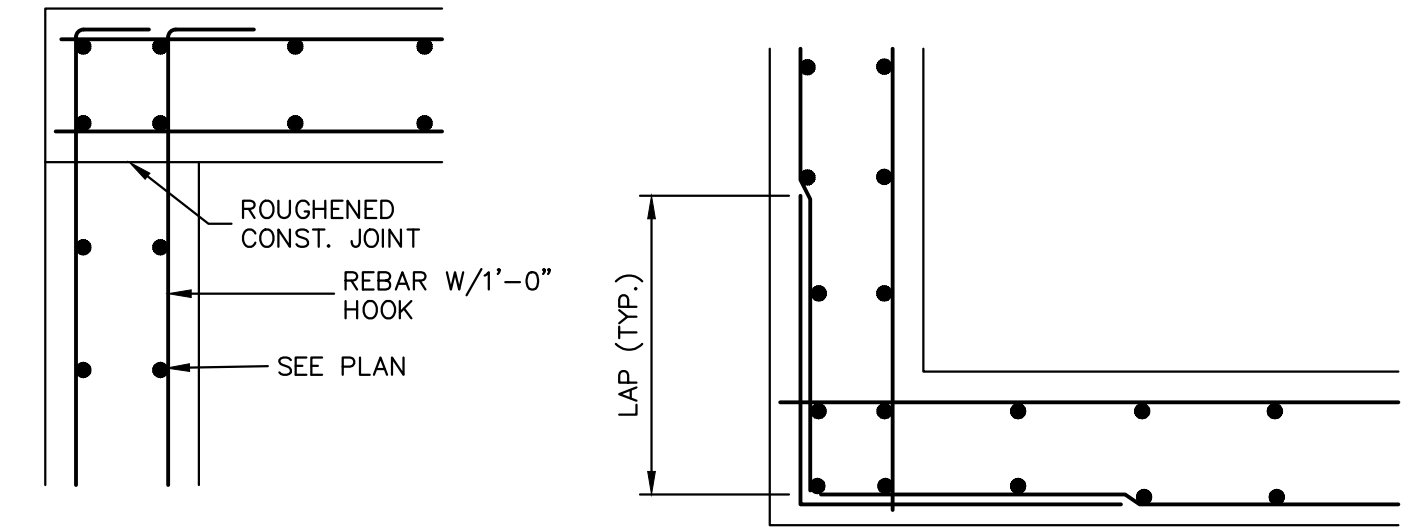
WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS. THE MINIMUM LAP SPLICE SHALL BE AS DESCRIBED ABOVE.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

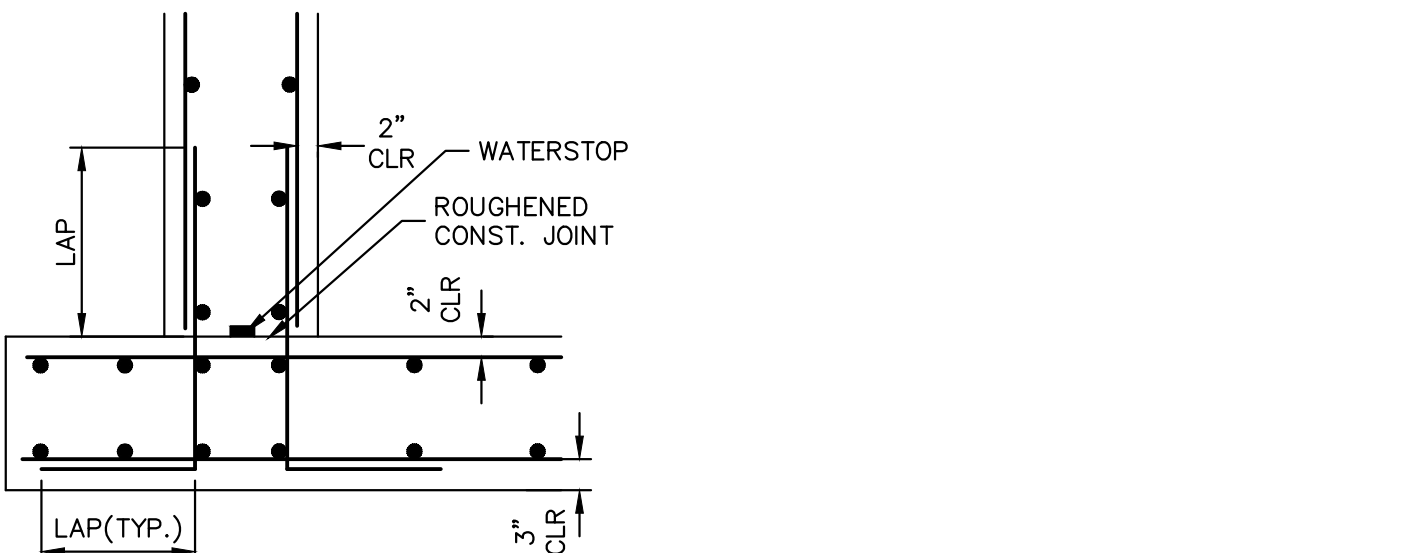
THE CONTRACTOR SHALL SUBMIT REINFORCING STEEL PLACING DRAWINGS (PRIOR TO CONSTRUCTION) TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE DESIGN DRAWINGS. THE DESIGN DRAWINGS SHALL GOVERN OVER PLACING DRAWINGS IN ALL CASES UNLESS MODIFICATIONS ARE APPROVED IN WRITING BY ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

