LIBERTY TREE ACADEMY CONSTRUCTION DOCUMENTS

TOWN OF PEYTON, EL PASO COUNTY

FINAL FOR CONSTRUCTION

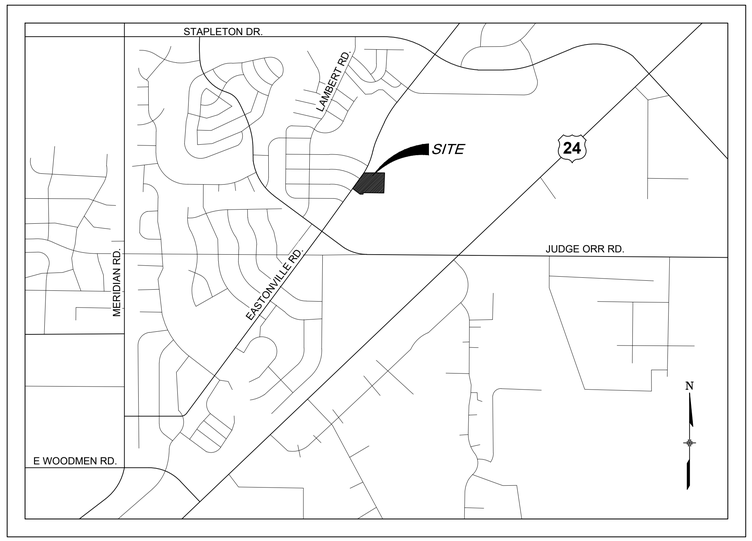
SEPTEMBER 2018

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

INDEX OF SHEETS

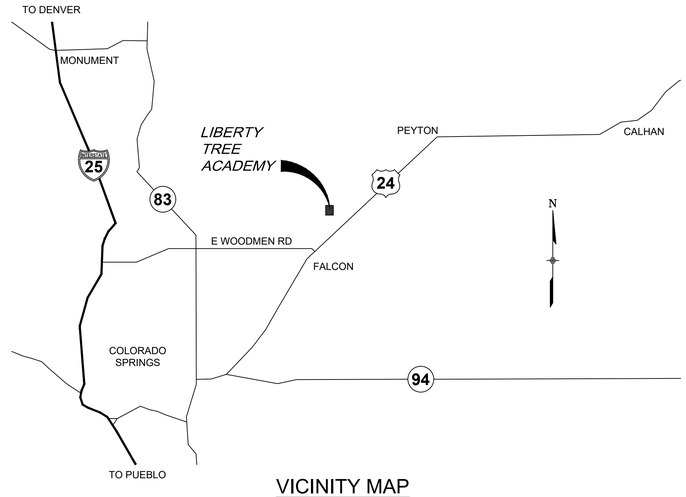
LAND USE SUMMARY

PARCEL AREA:	10.7 acres
PROJECT AREA:	3.4 acres
BUILDING AREA (PHASE 1):	41,585 sf
FAR:	0.28



LOCATION MAP

SCALE: N.T.S.



VICINITY MAP

SCALE: N.T.S.

CIVIL ENGINEER

MATRIX DESIGN GROUP
1601 BLAKE STREET, SUITE 200
DENVER, CO. 80202
PH: 303-572-0200
FAX: 303-572-0202
CONTACT: DAVE KLINE, P.E., PTOE
DAVE_KLINE@MATRIXDESIGNGROUP.COM

LANDSCAPE ARCHITECT

MATRIX DESIGN GROUP
1601 BLAKE STREET, SUITE 200
DENVER, CO. 80202
PH: 303-572-0200
FAX: 303-572-0202
CONTACT: TERESA ROBERSON
TERESA_ROBERSON@MATRIXDESIGNGROUP.COM

LEGAL DESCRIPTION:

LOT 1178, WOODMEN HILLS FILING NO. 10
COUNTY OF EL PASO
STATE OF COLORADO

BASIS OF BEARING:

BASIS OF BEARINGS: BEARINGS ARE BASED ON GRID BEARINGS OF THE COLORADO STATE PLANE CENTRAL ZONE, BASED ON THE EAST LINE OF LOT 1178 OF THE PLAT OF WOODMEN HILLS FILING NO. 10 AS RECORDED ON JULY 13, 2001 IN THE OFFICE OF THE EL PASO COUNTY CLERK AND RECORDER UNDER RECEPTION NUMBER 201098618, MONUMENTED ON THE NORTH END BY A FOUND 2-1/2" ALUMINUM CAP STAMPED "PLS 38160" AND ON THE SOUTH END BY A FOUND 1-1/2" ALUMINUM CAP STAMPED "PLS 32822", AND BEARS SOUTH 00°24'21" EAST A DISTANCE OF 1116.46 FEET.

BENCHMARK:

BENCHMARK IS DERIVED FROM AN ONLINE POSITIONING USER SERVICE PROVIDED BY THE NATIONAL GEODETIC SURVEY PERFORMED ON A SET #5 REBAR LOCATED ON THE EAST SIDE OF EASTONVILLE ROAD NEAR THE SOUTH PCR APPROXIMATELY 20 FEET SOUTH OF A SANITARY MANHOLE AND 12 FEET EAST OF A FIRE HYDRANT. THE ELEVATION DERIVED FROM THE STATIC SOLUTION IS 6960.52 U.S. SURVEY FEET (NAVD 88).

DESIGN ENGINEER'S STATEMENT:

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

DAVID KLINE, P.E., PTOE — 9/11/2018 DATE

OWNER/DEVELOPER'S STATEMENT:

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

LIBERTY TREE ACADEMY BUILDING CORPORATION — 9/11/2018 DATE

EL PASO COUNTY:

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

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

IN ACCORDANCE WITH 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. 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.

JENNIFER IRVINE, P.E.

Approved*
by Elizabeth Nijkamp
El Paso County Planning and Community Development
on behalf of Jennifer Irvine, County Engineer, ECM Administrator
09/11/2018 1:19:40 PM

DATE

*Approval is contingent upon Fire Department Approval.

FALCON FIRE DEPARTMENT:

ACCORDING TO THE MODELED CALCULATIONS REVIEWED BY THE GOVERNING WATER DISTRICT AND/OR COLORADO REGISTERED CIVIL ENGINEER/DESIGNER; THE THEORETICAL AVAILABLE FIRE FLOW AT NODE ____ IS _____ GALLONS PER MINUTE UNDER MAXIMUM DAILY DEMAND CONDITIONS AT 20PSI RESIDUAL. THE ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS.

UPON DETAILED REVIEW OF THE AVAILABLE WATER SUPPLY, FIRE HYDRANT LOCATIONS AND HOSE LAY DISTANCES, THESE PLANS ARE HEREBY CONSIDERED APPROVED.

FIRE DEPARTMENT SIGNATURE — DATE

REFERENCE DRAWINGS

X-995-MDG22x34

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT

FILE NAME: R:\18.995.001 (Liberty Tree Academy)\Dwg\Construction Plans\TS01.dwg
CTB FILE: ----
PLOT DATE: September 11, 2018 9:11:37 AM
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.

SHEET KEY

PREPARED FOR: LIBERTY TREE ACADEMY

PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

TITLE SHEET

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	NA	SHEET	1 OF 29
CHECKED BY:	DRK	VERT.	NA		

DRAWING No. TS01

GENERAL CONSTRUCTION PLAN NOTES:

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 SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   d. 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 VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

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 (PCD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

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. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.

10. 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.

11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.

13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]

14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.

15. 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.

REFERENCE DRAWINGS

X-995-MDG22x34

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT

FILE NAME: R:\18.995.001 (Liberty Tree Academy)\Dwg\Construction Plans\GN01.dwg
CTB FILE: ----
PLOT DATE: 9/11/2018 8:40 AM
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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL
COLORADO REGISTERED PROFESSIONAL ENGINEER
24520
9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

GENERAL NOTES

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	NA	DRAWING No.	GN01
CHECKED BY:	DRK	VERT.	NA	SHEET	2 OF 29

ABBREVIATIONS

AD	ALGEBRAIC DIFFERENCE
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
APPROX	APPROXIMATE OR APPROXIMATELY
AVE	AVENUE
BOC	BACK OF CURB
℄ OR B/L	BASELINE
BLVD	BOULEVARD
BVCE	BEGINNING OF VERTICAL CURVE ELEVATION
BVCS	BEGINNING OF VERTICAL CURVE STATION
C&G	CURB AND GUTTER
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
CEN	CENTER
℄ OR C/L	CENTERLINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
DIA OR Ø	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EACH
EGL	ENERGY GRADE LINE
ELEV OR EL	ELEVATION
ELL	ELBOW
EOP	EDGE OF PAVEMENT
ESMT	EASEMENT
EVCE	END OF VERTICAL CURVE ELEVATION
EVCS	END OF VERTICAL CURVE STATION
EW	EACH WAY
EX. OR EXIST	EXISTING
FES	FLARED END SECTION
FIN	FINISHED
℄ OR F/L	FLOWLINE
FLG	FLANGE
FT	FOOT/FEET
FRP	FIBERGLASS REINFORCED PIPE
FUT	FUTURE
GAL	GALLON
GALV	GALVANIZED
GAU	GAUGE (MATERIAL)
GV	GATE VALVE
GW	GROUNDWATER
HBP	HOT BITUMINOUS PAVEMENT
HCL	HORIZONTAL CONTROL LINE
HGL	HYDRAULIC GRADE LINE
HP	HIGH POINT
HORIZ	HORIZONTAL
HCL	HORIZONTAL CONTROL LINE
HR	HOUR
INV	INVERT
K	VERTICAL CURVE FACTOR
LBS	POUNDS
LF	LINEAR FEET
LP	LOW POINT
LS	LANDSCAPING
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
MAX	MAXIMUM
MFGR	MANUFACTURER
MH	MANHOLE
MID	MIDDLE OR MIDPOINT
MIN	MINIMUM
MJ	MECHANICAL JOINT
MSL	MEAN SEA LEVEL
NIC	NOT IN CONTRACT
NO OR #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
PR OR PROP	PROPOSED
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PCR	POINT OF CURB RETURN
PE	PLAIN END
PGL	PROFILE GRADE LINE
℄ OR P/L	PROPERTY LINE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVE OR POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENT
R OR RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REQ	REQUIRED
REV	REVISION
ROW	RIGHT-OF-WAY
RT	RIGHT
SCH	SCHEDULE
SD OR STM	STORM SEWER
SQ	SQUARE
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
SS OR SAN	SANITARY SEWER
SWK	SIDEWALK
TAN	TANGENT
TB	THRUST BLOCK
THD	THREADED
THK	THICKNESS
TL	TRUE LENGTH
TS	TRUE SLOPE
TYP	TYPICAL
UG	UNDERGROUND
UTIL	UTILITY
VC	VERTICAL CURVE
VERT	VERTICAL
W	WIDTH
w/	WITH

PROPOSED LEGEND

- PROPOSED CENTERLINE
- PROPOSED FENCE
- P-W 8 — PROPOSED UNDERGROUND UTILITY
- DRAINAGE
- RIGHT OF WAY
- EASEMENT
- PROPOSED CURB & GUTTER
- 6400 — PROPOSED CONTOUR
- ENERGY GRADE LINE
- HYDRAULIC GRADE LINE
- 2.0% — SLOPE OR DRAINAGE FLOW
- PROPOSED MANHOLE
- THRUST BLOCK
- FIRE HYDRANT
- PROPOSED WATER VALVE
- WATER FITTINGS
- WATER METER
- STORM INLET
- SANITARY SEWER SERVICE
- PROPOSED STORM DRAIN/INLET PLUG PIPE
- PROPOSED SIGN
- PROPOSED BARRICADE
- PROPOSED LIGHT STANDARD

EXISTING LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- EXISTING LOT LINE
- EXISTING EASEMENT
- SECTION LINE
- ROAD CENTERLINE
- EDGE OF PAVEMENT
- CURB AND GUTTER
- CONCRETE
- FENCE
- RETAINING WALL
- EXISTING WATERLINE
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- FOCA — EXISTING FIBER LINE
- EXISTING CONTOUR MAJOR
- EXISTING CONTOUR MINOR
- EXISTING FLOOD PLAIN
- EXISTING MANHOLE
- EXISTING POWER POLE
- EXISTING POWER POLE W/GUY WIRE
- EXISTING GATE VALVE
- EXISTING STORM INLET
- EXISTING SIGN
- 29.5 — EXISTING DECIDUOUS TREE
- 24.0 — EXISTING CONIFEROUS TREE
- EXISTING LIGHT STANDARD

MATERIALS LEGEND

- CONCRETE
- RECOMPACTED SUBGRADE
- HOT BITUMINOUS PAVEMENT (ASPHALT)

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

REFERENCE DRAWINGS

X-995-MDG22x34

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT

FILE NAME: R:\18.995.001 (Liberty Tree Academy)\Dwg\Construction Plans\LA01.dwg
CTB FILE: ----
PLOT DATE: 9/11/2018 8:40 AM
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SHEET KEY

PREPARED FOR: LIBERTY TREE ACADEMY

PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL

COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

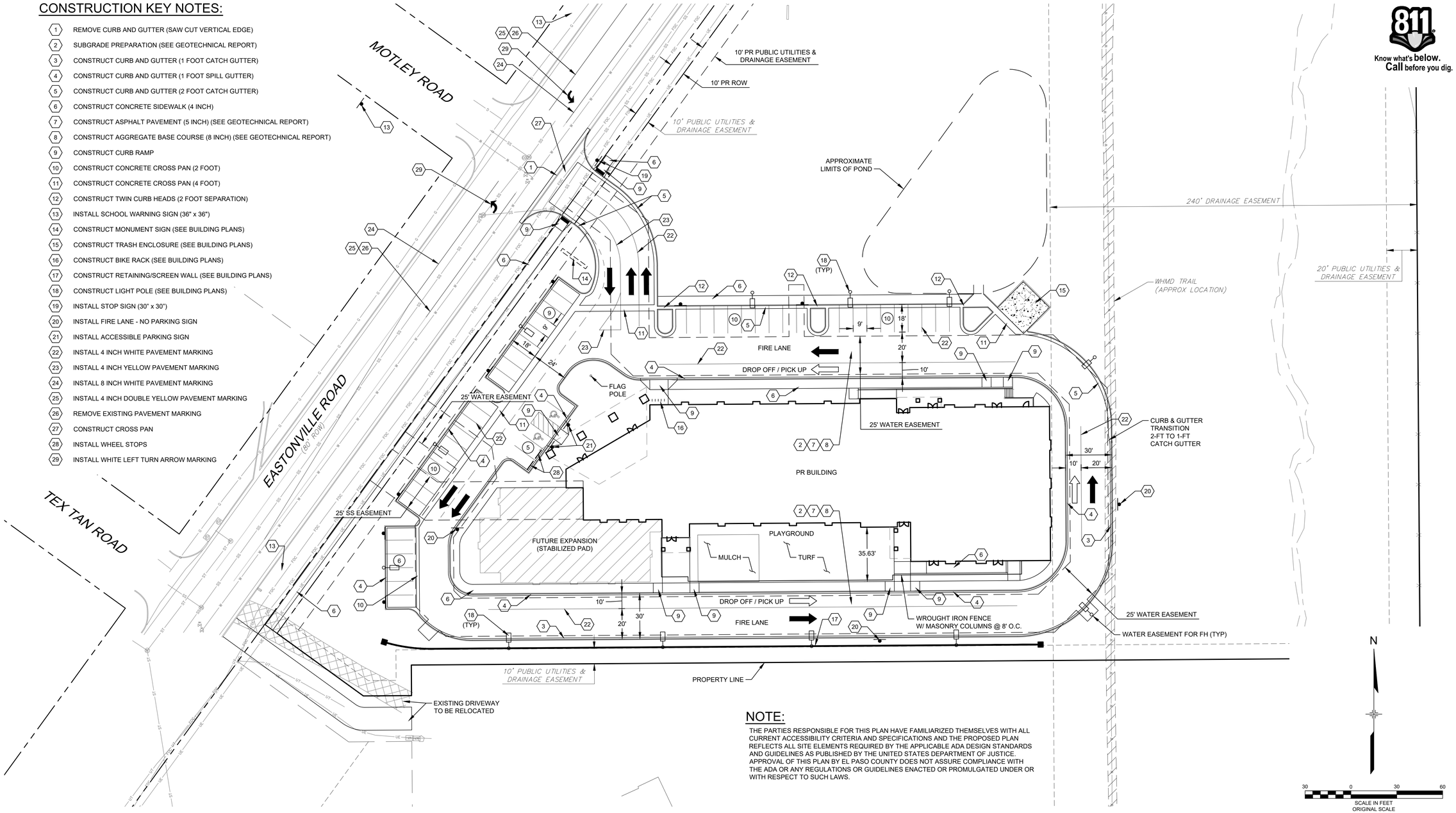
TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

LEGEND & ABBREVIATIONS

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ	NA	DRAWING No.	LA01
CHECKED BY:	DRK	VERT.	NA	SHEET	3 OF 29

CONSTRUCTION KEY NOTES:

1. REMOVE CURB AND GUTTER (SAW CUT VERTICAL EDGE)
2. SUBGRADE PREPARATION (SEE GEOTECHNICAL REPORT)
3. CONSTRUCT CURB AND GUTTER (1 FOOT CATCH GUTTER)
4. CONSTRUCT CURB AND GUTTER (1 FOOT SPILL GUTTER)
5. CONSTRUCT CURB AND GUTTER (2 FOOT CATCH GUTTER)
6. CONSTRUCT CONCRETE SIDEWALK (4 INCH)
7. CONSTRUCT ASPHALT PAVEMENT (5 INCH) (SEE GEOTECHNICAL REPORT)
8. CONSTRUCT AGGREGATE BASE COURSE (8 INCH) (SEE GEOTECHNICAL REPORT)
9. CONSTRUCT CURB RAMP
10. CONSTRUCT CONCRETE CROSS PAN (2 FOOT)
11. CONSTRUCT CONCRETE CROSS PAN (4 FOOT)
12. CONSTRUCT TWIN CURB HEADS (2 FOOT SEPARATION)
13. INSTALL SCHOOL WARNING SIGN (36" x 36")
14. CONSTRUCT MONUMENT SIGN (SEE BUILDING PLANS)
15. CONSTRUCT TRASH ENCLOSURE (SEE BUILDING PLANS)
16. CONSTRUCT BIKE RACK (SEE BUILDING PLANS)
17. CONSTRUCT RETAINING/SCREEN WALL (SEE BUILDING PLANS)
18. CONSTRUCT LIGHT POLE (SEE BUILDING PLANS)
19. INSTALL STOP SIGN (30" x 30")
20. INSTALL FIRE LANE - NO PARKING SIGN
21. INSTALL ACCESSIBLE PARKING SIGN
22. INSTALL 4 INCH WHITE PAVEMENT MARKING
23. INSTALL 4 INCH YELLOW PAVEMENT MARKING
24. INSTALL 8 INCH WHITE PAVEMENT MARKING
25. INSTALL 4 INCH DOUBLE YELLOW PAVEMENT MARKING
26. REMOVE EXISTING PAVEMENT MARKING
27. CONSTRUCT CROSS PAN
28. INSTALL WHEEL STOPS
29. INSTALL WHITE LEFT TURN ARROW MARKING



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

NOTE:

THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATIONS AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.

REFERENCE DRAWINGS

X-995-MDG22x34
X-995-PR-BASE
X-995-EX-BASE
X-995-EX-MAP
X-995-PR-UTIL

No.	DATE	DESCRIPTION	BY

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PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL
COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

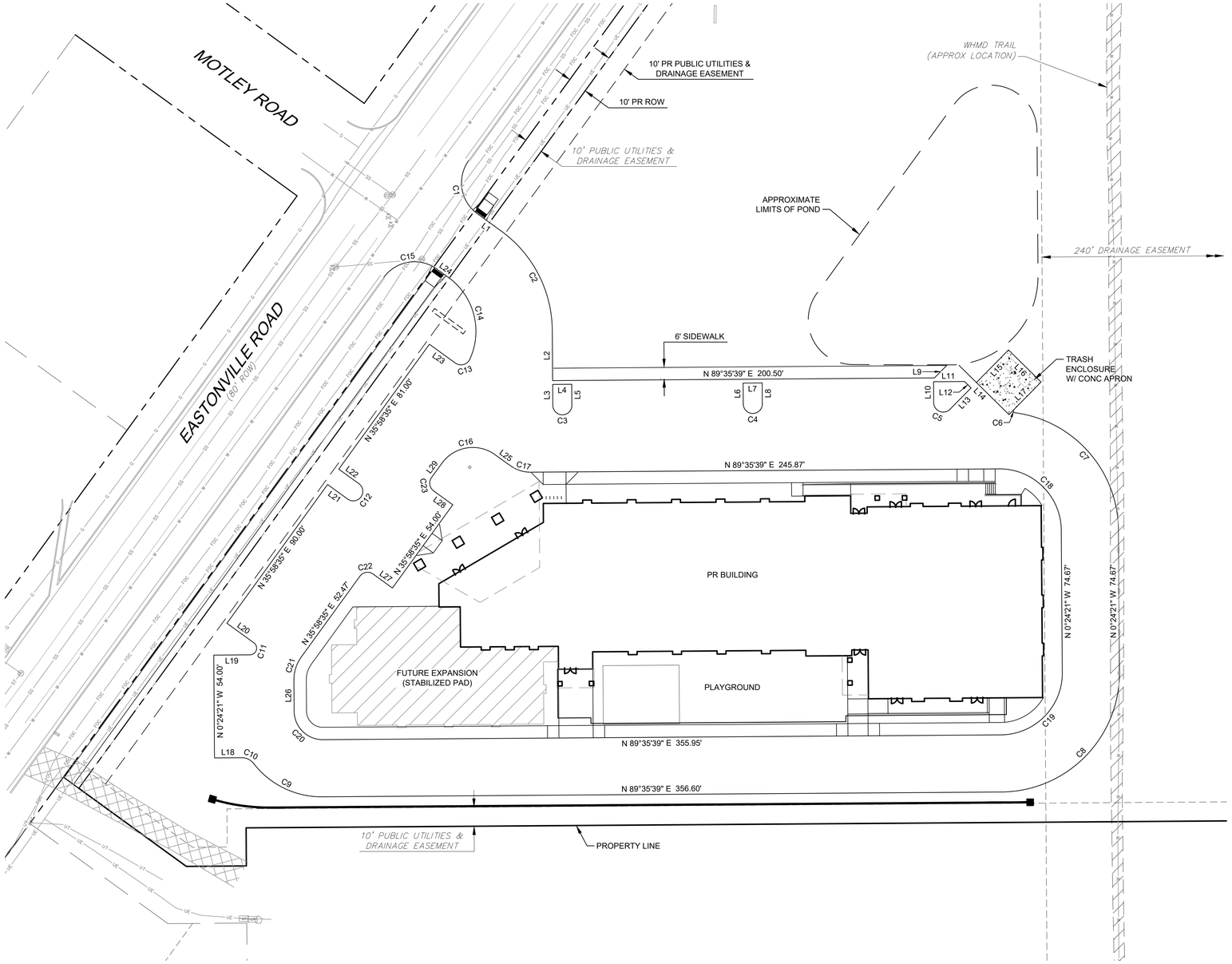
TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

SITE PLAN

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	1" = 30'		
CHECKED BY:	DRK	VERT.	NA	SHEET	4 OF 29
				DRAWING No.	SP01

