A-FRAME RESERVOIR

REHABILITATION

CONSTRUCTION PLANS

BOULDER COUNTY, COLORADO

JULY, 2018

OWNER: BOULDER COUNTY PARKS AND OPEN SPACE DEPARTMENT
5201 ST. VRAIN ROAD
LONGMONT, CO 80503
(303) 413-7077

ENGINEER: APPLEGATE GROUP, INC.
1490 W 121ST AVE., SUITE 100
DENVER, CO 80234
(303) 452-6611

SURVEYOR: HAMMER LAND SURVEYING, INC.
3050 67th AVE., SUITE 200
GREELEY, CO 80634
(970) 535-9318

GEOTECHNICAL ENGINEER: CEASRE, INC.
7108 S. ALTON WAY, BUILDING B
CENTENNIAL, CO 80112
(303) 220-0300

VICINITY MAP
SCALE 1" = 2000'

2000 1000 0 2000
SCALE IN FEET

Sheet List Table	
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Plans approved by Boulder County Parks and Open Space on the ____ day of July, 2018

Name

Title

Date

COLORADO 811
KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

I hereby certify that these plans for the A-Frame Dam Rehabilitation were prepared by me or under my direct supervision for Boulder County Parks and Open Space.

Colo. PE No. 43364
Steven A Smith, P.E.

FINAL CONSTRUCTION DRAWINGS ISSUED FOR BID

Applegate Group, Inc.
Water Resource Advisors for the West
1490 West 121st Ave., Suite 100
Denver, CO 80234
(303) 452-6611
Fax: (303) 452-2759
email: info@applegategroup.com Website: www.applegategroup.com

COVER SHEET

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

NO	DATE	BY	CHK'D	DESCRIPTION
1	18/JAN/17	LLD	SS	Revised Outfall Grading and TBM

REVISIONS

Date:	26/JUL/18
Job No:	15-117
Drawn:	LD
Design:	CH
Checked:	SS
Scale:	1" = 100'

COLORADO LICENSED STEVEN SMITH 43364 7/26/18 PROFESSIONAL ENGINEER

Sheet: 1
Of: 13

Plot Date: 07/26/18-12:11pm, Plotted byLuke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Name\A Title.dwg

GENERAL

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS REQUIRED TO PERFORM THE WORK DEPICTED ON THE CONSTRUCTION PLANS.
2. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO EXISTING INFRASTRUCTURE RESULTING FROM CONSTRUCTION ACTIVITY.
3. SITE ACCESS AND CONSTRUCTION ACTIVITIES LIMITED TO 8:00 AM TO 4:30 PM.

UTILITIES

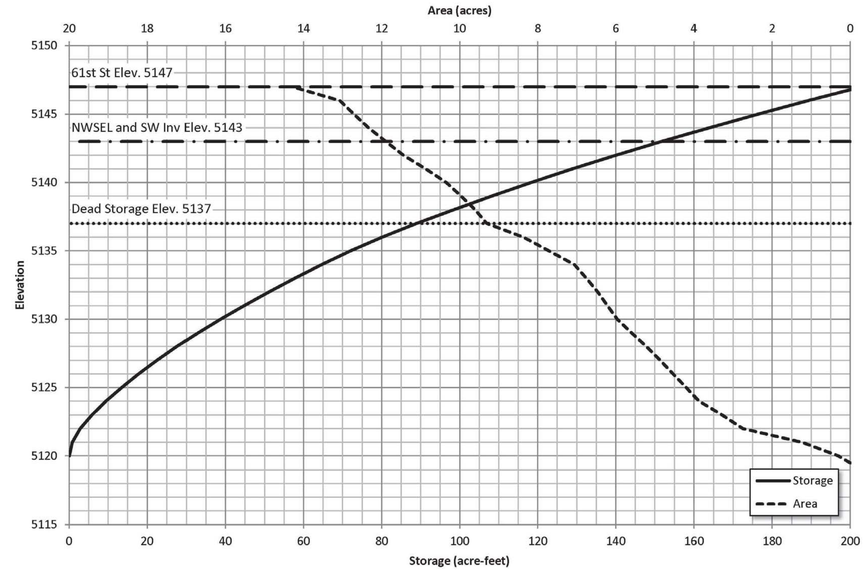
1. LOCATION OF EXISTING UTILITIES IS SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. TYPE, SIZE, LOCATION, AND NUMBER OF UTILITIES ARE APPROXIMATE WHEN SHOWN ON THE DRAWINGS. EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
2. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES TO COORDINATE SCHEDULING. SHOULD ANY CONFLICTS OR CONSTRUCTION RELOCATIONS OR OTHER INTERRUPTIONS IN SERVICE BE REQUIRED THE CONTRACTOR SHALL COORDINATE UTILITY SCHEDULING WITH HIS WORK.

SURVEY NOTES

1. BASIS OF BEARING: THE LINE BETWEEN NGS MONUMENTS M 410 AND ZDV B BEARING SOUTH 07°21'32" WEST, NAD 83 GRID BEARING, WITH ALL OTHER BEARINGS CONTAINED HEREIN RELATIVE THERETO:
2. DRAWING DOES NOT REPRESENT A MONUMENTED LAND SURVEY.
3. VERTICAL DATUM IS TAKEN FROM NGS SURVEY MARK M 410, BEING AN ELEVATION OF 5115.37 FEET NAVD 88 DATUM. MONUMENT IS LYING 2.8 MILE WESTERLY ALONG STATE HIGHWAY 66 FROM ITS JUNCTION WITH U.S. HIGHWAY 287 IN LONGMONT, 100.1 FEET NORTH OF THE CENTERLINE OF HIGHWAY 66, 67.6 FEET EAST OF A UTILITY POLE, 62 FEET NORTH OF THE NORTH END OF A CONCRETE CULVERT, AND 19.7 FEET EAST OF THE CENTER OF A FIELD ENTRANCE. MARK IS A PUNCH HOLE, TOP CENTER OF A 6.7 M LONG STAINLESS STEEL ROD, ENCLOSED IN A 5 INCH PVC PIPE WITH LOGO LID. CONTROL POINT CP–3 NORTHING: 1311553.7576, EASTING: 3088754.7009, ELEV: 5088.84 IS LOCATED AT THE NORTH END OF THE DRAGONFLY EMBANKMENT.

CONTROL POINTS				
ID	POINT NO.	NORTHING	EASTING	ELEVATION
CP-8	8	1,313,965.07	3,081,325.20	5,146.76
CP-9	9	1,314,373.29	3,079,994.46	5,160.44
CP-10	10	1,314,725.53	3,080,090.61	5,158.92
CP-1180	1870	1,314,334.96	3,081,262.28	5,146.87

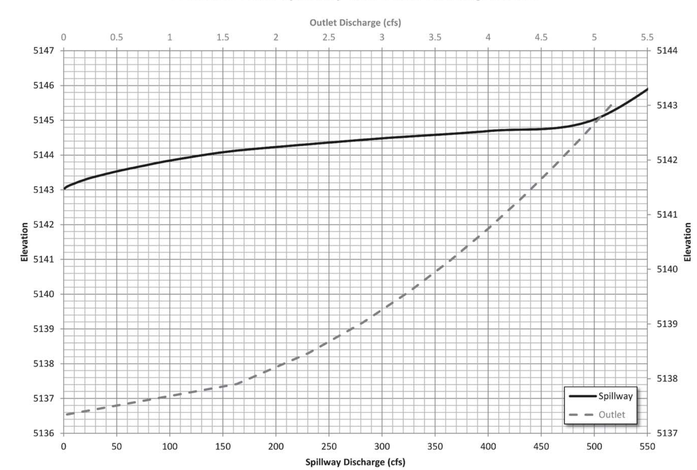
A-Frame Lake Stage-Storage-Area



Elevation	Area (acre)	Volume (acre-ft)	Spillway Discharge (cfs)	Outlet Discharge (cfs)
5120	0.3	0.1		
5121	1.2	0.8		
5122	2.8	2.8		
5123	3.3	5.8		
5124	3.9	9.4		
5125	4.2	13.5		
5126	4.5	17.8		
5127	4.9	22.5		
5128	5.2	27.5		
5129	5.6	32.9		
5130	6.0	38.7		
5131	6.2	44.8		
5132	6.5	51.1		
5133	6.8	57.7		
5134	7.1	64.6		
5135	7.7	72.0		
5136	8.4	80.1		
5137	9.3	88.9		0.0
5138	9.6	98.3		1.7
5139	10.0	108.1		2.8
5140	10.3	118.3		3.5
5141	10.9	128.9		4.1
5142	11.4	140.0		4.7
5143	11.9	151.7	0.0	5.2
5144	12.3	163.8	133.3	
5145	12.7	176.3	499.0	
5146	13.1	189.2	550.0	
5147	14.3	202.9	600.9	

*STAGE STORAGE AREA DATA BASED ON JULY 2015 SURVEY BY HAMMER LAND SURVEYING, INC., SUPPLEMENTED BY THE BOULDER COUNTY PARKS AND OPEN SPACE BATHYMETRIC SURVEY CONDUCTED SEPTEMBER 2015.

