

#### **BASIS OF BEARNING:**

BASIS OF BEARINGS: THE EAST LINE OF SECTION 7, TOWNSHIP 12 SOUTH, RANGE 63 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE SOUTH END BY A 3.25" ALUMINUM CAP STAMPED "LS 17496 1995" IN A RANGE BOX AND AT THE NORTH END BY A 3.25" ALUMINUM CAP STAMPED "CDOT LS 25381 2007" IN A RANGE BOX, BEARING S01°04'47"E AS REFERENCED TO COLORADO STATE PLANE CENTRAL ZONE.



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.

# LAZY Y AND ROCKIN J SUBDIVISION

**LOCATED IN THE SOUTH HALF OF SECTION 7 TOWNSHIP 12 SOUTH, RANGE 63 WEST OF THE 6TH P.M.** 

**STREET IMPROVEMENT PLANS** 

**COUNTY OF EL PASO, STATE OF COLORADO** 





						A A A A P G A	ONL	AU
ST DRIVE 9–7764	FIRE DISTRICT:	BLACK FOREST FIRE PROTEC 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 809 CHIEF BRYAN JACK (719) 49	TION DISTRICT 908 95-4300	PREPARED FOR	LYRJ	FOREST DRIVE	MUNUMENI, CU ZUIUD SCOTT SMITH	(719) 499–7764
IVE D 80919 267-6254	GAS DEPARIMENT:	BLACK HILLS ENERGY 7080 ALEGRE STREET FOUNTAIN, CO 80817 (719) 393–6625			<u>רז</u>		33	
INING OPMENT IRCLE, SUITE 110 D 80910	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495–2283			IRING		71 <del>9 -</del> 593 -25	11102
ARTMENT OF PUBLIC WORKS 0 80922 (719) 520-6460	COMMUNICATIONS:	U.S. WEST COMMUNICATIONS (LOCATORS) (800) 922-198	7		J-R ENGINEI	A Westrian Company	Centennial 303-740-9393 • Colorado Springs	Full Cuillis 3/0−431−3000 • www.jrch 1911143
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TI D P F I N TI P F, K C I N	HESE DETAILED PLANS AND IRECT SUPERVISION. SAID I REPARED ACCORDING TO T OR DETAILED ROADWAY, DE LANS AND SPECIFICATIONS I CONFORMITY WITH APPLIC RANSPORTATION PLANS. SA URPOSES FOR WHICH THE ACILITIES ARE DESIGNED AN NOWLEDGE AND BELIEF. I A AUSED BY ANY NEGLIGENT I PREPARATION OF THESE	D SPECIFICATIONS WERE PE PLANS AND SPECIFICATIONS THE CRITERIA ESTABLISHED RAINAGE, GRADING AND ER AND SAID PLANS AND SE CABLE MASTER DRAINAGE F AID PLAN AND SPECIFICATI PARTICULAR ROADWAY AN ND ARE CORRECT TO THE ACCEPT RESPONSIBILITY FO ACTS, ERRORS OR OMISSI DETAILED PLANS AND SPE	REPARED UNDER MY S HAVE BEEN BY THE COUNTY OSION CONTROL PECIFICATIONS ARE PLANS AND MASTER ONS MEET THE D DRAINAGE BEST OF MY OR ANY LIABILITY ONS ON MY PART CIFICATIONS.	I A7Y Y AND ROCK	SUBDIVISION	COVER SHEET		
 E	BRYAN T. LAW, P.E.	25043		SHE	 Eet	1 (	 DF <sup>,</sup>	4
SF2428	COLORADO P.E. 25043 OR AND ON BEHALF OF J	R ENGINEERING	lin.	JOB		252		)0

JOB NO. 25228.00

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MISC. UTILITIES

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### STANDARD NOTES FOR EL PASO COUNTY CONSTRUC

- 1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATION COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF E BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTIL OF COLORADO (UNCC).
- 3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION STORMWATER MANAGEMENT PLAN (SWMP), THE SOIL AND GEOTECHNICAL REPORT, AND THE A CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING 3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
- 3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINÁGE CRITERIA MANUAL, VOLUMES 3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRI 3.4. CDOT M&S STANDARDS
- 4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTAT CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFOR AND REQUIREMENTS OF THE MOST RECENT VERSIONS OF THE RELEVANT ADOPTED EL PASO C INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAG THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STAND REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- 5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, B ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSION CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- 6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANN DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISD OBTAIN ALL REQUIRED PERMITS. INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERM
- 8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPR ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON D OR INCONSISTENCIES.
- 9. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DE BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- 10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCES
- 11. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.
- 12. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS
- 13. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF F WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- 14. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE OWENER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

### **GENERAL CONSTRUCTION NOTES:**

- 1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION O UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINIT LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 2. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAM DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- 3. 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 APPROVED BY EL PASO COUNTY PCD.
- 5. ALL STATIONING IS CENTERLINE OF IMPROVEMENTS UNLESS OTHERWISE INDICATED. ALL ELEVATIONS TOP BACK OF CURB (TBC), ASPHALT (ASP), OR TOP OF INLET OR BOX (TOB).
- 6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO EPC EC 7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES IS RE
- GREATER THAN 18" VERTICAL IN THIS AREA.
- 8. ALL CULVERTS AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVER CULVERTS.
- 9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGI OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT THE TIME OF ROAD CONSTRUCTION TO EVALUATE MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL B SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.

### SIGNING AND STRIPING NOTES:

- 1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFO 2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DA
- ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS. 3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLA 4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY
- EL PASO COUNTY AND MUTCD STANDARDS. 5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- 6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- 7. ALL STREET NAME SIGNS SHALL HAVE 'D' SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" U NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERIN NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE
- 8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING. 9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL
- 10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
- 11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BI THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1 NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' 12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RES
- AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1. 13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) SIGNING AND STRIPING.
- 14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

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IPPER-LOWER CASE LETTERING ON 8" E E BORDER THAT IS NOT RECESSED. M IG ON 18" BLANK WITH A WHITE BORDE 2012 MUTCD "STANDARD HIGHWAY SIGN	BLANK AND IULTI–LANE ER THAT IS IS"	<b>ر</b>	IOTES	) - )	
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E A MINIMUM 125 MIL THICKNESS I I. WORD AND SYMBOL MARKINGS SHA 'LONG PER CDOT S-627-1. SIDENTIAL ROADWAYS SHALL INCLUDE F	PREFORMED LL BE THE ROTH RIGHT	D ROC	FNFR,		
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	PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING	LAZ			
Know what's <b>below.</b>	BRYAN T. LAW, P.E. COLORADO P.E. 25043 FOR AND ON BEHALF OF JR ENGINEERING, UNO	- SHEET	- 2 0. 2	OF 5228.	4 00