EPC 9/11/18

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



Line Table		
Line #	Length	Direction
L1	15.56'	S 54°01'25" E
L2	26.39'	N 0°24'21" W
L3	11.00'	N 0°24'21" W
L4	10.00'	N 89°35'39" E
L5	11.00'	N 0°24'21" W
L6	11.00'	N 0°24'21" W
L7	10.00'	N 89°35'39" E
L8	11.00'	N 0°24'21" W
L9	9.19'	N 44°35'39" E
L10	11.00'	N 0°24'21" W
L11	16.29'	N 89°35'39" E
L12	4.80'	N 45°24'21" W
L13	15.76'	N 44°35'39" E
L14	36.82'	N 45°24'21" W
L15	24.00'	N 44°35'39" E
L16	24.00'	N 45°24'21" W
L17	24.00'	N 44°35'39" E
L18	14.23'	S 89°35'39" W
L19	19.00'	S 89°35'39" W
L20	17.45'	N 54°01'25" W
L21	13.00'	N 54°01'25" W
L22	13.00'	N 54°01'25" W
L23	16.71'	N 54°01'25" W
L24	7.47'	S 54°01'25" E
L25	10.01'	N 54°20'05" W
L26	16.58'	N 0°24'21" W
L27	12.45'	N 54°01'25" W
L28	12.45'	N 54°01'25" W
L29	9.31'	N 35°58'35" E

Curve Table					
Curve	Length	Radius	Delta	Chord Bearing	Chord
C1	31.43'	20.00'	90°01'37"	S 9°00'37" E	28.29'
C2	60.83'	65.00'	53°37'04"	N 27°12'53" W	58.63'
C3	15.71'	5.00'	180°00'03"	N 89°35'38" E	10.00'
C4	15.71'	5.00'	180°00'03"	N 89°35'38" E	10.00'
C5	11.78'	5.00'	135°00'00"	S 67°54'21" E	9.24'
C6	2.22'	1.00'	127°01'45"	S 18°55'10" E	1.79'
C7	89.48'	62.50'	82°01'41"	N 41°25'12" W	82.03'
C8	98.17'	62.50'	90°00'00"	N 44°35'39" E	88.39'
C9	41.32'	45.00'	52°36'57"	S 64°05'53" E	39.89'
C10	7.35'	8.00'	52°36'57"	N 64°05'53" W	7.09'
C11	8.77'	3.50'	143°37'04"	N 17°47'07" E	6.65'
C12	15.71'	5.00'	180°00'03"	N 35°58'36" E	10.00'
C13	9.12'	5.15'	101°24'49"	N 75°16'10" E	7.97'
C14	48.02'	35.00'	78°36'32"	N 14°43'09" W	44.34'
C15	31.42'	20.00'	90°00'18"	S 80°58'26" W	28.29'
C16	31.31'	20.00'	89°41'20"	S 80°49'15" W	28.21'
C17	11.33'	18.00'	36°04'16"	S 72°22'13" E	11.15'
C18	51.05'	32.50'	90°00'00"	N 45°24'21" W	45.96'
C19	51.05'	32.50'	90°00'00"	N 44°35'39" E	45.96'
C20	23.56'	15.00'	90°00'00"	S 45°24'21" E	21.21'
C21	12.70'	20.00'	36°22'56"	S 17°47'07" W	12.49'
C22	7.85'	5.00'	90°00'00"	S 80°58'35" W	7.07'
C23	7.85'	5.00'	90°00'00"	S 9°01'25" E	7.07'

N

30 0 30 60
SCALE IN FEET
ORIGINAL SCALE

REFERENCE DRAWINGS

X-995-MDG22x34
X-995-PR-BASE
X-995-EX-BASE
X-995-EX-MAP

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT

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CTB FILE: ----
PLOT DATE: 9/11/2018 8:40 AM
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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL

COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

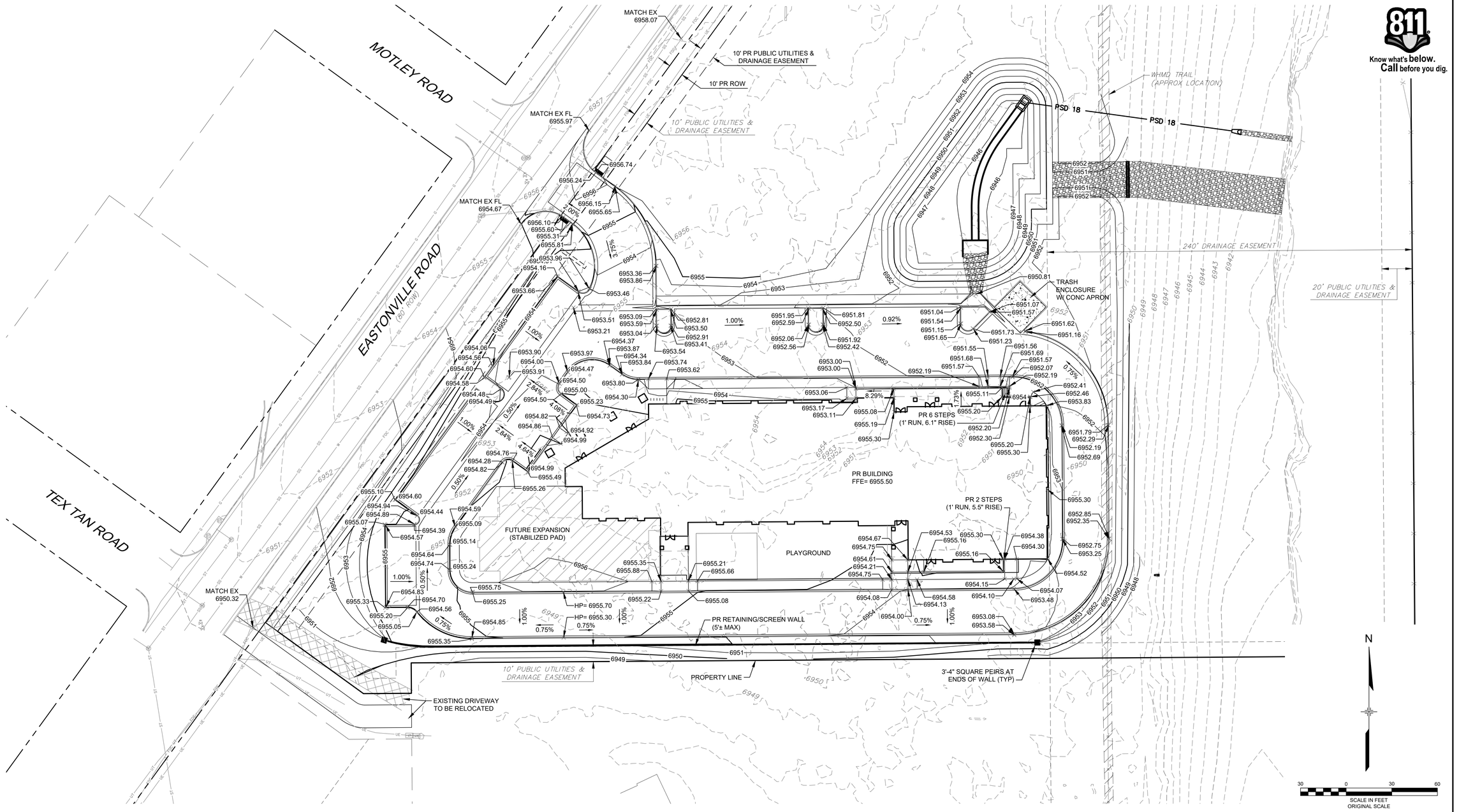
LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

HORIZONTAL CONTROL PLAN

DESIGNED BY:	ACR	SCALE	DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ. 1" = 30'		DRAWING No.
CHECKED BY:	DRK	VERT. NA	SHEET 5 OF 29	HC01

EPC 9/11/18



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X-995-PR-BASE
X-995-EX-BASE
X-995-EX-MAP
X-995-PR-UTIL
X-995-PR-GRAD

No.	DATE	DESCRIPTION	BY

REVISIONS

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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL
COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

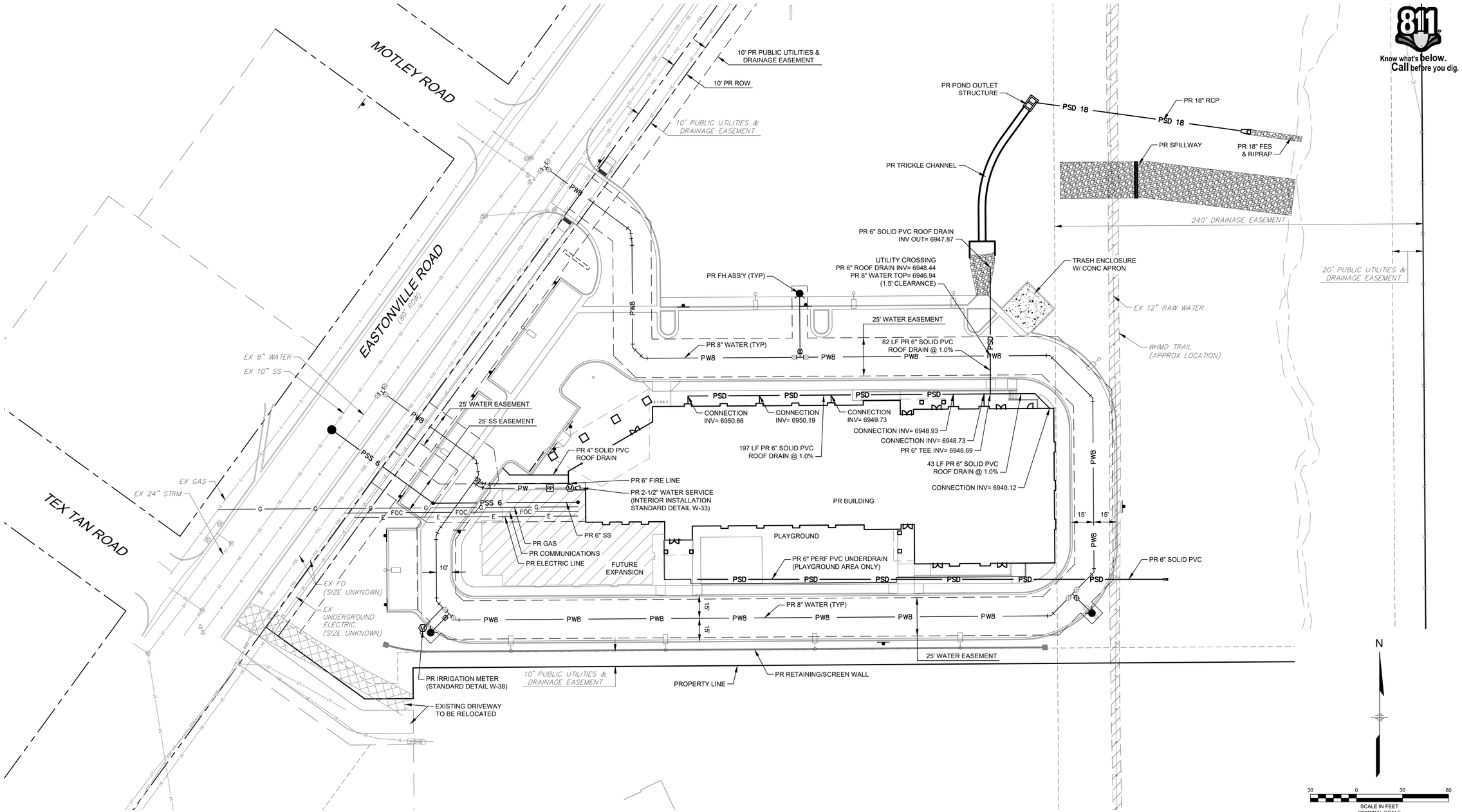
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

GRADING PLAN

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	1" = 30'		
CHECKED BY:	DRK	VERT.	NA	SHEET	6 OF 29
				DRAWING No.	GR01



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

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X-995-PR-BASE
X-995-EX-BASE
X-995-EX-MAP
X-995-PR-UTIL

No.	DATE	DESCRIPTION	BY
		REVISIONS	

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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL
COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

OVERALL UTILITY PLAN

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	1" = 30'		
CHECKED BY:	DRK	VERT.	NA	SHEET	7 OF 29

DRAWING No. UT01

EPC 9/11/18

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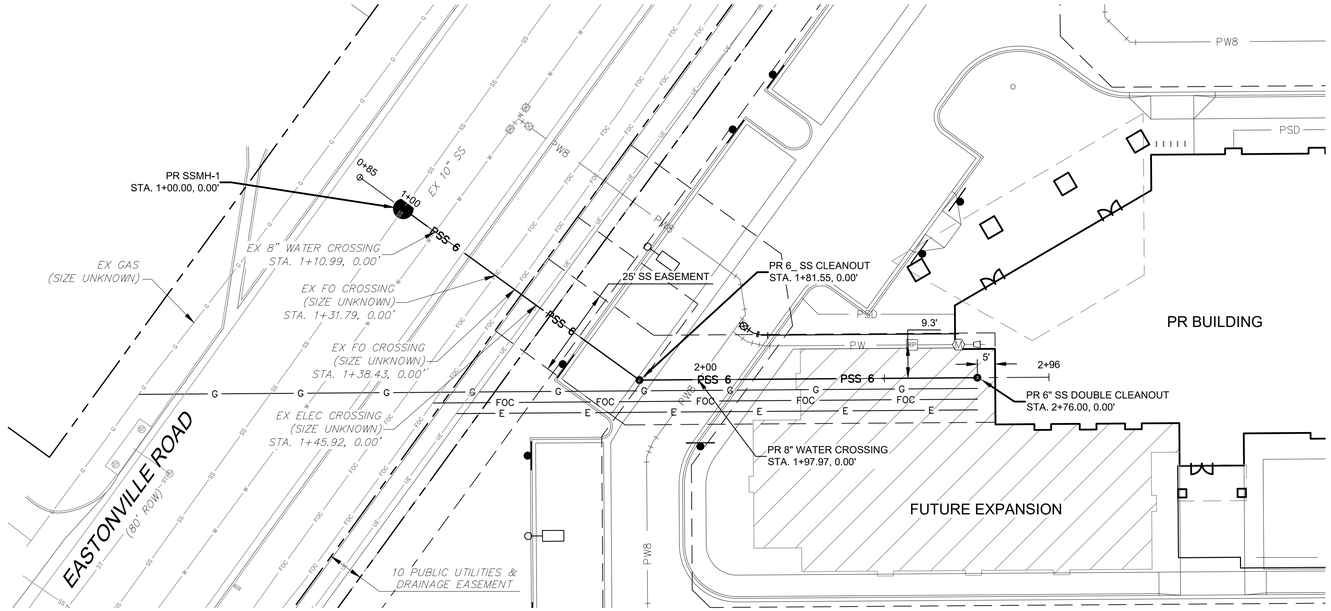

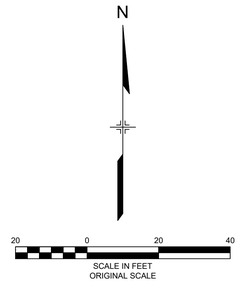

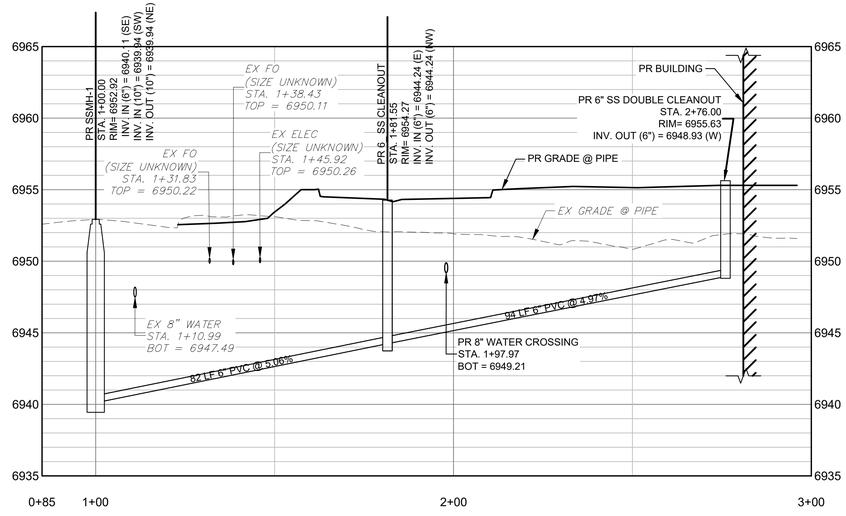

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SHEET KEY

PREPARED FOR: LIBERTY TREE ACADEMY

PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL

COLORADO REGISTERED PROFESSIONAL ENGINEER
24520
9/11/18
PROFESSIONAL ENGINEER

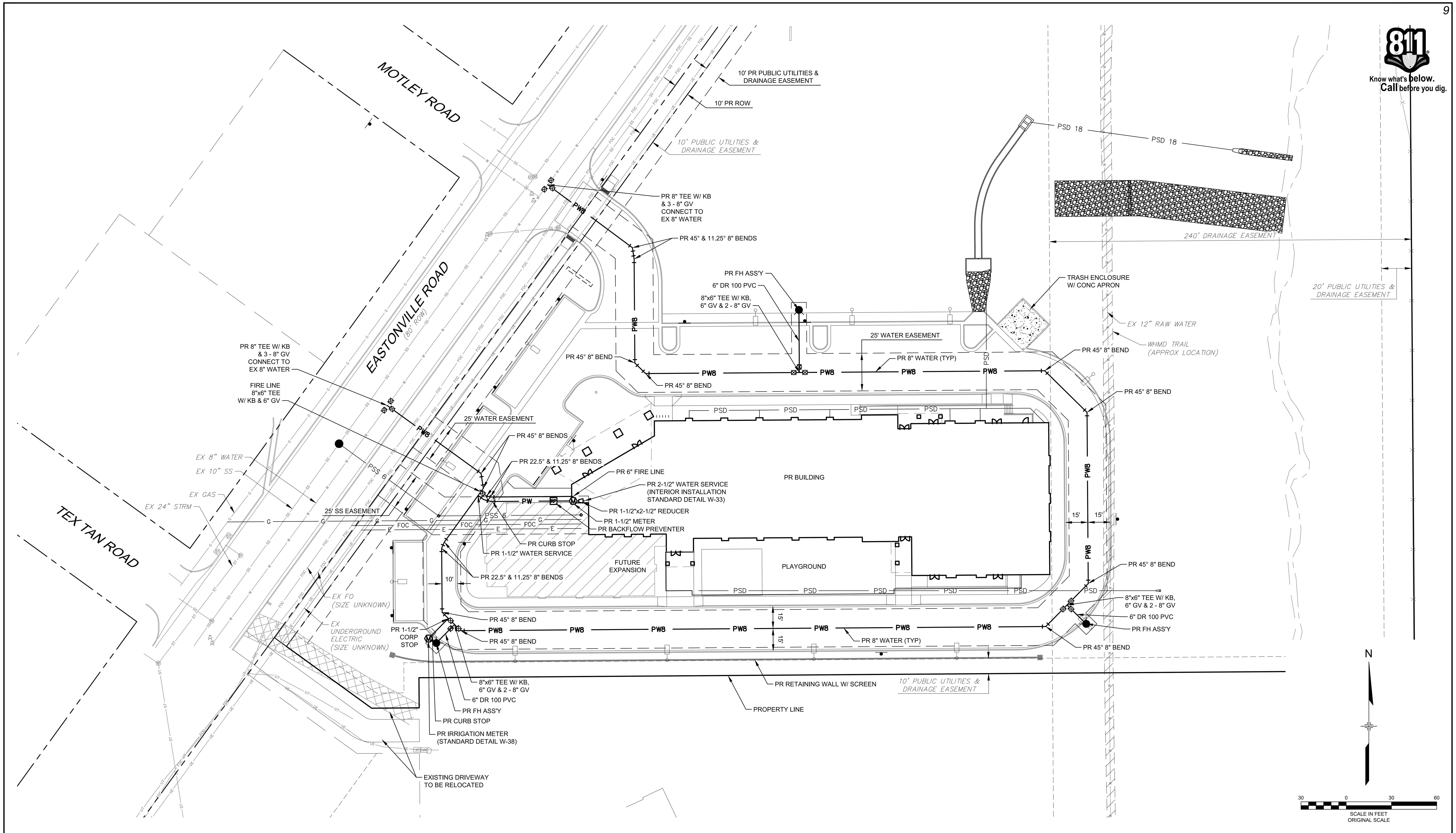
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

SANITARY SEWER PLAN & PROFILE

DESIGNED BY:	ACR	SCALE	DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ. 1" = 20'		DRAWING No.
CHECKED BY:	DRK	VERT. 1" = 5'	SHEET 8 OF 29	SS01



REFERENCE DRAWINGS	No.	DATE	DESCRIPTION	BY
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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY
PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

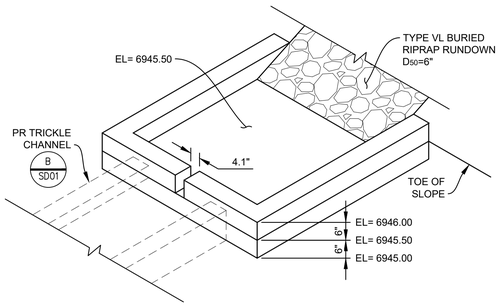
SEAL
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

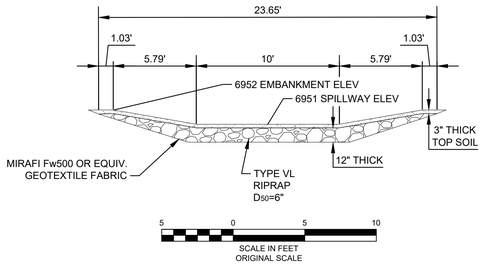
SITE WATER MAIN PLAN

DESIGNED BY: ACR	SCALE	DATE ISSUED: SEPTEMBER 2018	DRAWING No.
DRAWN BY: ACR	HORIZ. 1" = 30'		WT01
CHECKED BY: DRK	VERT. NA	SHEET 9 OF 29	



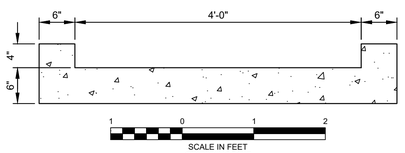
FOREBAY DETAIL (A)

SCALE: N.T.S.
SEE PLAN FOR LIMITS.