A-Frame Lake Spillway and Outlet Rating Curves



A-Frame Outlet Low Flow Flume Rating Table, Flowrate in cubic feet per second (cfs)

Staff Gage Reading (ft)	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0	--	--	--	--	--	0.001	0.001	0.011	0.014	0.017
0.1	0.021	0.025	0.030	0.035	0.040	0.046	0.052	0.059	0.066	0.074
0.2	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.18
0.3	0.19	0.20	0.22	0.23	0.25	0.27	0.28	0.30	0.32	0.34
0.4	0.36	0.38	0.40	0.42	0.44	0.46	0.49	0.51	0.54	0.56
0.5	0.59	0.61	0.64	0.67	0.70	0.73	0.76	0.80	0.83	0.86
0.6	0.90	0.93	0.97	1.01	1.05	1.08	1.13	1.17	1.21	1.25
0.7	1.30	1.34	1.39	1.44	1.49	1.54	1.59	1.64	1.69	1.75
0.8	1.80	1.86	1.92	1.98	2.04	2.10	2.16	2.22	2.29	2.35
0.9	2.41	2.48	2.54	2.61	2.67	2.74	2.81	2.88	2.95	3.02
1	3.09	3.16	3.23	3.30	3.38	3.45	3.52	3.60	3.68	3.75
1.1	3.83	3.91	3.98	4.06	4.14	4.22	4.30	4.38	4.47	4.55
1.2	4.63	4.71	4.80	4.88	4.97	5.05	5.14	5.23	5.32	5.40

ABBREVIATIONS LIST

BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
AD	CHANGE IN GRADIENT
CLR	CLEAR
CF	CONSTRUCTION FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CWA	CONCRETE WASHOUT AREA
DIA	DIAMETER
ECB	EROSION CONTROL BLANKET
ELEV	ELEVATION
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
HSS	HOLLOW STEEL SECTION
FT	FOOT
INV	INVERT
K	K–VALUE = VC LENGTH/AD
MAX	MAXIMUM
MIN	MINIMUM
N.W.S.E	NORMAL WATER SURFACE ELEVATION
N.I.C.	NOT IN CONTRACT
O.C.	ON CENTER
O.C.E.W.	ON CENTER EACH WAY
O.C.E.W.E.F.	ON CENTER EACH WAY EACH FACE
PVI	POINT OF VERTICAL INFLECTION
RCB	REINFORCED CONCRETE BOX CULVERT
SHT	SHEET
STA	STATION
SF	SILT FENCE
SP	STOCKPILE MANAGEMENT
T.O.W.	TOP OF WALL
TRM	TURF REINFORCEMENT MAT
TYP	TYPICAL
VTC	VEHICLE TRACKING CONTROL
VC	VERTICAL CURVE

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GENERAL NOTES

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

REVISIONS

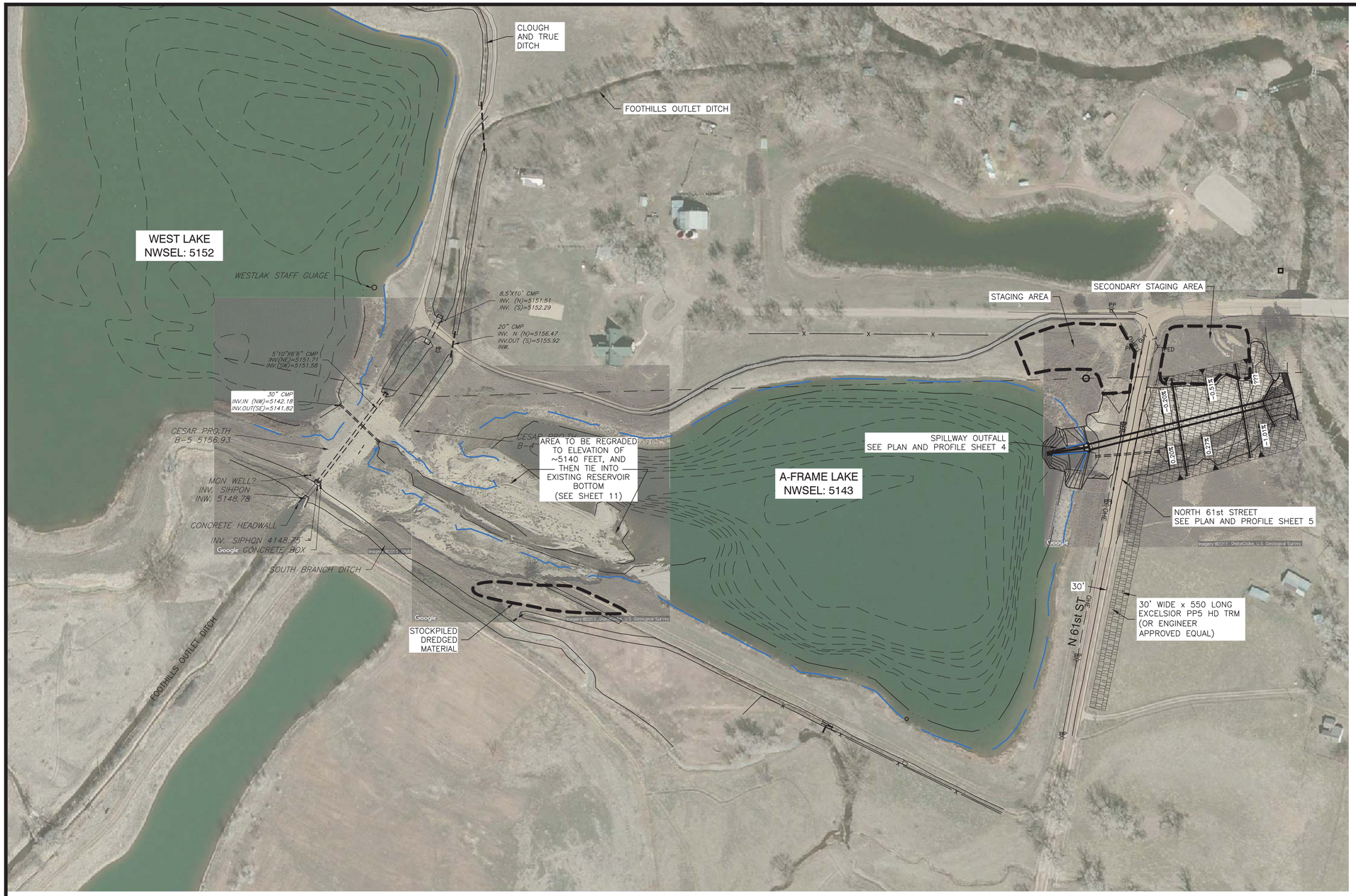
NO	DATE	BY	CHK'D	DESCRIPTION
1	18/JAN/17	LLD	SS	Revised Outlet Grading and Title

Date:	26/JUL/18
Job No:	15–117
Drawn:	LD
Design:	CH
Checked:	SS
Scale:	1" = 100'

COLORADO LICENSED STEVEN SMITH 43364 7/26/18 PROFESSIONAL ENGINEER

Sheet: 2
Of: 13

Plot Date: 07/26/18-12:12pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Name\A General Notes.DWG



Scale 1" = 100'
1' CONTOUR INTERVAL

100 50 0 100 200 300
SCALE IN FEET

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SITE PLAN

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

NO	DATE	BY	CHK'D	DESCRIPTION
1	18/JAN/17	LLD	SS	Revised Outfall Grading and TRM

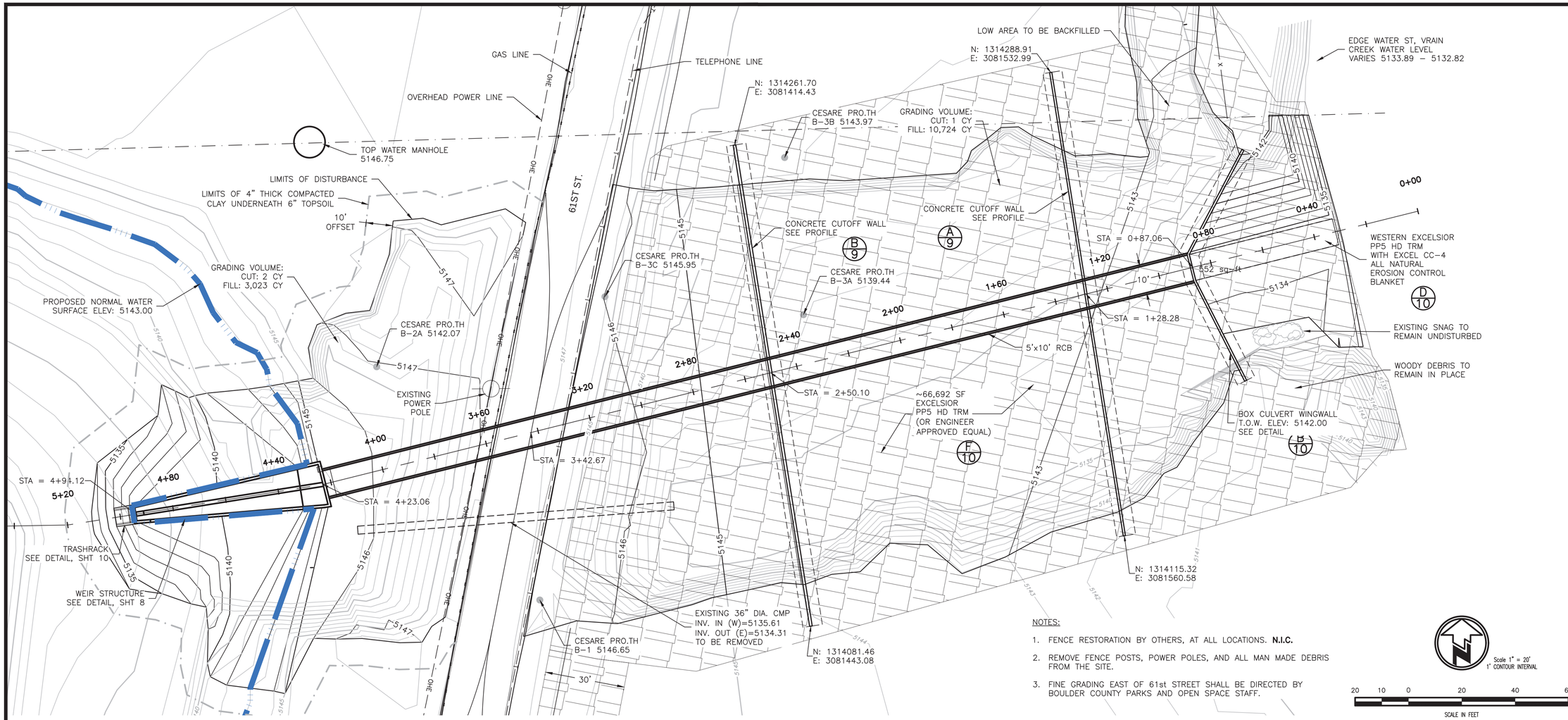
REVISIONS

Date:	26/JUL/18
Job No:	15-117
Drawn:	LD
Design:	CH
Checked:	SS
Scale:	1" = 100'