LINE TABLE								
LINE	BEARING	DISTANCE						
L1	S59 <b>•</b> 33'38"W	45.49'						
L2	N59 <b>°</b> 33'02"E	13.82'						
L3	N88°46'50"E	132.01'						
L4	S88*46'50"W	132.32'						

	CURVE	TABLE	
CURVE	DELTA	RADIUS	LENGTH
C1	78 <b>°</b> 51'54"	40.00'	55.06'
C2	113 <b>°</b> 21'47"	40.01'	79.16'
C3	29 <b>°</b> 08'14"	212.50'	108.06'
C4	29 <b>°</b> 01'08"	187.50'	94.96'
C5	58 <b>°</b> 21'29"	187.50'	190.98'
C6	58 <b>°</b> 21'28"	212.50'	216.44'
C7	91 <b>°</b> 02'00"	49.15 <b>'</b>	78.09'
C8	91 <b>°</b> 23'24"	49.16'	78.41'

	POINT TABULATION							
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION			
1	1+13.09	61.68'(RT)	ACCESS DRIVE	6805.06	CONNECT TO EX.			
2	1+13.41	62.00' (LT)	ACCESS DRIVE	6809.87	CONNECT TO EX.			
3	1+63.09	12.50'(RT)	ACCESS DRIVE	6806.87	PT			
4	1+63.41	12.50'(LT)	ACCESS DRIVE	6807.61	PT			
5	2+95.41	12.50'(RT)	ACCESS DRIVE	6812.72	PC			
6	2+95.41	12.50'(LT)	ACCESS DRIVE	6813.22	PC			
7	4+99.12	12.50' (RT)	ACCESS DRIVE	6828.94	PRC			
8	4+99.12	12.50'(LT)	ACCESS DRIVE	6829.44	PRC			
9	6+00.42	12.50'(RT)	ACCESS DRIVE	6837.05	PT			
10	6+00.83	12.50'(LT)	ACCESS DRIVE	6837.58	PT			
11	6+44.56	12.81'(RT)	ACCESS DRIVE	6839.16	PC			
12	6+14.65	12.50'(LT)	ACCESS DRIVE	6838.78	PC			
13	6+70.80	54.13' (RT)	ACCESS DRIVE	6839.58	PCR			
14	6+69.64	64.70'(LT)	ACCESS DRIVE	6839.75	PCR			
15	1+24.92	76.22' (LT)	ACCESS DRIVE	6809.12	CONNECT TO EX.			
16	1+38.61	49.87' (LT)	ACCESS DRIVE	6807.25	SWALE PT			
17	1+53.29	24.00' (LT)	ACCESS DRIVE	6804.54	SWALE PT			
18	1+52.89	24.00' (RT)	ACCESS DRIVE	6803.91	SWALE PT			
19	1+37.17	50.29' (RT)	ACCESS DRIVE	6803.58	SWALE PT			
20	1+22.11	74.49' (RT)	ACCESS DRIVE	6803.29	CONNECT TO EX.			







#### **STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS**

- 1. 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.
- 2. 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).
- 3. 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: 3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
- 3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2 3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION 3.4. CDOT M&S STANDARDS
- 4. 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.
- 5. 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.
- 6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- 7. 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.
- 8. 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.
- 9. 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.
- 10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- 11. 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.
- 12. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA. 13. 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.
- 14. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWENER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

#### **BASIS OF BEARNING:**

BASIS OF BEARINGS: THE EAST LINE OF SECTION 7, TOWNSHIP 12 SOUTH, RANGE 63 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE SOUTH END BY A 3.25" ALUMINUM CAP STAMPED "LS 17496 1995" IN A RANGE BOX AND AT THE NORTH END BY A 3.25" ALUMINUM CAP STAMPED "CDOT LS 25381 2007" IN A RANGE BOX. BEARING S01°04'47"E AS REFERENCED TO COLORADO STATE PLANE CENTRAL ZONE.

### **STORM SEWER NOTES**

- 1. SEE SHEET 1 FOR BASIS OF BEARING. SEE SHEET 2 FOR LEGEND. 2. 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. 3. ALL STATIONING IS PIPE CENTERLINE UNLESS OTHERWISE NOTED.
- 4. ALL PROPOSED RCP STORM SEWER PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
- 5. PIPE LENGTHS ARE FROM INSIDE INLET WALL TO INSIDE INLET WALL, FROM CENTER OF MANHOLE TO INSIDE INLET OF WALL, OR FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. PIPE LENGTHS INCLUDE FES OR HEADWALL
- 6. WHERE PIPES ENTER STRUCTURES, THE CENTERLINE STATION CALLED OUT ON THE PLANS IS TO THE CENTER OF STRUCTURE. WHERE PIPES ENTER STRUCTURES ON A SKEW, CONTRACTOR IS REQUIRED TO EXTEND PIPE TO ENSURE THAT BOTH EDGES OF THE PIPE EXTEND INTO THE STRUCTURE. CONTRACTOR WILL THEN BE REQUIRED TO CUT PIPE FLUSH WITH THE INSIDE FACE OF THE STRUCTURE AND GROUT IN PLACE.
- 7. PIPES SHALL HAVE JOINT RESTRAINTS ON LAST 3 JOINTS AT PIPE OUTFALL. 8. PIPES WITH PRESSURE HEAD SHALL USE WATER TIGHT JOINTS WITH A
- 100-YEAR SERVICE LIFE. 9. PIPE BEDDING SHALL CONFORM TO EL PASO COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS. BEDDING FOR RCP SHALL BE AG7122 NO. 57/67 CRUSHED ROCK. SQUEEGEE OR MIXTURES CONTAINING SQUEEGEE SHALL NOT BE USED. BEDDING SHALL BE 6 TO 8 INCHES
- DEEP UNDER THE PIPE AND BACKFILLED TO THE SPRING LINE. 10. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH MANUFACTURES SPECIFICATIONS AND EL PASO COUNTY
- STANDARDS AND SPECIFICATION. 11. SEE DETAIL SHEET 15 - 16 FOR APPLICABLE DETAILS.

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.

# LAZY Y AND ROCKING J SUBDIVISION

### LOCATED IN THE SOUTH HALF OF SECTION 7 TOWNSHIP 12 SOUTH, RANGE 63 WEST OF THE 6TH P.M.

**STORM SEWER AND POND PLANS** 

**COUNTY OF EL PASO, STATE OF COLORADO** 



### POND NOTES

- 1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
- 2. SEE SHEETS 3-6 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.