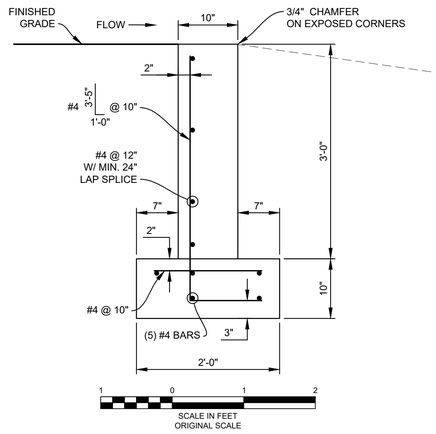


SPILLWAY SECTION (C)

SCALE: 1" = 5'

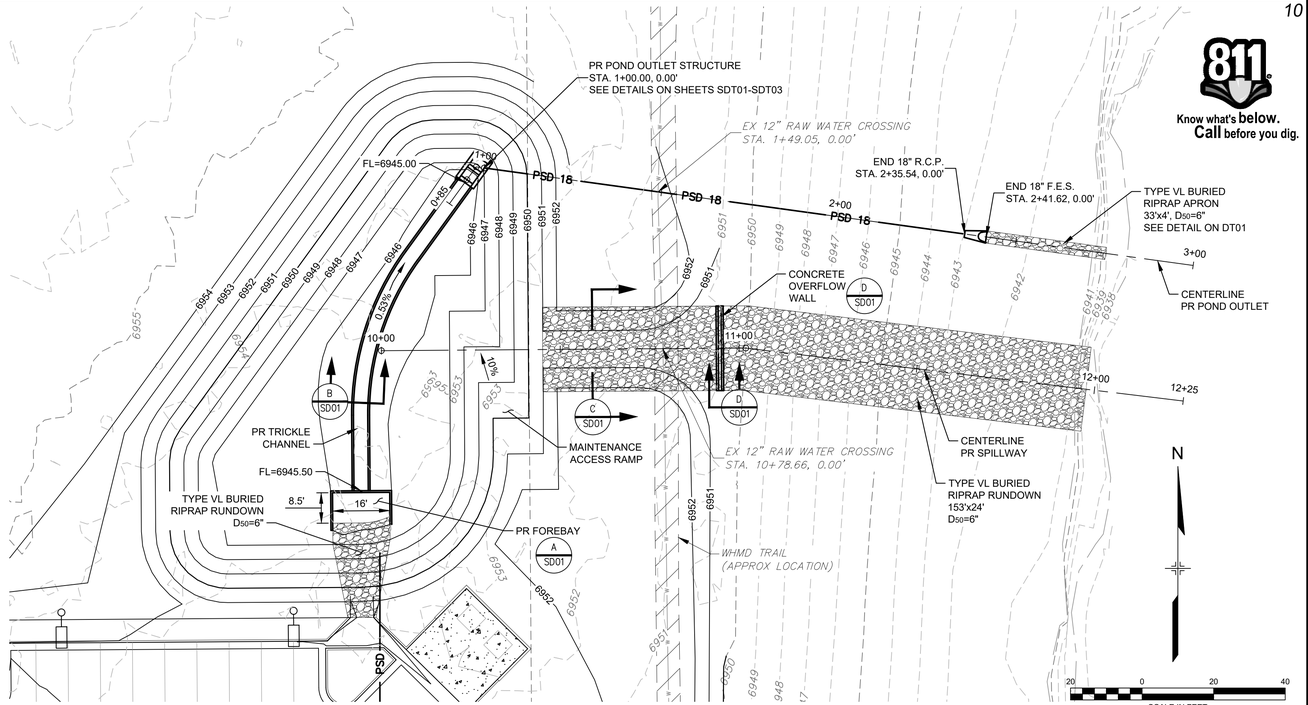


TRICKLE CHANNEL SECTION (B)



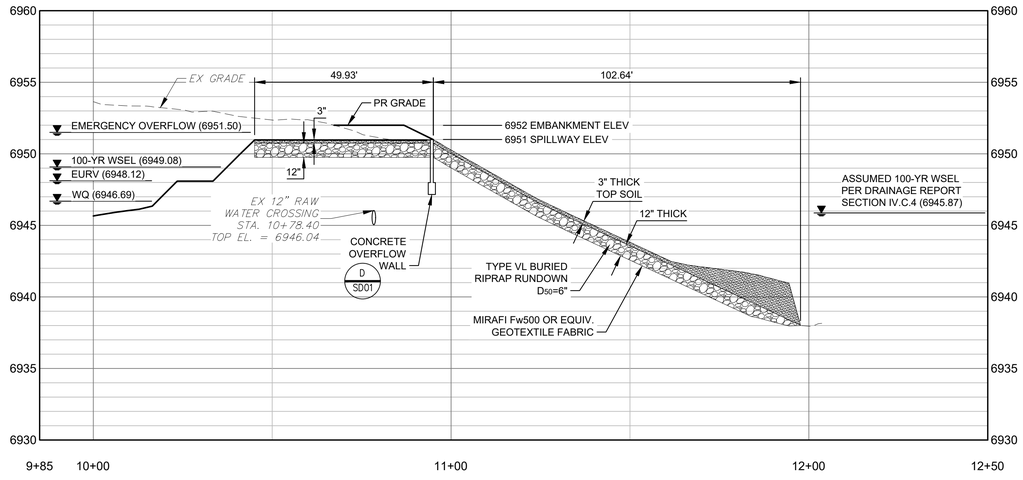
CONCRETE OVERFLOW WALL SECTION (D)

SCALE: 1" = 1'-0"



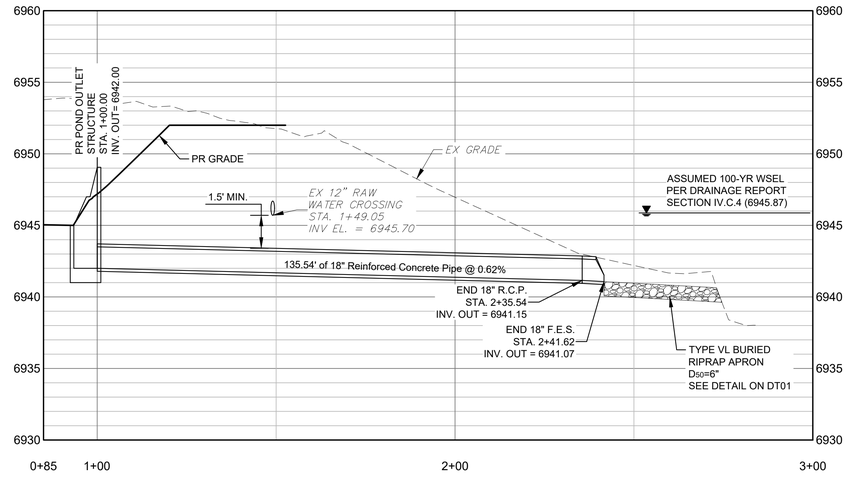
PLAN

SCALE: 1"=20'



SPILLWAY PROFILE

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



POND OUTLET PROFILE

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

REFERENCE DRAWINGS
X-995-MDG22x34
X-995-PR-UTIL
X-995-EX-BASE
X-995-EX-MAP
X-995-PR-BASE

No.	DATE	DESCRIPTION	BY

REVISIONS

SHEET KEY

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PREPARED FOR: LIBERTY TREE ACADEMY
PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL: COLORADO REGISTERED PROFESSIONAL ENGINEER, 24520, 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

POND OUTLET & SPILLWAY PLAN & PROFILE

DESIGNED BY:	ACR	SCALE	DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ AS SHOWN	DRAWING No.	SD01
CHECKED BY:	DRK	VERT. 1" = 5'	SHEET	10 OF 29

EPC 9/11/18

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:

1. CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM PLANNING AND COMMUNITY DEVELOPMENT (PCD) AND A PRECONSTRUCTION CONFERENCE IS HELD WITH PCD INSPECTIONS.

2. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF SITE WATERS, INCLUDING WETLANDS.

3. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.

4. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORMWATER MANAGER, SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.

5. ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPS AS INDICATED ON THE GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY PCD INSPECTIONS STAFF.

6. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 21 CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPS SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED.

7. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO STANDARDS AND SPECIFICATION PRESCRIBED IN THE DCM VOLUME II AND THE ENGINEERING CRITERIA MANUAL (ECM) APPENDIX I.

8. ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPS IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE DRAINAGE CRITERIA MANUAL (DCM) VOLUME II AND IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN (SWMP).

9. ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMPS AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS, THE SWMP AND THE DCM VOLUME II AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION.

10. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.

11. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSIVE VELOCITY.

12. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.

13. EROSION CONTROL BLANKETING SHALL BE USED ON SLOPES STEEPER THAN 3:1.

14. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.

15. VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.

17. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.

18. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.

19. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.

20. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.

21. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.

22. INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.

23. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

24. PRIOR TO ACTUAL CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.

25. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.

26. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY EARTH ENGINEERING CONSULTANTS, LLC ON APRIL 12, 2018, AND SHALL BE CONSIDERED A PART OF THESE PLANS.

27. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

REFERENCE DRAWINGS
X-995-MDG22x34

No.	DATE	DESCRIPTION	BY
		REVISIONS	

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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

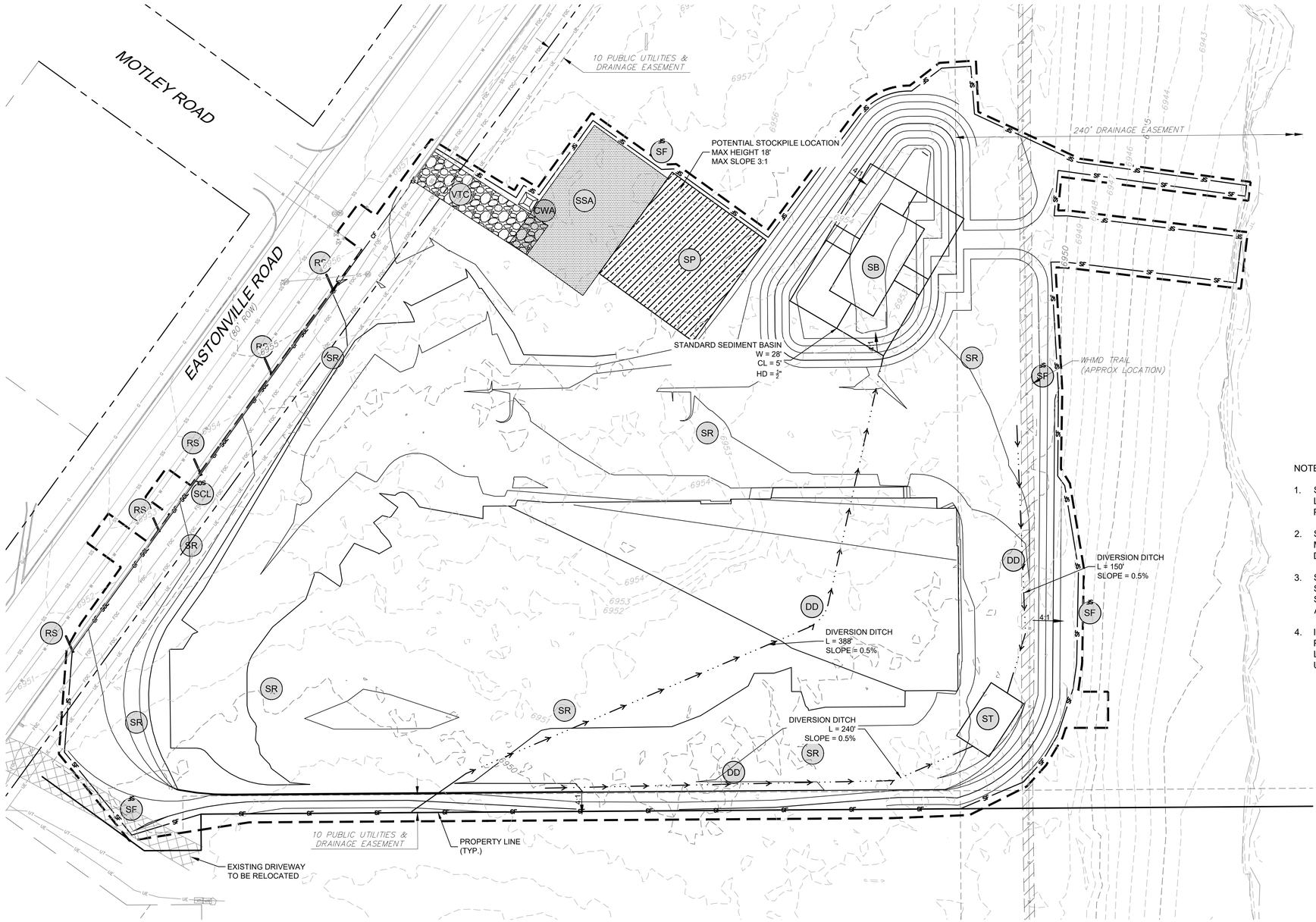
SEAL
COLORADO REGISTERED PROFESSIONAL ENGINEER
24520
9/11/18
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

EROSION CONTROL GENERAL NOTES

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	NA	DRAWING No.	ECGN01
CHECKED BY:	DRK	VERT.	NA	SHEET	11 OF 29



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

BMP LEGEND

CWA	CONCRETE WASHOUT AREA	
DD	DIVERSION DITCH	
ECB	EROSION CONTROL BLANKET	
SB	SEDIMENT BASIN	
SCL	SEDIMENT CONTROL LOG	
ST	SEDIMENT TRAP	
SM	SEEDING AND MULCHING	
SF	SILT FENCE	
SSA	STABILIZED STAGING AREA	
SR	SURFACE ROUGHING	
VTC	VEHICLE TRACKING CONTROL	
RS	ROCK SOCK	
CF	CONSTRUCTION FENCE	
LOC	LIMITS OF CONSTRUCTION	
	EXISTING 1' CONTOURS	
	EXISTING 5' CONTOURS	
	PROPOSED 1' CONTOURS	
	PROPOSED 5' CONTOURS	

NOTES:

1. SUGGESTED VTC LOCATIONS ARE SHOWN ON THE PLAN. THE EXACT LOCATIONS MAY VARY DUE TO PHASING, BUT MUST BE PROVIDED AT ALL POINTS OF ACCESS.
2. SUGGESTED STOCKPILE LOCATIONS ARE SHOWN ON PLAN. EXACT LOCATIONS MAY VARY WITHIN THE PROJECT LIMITS. SEE THE STOCKPILE MANAGEMENT DETAIL FOR ADDITIONAL INFORMATION.
3. SUGGESTED CONCRETE WASHOUT AND STABILIZED STAGING AREAS ARE SHOWN ON PLAN. EXACT LOCATIONS MAY VARY WITHIN THE PROJECT LIMITS. SEE THE CONCRETE WASHOUT AND STABILIZED STAGING AREA DETAIL FOR ADDITIONAL INFORMATION.
4. INLET PROTECTION, CURB SOCKS, AND PERIMETER CONTROL TO BE INSTALLED PRIOR TO DEMOLITION. SILT FENCE MAY BE USED AS PERIMETER CONTROL IN LANDSCAPED AREAS. ROCK SOCKS AND CONSTRUCTION FENCING SHOULD BE USED AS PERIMETER CONTROL ON IMPERVIOUS SURFACES.

N

30 0 30 60
SCALE IN FEET
ORIGINAL SCALE

REFERENCE DRAWINGS

X-995-PR-SWMP
X-995-EX-BASE
X-995-EX-MAP
X-995-MDG22x34
X-995-PR-GRAD

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT

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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL

COLORADO REGISTERED PROFESSIONAL ENGINEER
24520
9/11/18

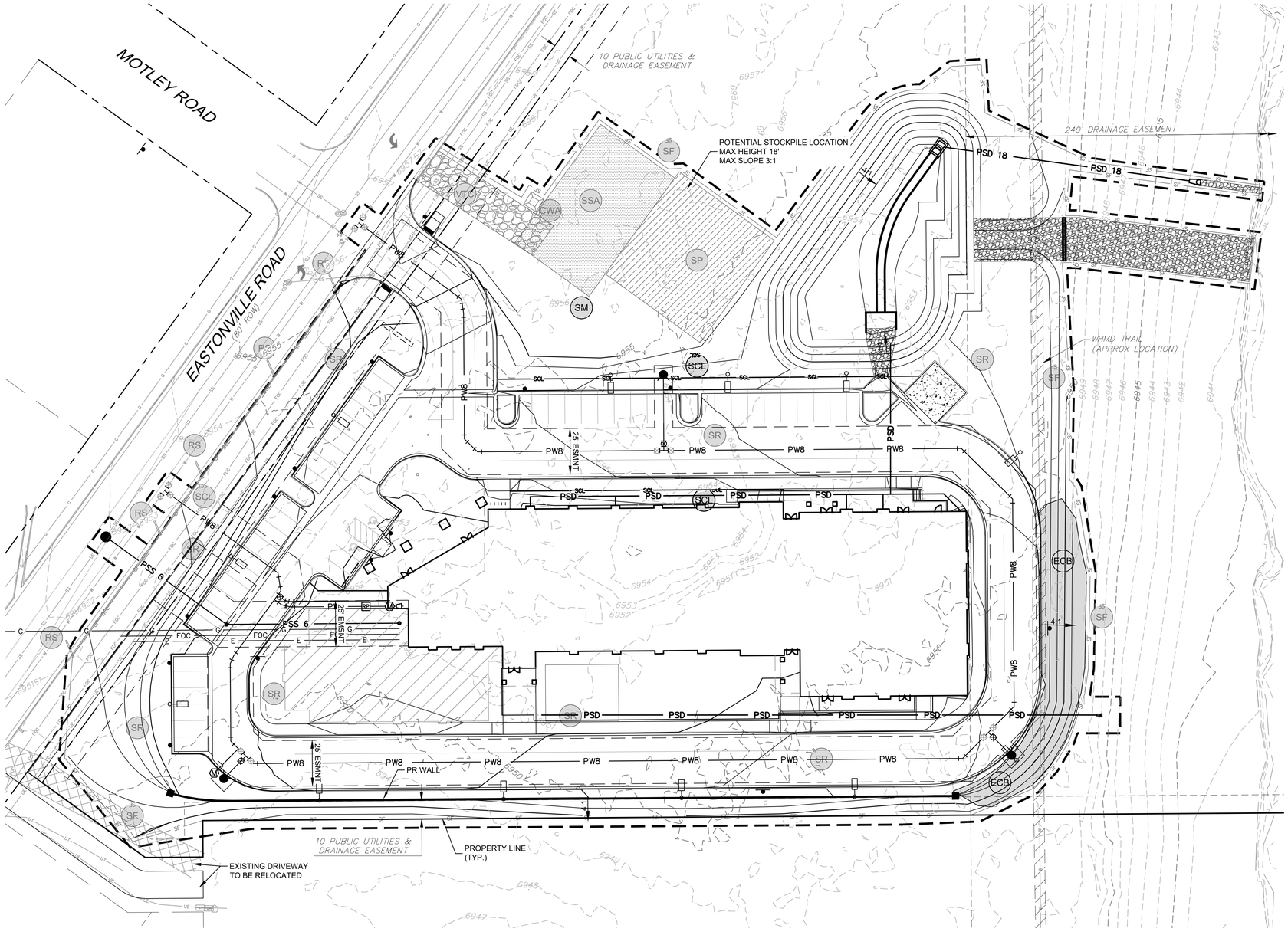
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

INITIAL EROSION CONTROL PLAN

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ	1" = 30'		DRAWING No.
CHECKED BY:	DRK	VERT.	NA	SHEET 12 OF 29	EC01



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

BMP LEGEND

CWA	CONCRETE WASHOUT AREA	
DD	DIVERSION DITCH	
ECB	EROSION CONTROL BLANKET	
SB	SEDIMENT BASIN	
SCL	SEDIMENT CONTROL LOG	SCL
ST	SEDIMENT TRAP	
SM	SEEDING AND MULCHING	
SF	SILT FENCE	SF
SSA	STABILIZED STAGING AREA	
SR	SURFACE ROUGHING	
VTC	VEHICLE TRACKING CONTROL	
RS	ROCK SOCKS	
CF	CONSTRUCTION FENCE	CF
LOC	LIMITS OF CONSTRUCTION	
	EXISTING 1' CONTOURS	
	EXISTING 5' CONTOURS	
	PROPOSED 1' CONTOURS	
	PROPOSED 5' CONTOURS	

NOTES:

1. SUGGESTED VTC LOCATIONS ARE SHOWN ON THE PLAN. THE EXACT LOCATIONS MAY VARY DUE TO PHASING, BUT MUST BE PROVIDED AT ALL POINTS OF ACCESS.
2. SUGGESTED STOCKPILE LOCATIONS ARE SHOWN ON PLAN. EXACT LOCATIONS MAY VARY WITHIN THE PROJECT LIMITS. SEE THE STOCKPILE MANAGEMENT DETAIL FOR ADDITIONAL INFORMATION.
3. SUGGESTED CONCRETE WASHOUT AND STABILIZED STAGING AREAS ARE SHOWN ON PLAN. EXACT LOCATIONS MAY VARY WITHIN THE PROJECT LIMITS. SEE THE CONCRETE WASHOUT AND STABILIZED STAGING AREA DETAIL FOR ADDITIONAL INFORMATION.
4. INLET PROTECTION, CURB SOCKS, AND PERIMETER CONTROL TO BE INSTALLED PRIOR TO DEMOLITION. SILT FENCE MAY BE USED AS PERIMETER CONTROL IN LANDSCAPED AREAS. ROCK SOCKS AND CONSTRUCTION FENCING SHOULD BE USED AS PERIMETER CONTROL ON IMPERVIOUS SURFACES.

N

30 0 30 60

SCALE IN FEET
ORIGINAL SCALE

REFERENCE DRAWINGS

X-995-PR-SWMP
X-995-EX-BASE
X-995-EX-MAP
X-995-MDG22x34
X-995-PR-UTIL
X-995-PR-BASE
X-995-PR-GRAD

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT

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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL

COLORADO REGISTERED PROFESSIONAL ENGINEER 24520 9/11/18 PROFESSIONAL ENGINEER

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

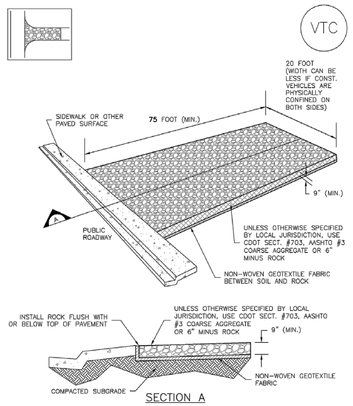
LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

FINAL EROSION CONTROL PLAN

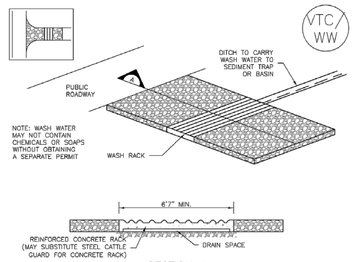
DESIGNED BY:	ACR	SCALE		DATE ISSUED: SEPTEMBER 2018	DRAWING No.
DRAWN BY:	ACR	HORIZ.	1" = 30'		
CHECKED BY:	DRK	VERT.	NA	SHEET 13 OF 29	EC02

EPC 9/11/18



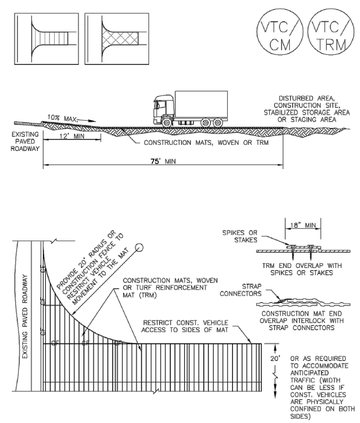
SECTION A

VTC–1. AGGREGATE VEHICLE TRACKING CONTROL



SECTION A

VTC–2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK



VTC–3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   –LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   –TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT–OF–WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON–WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

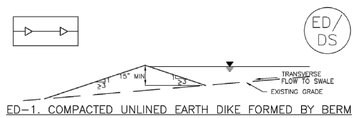
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

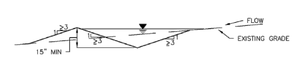
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

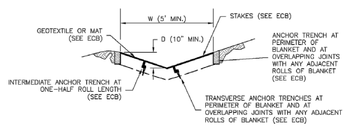


ED–1. COMPACTED UNLINED EARTH DIKE FORMED BY BERM

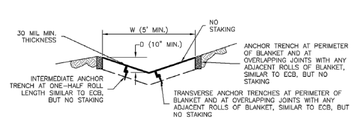
DS–1. COMPACTED UNLINED EXCAVATED SWALE



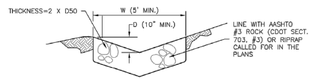
DS–2. COMPACTED UNLINED SWALE FORMED BY CUT AND FILL



DS–3. ECB LINED SWALE (CUT AND FILL OR BERM)



DS–4. SYNTHETIC LINED SWALE



DS–5. RIPRAP LINED SWALE

EARTH DIKE AND DRAINAGE SWALE INSTALLATION NOTES

1. SEE SITE PLAN FOR:
   – LOCATION OF DIVERSION SWALE
   – TYPE OF SWALE (UNLINED, COMPACTED AND/OR LINED).
   – LENGTH OF EACH SWALE.
   – DEPTH, D, AND WIDTH, W DIMENSIONS.
   – FOR ECB/TRM LINED DITCH, SEE ECB DETAIL.
   – FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, D50.

2. SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES AND/OR DIVERSION SWALES EXCEEDING 2–YEAR FLOW RATE OR 10 CFS.

3. EARTH DIKES AND SWALES INDICATED ON SWMP PLAN SHALL BE INSTALLED PRIOR TO LAND–DISTURBING ACTIVITIES IN PROXIMITY.

4. EMBANKMENT IS TO BE COMPACTED TO 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698.

5. SWALES ARE TO DRAIN TO A SEDIMENT CONTROL BMP.

6. FOR LINED DITCHES, INSTALLATION OF ECB/TRM SHALL CONFORM TO THE REQUIREMENTS OF THE ECB DETAIL.

7. WHEN CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION SWALE, INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12 INCHES.

EARTH DIKE AND DRAINAGE SWALE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SWALES SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION; IF APPROVED BY LOCAL JURISDICTION, SWALES MAY BE LEFT IN PLACE.

5. WHEN A SWALE IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF COLORADO SPRINGS, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Description

Photograph MU-1. An area that was recently seeded, mulched, and crimped.

Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, tackifiers, netting or other measures. Mulching helps reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. Although often applied in conjunction with temporary or permanent seeding, it can also be used for temporary stabilization of areas that cannot be reseeded due to seasonal constraints.

Mulch can be applied either using standard mechanical dry application methods or using hydromulching equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.

Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas where growing season constraints prevent effective reseeding. Disturbed areas should be properly mulched and tacked, or seeded, mulched and tacked promptly after final grade is reached (typically within no longer than 14 days) on portions of the site not otherwise permanently stabilized.

Standard dry mulching is encouraged in most jurisdictions; however, hydromulching may not be allowed in certain jurisdictions or may not be allowed near waterways.

Do not apply mulch during windy conditions.

Design and Installation

Prior to mulching, surface-roughen areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

A variety of mulches can be used effectively at construction sites. Consider the following:

Mulch	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

REFERENCE DRAWINGS

X-995-MDG22x34

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT

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SHEET KEY

N

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL

COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

EROSION CONTROL DETAILS

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	NA	SHEET	14 OF 29
CHECKED BY:	DRK	VERT.	NA	DRAWING No.	ECDT01

EPC 9/11/18

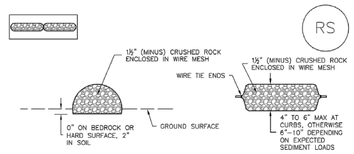
EC-4 Mulching (MU)

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydroseeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

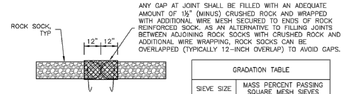
Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

SC-5 Rock Sock (RS)



ROCK SOCK SECTION ROCK SOCK PLAN



ROCK SOCK JOINTING

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	80 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION(S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½". RECOMMENDED MINIMUM ROLL WIDTH OF 48"
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.
5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS–1. ROCK SOCK PERIMETER CONTROL

Rock Sock (RS) SC-5

ROCK SOCK MAINTENANCE NOTES

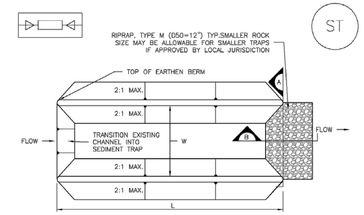
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE ROCK SOCK.
6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

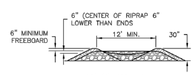
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER NORDSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

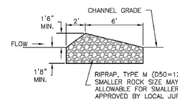
SC-8 Sediment Trap (ST)



SEDIMENT TRAP PLAN



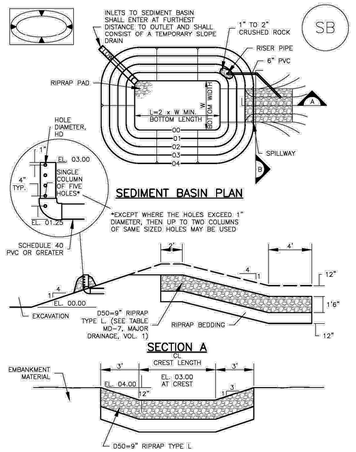
SECTION A



SECTION B

ST–1. SEDIMENT TRAP

Sediment Basin (SB) SC-7



SC-7 Sediment Basin (SB)

TABLE SB–1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 ½	2	9/32
2	21	3	13/32
3	28	5	5/8
4	33 ½	6	3/4
5	38 ½	8	7/32
6	43	9	7/32
7	47 ¼	11	7/32
8	51	12	7/32
9	55	13	3/4
10	58 ¾	15	15/16
11	61	16	7/32
12	64	18	1"
13	67 ½	19	1 3/8
14	70 ½	21	1 3/8
15	73 ¼	22	1 9/16

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF SEDIMENT BASIN.
   –TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
   –FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
   –FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND–DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS AS A STORMWATER CONTROL.
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
6. PIPE SCH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

Sediment Basin (SB) SC-7

SEDIMENT BASIN MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Sediment Trap (ST) SC-8

SEDIMENT TRAP INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
2. ONLY USE FOR DRAINAGE AREAS LESS THAN 1 ACRE.
3. SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND–DISTURBING ACTIVITIES.
4. SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
5. SEDIMENT TRAP OUTLET TO BE CONSTRUCTED OF RIPRAP, TYPE M (D50=12") TYP.SMALLER ROCK SIZE MAY BE ALLOWABLE FOR SMALLER TRAPS IF APPROVED BY LOCAL JURISDICTION.
6. THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.
7. THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL BE A MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

SEDIMENT TRAP MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN THE SEDIMENT DEPTH REACHES ½ THE HEIGHT OF THE RIPRAP OUTLET.
5. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

REFERENCE DRAWINGS

X-995-MDG22x34

No.	DATE	DESCRIPTION	BY

REVISIONS

SHEET KEY

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PREPARED FOR: LIBERTY TREE ACADEMY

PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL: COLORADO REGISTERED Joel 24520 9/11/18 PROFESSIONAL ENGINEER

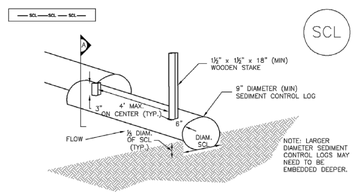
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

EROSION CONTROL DETAILS

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	NA	SHEET	15 OF 29
CHECKED BY:	DRK	VERT.	NA	DRAWING No.	ECDT02



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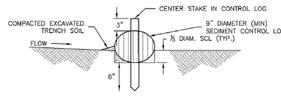
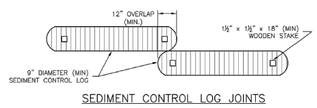
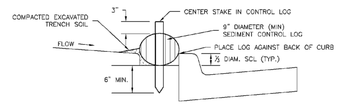


SECTION A

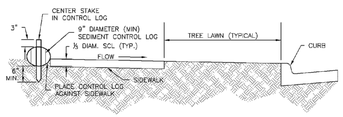


SEDIMENT CONTROL LOG JOINTS

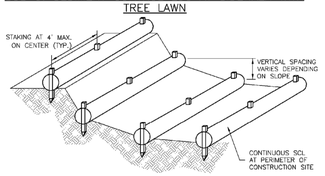
SCL-1. SEDIMENT CONTROL LOG



SCL-2. SEDIMENT CONTROL LOG AT BACK OF CURB



SCL-3. SEDIMENT CONTROL LOG AT SIDEWALK WITH TREE LAWN



SCL-4. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS OR HIGH VELOCITY DRAINAGE WAYS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

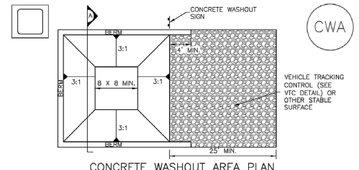
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

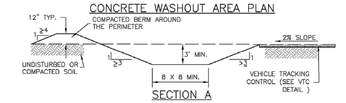
5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



CONCRETE WASHOUT AREA PLAN



SECTION A

CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   --CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY, DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

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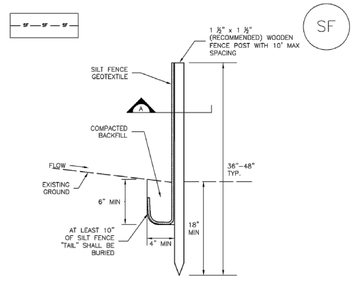
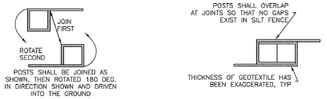


SILT FENCE



SECTION A

SF-1. SILT FENCE

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

REFERENCE DRAWINGS

X-995-MDG22x34

No.	DATE	DESCRIPTION	BY
		REVISIONS	

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SHEET KEY

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PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL

COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

EROSION CONTROL DETAILS

DESIGNED BY: ACR
DRAWN BY: ACR
CHECKED BY: DRK

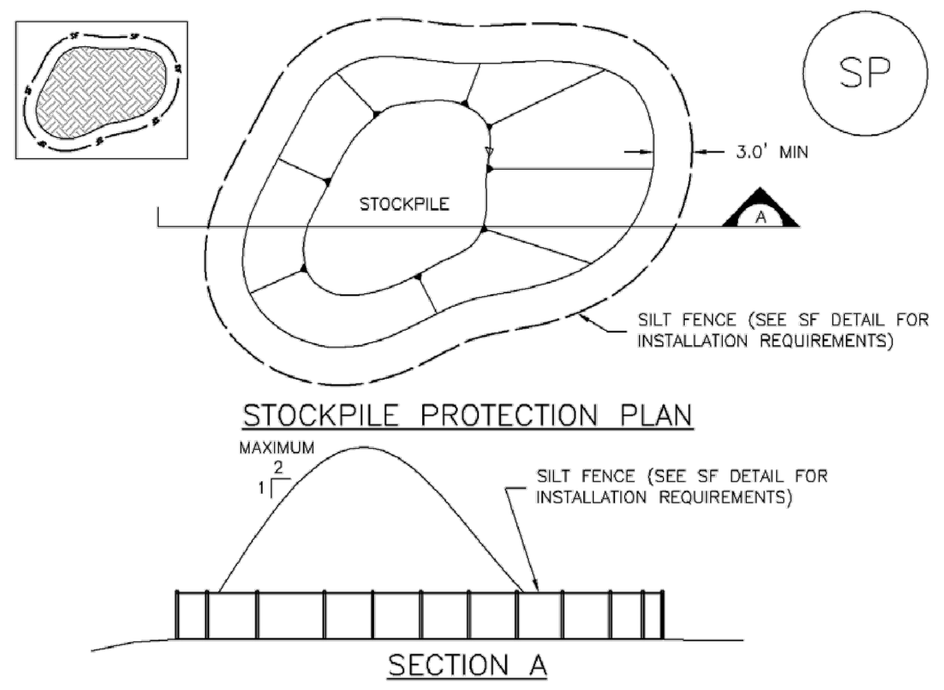
SCALE
HORIZ. NA
VERT. NA

DATE ISSUED: SEPTEMBER 2018
SHEET 16 OF 29

DRAWING No. ECDT03

EPC 9/11/18

Stockpile Management (SP) MM-2



SP-1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - –LOCATION OF STOCKPILES.
   - –TYPE OF STOCKPILE PROTECTION.

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

MM-2 Stockpile Management (SM)

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

STOCKPILE PROTECTION MAINTENANCE NOTES

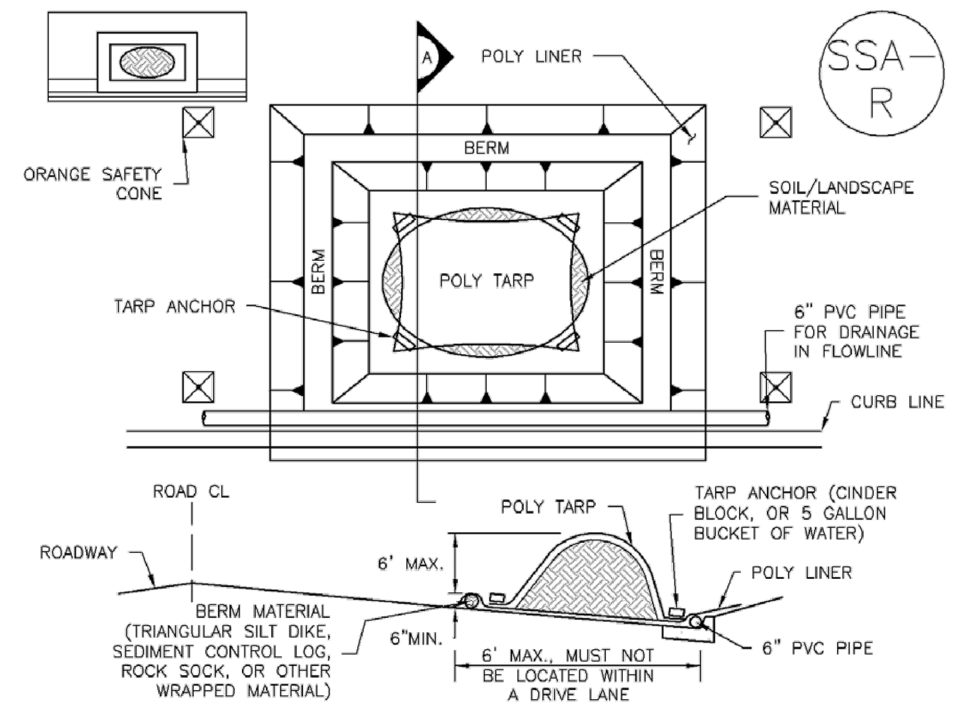
4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Stockpile Management (SP) MM-2



SP–2. MATERIALS STAGING IN ROADWAY

MATERIALS STAGING IN ROADWAYS INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   - –LOCATION OF MATERIAL STAGING AREA(S).
   - –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. FEATURE MUST BE INSTALLED PRIOR TO EXCAVATION, EARTHWORK OR DELIVERY OF MATERIALS.

3. MATERIALS MUST BE STATIONED ON THE POLY LINER. ANY INCIDENTAL MATERIALS DEPOSITED ON PAVED SECTION OR ALONG CURB LINE MUST BE CLEANED UP PROMPTLY.

4. POLY LINER AND TARP COVER SHOULD BE OF SIGNIFICANT THICKNESS TO PREVENT DAMAGE OR LOSS OF INTEGRITY.

5. SAND BAGS MAY BE SUBSTITUTED TO ANCHOR THE COVER TARP OR PROVIDE BERMING UNDER THE BASE LINER.

6. FEATURE IS NOT INTENDED FOR USE WITH WET MATERIAL THAT WILL BE DRAINING AND/OR SPREADING OUT ON THE POLY LINER OR FOR DEMOLITION MATERIALS.

7. THIS FEATURE CAN BE USED FOR:
   - –UTILITY REPAIRS.
   - –WHEN OTHER STAGING LOCATIONS AND OPTIONS ARE LIMITED.
   - –OTHER LIMITED APPLICATION AND SHORT DURATION STAGING.

MM-2 Stockpile Management (SM)

MATERIALS STAGING IN ROADWAY MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

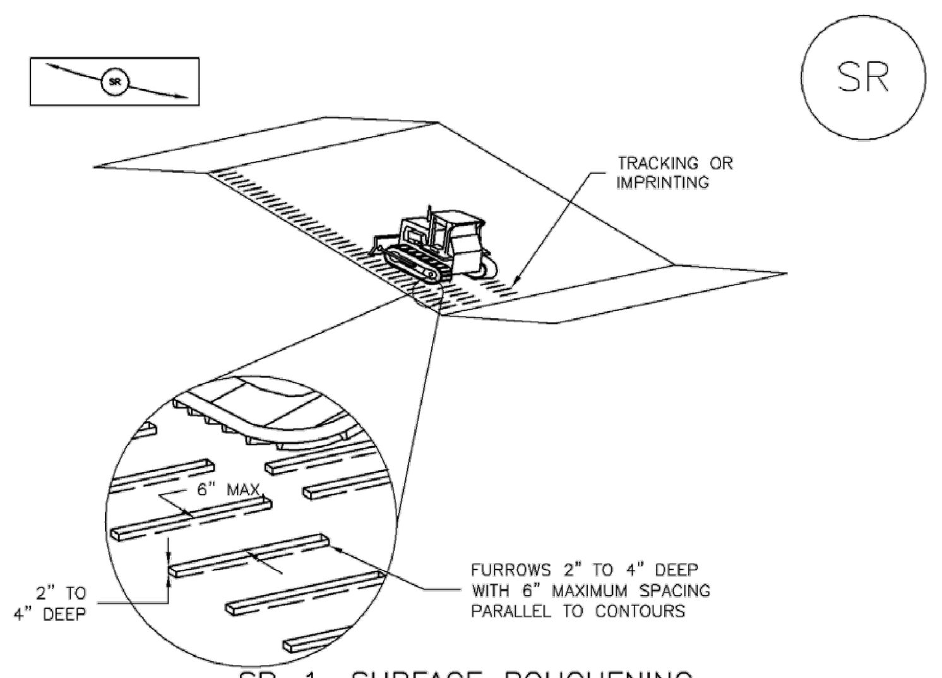
4. INSPECT PVC PIPE ALONG CURB LINE FOR CLOGGING AND DEBRIS. REMOVE OBSTRUCTIONS PROMPTLY.

5. CLEAN MATERIAL FROM PAVED SURFACES BY SWEEPING OR VACUUMING.

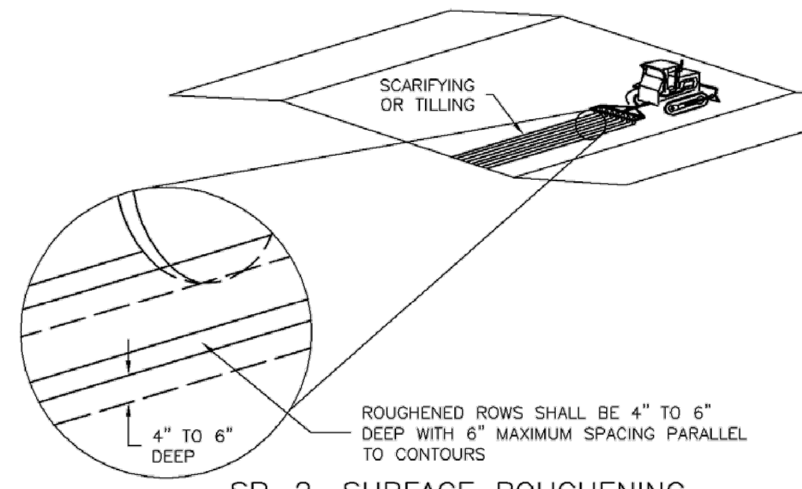
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM AURORA, COLORADO)

Surface Roughening (SR) EC-1



SR–1. SURFACE ROUGHENING
FOR STEEP SLOPES (3:1 OR STEEPER)



SR–2. SURFACE ROUGHENING
FOR LOW SLOPES (LESS THAN 3:1)

EC-1 Surface Roughening (SR)

SURFACE ROUGHENING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - –LOCATION(S) OF SURFACE ROUGHENING.

2. SURFACE ROUGHENING SHALL BE PROVIDED PROMPTLY AFTER COMPLETION OF FINISHED GRADING (FOR AREAS NOT RECEIVING TOPSOIL) OR PRIOR TO TOPSOIL PLACEMENT OR ANY FORECASTED RAIN EVENT.

3. AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD WILL BE PLACED WITHOUT DELAY IN THE CONSTRUCTION SEQUENCE, SURFACE ROUGHENING IS NOT REQUIRED.

4. DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.

5. A FARMING DISK SHALL NOT BE USED FOR SURFACE ROUGHENING.

SURFACE ROUGHENING MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACE UPON DISCOVERY OF THE FAILURE.

4. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.

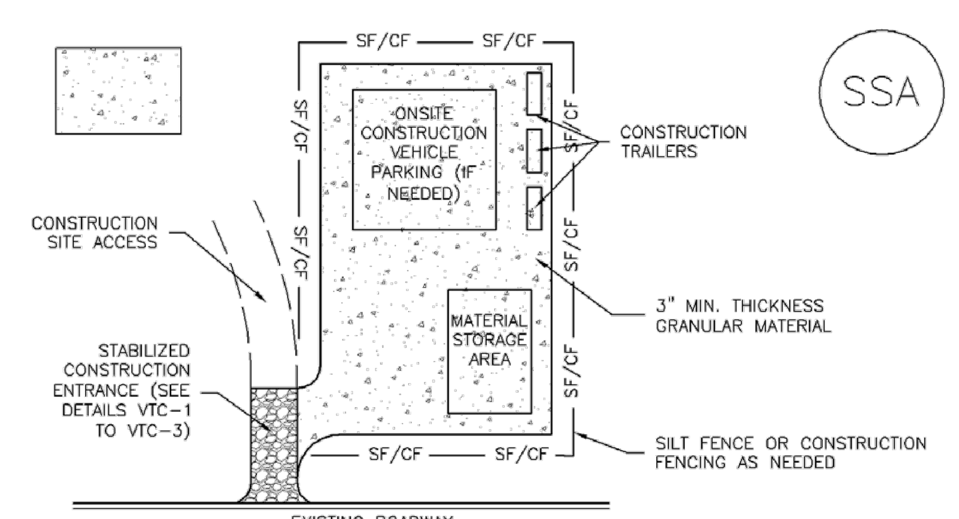
5. IN NON–TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.

6. IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE–ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER RILL EROSION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Stabilized Staging Area (SSA) SM-6



SSA–1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   - –LOCATION OF STAGING AREA(S).
   - –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE–ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

REFERENCE DRAWINGS
X-995-MDG22x34

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT
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CTB FILE: ----
PLOT DATE: 9/11/2018 8:42 AM
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.