COLORADO LICENSED
STEVEN SMITH
43364
7/26/18
PROFESSIONAL ENGINEER

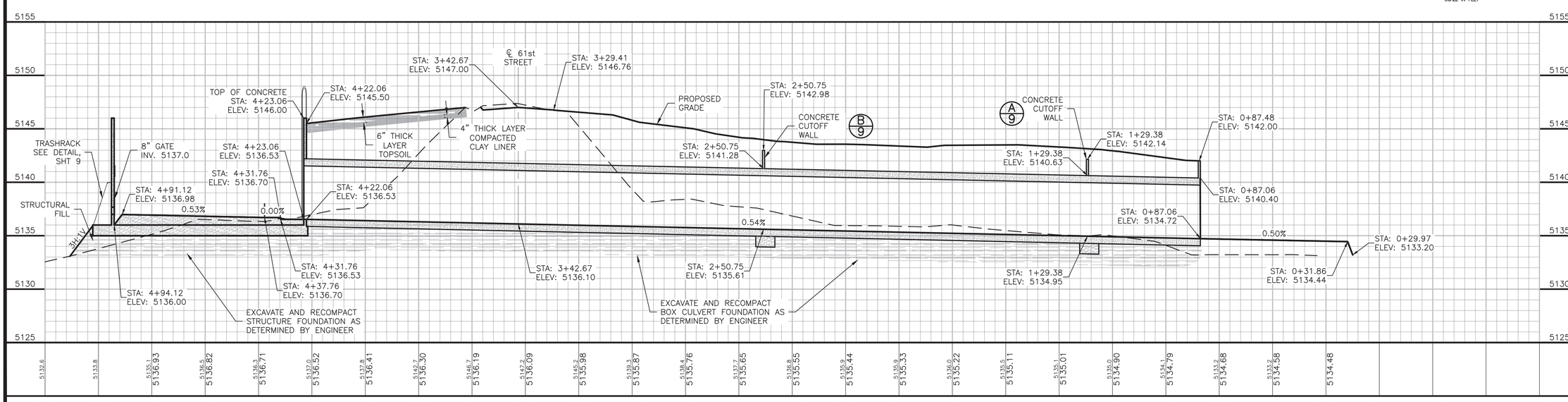
Sheet:
3
Of:
13

Plot Date: 07/26/18-12:12pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Phase Set\A-Frame\Drawing Name:A Site Overview.dwg



NOTES:

1. FENCE RESTORATION BY OTHERS, AT ALL LOCATIONS. **N.I.C.**
2. REMOVE FENCE POSTS, POWER POLES, AND ALL MAN MADE DEBRIS FROM THE SITE.
3. FINE GRADING EAST OF 61st STREET SHALL BE DIRECTED BY BOULDER COUNTY PARKS AND OPEN SPACE STAFF.



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SPILLWAY PLAN AND PROFILE

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

NO	DATE	BY	CHK'D	DESCRIPTION
1	18/JAN/17	LLD	SS	Revised Outlet Grading and Trim

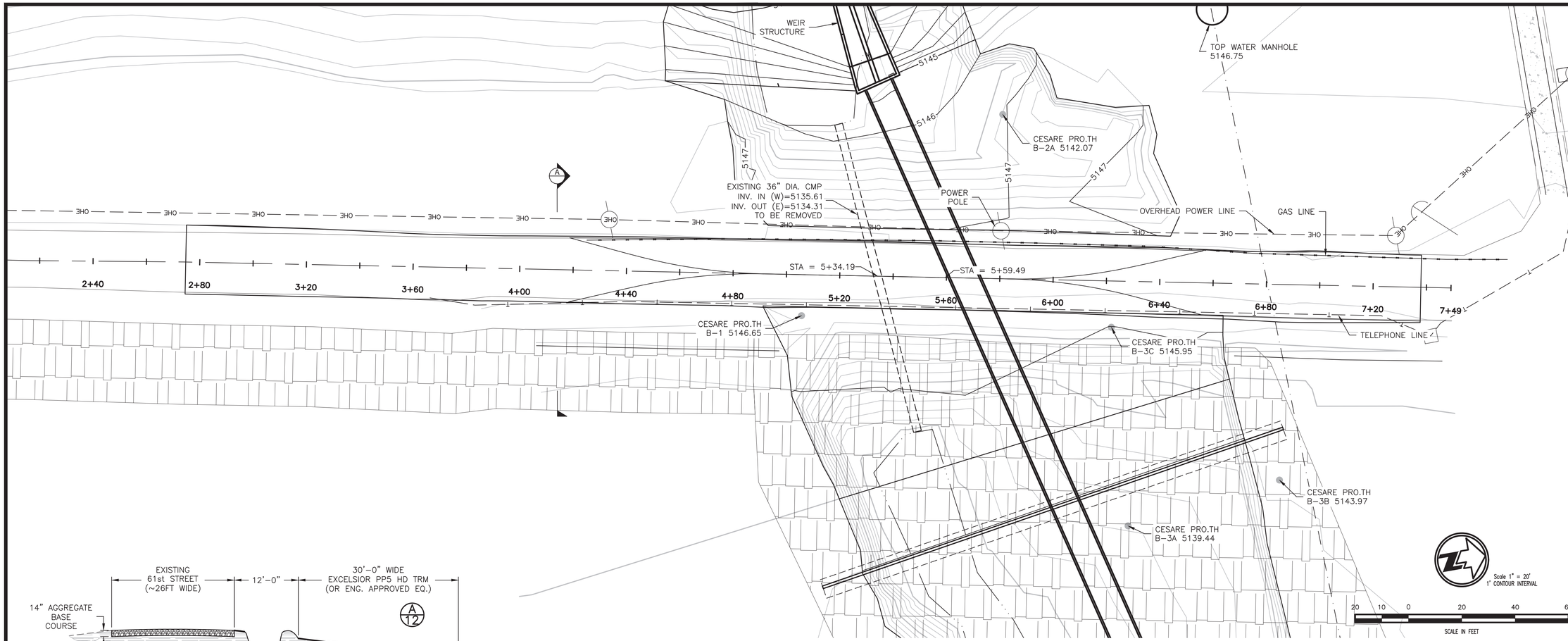
REVISIONS

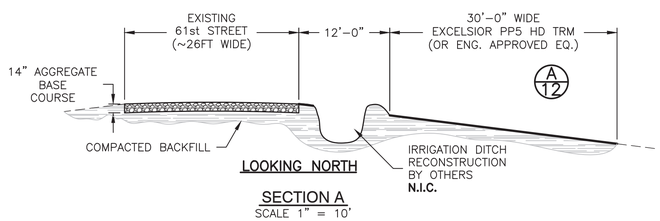
Date:	26/JUL/18
Job No:	15-117
Drawn:	LD
Design:	CH
Checked:	SS
Scale:	1" = 20'

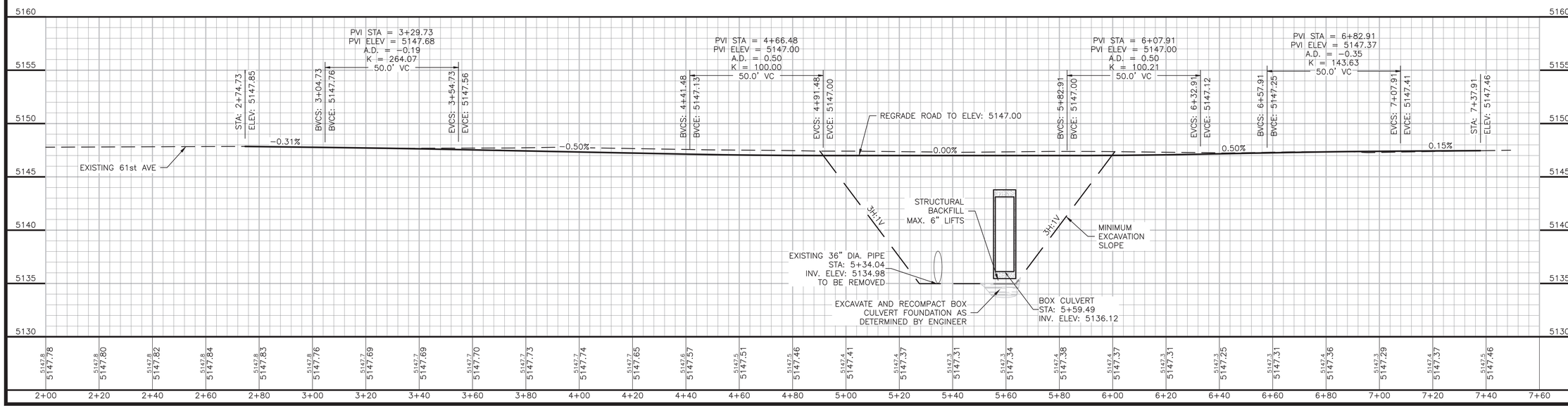
COLORADO LICENSED STEVEN SMITH 43364 7/26/18 PROFESSIONAL ENGINEER

Sheet: 4
Of: 13

Plot Date: 07/26/18–12:12pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Name:A Spillway Plan.dwg