APF APF APF APF AND IVE 801 TH DRI DRI SMI 172 GRE FOREST NUMENT, SCOTT FIRE DISTRICT BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300 BLACK HILLS ENERGY GAS DEPARTMENT: 7080 ALEGRE STREET FOUNTAIN, CO 80817 (719) 393-6625 ELECTRIC DEPARTMENT: MOUNTAIN VIEW ELECTRIC INEERIN 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283 U.S. WEST COMMUNICATIONS COMMUNICATIONS: (LOCATORS) (800) 922-1987 ENG J·R OWNER/DEVELOPER STATEMENT THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS. DATE SCOTT SMITH 1172 GREENLAND FOREST DRIVE MONUMENT, CO 80106 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 ECM 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. 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. DATE JOSHUA PALMER, P.E. COUNTY ENGINEER/ECM ADMINISTRATOR **(**) ENGINEER'S STATEMENT τ̈Ζ THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY ŌŌ DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY Ŷ КS FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL Ш PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTE Ο  $\overline{\phantom{a}}$ TRANSPORTATION PLANS. SAID PLAN AND SPECIFICATIONS MEET THE  $\odot$ ⊿ m∣ PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY ר<br/>ע ≺< 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. 25043

BRYAN T. LAW, P.E.

COLORADO P.E. 25043

FOR AND ON BEHALF OF JR ENGINEERING

SHEET 1 OF 16

JOB NO. 25228.00

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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.

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AH AHEAD ARCH ARCHITECT ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS ASS'Y ASSEMBLY AVE AVENUE BB BOX BASE BK BACK BNDY BOUNDARY BOP BOTTOM OF PIPE BOV BLOW OFF VALVE BFV BUTTERFLY VALVE BLVD BOULEVARD BW BOTTOM OF WALL C&G CURB & GUTTER CATV CABLE TELEVISION CB CATCH BASIN CBC CONCRETE BOX CULVERT CDOT COLORADO DEPARTMENT OF TRANSPORTATION CDS CUL-DE-SAC	IRR IRRIGATION KB KICK (THRUST) BL LB POUND LE LANDSCAPE EASED LF LINEAR FOOT LN LANE LOMR LETTER OF MAP F LP LOW POINT LS LUMP SUM LT LEFT MAX MAXIMUM M/D MOISTURE DENSIT MDDP MASTER DEVELOPT DRAINAGE PLAN MH MANHOLE MIN MINIMUM MS MOUNTABLE SIDEV N NORTH NRCP NON-REINFORCED PIPE ODP OFFICIAL DEVELOP	LOCK MENT REVISION Y MENT WALK CONCRETE	PREPARED FOR LYRJ 1172 GREENLAND FOREST DRIVE MONUMENT, CO 80106 SCOTT SMITH
CF CUBIC FOOT CFS CUBIC FEET PER SECOND CIP COMPLETE IN PLACE CL CENTER LINE CLOMR CONDITIONAL LETTER OF MA REVISION CLR CLEAR CMP CORRUGATED METAL PIPE CO CLEAN OUT COCS CITY OF COLORADO SPRINGS CONC CONCRETE CR CIRCLE CSP CORRUGATED STEEL PIPE CSU COLORADO SPRINGS UTILITIE CT COURT CTRB CONCRETE THRUST REDUCEF BLOCK CY CUBIC YARD DBPS DRAINAGE BASIN PLANNING STUDY DE DRAINAGE EASEMENT DIA DIAMETER DIP DUCTILE IRON PIPE DR DRIVE DRC DESIGN REVIEW COMMITTEE DU DWELLING UNITS DY DAY E EAST EA EACH EGL ENERGY GRADE LINE FL FUEVATION	OHE OVERHEAD ELECT OHU OVERHEAD UTILITY PC POINT OF CURVAT PCC POINT OF COMPOU CURVATURE PCR POINT OF CURB R PDP PRELIMINARY DEVI PLAN PE PROFESSIONAL EN PLAN PE PROFESSIONAL EN PLAN PL PROPERTY LINE PR PROPOSED S PRC POINT OF INTERSE PKWY PARKWAY PL PROPERTY LINE PR PROPOSED S PRC POINT OF REVERS PT POINT OF TANGEN PV PLUG VALVE PVC POLYVINYL CHLOR R RADIUS RCBC REINFORCED CONC CULVERT RCP REINFORCED CONC CULVERT RCP REINFORCED CONC RD ROAD ROW RIGHT OF WAY RT RIGHT S SOUTH STE STEEL SAN SANITARY SEWER SF SQUARE FOOT ST STREET STA STATION STM STORM SEWER	RIC Y TURE UND RETURN ELOPMENT NGINEER ECTION SE CURVATURE NCY RIDE CRETE BOX CRETE PIPE	Image: A matrix of the sector of the sect
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Know what's below	BRYAN T. LAW, P.E.	25043	SHEET 2 OF 16

Colorado P.E. 25043

JOB NO. 25228.00





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.

















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![](_page_10_Figure_0.jpeg)

POND GRADING PLAN										
STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION							
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M2	MAINTENANCE PATH	N: 432971.92 E: 289988.99	6816.62							
М3	MAINTENANCE PATH	N: 433009.16 E: 289963.75	6814.40							
M4	MAINTENANCE PATH	N: 433013.00 E: 289975.12	6814.16							
М5	MAINTENANCE PATH	N: 433047.49 E: 289969.73	6811.50							
М6	MAINTENANCE PATH	N: 433047.96 E: 289987.54	6811.50							
М7	MAINTENANCE PATH	N: 433061.14 E: 290032.09	6811.50							
М8	MAINTENANCE PATH	N: 433072.74 E: 290029.03	6811.26							
S1	SPILLWAY/TOP	N: 433153.01 E: 290126.63	6811.50							
S2	SPILLWAY CREST	N: 433148.73 E: 290130.83	6810.00							
S3	SPILLWAY CREST	N: 433116.66 E: 290154.39	6809.99							
S4	SPILLWAY/TOP	N: 433110.94 E: 290156.02	6811.50							
S5	SPILLWAY MATCH EX.	N: 433187.02 E: 290156.50	6800.41							
S6	SPILLWAY MATCH EX.	SPILLWAY MATCH EX. N: 433119.05 E: 290198.18								
T1	TOE N: 433128.10 E: 290128.49 68									
T2	TOE	N: 433142.44 E: 290110.09	6806.96							

STRUCTURE NAME	DESCRIPTION	NORTHING/EASTIN
Т3	TOE	N: 433146.69 E: 290094.21
T4	TOE	N: 433146.47 E: 289947.86
T5	TOE	N: 433121.11 E: 289923.73
T6	TOE	N: 433107.29 E: 289935.01
Τ7	TOE	N: 433099.60 E: 289935.22
Τ8	TOE	N: 433089.72 E: 289926.58
Т9	TOE	N: 433072.98 E: 289946.67
T10	TOE	N: 433074.58 E: 289983.50
T11	TOE	N: 433088.99 E: 290027.59
T12	TOE	N: 433092.12 E: 290102.54
T13	TOE	N: 433100.49 E: 290138.22
T14	TOE	N: 433123.16 E: 290132.46
T15	TOP	N: 433162.94 E: 290099.19
T16	TOP	N: 433158.95 E: 289947.53
T17	ТОР	N: 433118.25 E: 289908.54
T18	ТОР	N: 433095.13 E: 289909.26

ABOVE GROUND AND UNDERGROUND UTILITIES.