- |                    |                        |
|--------------------|------------------------|
| E.F. = EACH FACE   | O.F. = OUTSIDE FACE    |
| F.F. = FAR FACE    | T.&B. = TOP AND BOTTOM |
| N.F. = NEAR FACE   | T.F. = TOP FACE        |
| I.F. = INSIDE FACE | B.F. = BOTTOM FACE     |
| T.W. = TWO WAY     | T.F. = TWO FACES       |
| E.S. = EACH SIDE   | Lp = LAP LENGTH        |



**TYPICAL TOP CORNER WALL SECTION DETAIL**      **TYPICAL WALL CORNER PLAN VIEW**



**TYPICAL BOTTOM CORNER WALL SECTION DETAIL**

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEW AGENCIES, JR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**VILLAGREE DEVELOPMENT LLC**  
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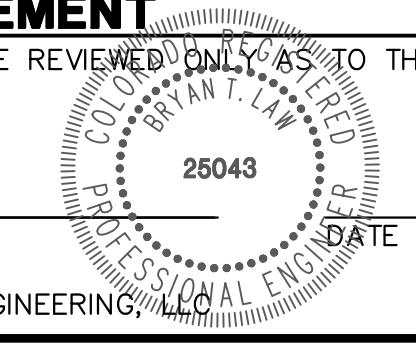
ESTATES AT CATHEDRAL PINES	DETAILS	BY	DATE	No.	REVISION
		N/A	N/A		
		DATE	03/29/24		
		DESIGNED BY	N/A		
		DRAWN BY	GAG		
		CHECKED BY			
		H-SCALE	N/A		
		V-SCALE	N/A		
		DESIGNED BY	N/A		
		DRAWN BY	GAG		
		CHECKED BY			
		DATE	03/29/24		
		DESIGNED BY	N/A		
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		CHECKED BY			