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61st STREET PLAN AND PROFILE

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

REVISIONS

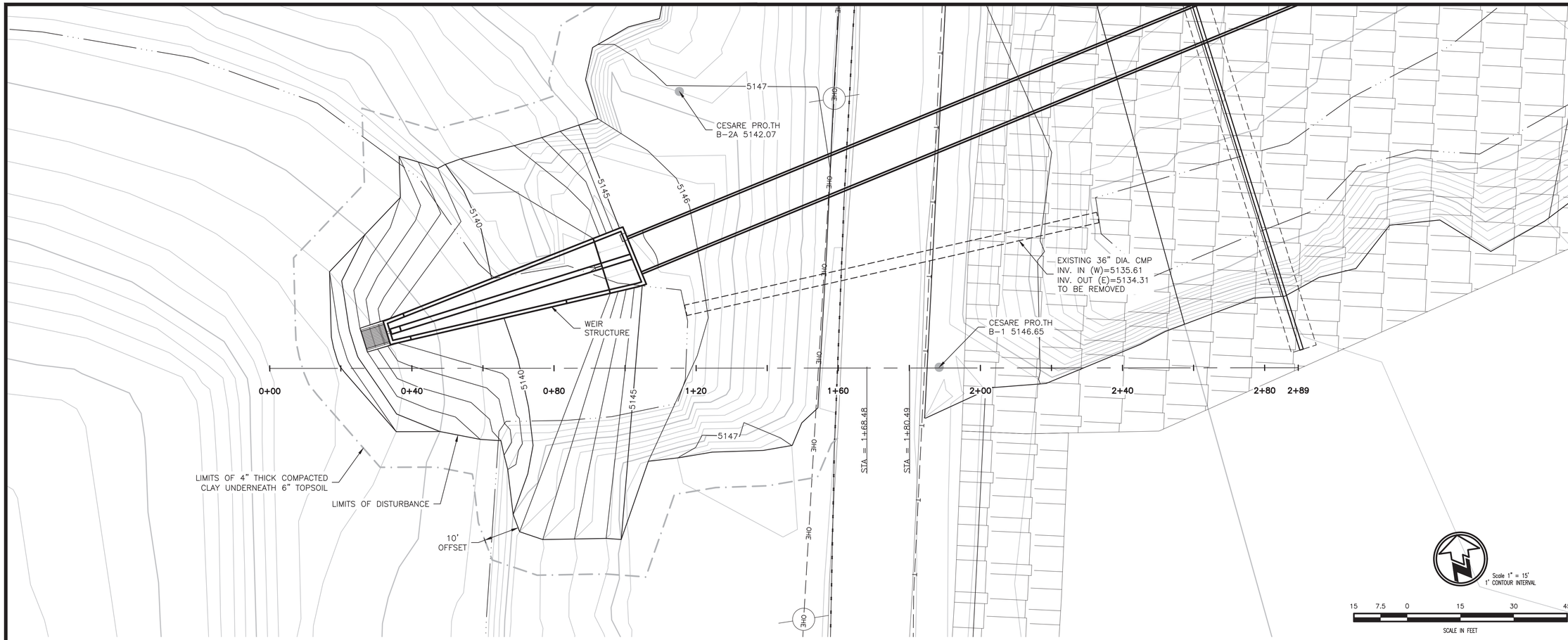
NO	DATE	BY	CHK'D	DESCRIPTION
1	18/JAN/17	LLD	SS	Revised Outlet Grading and Title

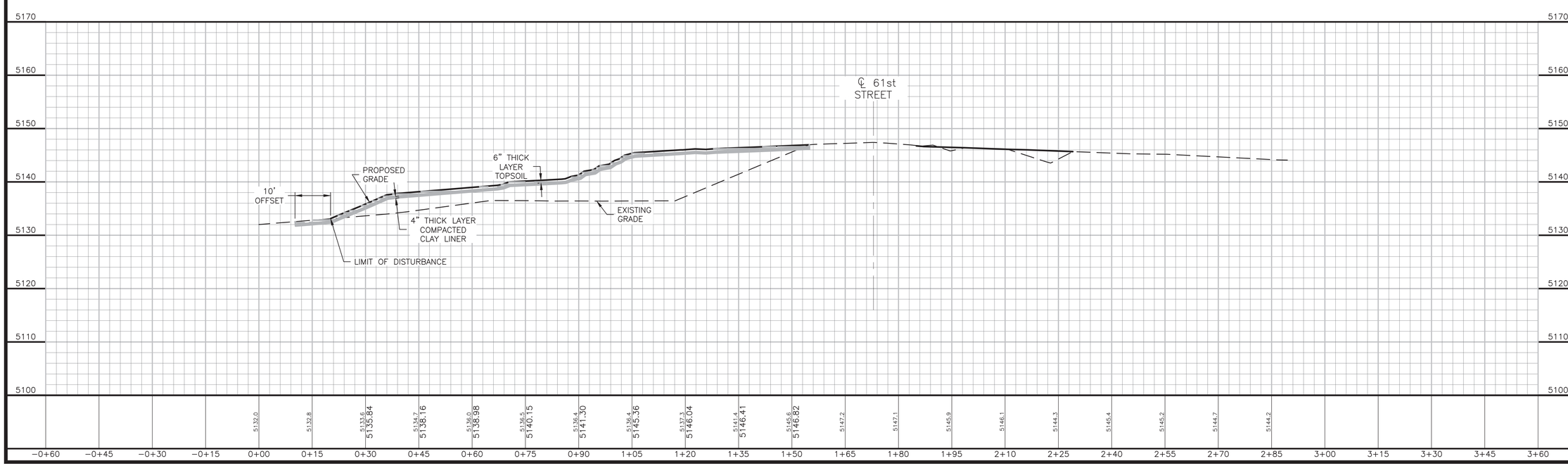
Date:	26/JUL/18
Job No:	15-117
Drawn:	LD
Design:	CH
Checked:	SS
Scale:	1" = 20'

COLORADO LICENSED
STEVEN SMITH
43364
7/26/18
PROFESSIONAL ENGINEER

Sheet: 5
Of: 13

Plot Date: 07/26/18-12:13pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Name:A 61st ST Prof.dwg





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61st STREET SECTION

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

REVISIONS

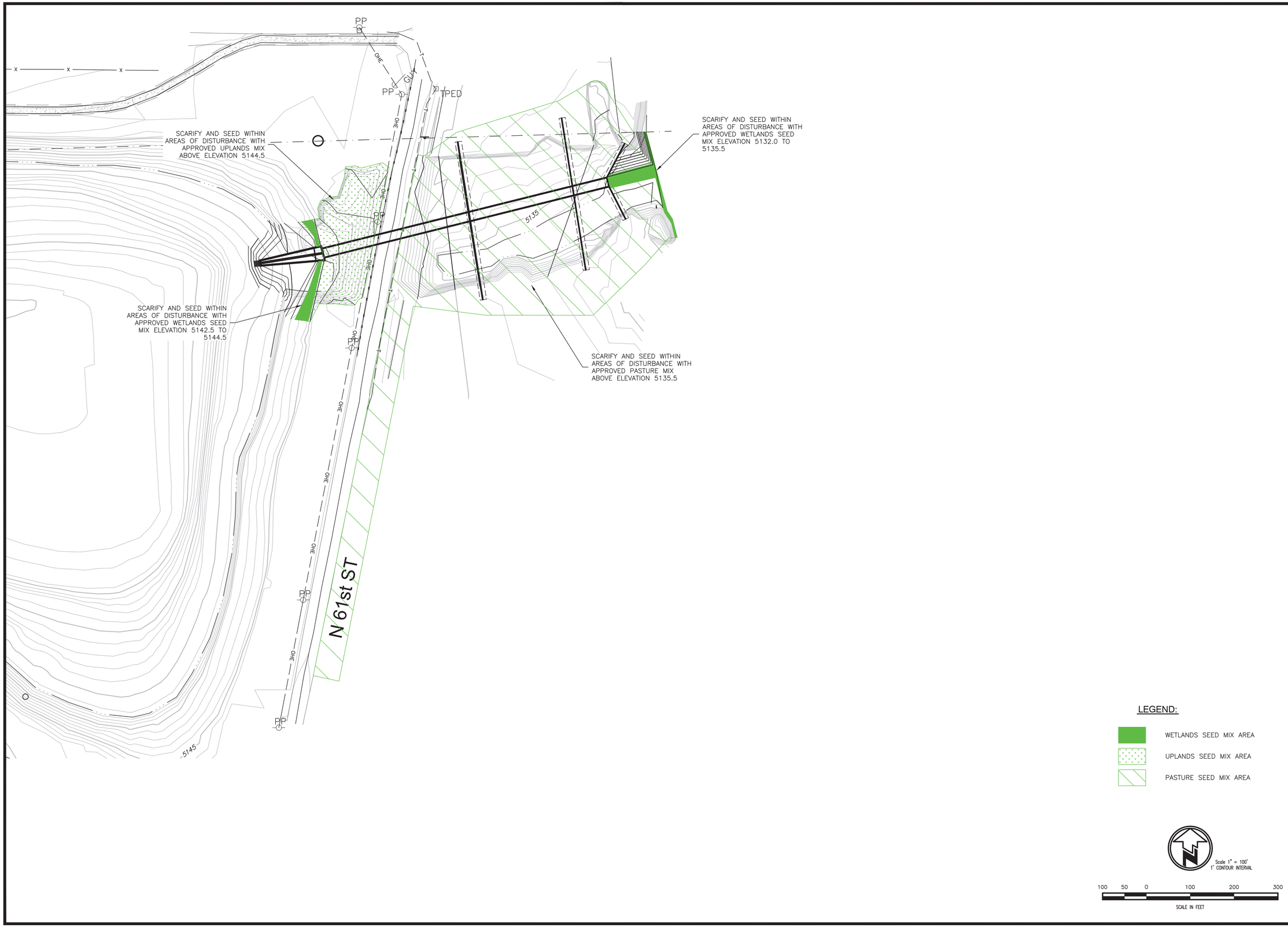
NO	DATE	BY	CHK'D	DESCRIPTION
1	18/JAN/17	LLD	SS	Revised Outlet Grading and Title