SHEET KEY

PREPARED FOR: LIBERTY TREE ACADEMY

PREPARED BY: Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL
COLORADO REGISTERED PROFESSIONAL ENGINEER DAVID ROBERT ... 24520 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

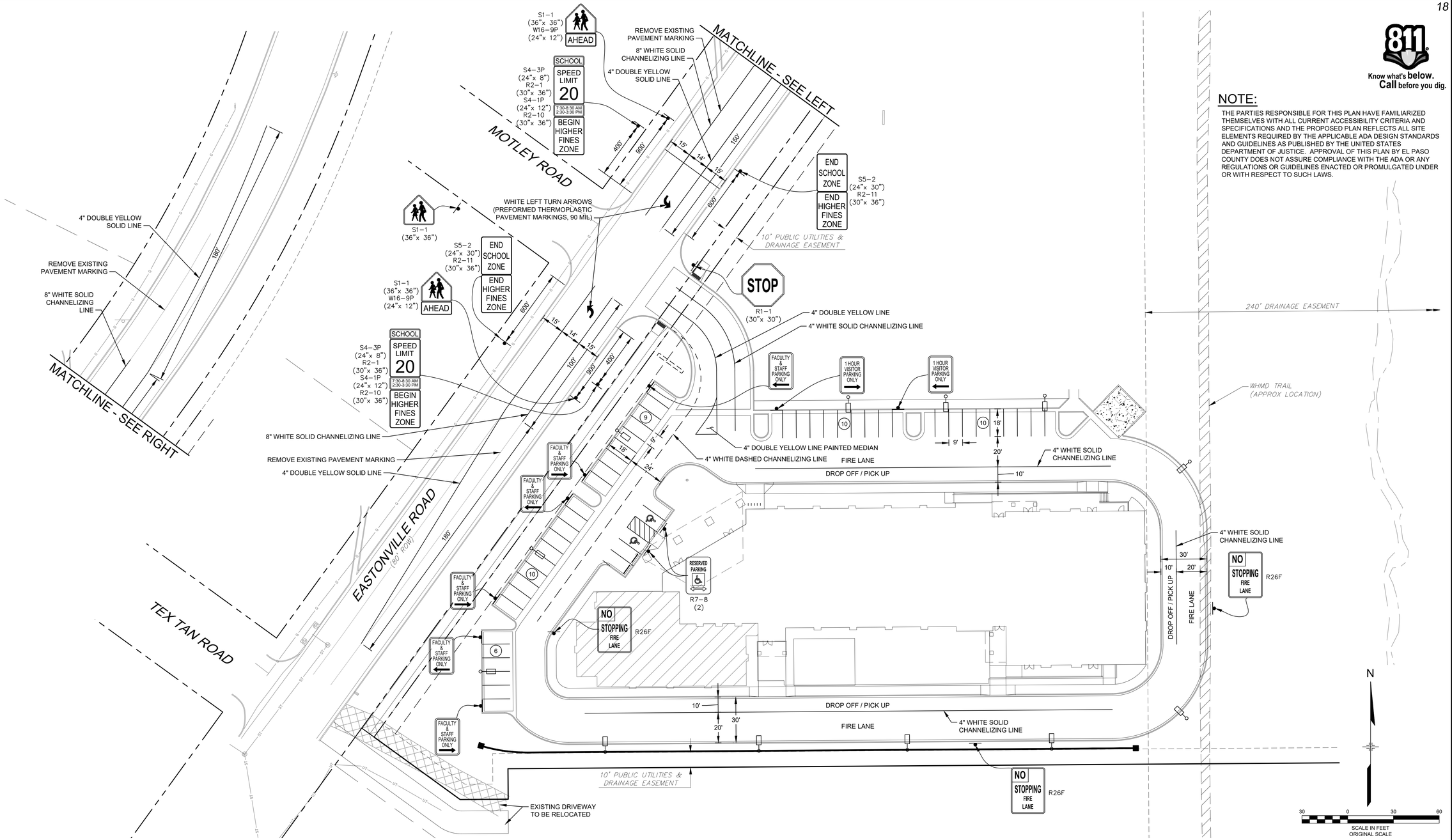
EROSION CONTROL DETAILS

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018	DRAWING No.
DRAWN BY:	ACR	HORIZ.	NA	SHEET	17 OF 29	ECDT04
CHECKED BY:	DRK	VERT.	NA			

EPC 9/11/18

NOTE:

THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATIONS AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.



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X-995-MDG22x34
X-995-PR-BASE
X-995-EX-BASE
X-995-EX-MAP
X-995-PR-UTIL

No.	DATE	DESCRIPTION	BY

REVISIONS

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SHEET KEY

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PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

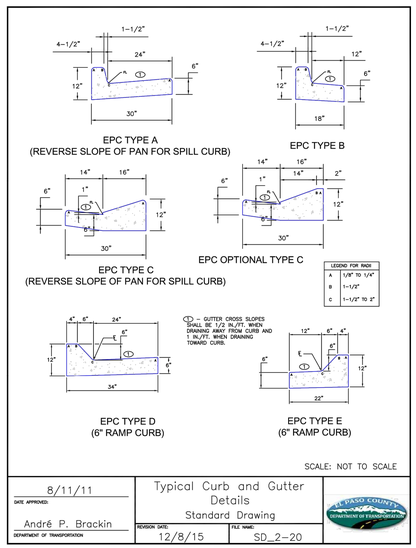
LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

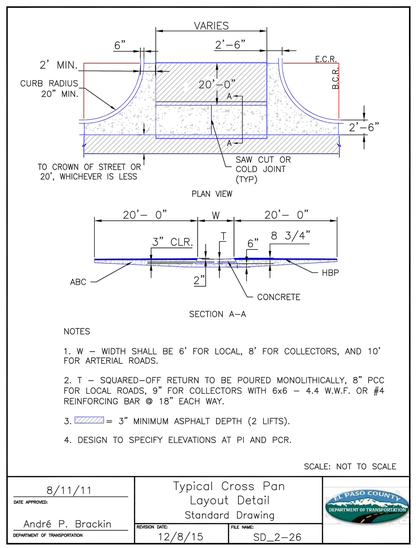
SIGNING & STRIPING PLAN

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	1" = 30'	SHEET	18 OF 29
CHECKED BY:	DRK	VERT.	NA	DRAWING No.	ST01

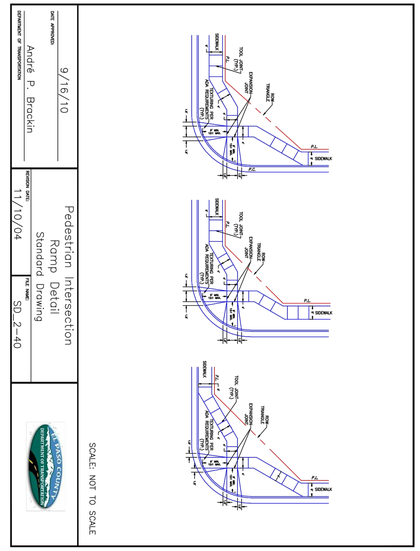
EPC 9/11/18



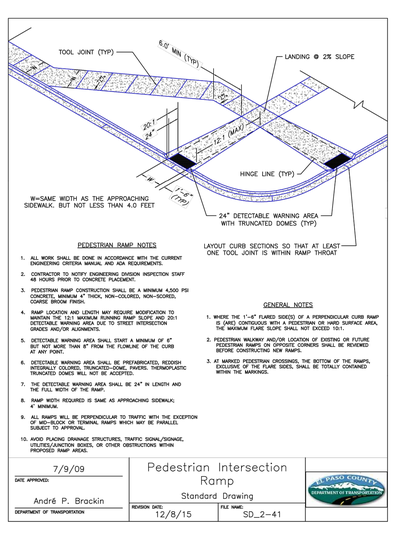
8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Typical Curb and Gutter Details Standard Drawing	REVISION DATE: 12/8/15 FILE NAME: SD_2-20



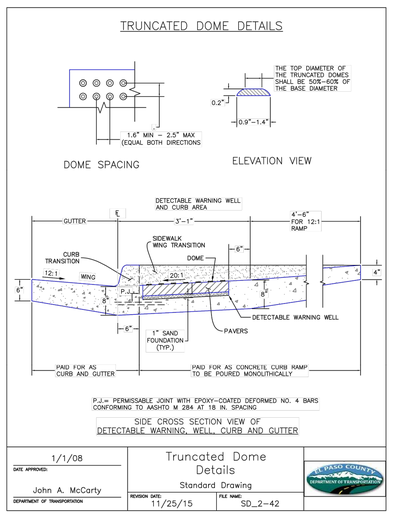
8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Typical Cross Pan Layout Detail Standard Drawing	REVISION DATE: 12/8/15 FILE NAME: SD_2-26



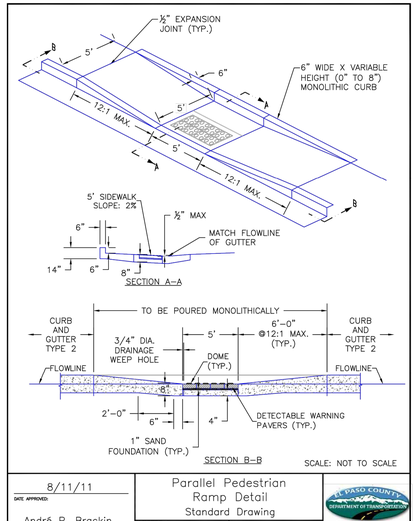
DATE APPROVED: 9/16/10 André P. Brackin DEPARTMENT OF TRANSPORTATION	Pedestrian Intersection Ramp Detail Standard Drawing	REVISION DATE: 11/10/04 FILE NAME: SD_2-40



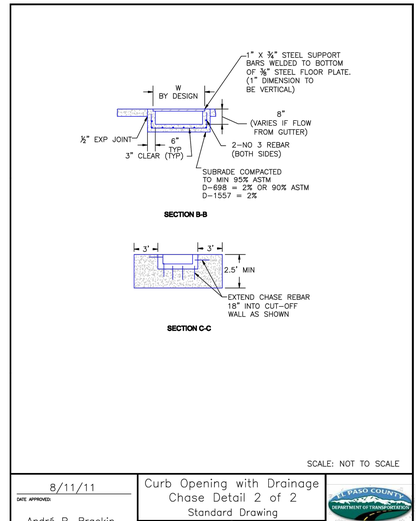
7/9/09 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Pedestrian Intersection Ramp Standard Drawing	REVISION DATE: 12/8/15 FILE NAME: SD_2-41



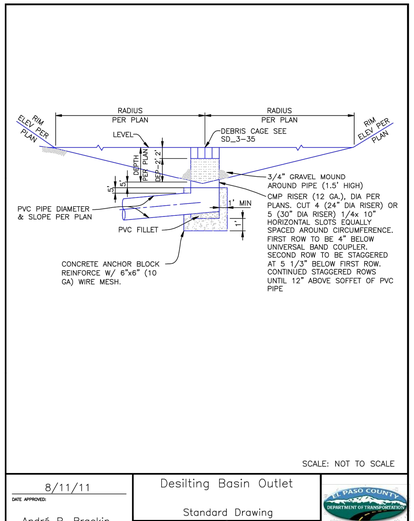
1/1/08 DATE APPROVED: John A. McCarty DEPARTMENT OF TRANSPORTATION	Truncated Dome Details Standard Drawing	REVISION DATE: 11/25/15 FILE NAME: SD_2-42



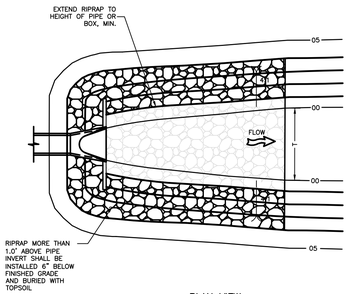
8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Parallel Pedestrian Ramp Detail Standard Drawing	REVISION DATE: 12/8/15 FILE NAME: SD_2-50



8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Curb Opening with Drainage Chase Detail 2 of 2 Standard Drawing	REVISION DATE: 11/10/04 FILE NAME: SD_3-25A



8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Desilting Basin Outlet Standard Drawing	REVISION DATE: 11/10/04 FILE NAME: SD_3-30



RIPRAP APRON DETAIL

REFERENCE DRAWINGS	No.	DATE	DESCRIPTION	BY
X-995-MDG22x34 Ch 9 Hydraulic Structures			REVISIONS	

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SHEET KEY

PREPARED FOR: LIBERTY TREE ACADEMY
PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL: COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

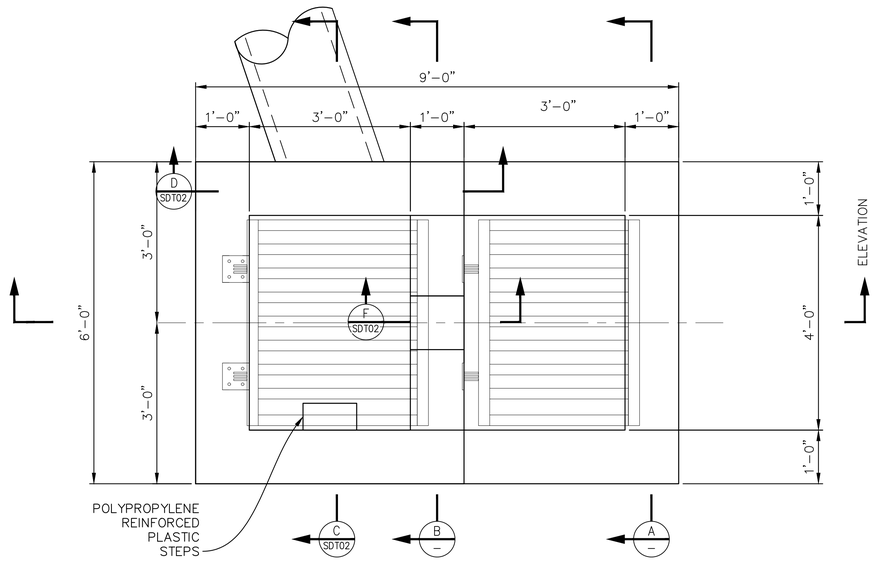
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

DETAILS

DESIGNED BY: ACR DRAWN BY: ACR CHECKED BY: DRK	SCALE HORIZ. NA VERT. NA	DATE ISSUED: SEPTEMBER 2018 SHEET 19 OF 29	DRAWING No. DT01



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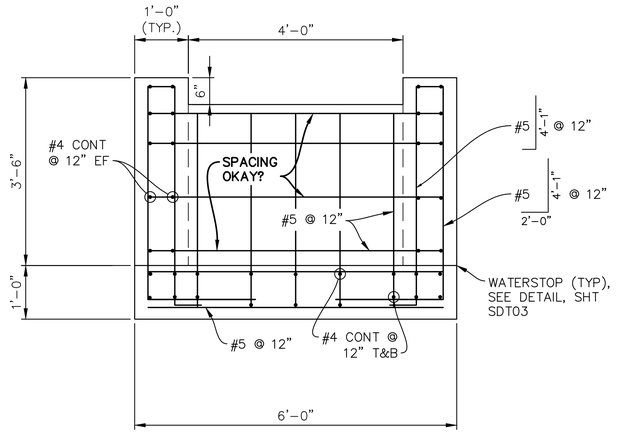

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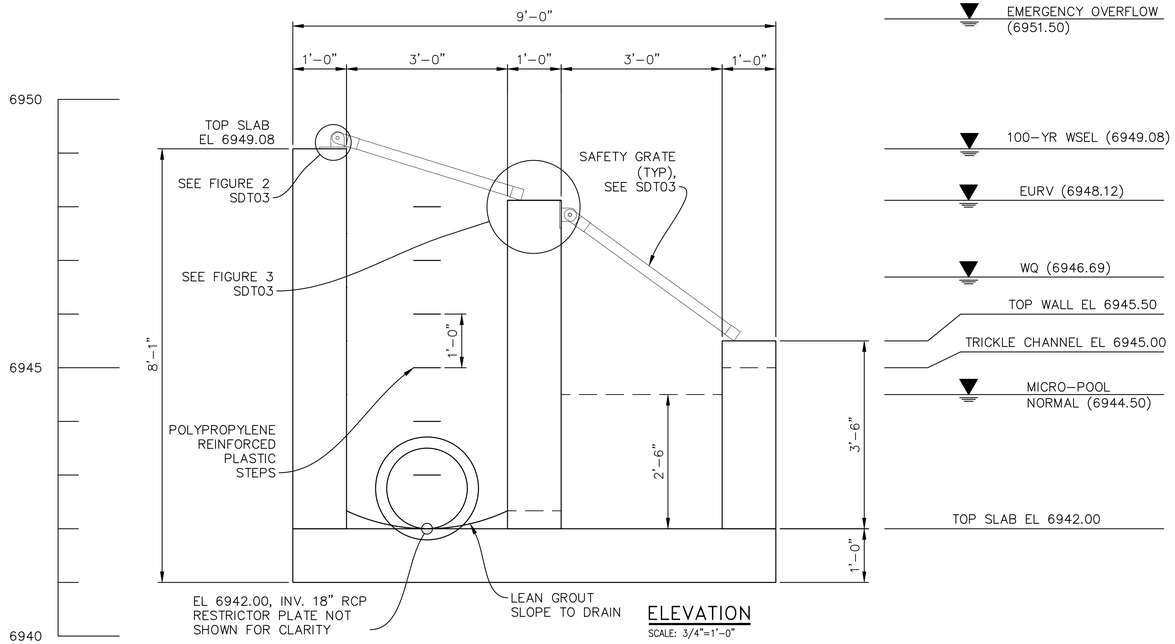

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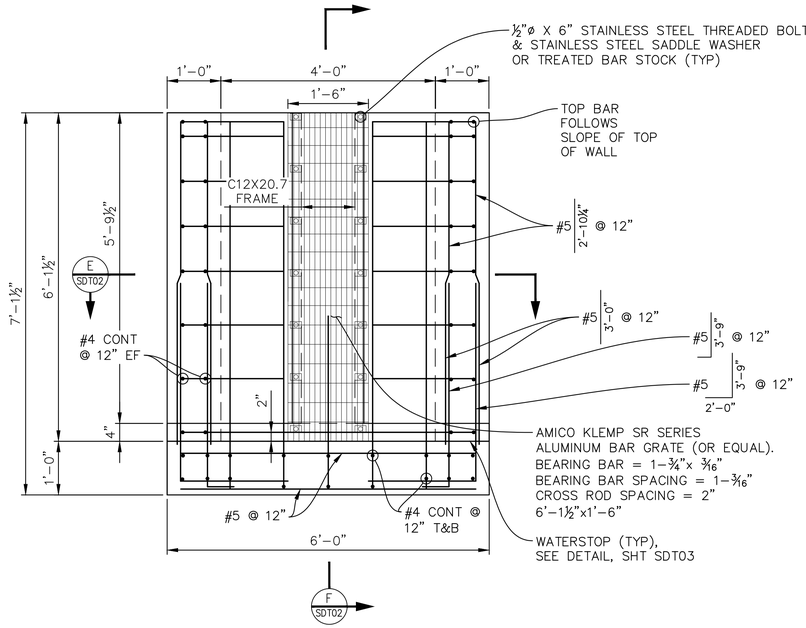

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REFERENCE DRAWINGS
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No.	DATE	DESCRIPTION	BY

REVISIONS

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PLOT DATE: 9/11/2018 9:03 AM
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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL
COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

POND OUTLET STRUCTURE DETAILS

DESIGNED BY:	ACR	SCALE	DATE ISSUED:	SEPTEMBER 2018	DRAWING No.
DRAWN BY:	ACR	HORIZ. 3/4" = 1'-0"			
CHECKED BY:	DRK	VERT. 3/4" = 1'-0"	SHEET	20 OF 29	SDT01

Know what's **below.**
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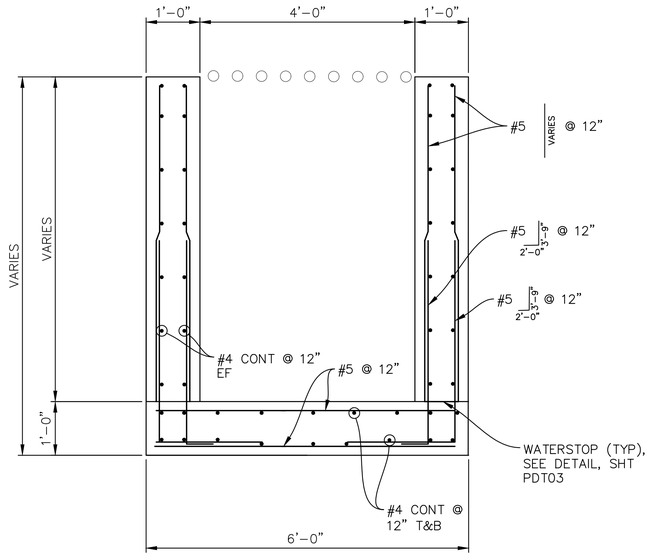

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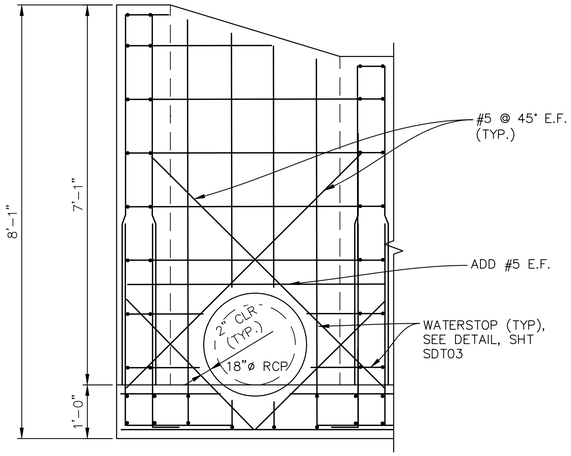

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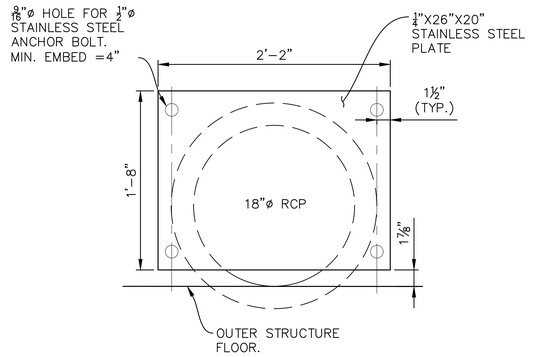

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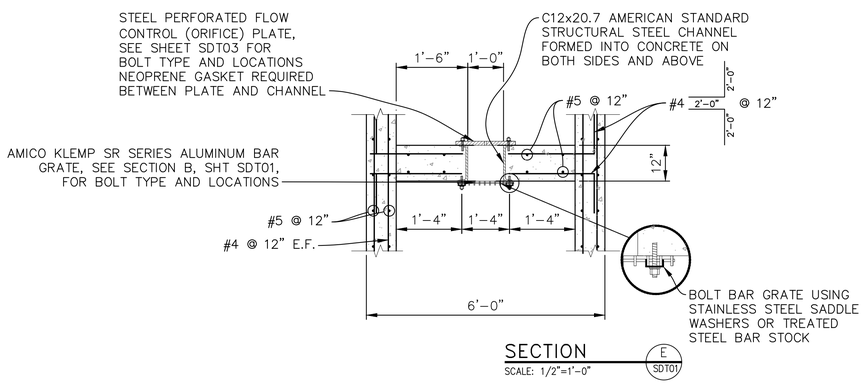