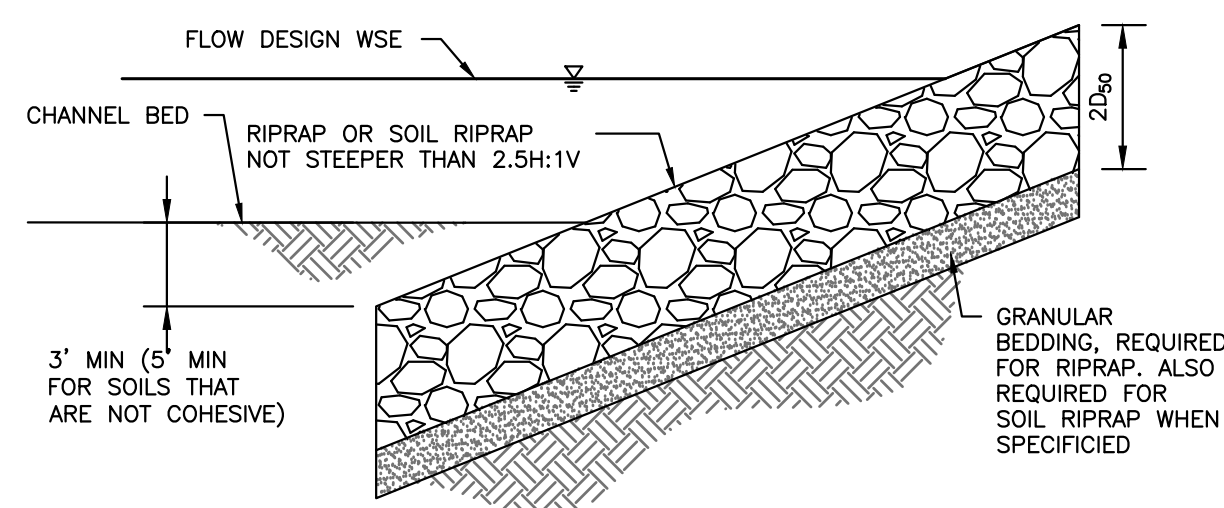
**ENGINEER'S STATEMENT**

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

BRYAN T. LAW, P.E.  
COLORADO P.E. 25043  
FOR AND ON BEHALF OF JR ENGINEERING







RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	D <sub>50</sub> * (INCHES)
TYPE VL	70 - 100	12	6
	50 - 70	9	
	35 - 50	6	
TYPE L	70 - 100	15	9
	50 - 70	12	
	35 - 50	9	
TYPE M	70 - 100	21	12
	50 - 70	18	
	35 - 50	12	
TYPE H	70 - 100	30	18
	50 - 70	24	
	35 - 50	18	
	2 - 10	6	

\*D<sub>50</sub> = MEAN ROCK SIZE

**SOIL RIPRAP NOTES:**

- ELEVATION TOLERANCES FOR THE SOIL RIPRAP SHALL BE 0.10 FEET. THICKNESS OF SOIL RIPRAP SHALL BE NO LESS THAN THICKNESS SHOWN AND NO MORE THAN 2-INCHES GREATER THAN THE THICKNESS SHOWN.
- WHERE "SOIL RIPRAP" IS DESIGNATED ON THE CONTRACT DRAWINGS, RIPRAP VOIDS ARE TO BE FILLED WITH NATIVE SOIL. THE RIPRAP SHALL BE PRE-MIXED WITH THE NATIVE SOIL AT THE FOLLOWING PROPORTIONS BY VOLUME: 65 PERCENT RIPRAP AND 35 PERCENT SOIL. THE SOIL USED FOR MIXING SHALL BE NATIVE TOPSOIL AND SHALL HAVE A MINIMUM FINES CONTENT OF 15 PERCENT. THE SOIL RIPRAP SHALL BE INSTALLED IN A MANNER THAT RESULTS IN A DENSE, INTERLOCKED LAYER OF RIPRAP WITH RIPRAP VOIDS FILLED COMPLETELY WITH SOIL. SEGREGATION OF MATERIALS SHALL BE AVOIDED AND IN NO CASE SHALL THE COMBINED MATERIAL CONSIST PRIMARILY OF SOIL; THE DENSITY AND INTERLOCKING NATURE OF RIPRAP IN THE MIXED MATERIAL SHALL ESSENTIALLY BE THE SAME AS IF THE RIPRAP WAS PLACED WITHOUT SOIL.
- WHERE SPECIFIED (TYPICALLY AS "BURIED SOIL RIPRAP"), A SURFACE LAYER OF TOPSOIL SHALL BE PLACED OVER THE SOIL RIPRAP ACCORDING TO THE THICKNESS SPECIFIED ON THE CONTRACT DRAWINGS. THE TOPSOIL SURFACE LAYER SHALL BE COMPACTED TO APPROXIMATELY 85% OF MAXIMUM DENSITY AND WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE IN ACCORDANCE WITH ASTM D698. TOPSOIL SHALL BE ADDED TO ANY AREAS THAT SETTLE.
- ALL SOIL RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.

U.S. STANDARD SIEVE SIZE	GRADATION FOR GRANULAR BEDDING	
	PERCENT PASSING BY WEIGHT	
	TYPE I CDOT SECT. 703.01	TYPE II CDOT SECT. 703.09 CLASS A
3 INCHES	-	90 - 100
1½ INCHES	-	-
¾ INCHES	-	20 - 90
⅜ INCHES	100	-
#4	95 - 100	0 - 20
#16	45 - 80	-
#50	10 - 30	-
#100	2 - 10	-
#200	0 - 2	0 - 3

**RIPRAP BEDDING**

RIPRAP DESIGNATION	THICKNESS REQUIREMENTS FOR GRANULAR BEDDING		
	MINIMUM BEDDING THICKNESS (INCHES)		
	FINE-GRAINED SOILS <sup>1</sup>		COARSE-GRAINED SOILS <sup>2</sup>
	TYPE I (LOWER LAYER)	TYPE II (UPPER LAYER)	TYPE II
VL (D <sub>50</sub> = 6 IN)	4	4	6
L (D <sub>50</sub> = 9 IN)	4	4	6
M (D <sub>50</sub> = 12 IN)	4	4	6
H (D <sub>50</sub> = 18 IN)	4	6	8
VH (D <sub>50</sub> = 24 IN)	4	6	8

- NOTES:
- MAY SUBSTITUTE ONE 12-INCH LAYER OF TYPE II BEDDING. THE SUBSTITUTION OF ONE LAYER OF TYPE II BEDDING SHALL NOT BE PERMITTED AT DROP STRUCTURES. THE USE OF A COMBINATION OF FILTER FABRIC AND TYPE II BEDDING AT DROP STRUCTURES IS ACCEPTABLE.
  - FIFTY PERCENT OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE.