Date:	26/JUL/18
Job No:	15-117
Drawn:	LD
Design:	CH
Checked:	SS
Scale:	1" = 15'

COLORADO LICENSED
STEVEN SMITH
43364
7/26/18
PROFESSIONAL ENGINEER

Sheet: 6
Of: 13

Plot Date: 07/26/18-12:14pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Name:A Road Section.dwg



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REVEGETATION PLAN

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

REVISIONS

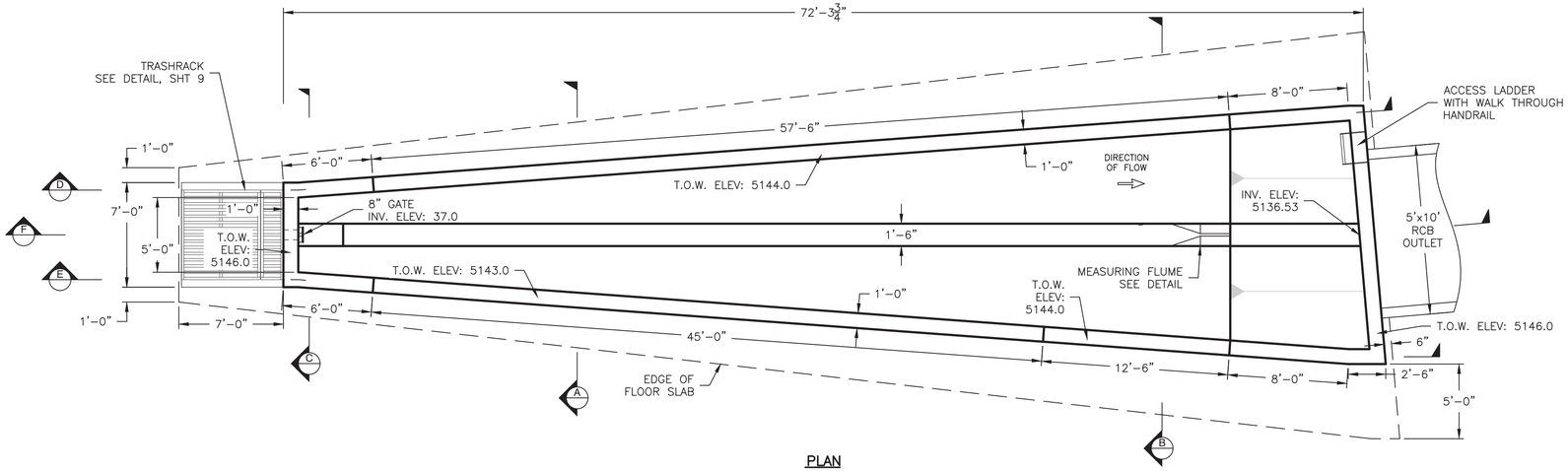
NO	DATE	BY	CHK'D	DESCRIPTION
1	18/JAN/17	LLD	SS	Revised Outlet Grading and Title

Date:	26/JUL/18
Job No:	15-117
Drawn:	LD
Design:	CH
Checked:	SS
Scale:	1" = 50'

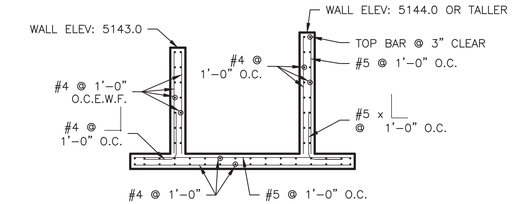
COLORADO LICENSED
STEVEN SMITH
43364
7/26/18
PROFESSIONAL ENGINEER

Sheet: **7**
Of: **13**

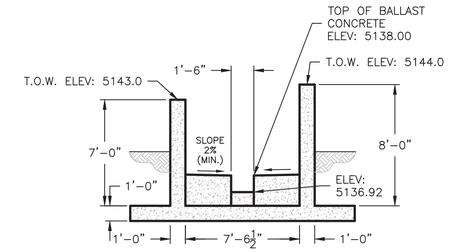
Plot Date: 07/26/18-12:14pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Non Set\A-Frame\Drawing Normal Revegetation.dwg



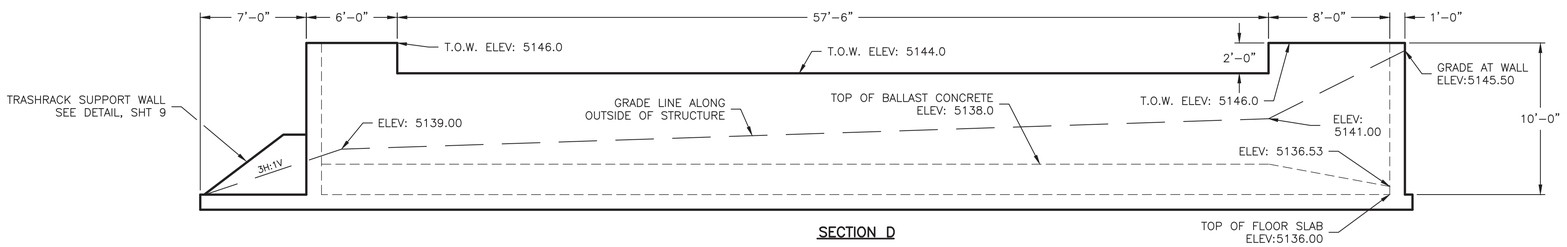
PLAN



TYPICAL REINFORCEMENT



SECTION A



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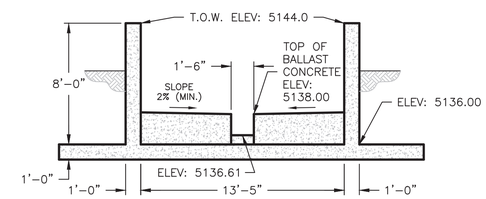

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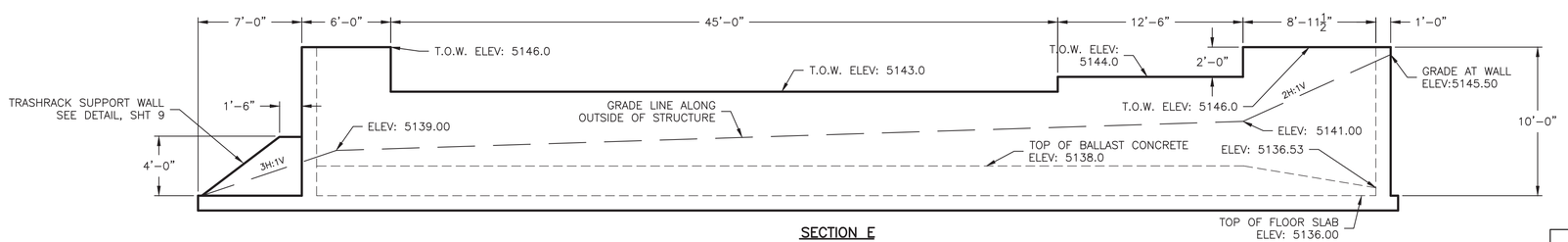

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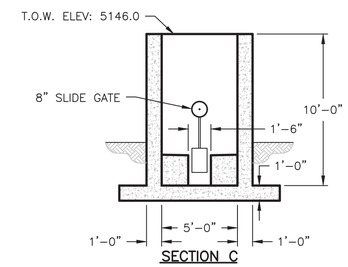

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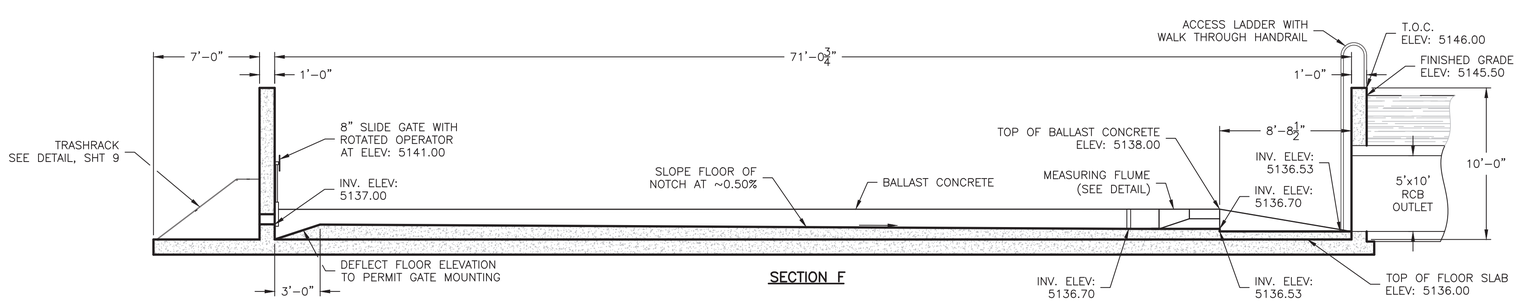
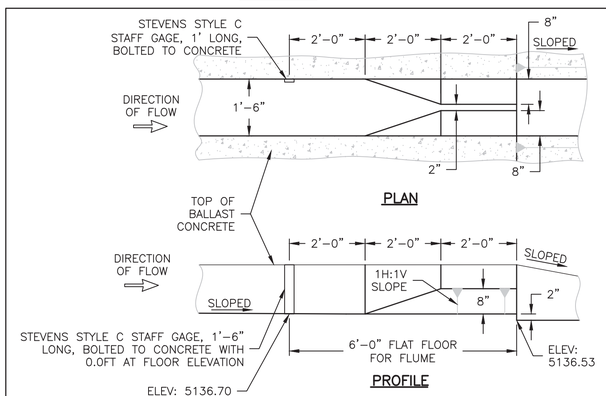