POND GRADING PLAN										
STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION							
T19	TOP	N: 433058.98 E: 289950.16	6811.50							
T20	TOP	N: 433063.39 E: 290117.79	6811.50							
T21	TOP / BERM	N: 433113.20 E: 290167.80	6811.50							
T22	TOP / BERM	N: 433162.02 E: 290134.55	6811.50							
T23	TOP / BERM	N: 433174.87 E: 290099.46	6811.50							
T24	TOP / BERM	N: 433170.88 E: 289947.80	6811.50							
T25	TOP / BERM	N: 433117.56 E: 289896.59	6811.50							
T26	TOP / BERM	N: 433094.70 E: 289897.30	6811.50							
T27	TOP / BERM	N: 433047.00 E: 289951.05	6811.50							
T28	TOP / BERM	N: 433051.39 E: 290118.10	6811.50							
TC1	TC CL FLOWLINE	N: 433124.85 E: 290129.94	6805.98							
TC2	TC CL FLOWLINE	N: 433111.89 E: 290112.94	6805.84							
TC3	TC CL FLOWLINE	N: 433107.82 E: 290101.37	6805.90							
TC4	TC CL FLOWLINE	N: 433103.45 E: 289935.11	6807.23							

	LINE TAE	BLE
LINE	BEARING	DISTANCE
L1	N52 <b>*</b> 46'09"E	22.36'
L4	N88°29'38"E	166.31'

CURVE TABLE										
CURVE	DELTA	RADIUS	LENGTH							
C1	35°43'29"	20.00'	12.47'							

![](_page_10_Figure_7.jpeg)

![](_page_11_Figure_0.jpeg)

![](_page_12_Figure_0.jpeg)

![](_page_12_Figure_1.jpeg)

![](_page_12_Figure_2.jpeg)

![](_page_13_Figure_0.jpeg)

	ORIFICE PLATE: 1. PROVIDE CONCONCRETE AND 2. BOLT PLATE TO TRASH RACKS: 3. TRASH RACKS: 3. TRASH RACKS BARS SHALL BE SHALL BE MOU 4. REMOVABLE TH AND PROVIDED PLANS. 5. STEEL TRASH AFTER GALVAN 6. STRUCTURAL S SHALL BE IN A 7. ALL HARDWARE 8. CONTRACTOR S APPROVAL PRIM	TRUCTURE PLATE A	AL BETWEEN THE ORIFICE PL D CONCRETE. ALVANIZED, @ 6" CENTERS. SUP CALVANIZED, @ 36". ALL TRASH ARE. NTED USING STAINLESS STEEL F BLE ACCESS PANELS AS SHOW CED AND MAY BE HOT POWDE AND BARS SHALL BE GALVAN ECIFICATIONS, SUBSECTION 712. STAINLESS STEEL. L PLATES AND GRATING FOR E	OTES: LATE AND PORT RACKS HARDWARE N ON THE R COATED HIZED AND 06. CNGINEER'S	RED FOR UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE	T DRIVE APPROPRIATE REVIEWING T DRIVE AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES	SMITH DESIGNATED BY WRITTEN 99-7764 AUTHORIZATION.
100 VY MOL V 100 VY MOL 6800 UV VY					AGINEERING	Dany     Data       Conside Strings 70_602_2603     MONUMENT,	wwirengineering.com (719) 49
2.30 W THICK OFFICE PLATE, CALVANCED STELL WITH \$5, \$5, \$5, AND THE CONTINUOUS NEOPRENE GASKET BETWEEN PLATE AND CONGRETE DIFICE PLATE DETAIL SCALE: 3/8"=1' NOTION 1 100 1 100 1 NOTION 1 100 1 100 1 100 1 NOTION 1 100 1 100 1 100 1 NOTION 1 100 1	5       100-YR WSEL:       ¥       100-         6809.01       ¥       100-	$\frac{-YR WSEL: 6809.01}{QCV WSEL: 6807.56} \qquad \qquad$	$\frac{1^{2}-11^{2}}{5^{2}}$	R ORIFICE #3 R EL: 6807.20 R ORIFICE #2 R EL: 6806.50 R ORIFICE #1 R EL: 6805.40	BY DATE	A Westrian Com	Fort Collins 970–491–9888 • 1
RUGINEER'S STATEMENT	2.90	************************************	ZED STEEL WITH 18"ø, 18"ø, AND TO CONCRETE © 12" O.C. MAX. TWEEN PLATE AND CONCRETE ATE DETAIL 3/8"=1"	1 <del>,</del> †ø" PROVIDE	H–SCALE 3/8"=1' No. REVISION V–SCALE 3/8"=1'	DATE 09/12/24 DESIGNED BY GAG	DRAWN BY IAU CHECKED BY
		ENGINEER'S STAT STANDARD DETAILS SHOWN WE APPLICATION ON THIS PROJECT		THEIR	LAZY Y AND ROCKING J SUBDIVISION	POND 1 OUTLET	

Know what's below. Call before you dig.

JOB NO. 25228.00

![](_page_14_Figure_0.jpeg)

POND GRADING PLAN									
STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION						
M1	MAINT. ROAD CL	N: 432236.99 E: 289427.00	6835.54						
M2	MAINT. ROAD CL	N: 432241.79 E: 289432.37	6834.72						
М3	MAINT. ROAD CL	N: 432240.73 E: 289481.48	6829.72						
M4	MAINT. ROAD CL	N: 432214.41 E: 289527.44	6829.05						
М5	MAINT. ROAD CL	N: 432196.83 E: 289592.50	6828.71						
M6	MAINT. ROAD CL	N: 432186.92 E: 289652.05	6828.41						
M7	MAINT. ROAD CL	N: 432186.00 E: 289681.60	6828.35						
S1	SPILLWAY / TOP	N: 432151.50 E: 289653.93	6831.75						
S2	SPILLWAY / CREST	N: 432151.50 E: 289658.93	6830.50						
S3	SPILLWAY / CREST	N: 432151.50 E: 289684.93	6830.50						
S4	SPILLWAY / TOP	N: 432151.50 E: 289689.93	6831.75						
T1	TOE	N: 432170.50 E: 289673.43	6828.08						
T2	TOE	N: 432164.27 E: 289689.93	6828.56						
ТЗ	TOE	N: 432164.02 E: 289766.99	6829.60						
Τ4	TOE	N: 432169.88 E: 289768.99	6829.62						
T5	TOE	N: 432181.56 E: 289721.25	6828.66						
Т6	TOE	N: 432221.12 E: 289616.43	6829.48						