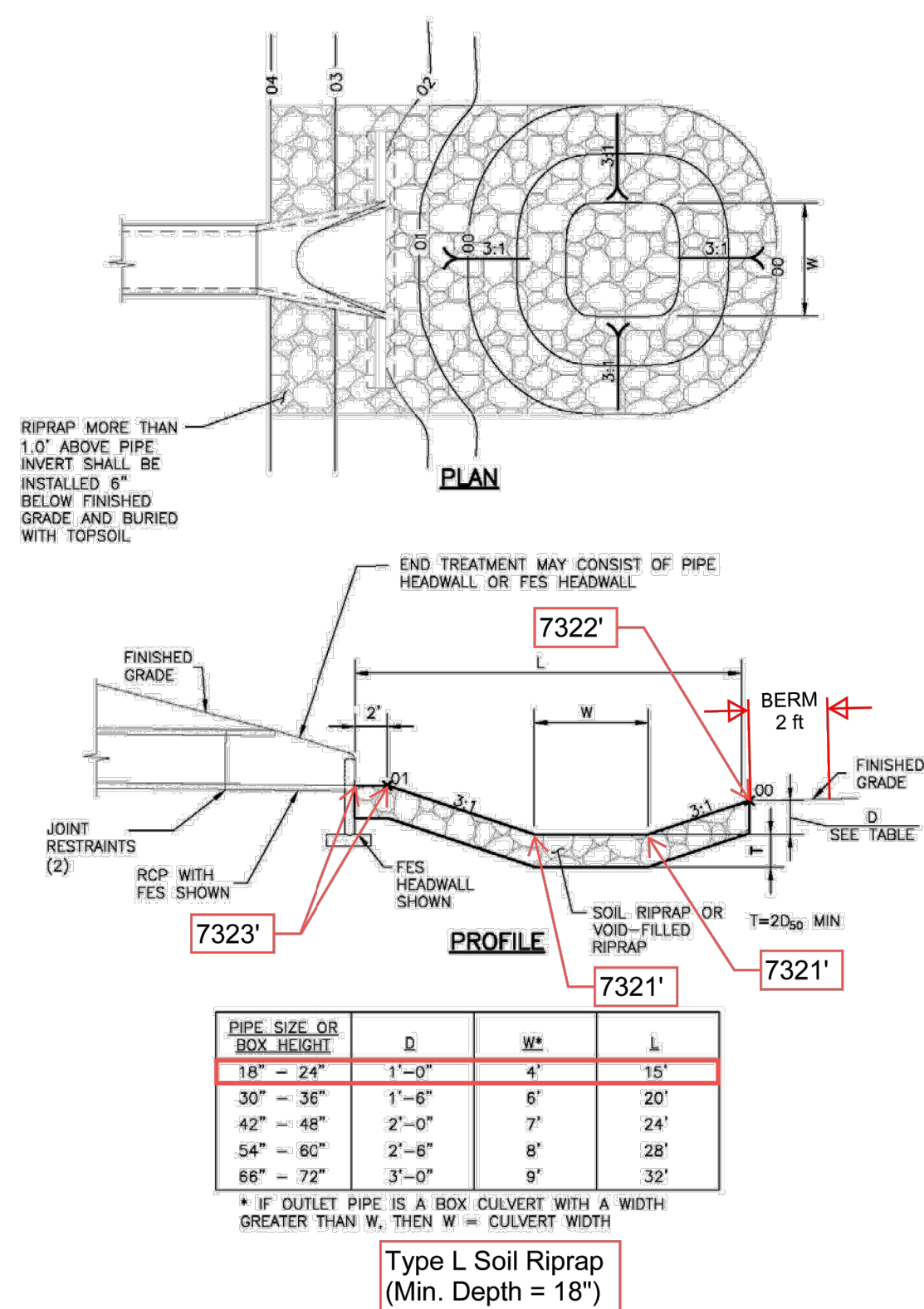


Figure 9-37. Low tailwater riprap basin

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
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BY	DATE	No.	REVISION	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				N/A	N/A	03/29/24	N/A	GAG	

ESTATES AT CATHEDRAL PINES  
DETAILS

SHEET 16 OF 16  
JOB NO. 25260.00



Know what's below.  
Call before you dig.

**ENGINEER'S STATEMENT**

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

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