SECTION F

A/8 DROP INLET STRUCTURE
SCALE 1" = 5'



B/8 MEASURING FLUME
SCALE 1" = 2'

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DETAILS

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A-FRAME RESERVOIR
REHABILITATION

REVISIONS

NO	DATE	BY	CHK'D	DESCRIPTION
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Date:	26/JUL/18
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Checked:	SS
Scale:	AS NOTED

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STEVEN SMITH
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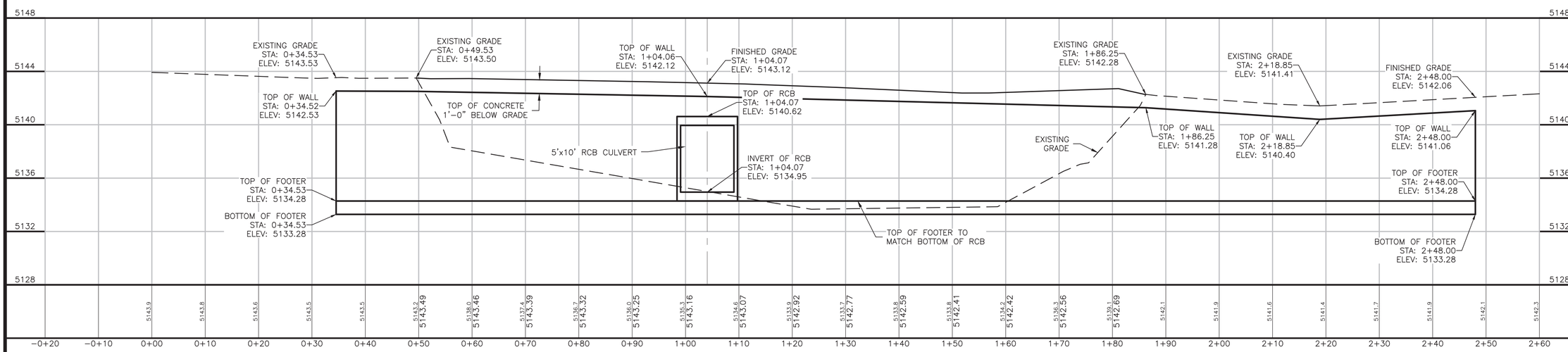
7/26/18
PROFESSIONAL ENGINEER

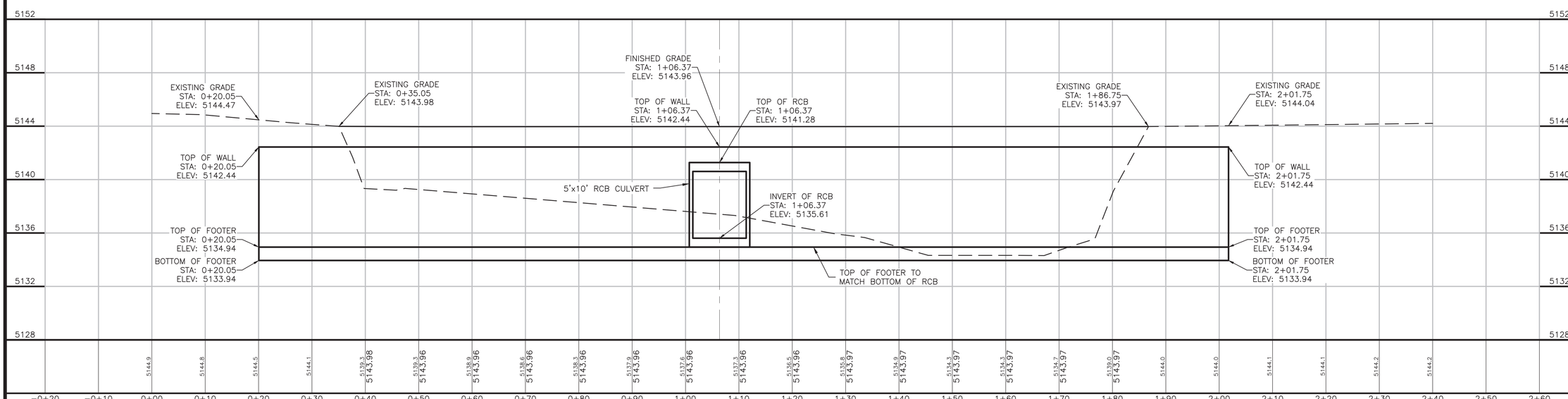
Sheet: 8
Of: 13

Plot Date: 07/26/18-12:14pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Name:A Detail.dwg



NOTES:
1. STATIONING IS FROM LEFT TO RIGHT LOOKING EAST.
2. SEE DETAIL A/9 FOR CONCRETE WALL REINFORCEMENT.

A/9 CONCRETE CUTOFF WALL AT STA: 1+20
SCALE 1" = 20' H&V
1" = 4' VER



B/9 CONCRETE CUTOFF WALL AT STA: 2+40
SCALE 1" = 10' HOR
1" = 4' VER

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CUTOFF WALL PROFILES

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

REVISIONS

NO	DATE	BY	CHK'D	DESCRIPTION
1	18/JAN/17	LLD	SS	Revised Outlet Grading and Title

Date:	26/JUL/18
Job No:	15-117
Drawn:	LD
Design:	CH
Checked:	SS
Scale:	1" = 100'

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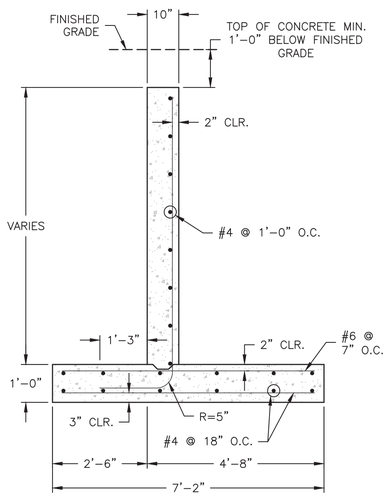
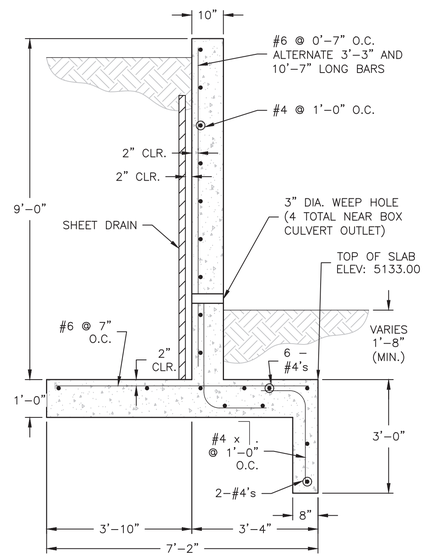
STEVEN SMITH
43364
7/26/18
PROFESSIONAL ENGINEER

Sheet: 9
Of: 13

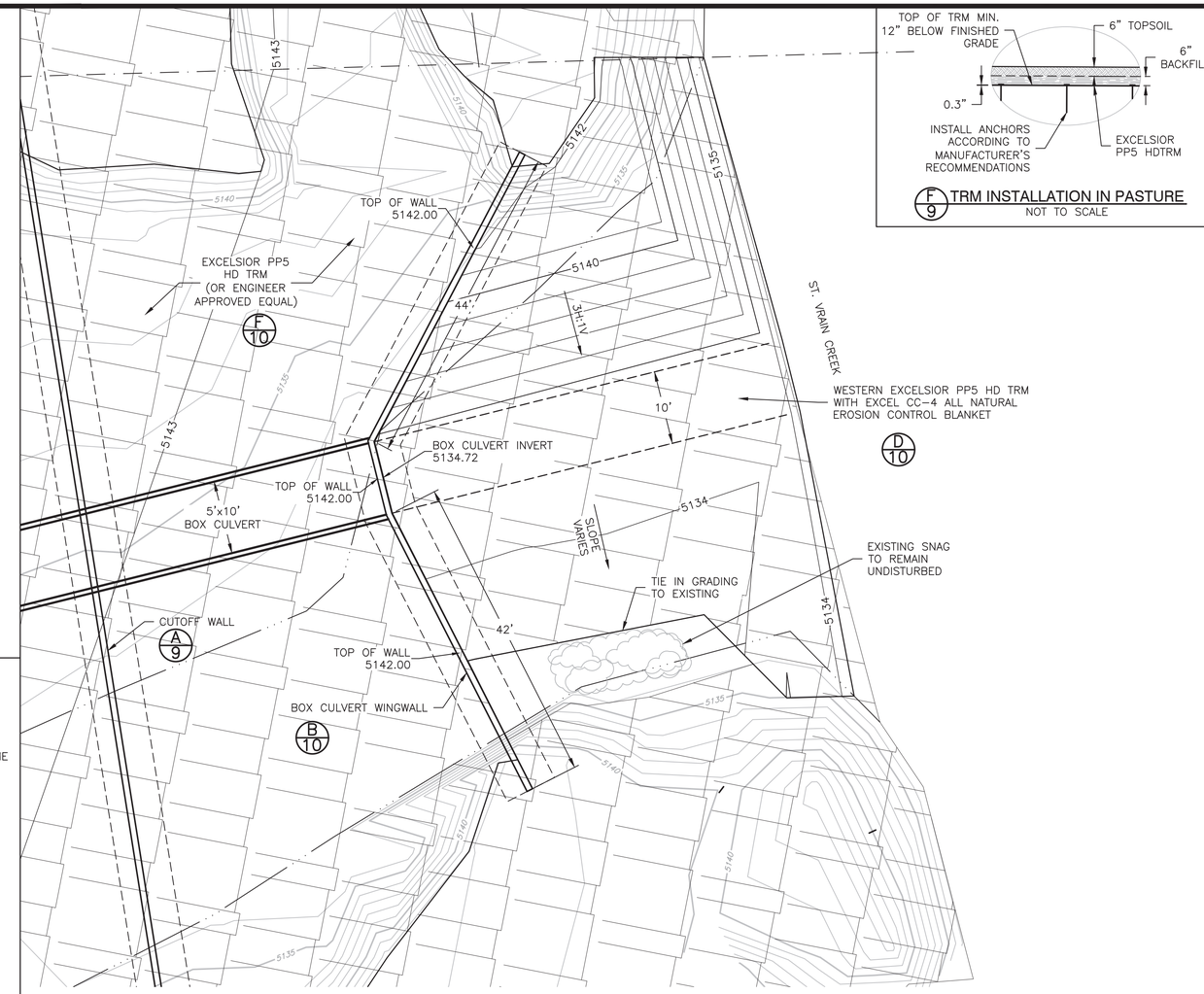
Plot Date: 07/26/18-12:14pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Name:A Cutoff Wall Details.dwg