			· · · · ·		/					
	POND GRA	DING PLAN			POND GRADING PLAN					
STRUCTURE NAME	DESCRIPTION	NORTHING/EASTING	ELEVATION	STRUCTURE NAME	DESCR		NORTHING/EASTIN	G ELEVATIO		
Τ7	TOE	N: 432245.96 E: 289564.05	6830.15	T24	тс	)P	N: 432232.81 E: 289464.85	6831.75		
Т8	TOE	N: 432242.48 E: 289510.97	6829.94	T25	тс	)P	N: 432223.28 E: 289461.93	6831.75		
Т9	TOE	N: 432248.62 E: 289481.88	6830.01	T26	тс	)P	N: 432165.03 E: 289539.16	6831.75		
T10	TOE	N: 432222.94 E: 289474.18	6828.64	TC1	TC CL F	LOWLINE	N: 432166.13 E: 289766.85	6828.10		
T11	TOE	N: 432221.35 E: 289472.97	6828.64	TC2	TC CL FI	LOWLLINE	N: 432167.40 E: 289736.30	6827.95		
T12	TOE	N: 432179.28 E: 289525.07	6829.62	TC3	TC CL FI	LOWLLINE	N: 432177.00 E: 289693.76	6827.73		
T13	TOE	N: 432164.26 E: 289653.93	6828.56	TC4	TC CL FI	LOWLLINE	N: 432178.50 E: 289681.60	6827.67		
T14	TOE	N: 432170.52 E: 289670.51	6828.00	TC5	TC CL FI	LOWLLINE	N: 432178.50 E: 289663.13	6827.66		
T15	TOP	N: 432151.50 E: 289779.51	6831.75	TC6	TC CL FI	LOWLLINE	N: 432179.52 E: 289650.82	6827.73		
T16	TOP	N: 432179.99 E: 289779.51	6831.75	TC7	TC CL FI	LOWLLINE	N: 432189.47 E: 289591.05	6828.03		
T17	TOP	N: 432193.58 E: 289724.21	6831.75	TC8	TC CL FI	LOWLLINE	N: 432190.57 E: 289586.04	6828.05		
T18	TOP	N: 432229.70 E: 289619.39	6831.75	TC9	TC CL FI	LOWLLINE	N: 432222.15 E: 289473.57	6828.64		
T19	TOP	N: 432254.01 E: 289565.84	6833.00	TC10	TC CL F	LOWLINE	N: 432170.52 E: 289671.93	6828.00		
T20	TOP	N: 432250.54 E: 289511.56	6832.59			LINE TA	BLE			
T21	ТОР	N: 432256.59 E: 289484.48	6832.75		LINE L1	<b>BEARING</b> S74 <b>*</b> 40'09"E	DISTANCE 115.02'			
T22	ТОР	N: 432256.47 E: 289463.37	6831.79		L3	S80°32'58"E	60.59'			
T23	ТОР	N: 432244.50 E: 289461-29	6831.75		L5	N90°00'00"E	18.46'			

![](_page_14_Figure_4.jpeg)

![](_page_14_Figure_5.jpeg)

![](_page_14_Figure_6.jpeg)

	L5	N90•00'00	)"Е	18.4	46'	
	L7	S75*54'55	5"Е	33.	44'	
	L9	S87*37'06	5"Е	52.	32'	
		CURVE	TA	BLE		
С	JRVE	DELTA	RA	DIUS	LENG	STH
	C1	5 <b>°</b> 52'45"	5	0.01'	5.1	3'
	C2	9 <b>°</b> 27'02"	7	5.00'	12.3	57'

![](_page_15_Figure_0.jpeg)

![](_page_16_Figure_0.jpeg)

![](_page_17_Figure_0.jpeg)

<ul> <li>DCIFICE PLATE:</li> <li>1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE AND BETWEEN THE RESTRICTOR PLATE AND CONCRETE.</li> <li>2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.</li> <li>TRASH RACKS SHALL BE 1¼" SCH.40 STEEL PIPE, GALVANIZED, @ 6" CENTERS. SUPPORT BARS SHALL BE ¼"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 6". ALL TRASH RACKS SHALL BE ½"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 36". ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.</li> <li>4. REMOVABLE TRASH RACK SECTIONS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED &amp; LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.</li> </ul>	UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.				
<ol> <li>STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.</li> <li>STRUCTURAL STEEL FOR GRATES, ORIFICE PLATES, AND BARS SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS, SUBSECTION 712.06.</li> <li>ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.</li> <li>CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.</li> </ol>	PREPARED FOR LYRJ 1172 GREENLAND FOREST DRIVE MONUMENT, CO 80106 SCOTT SMITH (719) 499-7764				
	<b>JA BAGINEERING</b> A Westrian Company Centernial 303–740–9393 • Colorado Springs 719–593–2593 Fort Collins 970–491–9888 • wwwjrengineering.com				
W.       100-YR, WSEL: ▼	BY DATE				
SCALE: 3/8"=1'	H-SCALE3/8"=1'No.REVISIONV-SCALE3/8"=1'No.REVISIONDATE09/12/24Designed byDesigned byDesigned byDESIGNED BYGAGDRAWN BYTAUDRAWN BYTAUCHECKED BYCHECKED BYCHECKED BYDesigned byDesigned by				
ENGINEER'S STATEMENT	LAZY Y AND ROCKING J SUBDIVISION POND 2 OUTLET				
now what's below. Call before you dig.	- SHEET 14 OF 16 JOB NO. 25228.00				

![](_page_18_Figure_0.jpeg)