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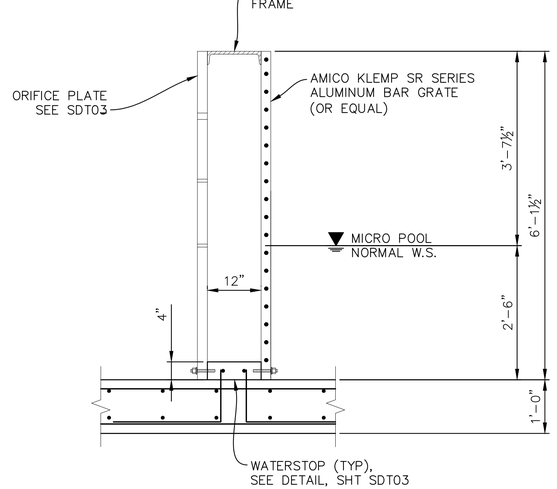

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REFERENCE DRAWINGS
X-995-MDG22x34

No.	DATE	DESCRIPTION	BY

REVISIONS

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PLOT DATE: 9/11/2018 9:03 AM
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SHEET KEY

PREPARED FOR: LIBERTY TREE ACADEMY
PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL: COLORADO REGISTERED 24520 PROFESSIONAL ENGINEER 9/11/18

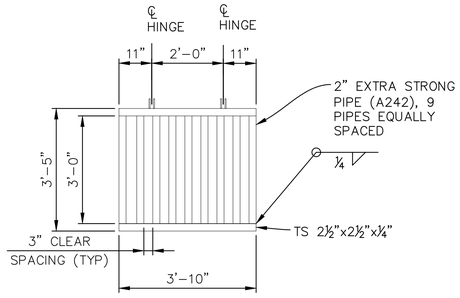
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY COMPANY

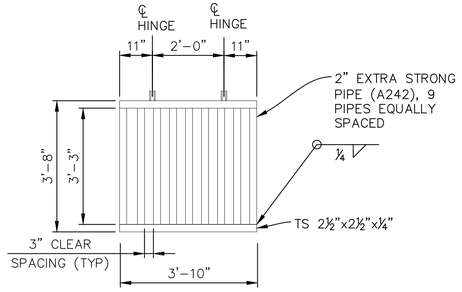
TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

POND OUTLET STRUCTURE DETAILS

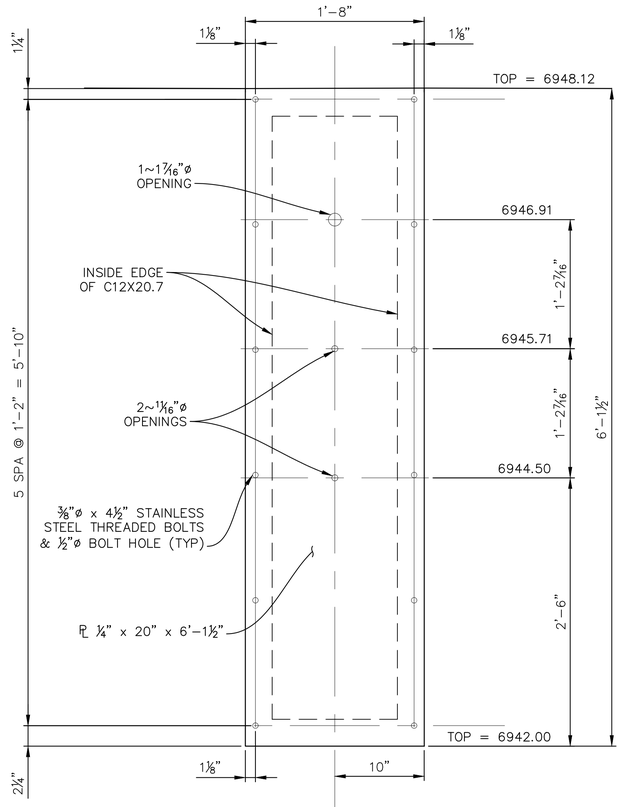
DESIGNED BY:	ACR	SCALE	DATE ISSUED:	SEPTEMBER 2018	DRAWING No.
DRAWN BY:	ACR	HORIZ AS SHOWN	SHEET	21 OF 29	SDT02
CHECKED BY:	DRK	VERT. AS SHOWN			



UPPER SAFETY GRATE PLAN
½"=1'-0"



LOWER SAFETY GRATE PLAN
1/2"=1'-0"



ORIFICE PLATE
1-1/2"=1'-0"

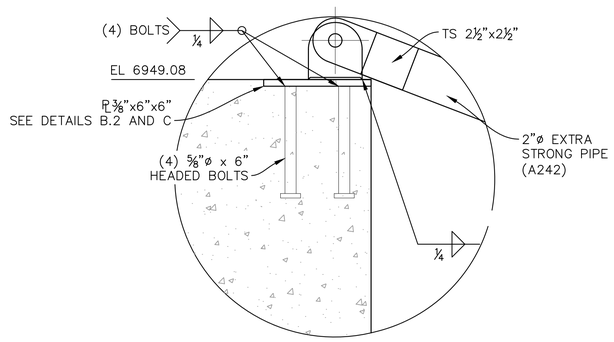


FIGURE 2
SAFETY GRATE HINGE
3"=1'-0"

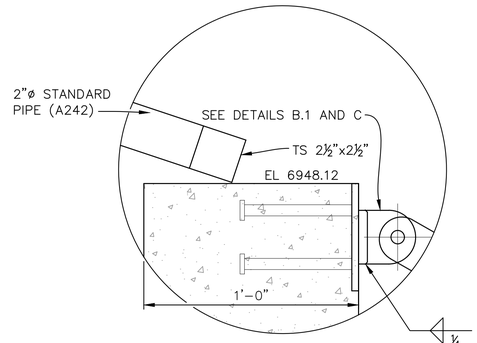
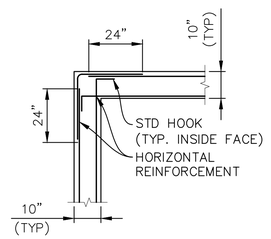
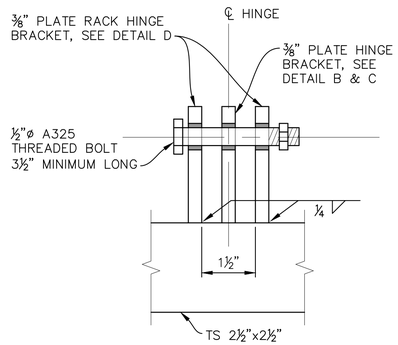


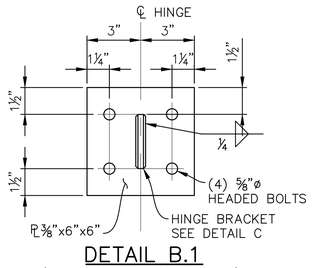
FIGURE 3
SAFETY GRATE HINGE
3"=1'-0"



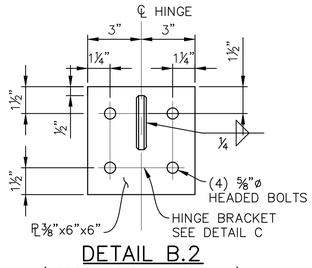
CORNER REINFORCING DETAIL
PLAN VIEW
3/8"=1'-0"



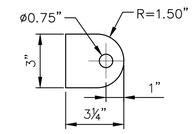
DETAIL A
6"=1'-0"



DETAIL B.1
(LOWER SAFETY GRATE ONLY)
3"=1'-0"

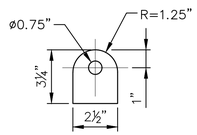


DETAIL B.2
(UPPER SAFETY GRATE ONLY)
3"=1'-0"



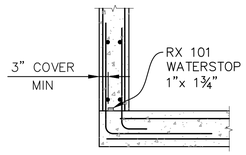
⅜" STEEL PLATE, A242 OR A588 (1 PER HINGE)

DETAIL C
HINGE BRACKET
3"=1'-0"



⅜" STEEL PLATE, A242 OR A588 (2 PER HINGE)

DETAIL D
RACK-HINGE BRACKET
3"=1'-0"



NOTES:

WATERSTOP SHALL BE VOLCLAY WATERSTOP RX 101 OR EARTHSHIELD JP 648 OR APPROVED EQUAL.

PLACE WATERSTOP FOR ENTIRETY OF EACH HORIZONTAL & VERTICAL CONSTRUCTION JOINT.

FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

WATERSTOP DETAIL

Know what's below. Call before you dig.

REFERENCE DRAWINGS
X-995-MDG22x34

No.	DATE	DESCRIPTION	BY

REVISIONS

COMPUTER FILE MANAGEMENT
FILE NAME: R:\18.995.001 (Liberty Tree Academy)\Dwg\Construction Plans\Structures\SDT01-03.dwg
CTB FILE: ----
PLOT DATE: 9/11/2018 8:43 AM
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.

SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

SEAL
COLORADO REGISTERED PROFESSIONAL ENGINEER
24520
9/11/18

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

POND OUTLET STRUCTURE DETAILS

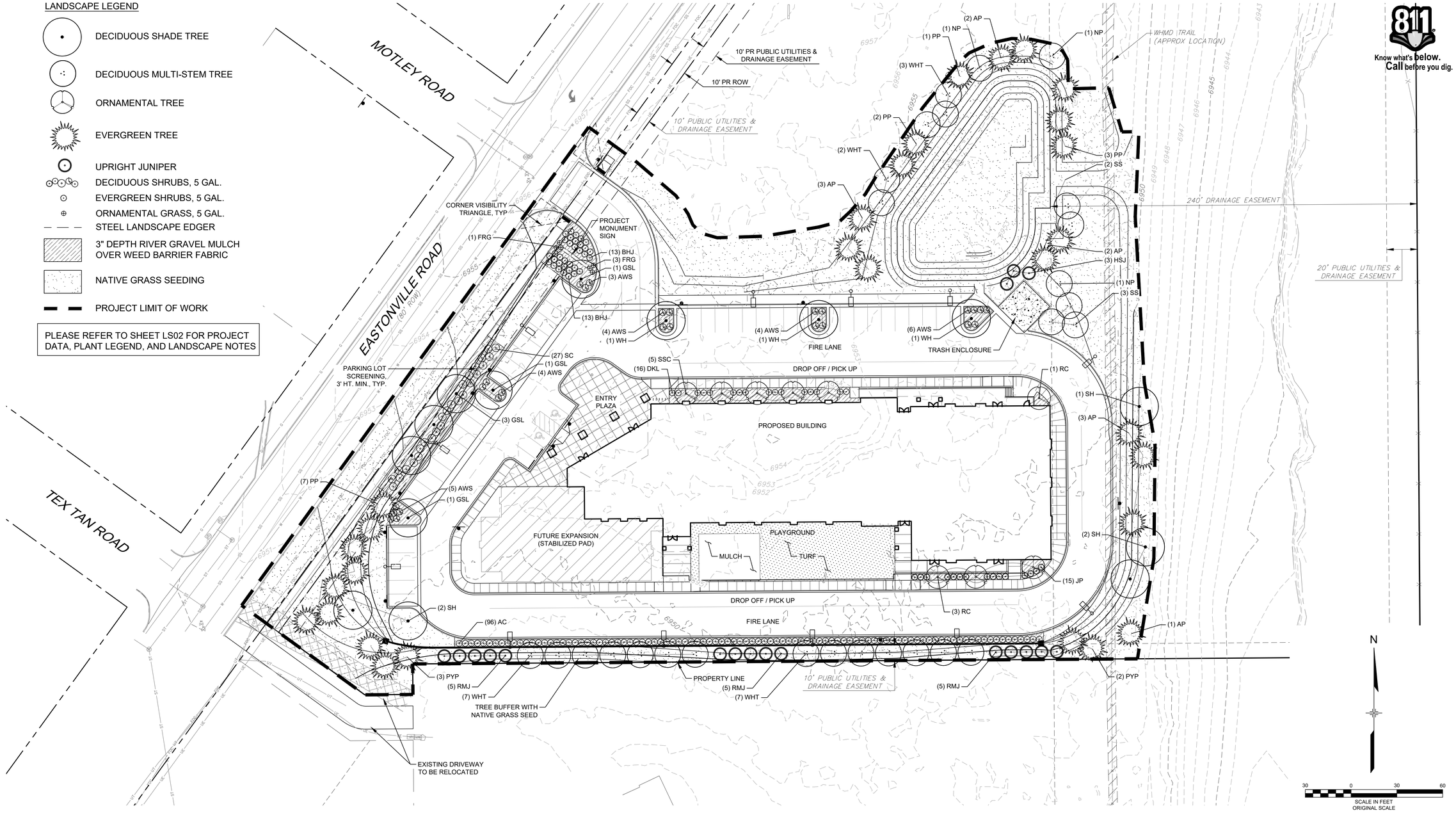
DESIGNED BY:	ACR	SCALE	DATE ISSUED:	DRAWING No.
DRAWN BY:	ACR	HORIZ. AS SHOWN	SEPTEMBER 2018	STD03
CHECKED BY:	DRK	VERT. AS SHOWN	SHEET 22 OF 29	

EPC 9/11/18

LANDSCAPE LEGEND

- DECIDUOUS SHADE TREE
- DECIDUOUS MULTI-STEM TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- UPRIGHT JUNIPER
- DECIDUOUS SHRUBS, 5 GAL.
- EVERGREEN SHRUBS, 5 GAL.
- ORNAMENTAL GRASS, 5 GAL.
- STEEL LANDSCAPE EDGER
- 3" DEPTH RIVER GRAVEL MULCH OVER WEED BARRIER FABRIC
- NATIVE GRASS SEEDING
- PROJECT LIMIT OF WORK

PLEASE REFER TO SHEET LS02 FOR PROJECT DATA, PLANT LEGEND, AND LANDSCAPE NOTES



Know what's below. Call before you dig.

N

30 0 30 60

SCALE IN FEET
ORIGINAL SCALE

REFERENCE DRAWINGS

X-995-MDG22x34
X-995-PR-BASE
X-995-EX-BASE
X-995-EX-MAP
X-995-PR-GRAD
X-995-PR-LANDSCAPE
Planting Details

No.	DATE	DESCRIPTION	BY

REVISIONS

SHEET KEY

COMPUTER FILE MANAGEMENT

FILE NAME: R:\18.995.001 (Liberty Tree Academy)\Dwg\Construction Plans\Landscape\LS01_CD.dwg
CTB FILE: ----
PLOT DATE: 9/11/2018 8:43 AM
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PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

Teresa J. Roberson LA-203 01/01/2008 Original Date of Licensure STATE OF COLORADO LICENSED LANDSCAPE ARCHITECT

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

LANDSCAPE PLAN

DESIGNED BY:	ACR	SCALE		DATE ISSUED:	SEPTEMBER 2018
DRAWN BY:	ACR	HORIZ.	1" = 30'	SHEET	23 OF 29
CHECKED BY:	DRK	VERT.	NA	DRAWING No.	LS01

EPC 9/11/18

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

PLANT LEGEND

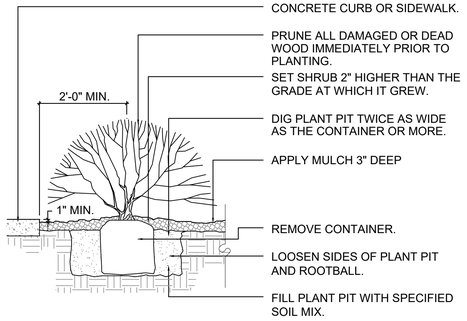
	SYMBOL	QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE	NOTES
DECIDUOUS SHADE TREES						
	GSL	6	ACCOLADE ELM	ULMUS JPAONICA X WILSONIANA	1.5" CAL.	B&B
	SH	5	SKYLINE HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE'	1.5" CAL.	B&B
	WH	3	WESTERN HACKBERRY	CELTIS OCCIDENTALIS	1.5" CAL.	B&B
	SUBTOTAL	*14*				
EVERGREEN TREES						
	AP	11	AUSTRIAN PINE	PINUS NIGRA	6' HT.	B&B
	HSJ	3	HILLSPIRE JUNIPER	JUNIPERUS VIRGINIANA 'CUPRESSIFOLIA'	6' HT.	B&B
	PP	13	PONDEROSA PINE	PINUS PONDEROSA	6' HT.	B&B
	PYP	5	PINYON PINE	PINUS EDULIS	6' HT.	B&B
	RMJ	15	ROCKY MOUNTAIN JUNIPER	JUNIPERUS SCOPULORUM	6' HT.	B&B
	SUBTOTAL	*27*				
ORNAMENTAL TREES						
	NP	4	NEWPORT PLUM	PRUNUS CERASIFERA 'NEWPORT'	1" CAL.	B&B; MULTI-STEM
	RC	6	RADIANT CRABAPPLE	MALUS 'RADIANT'	1" CAL.	B&B
	SS	5	SHADBLOW SERVICEBERRY	AMELANCHIER CANADENSIS	1" CAL.	B&B; MULTI-STEM
	SSC	5	SPRING SNOW CRABAPPLE	MALUS 'SPRING SNOW'	1" CAL.	B&B
	WHT	18	WASHINGTON HAWTHORN	CRATAEUS PHAENOPYRUM	1" CAL.	B&B; MULTI-STEM
	SUBTOTAL	*38*				
EVERGREEN SHRUBS						
	BHJ	26	BAR HARBOUR JUNIPER	JUNIPERUS HORIZONTALIS 'BAR HARBOUR'	5 GAL.	4' O.C. SPACING
	SUBTOTAL	*26*				
DECIDUOUS SHRUBS						
	AC	96	ALPINE CURRANT	RIBES ALPINUM	5 GAL.	4' O.C. SPACING
	AWS	26	ANTHONY WATERER SPIREA	SPIRAEA BUMALDA 'ANTHONY WATERER'	5 GAL.	4' O.C. SPACING
	DKL	23	DWARF KOREAN LILAC	SYRINGA MEYERI	5 GAL.	4' O.C. SPACING
	JP	27	JACKMAN POTENTILLA	POTENTILLA FRUTICOSA 'JACKMANII'	5 GAL.	4' O.C. SPACING
	SC	27	SPREADING COTONEASTER	COTONEASTER DIVARICATA	5 GAL.	5' O.C. SPACING
	SUBTOTAL	*199*				
ORNAMENTAL GRASSES						
	FRG	4	FEATHER REED GRASS	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	5 GAL.	3' O.C.
	SUBTOTAL	*4*				

PROJECT DATA	
DESCRIPTION	QUANTITY
PROPERTY (AS DELINEATED ON PLAN)*	161,038 S.F.
BUILDING	25,279 S.F.
PARKING & OTHER VEHICULAR USE AREAS	47,391 S.F.
LANDSCAPE	65,609 S.F.
PARKING STALLS	49

* ONLY A PORTION OF THE TOTAL LOT IS BEING DEVELOPED AT THIS TIME, AS OUTLINED ON THE PLAN BY THE PROJECT LIMIT OF WORK. THEREFORE, THE QUANTITY SHOWN ABOVE IS ONLY THAT PORTION BEING DEVELOPED AT THIS TIME.

LANDSCAPE NOTES:

1. ALL CONSTRUCTION SHALL BE DONE PER REGULATIONS OF GOVERNING AGENCIES.
2. AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM IS REQUIRED FOR ALL LANDSCAPE AREAS. SPRAY IRRIGATION WILL BE PROVIDED FOR TURF AND GRASS AREAS; DRIP IRRIGATION WILL BE PROVIDED FOR ALL SHRUB BEDS AND TREES.
3. NO TREE OR SHRUB WILL BE PLANTED WITHIN 5' OF A FIRE HYDRANT.
4. DISTANCE OF TREES FROM WET UTILITY LINES SHALL BE A MINIMUM OF 10 FEET.
5. ALL SHRUB BED AREAS SHALL BE SEPARATED FROM SOD OR GRASS AREAS BY ROLLED-TOP STEEL EDGING MATERIAL.
6. 3" DEPTH RIVER GRAVEL MULCH (1½") SHALL BE PLACED OVER A SUITABLE WEED BARRIER FABRIC IN ALL SHRUB PLANTING BEDS.
7. SOIL PREPARATION FOR LANDSCAPE AREAS SHALL INCLUDE TOPSOIL AND/OR ORGANIC MATTER (COMPOST OR AGED GROUND MANURE) AND SHALL BE ADDED AT A RATE OF 4 CUBIC YARDS PER ONE THOUSAND SQUARE FEET AND TILLED 8" DEPTH INTO THE SOIL.
8. SHRUB BEDS SHALL BE AMENDED AND TILLED IN THEIR ENTIRETY.
9. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE IN ALL LANDSCAPE AREAS.
10. CONTRACTOR SHALL ENSURE THAT THE LANDSCAPE PLAN IS COORDINATED WITH THE PLANS PREPARED BY OTHER CONSULTANTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE, OR OTHER CONSTRUCTION DOES NOT CONFLICT WITH NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS AS DESIGNATED ON THIS PLAN.
11. TOPSOIL, IF DISTURBED SHALL BE STOCKPILED AND RE-USED ON THE SITE.



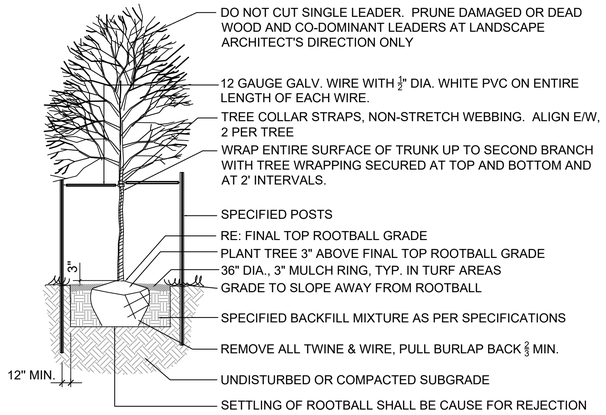
NOTE: ANY BROKEN OR CRUMBLING ROOTBALL WILL BE REJECTED. REMOVING THE CONTAINERS WILL NOT BE AN EXCUSE FOR DAMAGED ROOTBALLS.

NOTE: HOLD GRADE 1" BELOW EDGE OF WALK OR CURB. THIS DETAIL SHALL ALSO APPLY TO PERENNIAL FLOWERS IN CONTAINER.

NOTE: ALL JUNIPER PLANTS SHOULD BE PLANTED SO TOP OF ROOT MASS OCCURS AT FINISH GRADE OF MULCH LAYER.

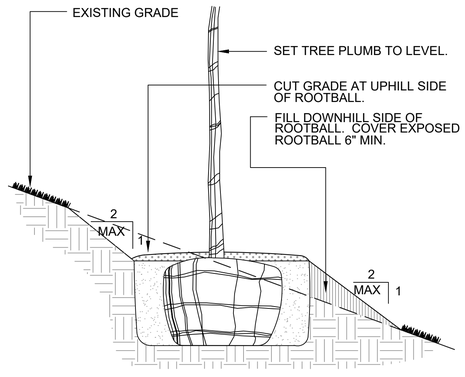
SHRUB PLANTING

NTS



DECIDUOUS TREE PLANTING

NTS

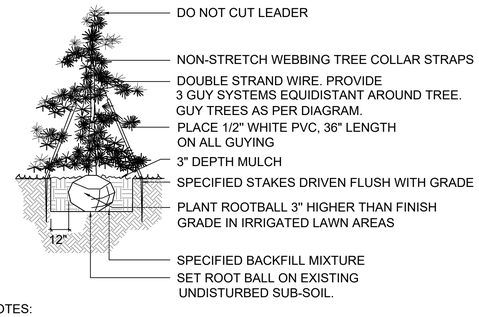


NOTE: REFER TO VARIOUS SPECIFIC TREE INSTALLATION DETAILS FOR STAKING, GUYING, MULCHING, ETC.