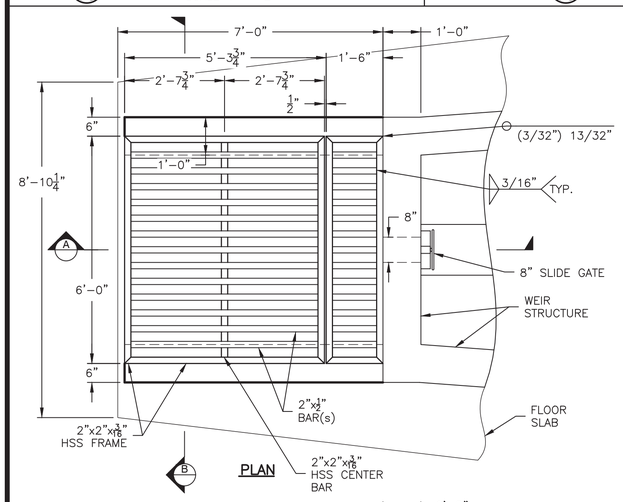
A/10 TYPICAL CUTOFF WALL SECTION
SCALE 1" = 2'

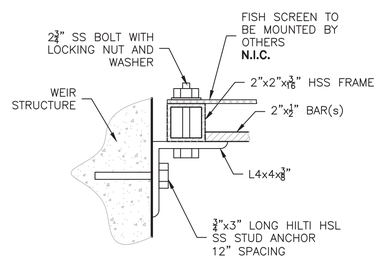


B/10 BOX CULVERT WINGWALL DETAIL
SCALE 1" = 2'



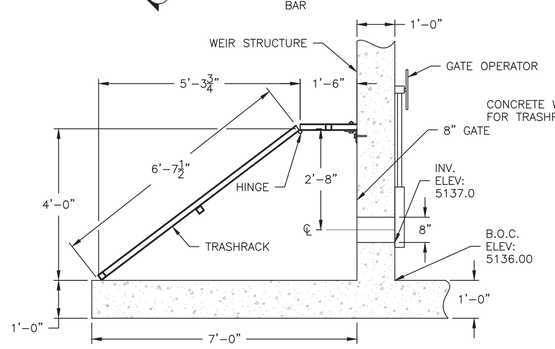
E/9 BOX CULVERT WING WALL
SCALE 1" = 10'



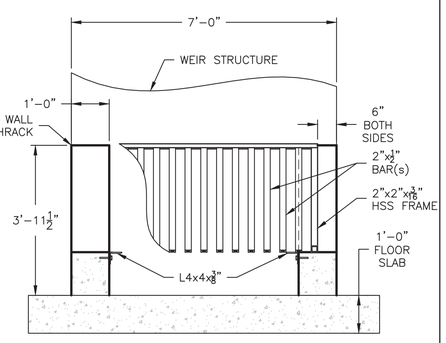


CONNECTION DETAIL
NOT TO SCALE

NOTE:
TRASHRACK SHALL BE GALVANIZED WITH STAINLESS STEEL BOLTS AND ANCHORS.

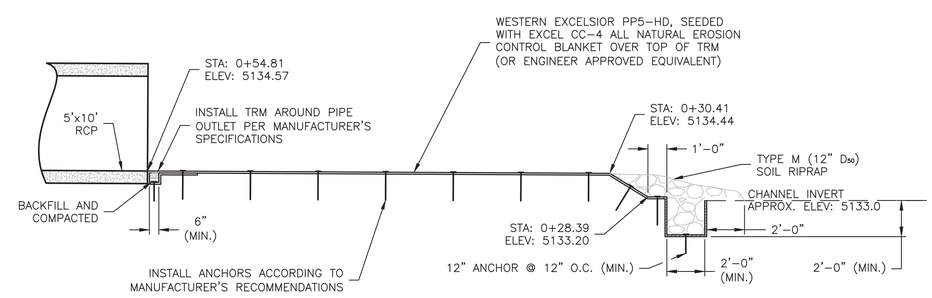


SECTION A



SECTION B

C/10 WEIR GATE TRASRACK
SCALE 1" = 2'



D/9 TRM BANK PROTECTION
SCALE 1" = 4'

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DETAILS

BOULDER COUNTY
A-FRAME RESERVOIR
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Checked:	SS
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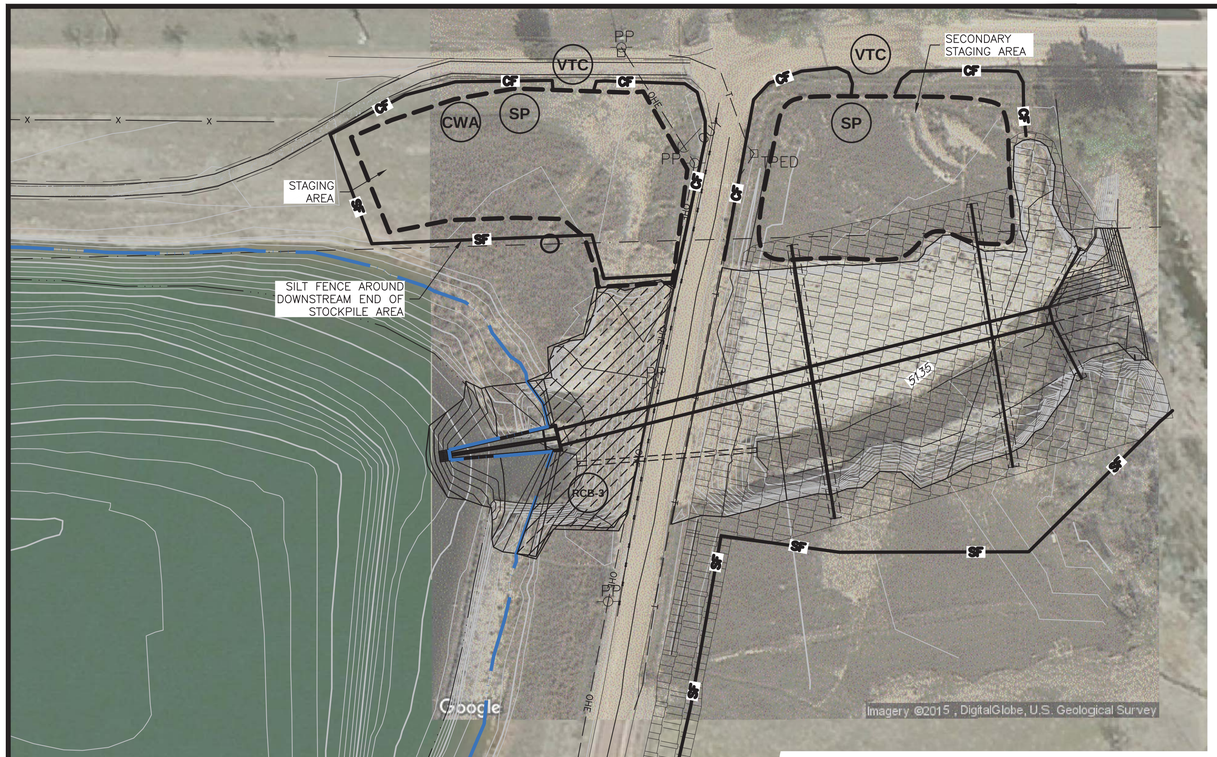
Sheet: 10
Of: 13

Plot Date: 07/26/18-12:14pm, Plotted By:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Name:A Cutoff Wall Details.dwg