<u>c-BAR</u>	<u>s and</u>	REINF	ORCIN	IG STE	EL QU	JANTIT	<u>Y (EX(</u>		TOE V	VALL)				* REINFOR	CING STEEL IES, BUT DO	_ QUANTITY DES NOT IN	' INCLUDES ICLUDE TOE	STEM AND	FOOTING NTITIES.	
L (MULTI	PLE OF m)	≤ (1.0	) x m)	≤ (1.25	5 x m)	≤ (1.5	ixm)	≤ (1.75	ōxm)	≤ (2.0	) x m)	≤ (2.25	5 x m)	≤ (2.5	x m)	≤ (2.7	5 x m)	≤ (3.0	xm)	≤ (3.25 >
m (FT)	k (FT)	c-BARS	* REINF. LB./L.F.	c-BARS	₩ REINF. LB./L.F.	c-BARS	* REINF. LB./L.F.	c-BARS	₩ REINF. LB./L.F.	c-BARS	* REINF. LB./L.F.	c-BARS	* REINF. LB./L.F.	c-BARS	* REINF. LB./L.F.	c-BARS	* REINF. LB./L.F.	c-BARS	* REINF. LB./L.F.	c-BARS
	4	#4 @ 10"	55.60	#5 @ 10"	57.95	#5 @ 10'	57.10	#5 @ 8"	60.22	#5 @ 7"	62.43	#5 @ 7" #5 @ 7"	62.09	#5 @ 6"	65.38	#5 @ 6"	65.15	#6 @ 8"	67.10	#6 @ 8"
	6	#4 @ 10 #5 @ 10"	64.43	#6 @ 10"	70.60	#5 @ 10 #6 @ 10'	69.69	#5 @ 8"	74.93	#5 @ 8"	74.45	#5 @ 7"	78.30	#5 @ 6"	83.64	#5 @ 6"	83.40	#6 @ 6"	83.22	#6 @ 6"
14	7	#5 @ 10"	67.29	#6 @ 10"	73.76	#6 @ 10'	72.83	#6 @ 8"	78.32	#6 @ 8"	77.84	#6 @ 7"	81.87	#6 @ 6"	87.45	#6 @ 6"	87.21	#6 @ 6"	87.02	#6 @ 6"
	8	#5 @ 8"	74.71	#6 @ 8"	83.46	#6 @ 7"	87.09	#6 @ 6"	92.54	#7 @ 7"	99.47	#7 @ 7"	99.08	#7 @ 6"	107.11	#7 @ 6"	106.86	#7 @ 6"	106.66	#7 @ 6"
	9	#5 @ 8" #4 @ 10"	78.10	#6 @ 8" #4 @ 10"	87.23	#5 @ /"	91.03	#6 @ 6" #5 @ 10"	53.00	#/ @ /"	103.93	#/@/" #5@Q"	53.85	#/ 09 6'' #5 @ 8''	55.54	#/ 09 6"	57.85	#/ @ 6"	57.67	#7 @ 6"
	5	#4 @ 10" #4 @ 10"	52.66	#4 @ 10"	51.37	#5 @ 10'	56.09	#5 @ 10"	55.46	#5 @ 10"	54.99	#5 @ 9"	56.29	#5 @ 8"	58.08	#5 @ 7"	60.51	#5 @ 7"	60.33	#5 @ 7"
13	6	#4 @ 10"	54.92	#5 @ 10"	59.48	#5 @ 9"	60.31	#6 @ 9"	67.56	#6 @ 9"	67.08	#6 @ 9"	66.70	#6 @ 8"	69.53	#6 @ 8"	69.28	#6 @ 7"	73.12	#6 @ 7"
	7	#4 @ 10"	57.36	#5 @ 10"	62.16	#5 @ 9"	63.05	#6 @ 9"	70.66	#6 @ 9"	70.16	#6 @ 9"	69.78	#6 @ 8"	72.75	#6 @ 8"	72.50	#6 @ 7"	76.52	#6 @ 7"
	8	#5 @ 10"	66.39	#6 @ 10"	72.82	#6 @ 8"	77.97	#6 @ 7"	81.68	#6 @ 7"	81.19	#6 @ 6"	86.67	#6 @ 6"	86.37	#7 @ 7"	93.18	#7 @ 7"	92.97	<u>#7 @ 7"</u>
	9	#3 @ 10" #4 @ 10"	43.01	#0 @ 10"	/0.10	#0 @ 0"	01.49	#0 @ /"	41.22	#0 @ /"	04.07	#0 @ 0" #1 @ 0"	90.39	#0 @ 0" #5 @ 10"	90.29	#7 @ 7"	97.39	#7 @ 7"	97.10	#7 @ 7"
	3	#4 @ 10"	45.82	#4 @ 10"	44.55	#4 @ 10	43.71	#4 @ 10"	43.11	#4 @ 10'	42.66	#4 @ 9"	43.22	#5 @ 10"	46.75	#5 @ 10"	46.51	#5 @ 10"	46.32	#5 @ 10"
	4	#4 @ 10"	47.80	#4 @ 10"	46.51	#4 @ 10	45.65	#5 @ 10"	50.06	#5 @ 10"	49.59	#5 @ 10"	49.23	#5 @ 10"	48.94	#5 @ 10"	48.69	#5 @ 9"	50.00	#5 @ 8"
12	5	#4 @ 10"	49.84	#4 @ 10"	48.53	#4 @ 10	47.66	<b>#</b> 5 @ 10"	52.33	<b>#</b> 5 <b>◎</b> 10"	51.85	<b>#</b> 5 <b>◎</b> 10"	51.48	<b>#</b> 5 @ 10"	51.19	#5 @ 10"	50.94	#5 @ 9"	52.33	#5 @ 8"
	6	#4 @ 10"	51.99	#4 @ 10"	50.65	#5 @ 10'	55.34	#5 @ 8"	58.41	#5 @ 8"	57.93	#6 @ 10"	60.60	#6 @ 10"	60.29	#6 @ 9"	62.42	#6 @ 9"	62.22	#6 @ 9"
	/	#4 @ 10" #5 @ 10"	62.91	#5 @ 10" #5 @ 10"	58.80 61.45	#5 @ 10' #5 @ 7''	67.67	#5 @ 8" #5 @ 6"	70.68	#5 @ 8" #5 @ 6"	70.20	#6 @ 10" #6 @ 7"	76 44	#6 @ 10" #6 @ 7"	76.13	#6 @ 9" #6 @ 7"	75.87	#6 @ 9" #6 @ 6"	81 30	#6 @ 6"
	9	#5 @ 10"	65.64	#5 @ 10"	64.15	#5 @ 7"	70.44	#5 @ 6"	73.82	#5 @ 6"	73.33	#6 @ 7"	79.86	#6 @ 7"	79.54	#6 @ 7"	79.28	#6 @ 6"	84.95	#6 @ 6"
	2	#4 @ 10"	41.70	#4 @ 10"	40.42	#4 @ 10	39.57	#4 @ 10"	38.96	#4 @ 10'	' 38.50	#4 @ 10"	38.15	#4 @ 10"	37.87	#4 @ 10"	37.63	#4 @ 9"	38.25	#5 @ 10"
	3	#4 @ 10"	43.57	#4 @ 10"	42.27	#4 @ 10	41.40	#4 @ 10"	40.79	#4 @ 10'	40.33	#4 @ 10"	39.97	#4 @ 10"	39.69	#4 @ 10"	39.45	#4 @ 9"	40.12	#5 @ 10"
	4	#4 @ 10"	45.48	#4 @ 10"	44.16	#4 @ 10	43.28	#4 @ 10"	42.66	#4 @ 9"	43.09	#5 @ 10"	46.57	#5 @ 10"	46.27	#5 @ 10"	46.02	#5 @ 10"	45.82	#5 @ 10"
11	5	#4 @ 10" #4 @ 10"	47.46	#4 @ 10" #4 @ 10"	46.10	#4 @ 10 #4 @ Q''	45.21	#4 @ 10" #5 @ 10"	44.58	#4 @ 9" #5 @ 10"	45.06	#5 @ 10" #5 @ 9"	48.74	#5 @ 10" #5 @ 9"	48.44	#5 @ 10" #5 @ 8"	48.19	#5@10" #5@8"	47.99	#5 @ 10" #5 @ 7"