NOTE: THIS INSTALLATION SHALL APPLY TO ALL TREE TYPES AND SIZES PLANTED ON SLOPES LESS THAN 2:1.

TREE PLANTING ON SLOPE

NTS



NOTES:
1. INSTALL SPECIFIED MULCH TO DRIPLINE OF TREE WHERE PLANTED IN GRASS AREAS.
2. DO NOT PROVIDE WATER BASIN IN IRRIGATED LAWN AREAS.
3. PLANT TOP OF ROOTBALL AT FINAL GRADE OF WATERING BASIN IN NATIVE GRASS AREAS.

EVERGREEN TREE PLANTING

NTS

REFERENCE DRAWINGS

X-995-MDG22x34
X-995-PR-BASE
X-995-EX-BASE
X-995-EX-MAP
X-995-PR-GRAD
X-995-PR-LANDSCAPE
Planting Details

No.	*DATE*	*DESCRIPTION*	*BY*

REVISIONS

COMPUTER FILE MANAGEMENT

FILE NAME: R:\18.995.001 (Liberty Tree Academy)\Dwg\Construction Plans\Landscape\LS01_CD.dwg
CTB FILE: ----
PLOT DATE: 9/11/2018 8:43 AM
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SHEET KEY

PREPARED FOR:
LIBERTY TREE ACADEMY

PREPARED BY:
Matrix DESIGN GROUP
AN EMPLOYEE-OWNED COMPANY

Teresa J. Robertson LA-203 01/01/2008 Original Date of Licensure STATE OF COLORADO LICENSED LANDSCAPE ARCHITECT

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS, PCD FILE NO. PPR-18-023

LANDSCAPE NOTES

DESIGNED BY:	*ACR*	*SCALE*		*DATE ISSUED:*	*SEPTEMBER 2018*
DRAWN BY:	*ACR*	*HORIZ.*	*NA*	*DRAWING No.*	*LS02*
CHECKED BY:	*DRK*	*VERT.*	*NA*	*SHEET*	*24 OF 29*

EPC 9/11/18

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	DETAIL NO.
	HUNTER	PROS-12-CV-PRS30 WITH PRO-SPRAY NOZZLE	HI-POP SPRAY HEAD	1
	HUNTER	PROS-12-CV-PRS30 WITH PRO-SPRAY SST, CORNER NOZZLE	HI-POP SPRAY HEAD	1
	HUNTER	I-20-12 WITH # NOZZLE	GEAR DRIVEN ROTOR	2
	HUNTER	I-20-12 WITH # NOZZLE	GEAR DRIVEN ROTOR	2
	HUNTER	ICV-FS-AS	ELECTRIC CONTROL VALVE WITH DECODER	11, 17
	HUNTER	HQ-44-LRC	QUICK COUPLING VALVE	3
A	HUNTER	DUAL - 48 STATION MODEL	2-WIRE ELECTRIC CONTROLLER	4
W	HUNTER	SOLAR SYNC - WSS-SEN (*wireless)	WEATHER SENSOR DEVICE	20
	FEBCO	825YA WITH WATTS 223-HP PRV	RP BACKFLOW PREVENTER	5
N/S	STRONG BOX	SBBC-(15)AL	BACKFLOW PREVENTER ENCLOSURE	6
N/S	OLDCASTLE / CARSON	REFER TO SPECIFICATIONS AND DETAILS	VALVE BOXES	VARIOUS
N/S	MATCO	201X	MANUAL DRAIN VALVE	7
		LINE SIZE - 2½" AND SMALLER	GATE VALVE	8
	HUNTER	ICV-FS-AS	MASTER CONTROL VALVE	13
FS	GST	FSI-T 10-001 1"	FLOW SENSOR	14
		CLASS 200 DR - 2½" & SMALLER	PVC MAINLINE	9
		CLASS 200 DR	PVC LATERAL	9
		CLASS 160	PVC SLEEVING	10
	TORO	BLUE STRIPE	POLY DRIP TUBING -¾" MIN. WIDTH	15
	HUNTER	ICZ-101-LF-25	DRIP VALVE ASSEMBLY WITH DECODER	14, 16
			DRIP LINE BLOW-OUT STUB	16
N/S	RAIN BIRD	XERI-BUG	DRIP EMITTERS	15
N/S	HUNTER	DUAL-1	VALVE DECODER	11, 14, 17
	PAIGE	P7354D (FOR HUNTER, BASELINE)	2-WIRE DECODER CABLE	11, 14, 17
A	HUNTER	DUAL-S	SURGE PROTECTION	18

CONTROLLER & STATION NO.
CONTROL VALVE SIZE

IRRIGATION CONSTRUCTION NOTES

1. DRAWINGS AND BASE INFORMATION - ALL BASE AND PLANTING INFORMATION HAVE BEEN PROVIDED BY MATRIX DESIGN GROUP. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY HYDROSYSTEMS*KDI OF ANY DISCREPANCIES BETWEEN THE UTILITY OR PLANTING PLANS AND THE IRRIGATION PLAN. IF CONTRACTOR FAILS TO NOTIFY HYDROSYSTEMS*KDI AND MAKES CHANGES TO THE IRRIGATION SYSTEM DESIGN, HE ASSUMES ALL COSTS AND LIABILITIES ASSOCIATED WITH THOSE FIELD CHANGES. REFER TO SPECIFICATIONS FOR ADDITIONAL PROJECT REQUIREMENTS. CONTACT IRRIGATION CONSULTANT FOR CURRENT SPECIFICATIONS IF NOT PROVIDED.

2. SYSTEM PRESSURE - HYDROSYSTEMS*KDI HAS CONTACTED THE LOCAL WATER DISTRICT THAT SERVES THIS SITE AND THEY HAVE BEEN TOLD THAT THE STATIC WATER PRESSURE IN THIS AREA SHOULD BE **109** PSI. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY PRESSURE PRIOR TO COMMENCING ANY CONSTRUCTION AND NOTIFY HYDROSYSTEMS*KDI OF ANY VARIANCE FROM THE STATED PRESSURE IMMEDIATELY. WRITTEN DOCUMENTATION OF PRESSURE TEST AND RESULTS SHALL BE PROVIDED TO HYDROSYSTEMS*KDI AT CONSTRUCTION ONSET. IF CONTRACTOR FAILS TO FIELD VERIFY PRESSURE AND/OR NOTIFY HYDROSYSTEMS*KDI OR ANY VARIATIONS FROM THIS PRESSURE, THEN HE ASSUMES ALL CONSTRUCTION AND ENGINEERING COSTS ASSOCIATED WITH SYSTEM MODIFICATIONS REQUIRED TO ACCOMMODATE ACTUAL SITE PRESSURE. THIS SYSTEM HAS BEEN DESIGNED FOR A REQUIRED STATIC PRESSURE OF **81** PSI MINIMUM.

3. IRRIGATION SYSTEM OPERATION INTENT - THIS IRRIGATION SYSTEM HAS BEEN DESIGNED TO IRRIGATE THE ESTABLISHED LANDSCAPE WITHIN A SIX NIGHT PER WEEK, SIX HOUR PER NIGHT WATERING WINDOW. ESTABLISHMENT WATERING WILL REQUIRE UP TO TWICE AS MUCH IRRIGATION FOR A FOUR TO SIX WEEK PERIOD. THE DESIGN IS BASED ON THE FOLLOWING PROJECTED WEEKLY APPLICATION RATES AFTER ESTABLISHMENT. THESE FIGURES ARE BASED ON A 30-YEAR AVERAGE WEATHER DATA AND WILL NEED TO BE ADJUSTED DUE TO SEASONAL CHANGES AND WEATHER CONDITIONS ABOVE AND BELOW THE AVERAGE VALUES UTILIZED.
   ORNAMENTAL PLANTINGS 0.89" PER WEEK PEAK SEASON
   NATIVE SEED MIXES 0.74" PER WEEK PEAK SEASON (TWO SEASONS)
   NOTE: IT IS THE INTENT OF THIS DESIGN THAT NATIVE AREAS WOULD ONLY BE IRRIGATED FOR ESTABLISHMENT. SYSTEM WILL REMAIN FOR USE DURING YEARS WITH LESS THAN NORMAL RAINFALL.

4. EQUIPMENT INSTALLATION - IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED WITHIN PROPERTY LIMITS AND WITHIN LANDSCAPED AREAS. ANY EQUIPMENT OTHER THAN VALVE BOXES OR SLEEVING THAT CONTAINS PIPE OR WIRES SHOWN OUTSIDE OF THESE LIMITS IS SHOWN IN THAT LOCATION FOR GRAPHICAL CLARITY ONLY. ALL VALVE BOXES SHALL BE INSTALLED A MINIMUM OF 2'-0" FROM EDGE OF ANY PAVED SURFACES UNLESS SPECIFICALLY INDICATED ON PLANS. BOXES INSTALLED IN OPEN TURF AREAS SHALL BE KEPT TO EDGES AND STAKED FOR REVIEW IF ALONG HIGH TRAFFIC AREAS. ALL VALVE BOXES SHALL BE PLACED A MINIMUM OF 3'-0" FROM THE CENTERLINE OF ANY DRAINAGE SWALE. ALL VALVE BOXES WITHIN PAVEMENT SHALL BE TIER 15 RATED BOXES FOR HEAVY DUTY NON-DELIBERATE TRAFFIC. BOX LID COLOR SHALL MATCH ADJACENT MATERIALS, I.E. GREEN IN TURF, TAN IN WOOD MULCH, GRAY IN STONE MULCH, PURPLE FOR RECLAIMED WATER SYSTEMS (IF REQUIRED). REFER TO LANDSCAPE PLANS FOR MATERIAL COLORS AND TYPES. ALL BOXES SHALL BE INSTALLED TO BE FLUSH WITH GRADE AND IN AN ORDERLY MANNER.

5. PIPING INSTALLATION - IRRIGATION PIPING SHALL MAINTAIN A MINIMUM DISTANCE FROM BUILDING FOUNDATIONS OF 5 FEET OR AS DESCRIBED IN SOILS REPORT, WHICHEVER IS GREATER. NO SPRAY IRRIGATION SHALL OCCUR WITHIN 10 FEET OF THE FOUNDATION. NO DRIP IRRIGATION SHALL OCCUR WITHIN 5 FEET OF THE FOUNDATION UNLESS SOIL MOISTURE SENSORS ARE INSTALLED ON VALVES SERVICING THESE AREAS. ALL IRRIGATION PIPING AND EMISSION DEVICES LOCATED ON TOP OF OR WITHIN BUILDING STRUCTURE SHALL CONFORM TO WATERPROOFING CONSULTANT REQUIREMENTS. PIPE ROUTING MAY BE SHOWN WITHIN THESE DISTANCES FOR GRAPHICAL CLARITY ONLY.

6. MANUAL DRAIN VALVES - CONTRACTOR TO INSTALL ONE MANUAL DRAIN VALVE ON PRESSURE SUPPLY LINE DIRECTLY DOWNSTREAM OF BACKFLOW PREVENTER AND AT ALL LOW POINTS AND DEAD ENDS OF PRESSURE SUPPLY PIPING TO ENSURE COMPLETE DRAINAGE OF SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THESE LOCATIONS IN-FIELD AND INSTALLATION LOCATIONS SHALL BE NOTED ON AS-BUILTS.

7. POP-UP SPRAY NOZZLES - CONTRACTOR TO INSTALL PLASTIC NOZZLES ON ALL POP-UP SPRAY HEADS. INSTALL 17 SERIES NOZZLES ON ALL HEADS SPACED AT 16' TO 15'. INSTALL 15 SERIES NOZZLES ON ALL HEADS SPACED AT 12' TO 14'. INSTALL 12 SERIES NOZZLES ON ALL HEADS SPACED 10' TO 11'. INSTALL 10 SERIES NOZZLES ON ALL HEADS SPACED AT 8' TO 9'. INSTALL 8 SERIES NOZZLES ON ALL HEADS SPACED AT 6' TO 7'. INSTALL 5' NOZZLES ON ALL HEADS SPACED AT 5'. INSTALL SIDE STRIP NOZZLES ON ALL HEADS WITH AN "S" DESIGNATION AND RIGHT AND LEFT CORNER STRIP NOZZLES ON ALL HEADS WITH AN "L" OR "R" DESIGNATION. VARIABLE ARC NOZZLES SHOULD BE UTILIZED ADJACENT TO CURVILINEAR SHRUB BEDS OR FOR ANY ANGLES THAT ARE NOT A STANDARD NOZZLE ANGLE. WHERE INDICATED, INSTALL LOW FLOW SQ SERIES SQUARE NOZZLES AT SPACING SHOWN.

8. DRIP IRRIGATION - REFER TO IRRIGATION DETAIL SHEET FOR DRIP EMITTER QUANTITIES AND PLACEMENT.

9. UNLABELED PIPING - ALL UNLABELED LATERAL PIPING SHALL BE 1" MINIMUM UNLESS OTHERWISE NOTED.

10. SLEEVING - ALL SLEEVING UNDER PAVED SURFACES SHOWN ON PLANS IS BY CONTRACTOR UNLESS OTHERWISE NOTED. SLEEVING SHALL BE INSTALLED IN THE SIZES AND QUANTITIES SHOWN ON PLANS OR BASED ON THE SCHEDULE BELOW. WHERE SLEEVES ARE SHOWN, BUT NOT LABELED, FOLLOW THE SCHEDULE BELOW. ALL MAINLINE, CONTROL WIRES AND DRIP LINES UNDER PAVED SURFACES ARE TO BE INSTALLED IN SLEEVING. ALL MAINLINE SLEEVE LOCATIONS TO INCLUDE A SEPARATE WIRE SLEEVE.

SLEEVED PIPE SIZE/WIRE QUANTITY	REQUIRED SLEEVE SIZE & (QUANTITY)
¾" - 1¼" PIPING	2" PVC (1)
1½" - 2" PIPING	4" PVC (1)
2½" - 3" PIPING	6" PVC (1)
COMMUNICATION CABLE	2" PVC (1)

11. 2-WIRE SYSTEM NOTES - CONTRACTOR SHALL INSTALL ALL TWO-WIRE COMPONENTS PER MANUFACTURES RECOMMENDATIONS AND STANDARDS.
    11.1. CONTRACTOR SHALL USE ONLY MANUFACTURED 2-WIRE DECODER CABLE (SEE SCHEDULE FOR SPECIFIC 2-WIRE CABLE).
    11.2. USE DIFFERENT COLOR 2-WIRE DECODER CABLE FOR EACH CONTROLLER (BLUE FOR A AND BLACK FOR B).
    11.3. ONLY USE SINGLE STATION DECODERS (SEE SCHEDULE FOR SPECIFIC MODEL).
    11.4. ONLY USE SENSOR DECODER FOR FLOW SENSOR (SEE SCHEDULE FOR SPECIFIC MODEL) IF INDICATED ON PLANS.
    11.5. LOOP 5' OF 2-WIRE DECODER CABLE INTO ALL VALVE BOXES (WITH DECODERS AND SPLICES) FOR MAINTENANCE.
    11.6. USE ONLY 3M DBR-6 WATERPROOF CONNECTORS ON ALL WIRE SPLICES AND ALL WIRE SPLICES ARE TO BE MADE WITHIN A VALVE BOX WITH CONTROL VALVES OR A SEPARATE 10" ROUND VALVE BOX FOR WIRE SPLICES.
    11.7. INSTALL SURGE PROTECTOR RODS OR PLATES 8 LF. FROM VALVES, DECODERS, AND COMMUNICATION WIRE.
    11.8. GROUND ALL DECODERS AND DECODER WIRE A MINIMUM OF EVERY 1000' OF WIRE OR EVERY 12TH DECODER AND AT ALL ENDS OF 2-WIRE DECODER CABLE RUN.
    11.9. LOOP EXTRA 10' OF 2-WIRE DECODER CABLE INTO A VALVE BOX AT PHASING LINES FOR FUTURE CONNECTION (IF INDICATED ON PLANS).

12. ADJUSTMENT - CONTRACTOR SHALL FINE TUNE/ADJUST THE IRRIGATION SYSTEM TO REDUCE/AVOID OVERSPRAY ONTO HARD SURFACES BY ADJUSTING NOZZLE DIRECTION AND NOZZLE RADIUS.

13. PLANS AND SPECIFICATIONS - CONTRACTOR RESPONSIBLE TO ENSURE WORK CONFORMS TO PLANS AND SPECIFICATIONS. AT ONSET OF CONSTRUCTION, VERIFY PLANS ARE CURRENT. WHERE REQUIRED BY CITY OR TOWN, CONTRACTOR SHALL CONSTRUCT ONLY OFF CITY OR TOWN STAMPED PLANS. REVISIONS TO CITY OR TOWN STAMPED PLANS SHALL CONFORM TO CITY OR TOWN FIELD CHANGE PROCEDURES AND DOCUMENTATION.

14. EXISTING IRRIGATION DAMAGE - CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING IRRIGATION SYSTEMS DAMAGED DURING NEW INSTALLATION. REPAIR OR REPLACEMENT SHALL BE DETERMINED BY OWNER OR OWNER'S REPRESENTATIVE AND PAID FOR BY THE LANDSCAPE CONTRACTOR.

15. EXISTING IRRIGATION COORDINATION - EXISTING IRRIGATION SYSTEM SHALL NOT BE TURNED OFF FOR MORE THAN 24 HOURS MAXIMUM. CONTRACTOR SHALL COORDINATE TURN OFF OF SYSTEM WITH OWNER OR MAINTENANCE STAFF 72 HOURS PRIOR TO ANY NEW CONSTRUCTION.

16. WATER BUDGETS AND PROJECTIONS - HYDROSYSTEMS-KDI HAS BASED THE IRRIGATION DESIGN AND THE ASSOCIATED PROJECTED WATER USE UPON SUCH FACTORS AS CITY OR WATER DISTRICT IMPOSED REQUIREMENTS, PUBLISHED PLANT SPECIES WATER NEEDS, SELECTED IRRIGATION METHOD EFFICIENCIES AS REPORTED BY INDEPENDENT TESTING FACILITIES, HISTORICAL WEATHER DATA FOR THE PROJECT LOCATION, AND PROPER MAINTENANCE PROCEDURES. HYDROSYSTEMS*KDI IS NOT RESPONSIBLE, AND ACCEPTS NO RESPONSIBILITY, FOR THE ACTUAL WATER USAGE VARIATION THAT IS A RESULT OF FIELD MODIFICATIONS TO THE SYSTEM NOT MATCHING CONSTRUCTION DOCUMENTS, IMPROPER MAINTENANCE, WASTE DUE TO SYSTEM DAMAGE OR VANDALISM, OR WEATHER CONDITIONS THAT DEVIATE FROM PUBLISHED 30 YEAR HISTORICAL AVERAGES.

Know what's **below.**
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DIRECTORY

HydroSystems-KDI, Inc. Irrigation Consulting
860 Tabor Street, Suite 200
Lakewood, Colorado 80401
303-980-5327
303-980-5384 (fax)

REFERENCE DRAWINGS

LS01_SDP
X-995-PR-LANDSCAPE
X-995-EX-BASE
X-995-EX-MAP
X-995-MDG22x34
X-995-PR-BASE
X-995-PR-GRAD

No.	DATE	DESCRIPTION	BY
		REVISIONS	

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CTB FILE: ----
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SHEET KEY

PREPARED FOR: LIBERTY TREE ACADEMY
PREPARED BY: Matrix DESIGN GROUP, AN EMPLOYEE-OWNED COMPANY

SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS

IRRIGATION NOTES & SCHEDULE

DESIGNED BY:	KC	SCALE	DATE ISSUED:	AUGUST 2018
DRAWN BY:	KC	HORIZ.		DRAWING No.
CHECKED BY:	KJD	VERT.	SHEET 25 OF 29	IR0

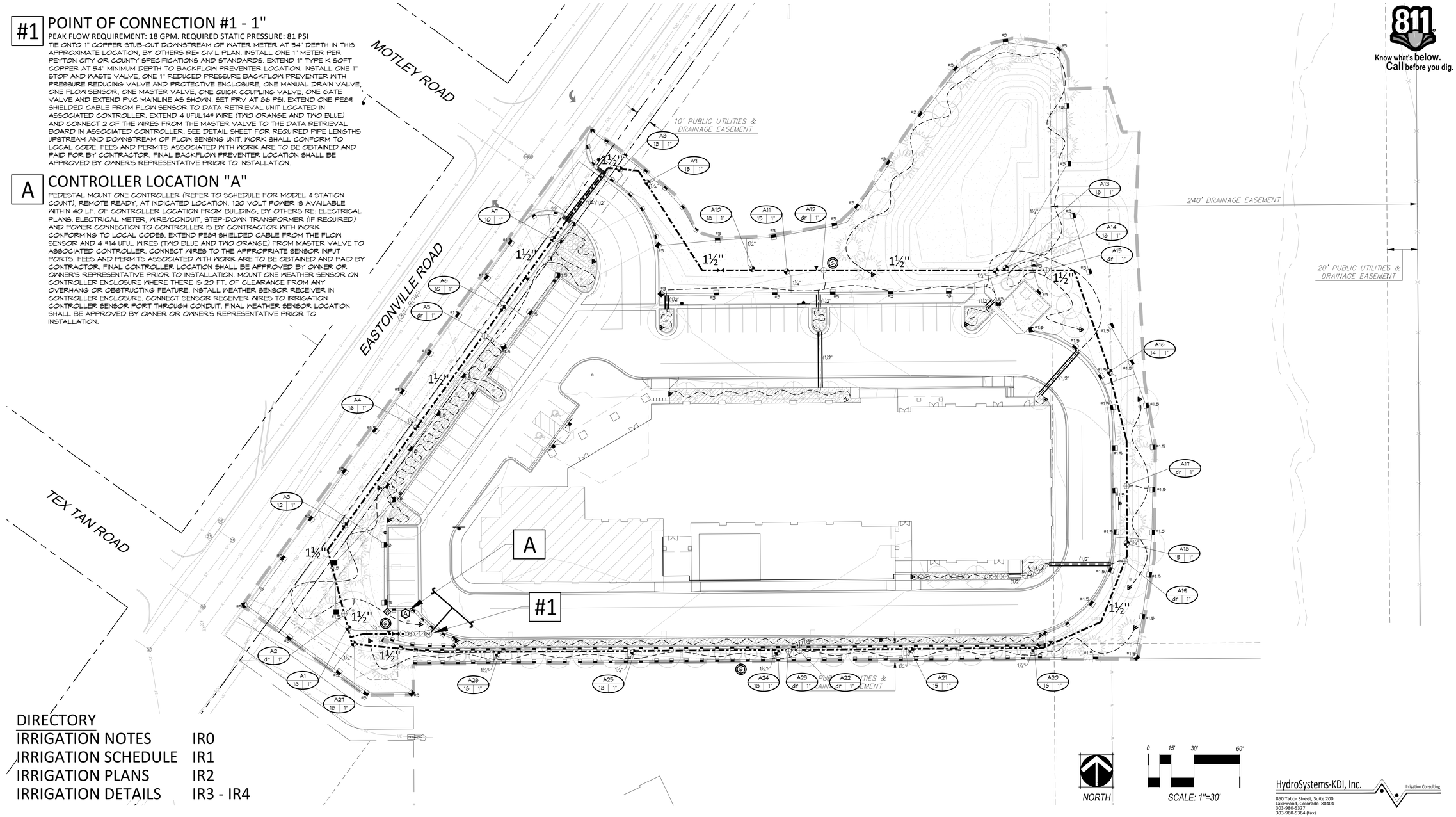
#1 POINT OF CONNECTION #1 - 1"