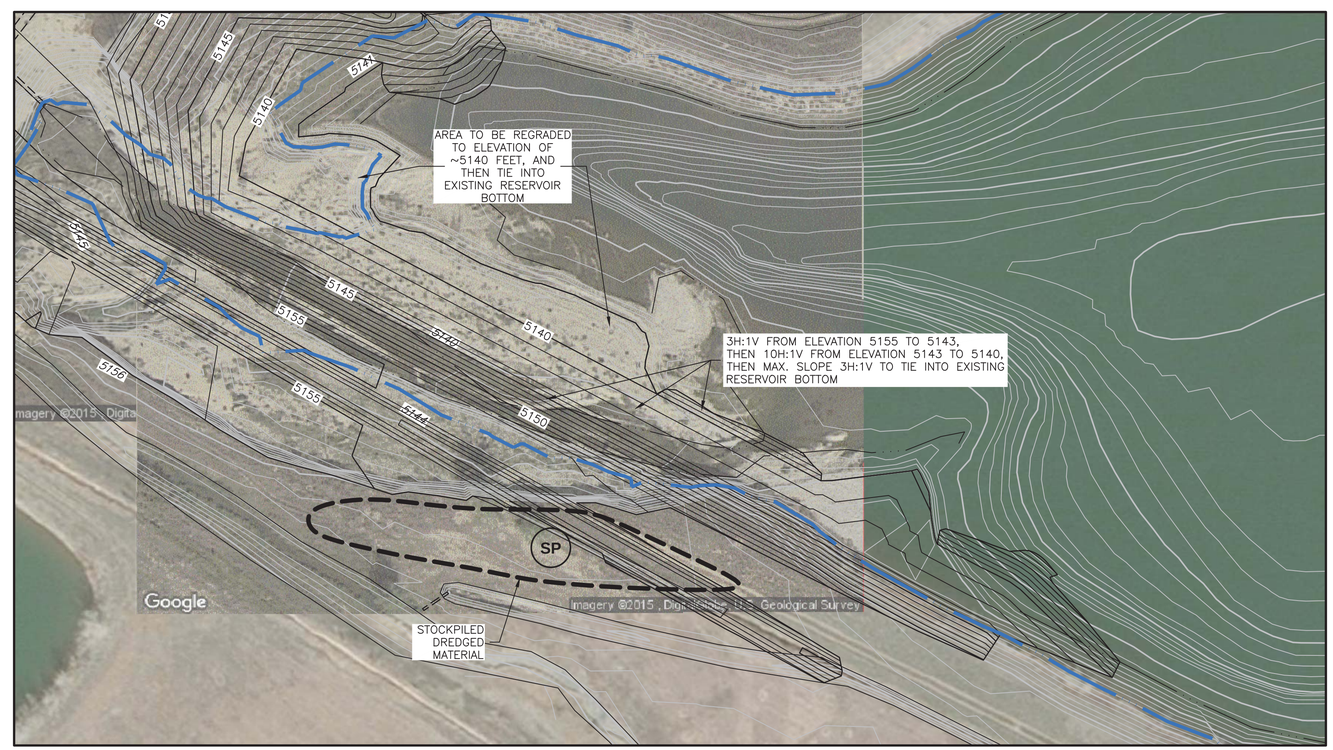


Scale 1" = 50'
1' CONTOUR INTERVAL

50 25 0 50 100 150
SCALE IN FEET

LEGEND:

- SP — STOCKPILE MANAGEMENT
- SF — SILT FENCE
- CWA — CONCRETE WASH AREA
- VTC — VEHICLE TRACKING CONTROL
- CF — CONSTRUCTION FENCE
- RCB-3 — ROLLED EROSION CONTROL PRODUCTS



Scale 1" = 50'
1' CONTOUR INTERVAL

50 25 0 50 100 150
SCALE IN FEET

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EROSION AND SEDIMENT CONTROL PLAN

BOULDER COUNTY
A-FRAME RESERVOIR
REHABILITATION

REVISIONS

NO	DATE	BY	CHK'D	DESCRIPTION
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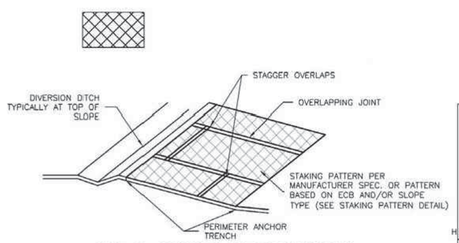
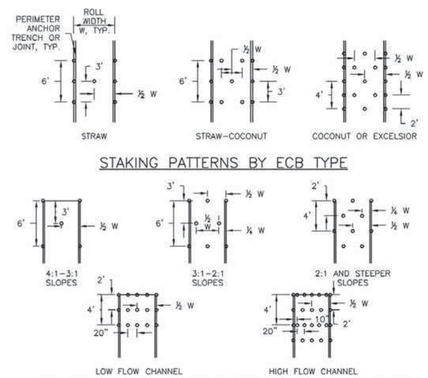
Of: **13**

Plot Date: 07/26/18-12:14pm, Plotted by:Luke, Drawing Path: N:\15117 Westlake and A Frame\Drawings\Plan Set\A-Frame\Drawing Names\Erosion Control.dwg

EC-6 Rolled Erosion Control Products (RECP)

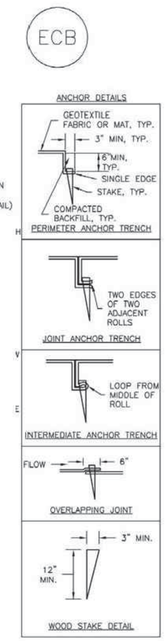


ECB-3. OUTSIDE OF DRAINAGEWAY



STAKING PATTERNS BY ECB TYPE

STAKING PATTERNS BY SLOPE OR CHANNEL TYPE



EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF ECB.
   - TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
   - AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.

3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.

4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.

5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.

6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.

7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.

8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.

9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED.

10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

EROSION CONTROL BLANKET 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. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.

5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

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 AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

TABLE ECB-1. ECB MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	-	100%	-	DOUBLE/ NATURAL
STRAW-COCONUT	30% MIN	70% MAX	-	DOUBLE/ NATURAL
COCONUT	100%	-	-	DOUBLE/ NATURAL
EXCELSIOR	-	-	100%	DOUBLE/ NATURAL

*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNEL.
**ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS

A/13 EROSION CONTROL DETAIL
NOT TO SCALE

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EROSION AND SEDIMENT CONTROL DETAILS

BOULDER COUNTY A-FRAME RESERVOIR REHABILITATION

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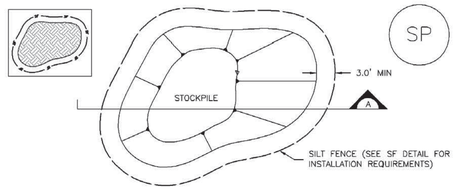
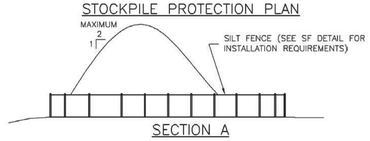
Stockpile Management (SP) — MM-2



STOCKPILE PROTECTION PLAN



SECTION A

SP–1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

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

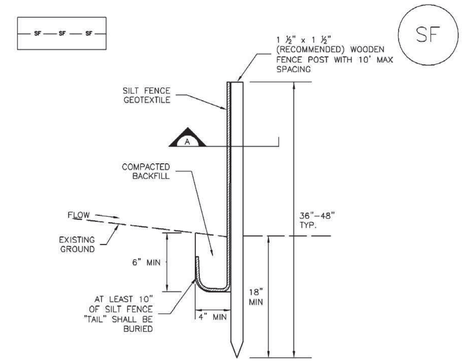
2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE 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).

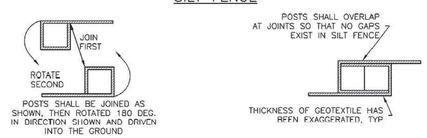
4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

A/13 EROSION CONTROL DETAIL
NOT TO SCALE

Silt Fence (SF) — SC-1



SILT FENCE

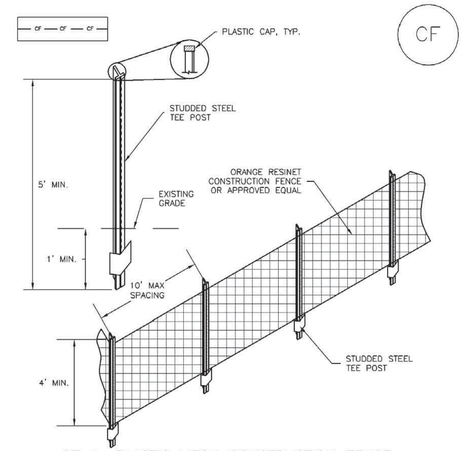


SECTION A

SF–1. SILT FENCE

B/13 EROSION CONTROL DETAIL
NOT TO SCALE

SM-3 — Construction Fence (CF)



CF–1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF CONSTRUCTION FENCE.

2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

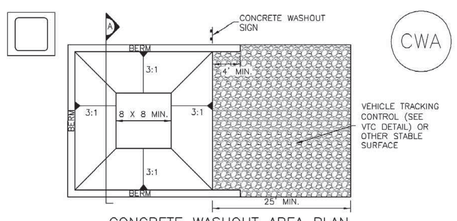
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR–GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.

4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.

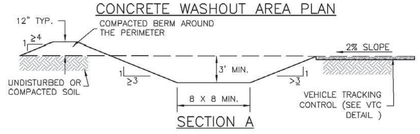
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

C/13 EROSION CONTROL DETAIL
NOT TO SCALE

Concrete Washout Area (CWA) — MM-1



CONCRETE WASHOUT AREA PLAN

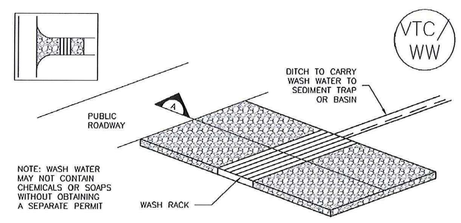


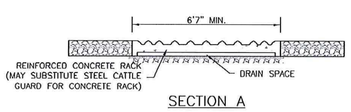
SECTION A

CWA–1. CONCRETE WASHOUT AREA

D/13 EROSION CONTROL DETAIL
NOT TO SCALE

SM-4 — Vehicle Tracking Control (VTC)





SECTION A

VTC–2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

E/13 EROSION CONTROL DETAIL
NOT TO SCALE

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