	7	#4 @ 10"	51.73	#4 @ 10"	50.31	#4 @ 9"	50.43	#5 @ 10"	54.29	#5 @ 10"	53.78	#5 @ 9"	55.04	#5 @ 9"	54.73	#5 @ 8"	56.55	#5 @ 8"	56.35	#5 @ 7"
	8	#4 @ 10"	54.00	#5 @ 10"	58.44	#5 @ 10'	57.45	#5 @ 8"	60.64	#5 @ 7"	62.92	#5 @ 6"	66.25	#5 @ 6"	65.94	#5 @ 6"	65.69	#6 @ 8"	67.76	#6 @ 8"
	9	#4 @ 10"	56.20	<b>#</b> 5 @ 10"	60.87	#5 @ 10'	59.85	#5 @ 8"	63.21	#5 @ 7"	65.60	#5 @ 6"	69.09	#5 @ 6"	68.78	#5 @ 6"	68.52	#6 @ 8"	70.69	#6 @ 8"
	2	#4 @ 10"	39.84	#4 @ 10"	38.53	#4 @ 10	37.65	#4 @ 10"	37.03	#4 @ 10'	36.57	#4 @ 10"	36.20	#4 @ 10"	35.91	#4 @ 10"	35.67	#4 @ 10"	35.48	#4 @ 9"
	3	#4 @ 10" #4 @ 10"	41.68	#4 @ 10"	40.35	#4 @ 10	· 39.47	#4 @ 10"	38.84	#4 @ 10'	40.10	#4 @ 10"	38.00	#4 @ 10"	37.71	#4 @ 10"	37.46	#4 @ 10"	37.27	#4 @ 9"
10	5	#4 @ 10"	45.53	#4 @ 10"	44.14	#4 @ 10	43.21	#4 @ 10"	42.56	#4 @ 10'	42.07	#4 @ 10" #5 @ 10"	46.44	#4 @ 10" #5 @ 10"	46.13	#5 @ 10"	45.87	#4 @ 10" #5 @ 10"	45.67	#4 @ 9 #5 @ 10"
	6	#4 @ 10"	47.58	#4 @ 10"	46.14	#4 @ 10	45.20	#4 @ 10"	44.53	#4 @ 10'	44.03	#5 @ 10"	48.67	#5 @ 10"	48.35	#5 @ 10"	48.08	#5 @ 10"	47.88	#5 @ 10"
	7	#4 @ 10"	49.79	#4 @ 10"	48.31	<b>#</b> 4 <b>◎</b> 10	47.34	<b>#</b> 5 <b>◎</b> 10"	51.97	#5 @ 10"	51.45	<b>#</b> 5 ⊚ 10"	51.04	#5 © 9"	52.29	#5 @ 9"	52.03	#5 @ 8"	53.79	#5 @ 8"
	8	#4 @ 10"	52.06	#4 @ 10"	50.54	#4 @ 10	49.54	#5 @ 10"	54.43	#5 @ 10"	53.89	#5 @ 10"	53.47	#5 @ 9"	54.80	#5 @ 9"	54.53	#5 @ 8"	56.39	#5 @ 8"
	2	#4 @ 10" #4 @ 10"	38.01	#4 @ 10" #4 @ 10"	36.75	#4 @ 10	' 35.85 ' 37.64	#4 @ 10" #4 @ 10"	35.21	#4 @ 10' #4 @ 10'	1 34.73	#4 @ 10" #4 @ 10"	34.30	#4 @ 10" #4 @ 10"	34.06	#4 @ 10" #4 @ 10"	35.81	#4 @ 10"	35.61	#4 @ 10"
	4	#4 @ 10"	41.81	#4 @ 10"	40.40	#4 @ 10	39.47	#4 @ 10"	38.81	#4 @ 10'	38.31	#4 @ 10"	37.93	#4 @ 10"	37.63	#4 @ 10"	37.37	#4 @ 10"	37.17	#4 @ 10"
9	5	#4 @ 10"	43.75	#4 @ 10"	42.30	#4 @ 10	41.35	#4 @ 10"	40.67	#4 @ 10'	40.17	#4 @ 10"	39.78	#4 @ 10"	39.47	#4 @ 10"	39.20	#4 @ 9"	39.86	#5 @ 10"
	6	#4 @ 10"	45.79	#4 @ 10"	44.30	#4 @ 10	43.31	#4 @ 10"	42.62	#4 @ 10'	42.10	#4 @ 10"	41.71	#4 @ 10"	41.39	#4 @ 10"	41.12	#4 @ 9"	41.82	#5 @ 10"
	7	#4 @ 10" #4 @ 10"	48.04	#4 @ 10" #4 @ 10"	46.50	#4 @ 10	45.49	#4 @ 10" #4 @ 10"	44.77	#5 @ 10"	49.29	#5 @ 10"	48.86	#5 @ 10"	48.53	#5 @ 10"	48.24	#5 @ 10"	48.03	#5 @ 10"
	8	#4 @ 10"	36.41	#4 @ 10"	40.04	#4 @ 10	47.00	#4 @ 10"	47.00	#3 @ 10"	32.03	#3 @ 10" #4 @ 10"	32.54	#3 @ 10"	32.23	#5 @ 10"	31.07	#5 @ 10"	31.77	#3 @ 10"
	3	#4 @ 10"	38.23	#4 @ 10"	36.80	#4 @ 10	35.85	#4 @ 10"	35.18	#4 @ 10"	32.92	#4 @ 10"	34.28	#4 @ 10"	33.97	#4 @ 10"	33.70	#4 @ 10"	33.50	#4 @ 10"
	4	#4 @ 10"	40.09	#4 @ 10"	38.61	#4 @ 10	37.64	#4 @ 10"	36.95	#4 @ 10"	36.44	#4 @ 10"	36.04	#4 @ 10"	35.72	#4 @ 10"	33.45	#4 @ 10"	35.25	#4 @ 10"
°	5	#4 @ 10"	41.99	#4 @ 10"	40.47	#4 @ 10	' 39.47	#4 @ 10"	38.76	#4 @ 10"	38.24	#4 @ 10"	37.83	#4 @ 10"	37.50	#4 @ 10"	37.23	#4 @ 10"	37.02	#4 @ 10"
	6	#4 @ 10"	43.97	#4 @ 10"	42.40	#4 @ 10	41.36	#4 @ 10"	40.64	#4 @ 10"	40.10	#4 @ 10"	39.68	#4 @ 10"	39.35	#4 @ 10"	39.07	#4 @ 9"	43.33	#5 @ 10"
	/	#4 @ 10" #4 @ 10"	46.19	#4 @ 10"	44.56	#4 @ 10	43.49	#4 @ 10"	42.74	#4 @ 10"	42.18	#4 @ 10"	41.75	#4 @ 10"	41.41	#4 @ 10"	41.13	#4 @ 9"	45.65	#5 @ 10"
	3	#4 @ 10" #4 @ 10"	36.73	#4 @ 10" #4 @ 10"	35.23	#4 @ 10	34.23	#4 @ 10" #4 @ 10"	33.53	#4 @ 10" #4 @ 10"	33.00	#4 @ 10" #4 @ 10"	32.59	#4 @ 10" #4 @ 10"	32.26	#4 @ 10" #4 @ 10"	31.99	#4 @ 10" #4 @ 10"	31.78	#4 @ 10"
7	4	#4 @ 10"	38.59	#4 @ 10"	37.04	#4 @ 10	36.01	#4 @ 10"	35.29	#4 @ 10"	34.75	#4 @ 10"	34.33	#4 @ 10"	33.99	#4 @ 10"	33.71	#4 @ 10"	33.50	#4 @ 10"
	5	#4 @ 10"	40.48	#4 @ 10"	38.86	#4 @ 10	' 37.80	#4 @ 10"	37.06	#4 @ 10"	36.50	#4 @ 10"	36.07	#4 @ 10"	35.73	#4 @ 10"	35.44	#4 @ 10"	35.22	#4 @ 10"
	6	#4 @ 10"	42.39	#4 @ 10"	40.71	#4 @ 10	39.61	#4 @ 10"	38.84	#4 @ 10"	38.26	#4 @ 10"	37.82	#4 @ 10"	37.47	#4 @ 10"	37.17	#4 @ 10"	36.95	#4 @ 10"
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### **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.