PEAK FLOW REQUIREMENT: 18 GPM. REQUIRED STATIC PRESSURE: 81 PSI

TIE ONTO 1" COPPER STUB-OUT DOWNSTREAM OF WATER METER AT 54" DEPTH IN THIS APPROXIMATE LOCATION, BY OTHERS RE= CIVIL PLAN. INSTALL ONE 1" METER PER PEYTON CITY OR COUNTY SPECIFICATIONS AND STANDARDS. EXTEND 1" TYPE K SOFT COPPER AT 54" MINIMUM DEPTH TO BACKFLOW PREVENTER LOCATION. INSTALL ONE 1" STOP AND WASTE VALVE, ONE 1" REDUCED PRESSURE BACKFLOW PREVENTER WITH PRESSURE REDUCING VALVE AND PROTECTIVE ENCLOSURE, ONE MANUAL DRAIN VALVE, ONE FLOW SENSOR, ONE MASTER VALVE, ONE QUICK COUPLING VALVE, ONE GATE VALVE AND EXTEND PVC MAINLINE AS SHOWN. SET PRV AT 56 PSI. EXTEND ONE PE89 SHIELDED CABLE FROM FLOW SENSOR TO DATA RETRIEVAL UNIT LOCATED IN ASSOCIATED CONTROLLER. EXTEND 4 UFUL14# WIRE (TWO ORANGE AND TWO BLUE) AND CONNECT 2 OF THE WIRES FROM THE MASTER VALVE TO THE DATA RETRIEVAL BOARD IN ASSOCIATED CONTROLLER. SEE DETAIL SHEET FOR REQUIRED PIPE LENGTHS UPSTREAM AND DOWNSTREAM OF FLOW SENSING UNIT. WORK SHALL CONFORM TO LOCAL CODE. FEES AND PERMITS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID FOR BY CONTRACTOR. FINAL BACKFLOW PREVENTER LOCATION SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

A CONTROLLER LOCATION "A"

PEDESTAL MOUNT ONE CONTROLLER (REFER TO SCHEDULE FOR MODEL & STATION COUNT), REMOTE READY, AT INDICATED LOCATION. 120 VOLT POWER IS AVAILABLE WITHIN 40 LF. OF CONTROLLER LOCATION FROM BUILDING, BY OTHERS RE: ELECTRICAL PLANS. ELECTRICAL METER, WIRE/CONDUIT, STEP-DOWN TRANSFORMER (IF REQUIRED) AND POWER CONNECTION TO CONTROLLER IS BY CONTRACTOR WITH WORK CONFORMING TO LOCAL CODES. EXTEND PE89 SHIELDED CABLE FROM THE FLOW SENSOR AND 4 #14 UFUL WIRES (TWO BLUE AND TWO ORANGE) FROM MASTER VALVE TO ASSOCIATED CONTROLLER. CONNECT WIRES TO THE APPROPRIATE SENSOR INPUT PORTS. FEES AND PERMITS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID BY CONTRACTOR. FINAL CONTROLLER LOCATION SHALL BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. MOUNT ONE WEATHER SENSOR ON CONTROLLER ENCLOSURE WHERE THERE IS 20 FT. OF CLEARANCE FROM ANY OVERHANG OR OBSTRUCTING FEATURE. INSTALL WEATHER SENSOR RECEIVER IN CONTROLLER ENCLOSURE. CONNECT SENSOR RECEIVER WIRES TO IRRIGATION CONTROLLER SENSOR PORT THROUGH CONDUIT. FINAL WEATHER SENSOR LOCATION SHALL BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.



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PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS

IRRIGATION PLAN

DESIGNED BY:	KC	SCALE	DATE ISSUED:	AUGUST 2018	DRAWING No.
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CHECKED BY:	KJD	VERT.	SHEET	26 OF 29	IR1

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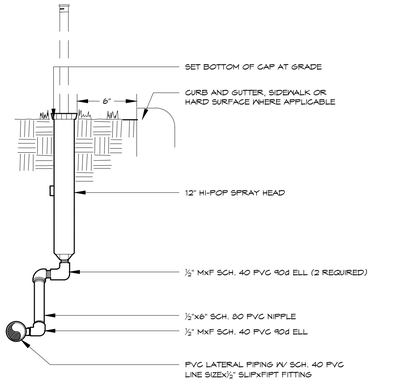
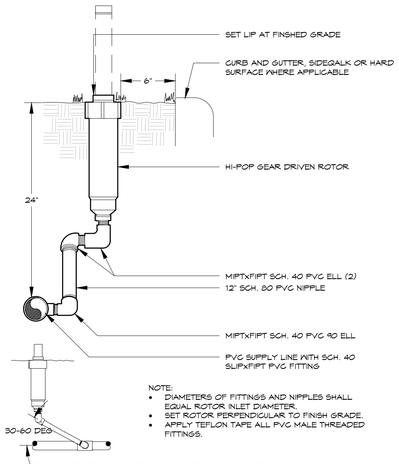


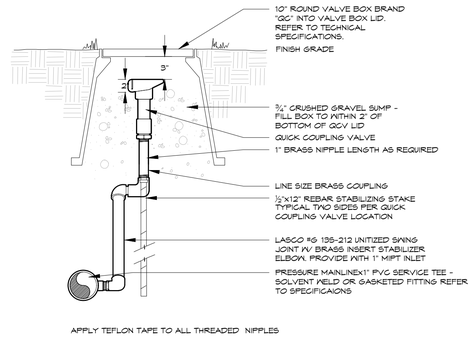
NOTE:
- SET HEAD PERPENDICULAR TO FINISH GRADE SWING.
- JOINT ASSEMBLY SHALL BE ATTACHED TO BOTTOM SPRAY HEAD INLET ONLY.
- APPLY TEFLON TAPE TO ALL MALE PVC THREADED FITTINGS AND NIPPLES.

HI-POP SPRAY HEAD — 1



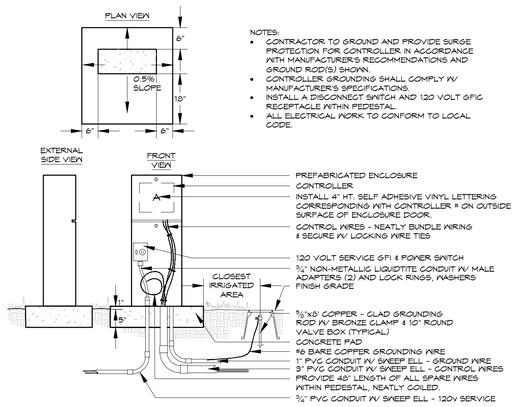
NOTE:
- DIAMETERS OF FITTINGS AND NIPPLES SHALL EQUAL ROTOR INLET DIAMETER.
- SET ROTOR PERPENDICULAR TO FINISH GRADE.
- APPLY TEFLON TAPE ALL PVC MALE THREADED FITTINGS.

HI-POP GEAR DRIVEN ROTOR — 2



APPLY TEFLON TAPE TO ALL THREADED NIPPLES

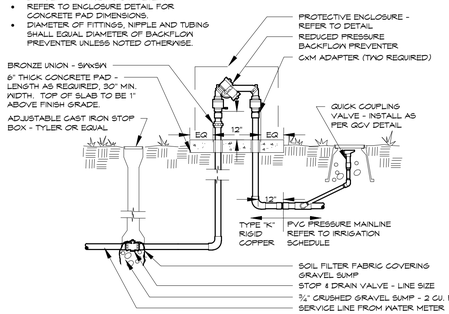
QUICK COUPLING VALVE — 3



NOTES:
- CONTRACTOR TO GROUND AND PROVIDE SURGE PROTECTION FOR CONTROLLER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND GROUND ROD(S) SHOWN.
- CONTROLLER GROUNDING SHALL COMPLY W/ MANUFACTURER'S SPECIFICATIONS.
- INSTALL A DISCONNECT SWITCH AND 120 VOLT GFIC RECEPTACLE WITHIN PEDESTAL.
- ALL ELECTRICAL WORK TO CONFORM TO LOCAL CODE.

ELECTRIC CONTROLLER — 4
PEDESTAL

NOTE:
- CONCRETE PAD PENETRATIONS TO BE 1" LARGER THAN TUBING DIAMETER.
- REFER TO ENCLOSURE DETAIL FOR CONCRETE PAD DIMENSIONS.
- DIAMETER OF FITTINGS, NIPPLE AND TUBING SHALL EQUAL DIAMETER OF BACKFLOW PREVENTER UNLESS NOTED OTHERWISE.

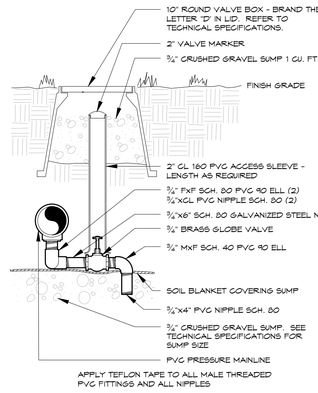


BACKFLOW PREVENTER — 5
3/4" - 2" SYSTEMS WITH PVC CONNECTION

BFP MODEL/SIZE	ENCLOSURE MODEL	X	Y
FEBCO 825Y ¾" & 1"	SBBC-30AL	30"	42"
FEBCO 825Y 1½" & 2"	SBBC-45AL	45"	57"
FEBCO 825YA ¾" & 1"	SBBC-15AL	15"	27"
FEBCO 825YA 1½" & 2"	SBBC-30AL	30"	42"

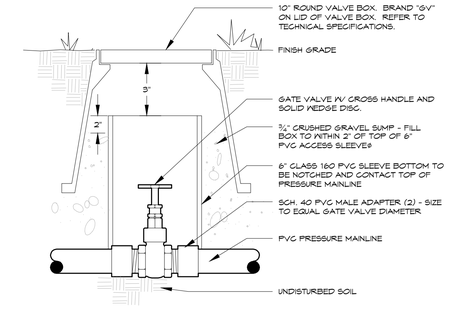
NOTES:
- PAD PENETRATIONS FOR BACKFLOW PREVENTER RISERS TO BE 1" LARGER THAN RISER DIAMETER.
- TOP SURFACE OF CONCRETE PAD SHALL BE 1" ABOVE FINISH GRADE.
- INSTALL ENCLOSURE ANCHORS AS PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE OWNER WITH KEYED PADLOCK FOR ENCLOSURE.

BACKFLOW ENCLOSURE — 6
STRONGBOX - 3/4" - 2" SYSTEMS



APPLY TEFLON TAPE TO ALL MALE THREADED PVC FITTINGS AND ALL NIPPLES

MANUAL DRAIN VALVE — 7



GATE VALVE — 8

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303-980-5384 (fax)

REFERENCE DRAWINGS

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X-995-EX-BASE
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PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
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IRRIGATION DETAILS

DESIGNED BY:	KC	SCALE	DATE ISSUED:	AUGUST 2018
DRAWN BY:	KC	HORIZ.	SHEET	27 OF 29
CHECKED BY:	KJD	VERT.		DRAWING No. IR2

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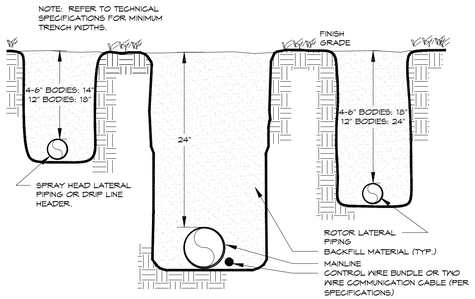
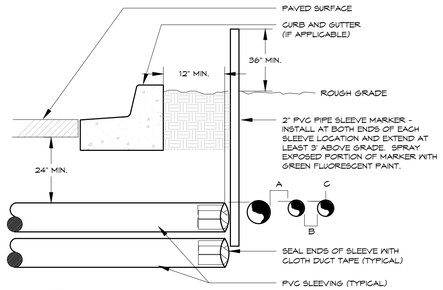


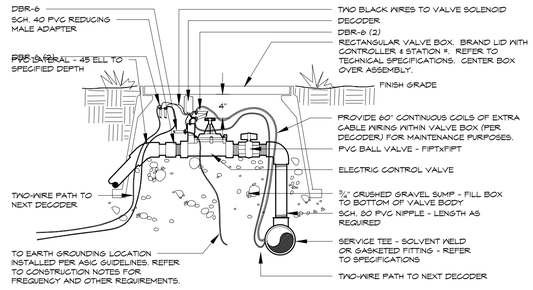
TRENCH
24" MAINLINE

9



NOTE:
- ALL SLEEVE MATERIAL PER IRRIGATION SCHEDULE, SIZE AS NOTED ON PLAN.
- INSTALL SLEEVES IN SIDE-BY-SIDE CONFIGURATION WHERE MULTIPLE SLEEVES ARE TO BE INSTALLED. SPACE SLEEVES 4" TO 6" APART. DO NOT STACK SLEEVES VERTICALLY.
- CONTRACTOR TO COORDINATE WITH FLATWORK INSTALLER TO BRAND A "V" IN SIDEWALK OR CURB AT BOTH ENDS OF SLEEVE CROSSING.

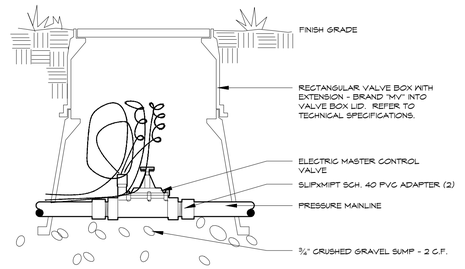
IRRIGATION SLEEVING
10



NOTE: DIAMETERS OF BALL VALVES, PVC FITTINGS AND NIPPLES SHALL EQUAL ELECTRIC CONTROL VALVE DIAMETER. VALVE BOXES SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO ADJACENT SIDEWALKS AND HARD SURFACES WHERE APPLICABLE. APPLY TEFLON TAPE TO ALL MALE THREADED FITTINGS AND THREADED NIPPLES.

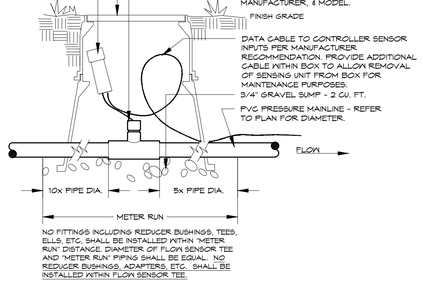
ELECTRIC CONTROL VALVE
TWO-WIRE SYSTEM - PVC PIPE

11



MASTER VALVE
24V - Small - Typical

12

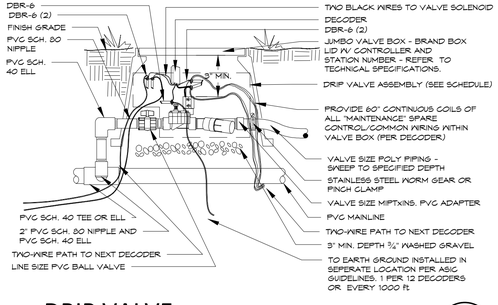


NO FITTINGS INCLUDING REDUCER BUSHINGS, TEES, ELLS, ETC. SHALL BE INSTALLED WITHIN "METER RUN" DISTANCE. DIAMETER OF FLOW SENSOR TEE AND "METER RUN" PIPING SHALL BE EQUAL. NO REDUCER BUSHINGS, ADAPTERS, ETC. SHALL BE INSTALLED WITHIN FLOW SENSOR TEE.

FLOW SENSOR
VIA DATA CABLE - TEE STYLE

13

NOTE:
INSTALL ASSEMBLY TO REST ON GRAVEL SUMP. CONTAIN ENTIRE ASSEMBLY WITHIN BOX. NO VALVE BOX EXTENSIONS WILL BE ACCEPTED. PROVIDE 3"-4" CLEARANCE BETWEEN TOP OF CONTROL VALVE SOLENOID AND BOTTOM OF VALVE BOX LID. TOP OF VALVE BOX TO BE FLUSH WITH FINISH GRADE. VALVE BOX SHALL NOT REST ON DRIP TUBING.



DRIP VALVE
TWO-WIRE SYSTEM - KIT - POLY PIPE

14

PLANT SIZE	EMITTER FLOW RATE	EMITTER QTY. AT MULCHED BED LOCATIONS	EMITTER QTY. AT NATIVE SEED LOCATIONS
1 - 2 GALLON MATERIAL	0.5 GPH	ONE EACH	ONE EACH
5 GALLON MATERIAL	0.5 GPH	TWO EACH	TWO EACH
1½" CALIPER TREE	1.0 GPH	THREE EACH	FOUR EACH
2" CALIPER TREE	1.0 GPH	FOUR EACH	SIX EACH
2½" CALIPER TREE	1.0 GPH	SIX EACH	EIGHT EACH
3" CALIPER TREE	1.0 GPH	EIGHT EACH	TEN EACH
3½" CALIPER TREE	1.0 GPH	NINE EACH	ELEVEN EACH
4" CALIPER TREE	1.0 GPH	TEN EACH	TWELVE EACH
6 FT. CONIFEROUS TREE	1.0 GPH	FOUR EACH	SIX EACH
8 FT. CONIFEROUS TREE	1.0 GPH	SIX EACH	NINE EACH
10 FT. CONIFEROUS TREE	1.0 GPH	EIGHT EACH	TWELVE EACH
12 FT. CONIFEROUS TREE	1.0 GPH	TEN EACH	FOURTEEN EACH

NOTES:
- INSTALL EMITTERS ON OPPOSING SIDES OF ROOTBALL. THREE OR MORE EMITTERS SHALL BE EQUALLY SPACED AROUND ROOT BALL.
- EMITTERS ARE TO BE INSTALLED TO CLEAR SURFACE BY A MINIMUM OF 1" AND A MAXIMUM OF 2".
- FLUSH ALL LINES THOROUGHLY, INCLUDING EMITTER MICRO-TUBING PRIOR TO EMITTER INSTALLATION.
- IF PLANTING ON A 4:1 SLOPE OR STEEPER, INSTALL BOTH EMITTERS ON UPHILL SIDE OF ROOT BALL.
- EMITTERS SHALL BE SELF-FLUSHING, PRESSURE COMPENSATING-TYPE UNLESS NOTED OTHERWISE WITHIN TECHNICAL SPECIFICATIONS.
- DRIP VALVE ZONES ARE DESIGNED TO ACCOUNT FOR DIFFERENCES IN PLANT REQUIREMENTS (HYDROZONES) AND SUN EXPOSURE.
- CONTRACTOR SHALL ENSURE HYDROZONES ARE VALVED SEPARATELY AS SHOWN ON PLAN.
- SITE CONDITIONS MAY DICTATE THAT MULTIPLE SUN EXPOSURES ARE VALVED TOGETHER DURING THE DESIGN PROCESS. CONTRACTOR SHALL ADJUST EMITTER SCHEDULE AS FOLLOWS:
  - EMITTER QUANTITIES SHALL REMAIN THE SAME BUT EMITTER GALLONAGES SHALL BE DOUBLED FOR PLANTS WITH SOUTH AND WEST EXPOSURES.
  - EMITTER QUANTITIES AND GALLONAGE SHALL BE AS SHOWN IN SCHEDULE FOR PLANTS WITH NORTH AND EAST EXPOSURES.
  - PLANTINGS WITH NORTH AND EAST EXPOSURE SHALL DICTATE VALVE RUN-TIMES AND CONTRACTOR SHALL ADJUST SCHEDULING ACCORDINGLY.

DRIP EMITTER
BELOW GRADE

15

DIRECTORY

HydroSystems-KDI, Inc. — Irrigation Consulting
860 Tabor Street, Suite 200
Lakewood, Colorado 80401
303-980-5327
303-980-5384 (fax)

REFERENCE DRAWINGS

LS01_SDP
X-995-PR-LANDSCAPE
X-995-EX-BASE
X-995-EX-MAP
X-995-MDG22x34
X-995-PR-BASE
X-995-PR-GRAD

No.	DATE	DESCRIPTION	BY
		REVISIONS	

COMPUTER FILE MANAGEMENT
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CTB FILE: ----
PLOT DATE: 8/10/2018 9:32 AM
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.

SHEET KEY

PREPARED FOR: LIBERTY TREE ACADEMY
PREPARED BY: Matrix DESIGN GROUP — AN EMPLOYEE-OWNED COMPANY

SEAL

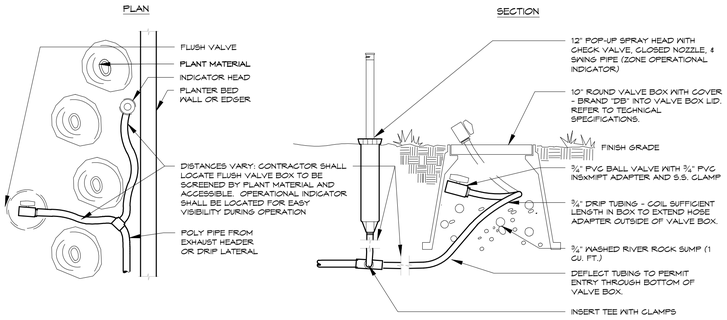
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.
PROJECT No. 18.995.001

LIBERTY TREE ACADEMY

TOWN OF PEYTON, EL PASO COUNTY
CONSTRUCTION DOCUMENTS

IRRIGATION DETAILS

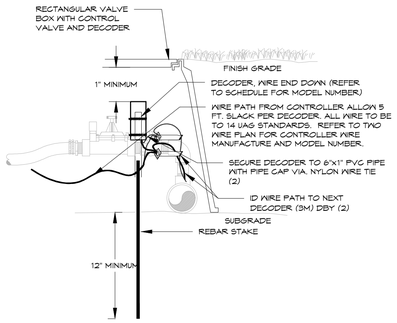
DESIGNED BY:	KC	SCALE	DATE ISSUED:	AUGUST 2018	DRAWING No.
DRAWN BY:	KC	HORIZ.	SHEET	28 OF 29	IR3
CHECKED BY:	KJD	VERT.			



DRIP FLUSH VALVE

WITH OPERATIONAL INDICATOR

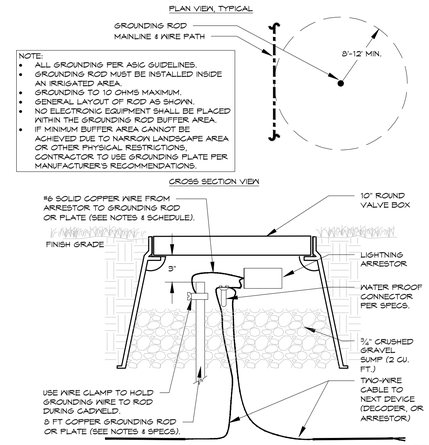
16



DECODER INSTALLATION

TWO-WIRE SYSTEM

17



ARRESTOR GROUNDING

TWO-WIRE SYSTEM - TYPICAL

18

WEATHER SENSOR

POLE MOUNTED - Wireless

19

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