- 3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
- 4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c. 5. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED  $\frac{3}{4}$ ".
- 6. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.
- 7. HEADWALLS FOR PIPES SHALL BE CONSTRUCTED PER CDOT M-601-10. 8. WINGWALLS SHALL BE CONSTRUCTED PER CDOT M-601-20.

![](_page_19_Figure_7.jpeg)

RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	D <sub>50</sub> * (INCHES)						
TYPE VL	70 - 100 50 - 70 35 - 50 2 - 10	12 9 6 2	6						
TYPE L	70 - 100 50 - 70 35 - 50 2 - 10	15 12 9 3	9						
TYPE M	70 - 100 50 - 70 35 - 50 2 - 10	21 18 12 4	12						
TYPE H	70 - 100 50 - 70 35 - 50 2 - 10	30 24 18 6	18						
*D <sub>50</sub> = MEAN ROCK SIZE									

### **SOIL RIPRAP NOTES:**

- 1. 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.
- 2. 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.
- 3. 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.
- 4. ALL SOIL RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.

![](_page_19_Figure_14.jpeg)

#### **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 CDOT 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 MAY BE 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.

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, 0.8fc'.

fy=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.

fc'=4,500 psi

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.

0.F.

T.F.

B.F.

T.F. Lp

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 FXIST. THE INCREASES ABOVE FOR #6 THRU #11 BARS MAY BE 25%, 13%, AND 42% RESPECTIVELY.

IIUN3	EXIST. INC	INCREASES	ADUVE	FUR		J = H I D A K S
4	1'-3"				" #5	" 1' <b>-</b> 7"
6	2'-5"				#7	2'—10"
8	3'-8"				<i>#</i> 9	4'-8"
10	5 <b>'</b> —11"				<i></i> #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 ORDERI 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.

0.F.	=	OUTSIDE FACE
Т.&В.	=	TOP AND BOTTOM
T.F.	=	TOP FACE
B.F.	=	BOTTOM FACE
T.F.	=	TWO FACES
Lo	=	LAP LENGTH

![](_page_19_Figure_32.jpeg)

![](_page_19_Figure_33.jpeg)

#### TYPICAL TOP CORNER WALL SECTION DETAIL

## **PLAN VIEW**

GRADATION FOR GRANULAR BEDDING					
LIS STANDARD SIEVE	PERCENT PASSING BY WEIGHT				
SIZE	TYPE I CDOT SECT. 703.01	TYPE II CDOT SECT. 703.09 CLASS A			
3 INCHES	_	90 - 100			
1½ INCHES	-	_			
3/4 INCHES	-	20 - 90			
⅔ INCHES	100	_			
#4	95 — 100	0 – 20			
#16	45 — 80	_			
<b>#</b> 50	10 - 30	_			
#100	2 - 10	_			
#200 0 - 2		0 - 3			
RIPRAP BEDDING					

THICKNESS REQUIREMENTS FOR GRANULAR BEDDING						
	MINIMUM BEDDING THICKNESS (INCHES)					
	FINE-GRAIN	COARSE-GRAINED SOILS 2				
DESIGNATION	TYPE   (LOWER LAYER)	TYPE II (UPPER LAYER)	TYPE II			
$VL (D_{50} = 6 IN)$	4	4	6			
$L (D_{50} = 9 IN)$	4	4	6			
$M (D_{50} = 12 \text{ IN})$	4	4	6			
H (D <sub>50</sub> = 18 IN)	4	6	8			
VH ( $D_{50} = 24$ IN)	4	6	8			

1. 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. 2. FIFTY PERCENT OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE.

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 GEOTECHNICA

**CORNER WALL** SECTION DETAIL

3	UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERI AGENCIES, JR ENGINEERI AGENCIES, JR ENGINEERI ACTHEIR USE ONLY FOR THE PURPOSE DESIGNATED BY WRITTEN AUTHORIZATION.						
	PREPARED FOR LYRJ 1172 GREENLAND FOREST DRIVE MONUMENT, CO 80106 SCOTT SMITH						
NG	JFR ENGINEERING JFR ENGINEERING A Westrian Company Centernial 303–740–9393 • Colorado Springs 719–593–2593 Fort Collins 970–491–9888 • wwwjrengineering.com						
	DATE						
	No. REVISION BY						
	N/A	N/A	9/12/24	PAL	ΡΔΙ	- 7	
	H-SCALE	V-SCALE	DATE 0	DESIGNED BY	DRAWN RY		СНЕСКЕД ВҮ
	I A7Y Y AND ROCKING I	SUBDIVISION		POND STANDARD DETAILS			

SHEET 16 OF 16

JOB NO. 25228.00

N CC

![](_page_19_Picture_48.jpeg)

ENGINEER'S STATEMENT
STANDARD DETAILS SHOWN WERE REVIEWED ON YCAS TO THEIR
APPLICATION ON THIS PROJECT
PR 24
BRYAN T LAW PF