

THE CITIZEN ON CONSTITUTION

GRADING EROSION CONTROL AND PUBLIC IMPROVEMENT PLAN

A PORTION OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH P.M., CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

LEGAL DESCRIPTION

PARCEL A:

A PARCEL OF LAND LOCATED IN SECTION 5, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 5; THENCE SOUTH 89°53'50" WEST, 30.00 FEET ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 5 TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF MARKSHEFFEL ROAD; THENCE SOUTH 00°20'42" WEST, 60.00 FEET ALONG SAID WESTERLY RIGHT-OF-WAY LINE TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF PROPOSED 120.00 FOOT WIDE RIGHT-OF-WAY OF CONSTITUTION AVENUE TO THE POINT OF BEGINNING OF THE TRACT OF LAND HEREIN DESCRIBED; THENCE SOUTH 00°20'42" WEST, 435.00 FEET ALONG SAID WESTERLY RIGHT-OF-WAY LINE OF MARKSHEFFEL ROAD TO THE SOUTHEAST CORNER OF THE TRACT OF LAND DESCRIBED IN BOOK 2083 AT PAGE 587 OF THE RECORDS OF SAID COUNTY; THENCE SOUTH 89°53'50" WEST, 1292.28 FEET ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE TO THE POINT OF BEGINNING, EL PASO COUNTY, COLORADO.

EXCEPT THAT PORTION DESCRIBED AS FOLLOWS: THAT PORTION OF THE NORTHEAST ONE-QUARTER OF SECTION 5, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH P.M., SITUATE IN EL PASO COUNTY, COLORADO, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 5 THENCE SOUTH 89°53'50" WEST ON THE NORTH LINE THEREOF, 1322.28 FEET TO THE NORTHWEST CORNER OF SAID NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER OF SECTION 5, THENCE SOUTH 00°20'41" WEST ON THE WEST LINE OF SAID NORTHEAST ONE-QUARTER OF SECTION 5, 60.00 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF PROPOSED 120.00 FOOT RIGHT-OF-WAY OF CONSTITUTION AVENUE AND THE POINT OF BEGINNING OF THE TRACT OF LAND HEREIN DESCRIBED, THENCE (1) CONTINUE ON THE LAST MENTIONED COURSE, 435.00 FEET; (2) NORTH 89°53'50" EAST, 172.42 FEET; (3) NORTH 00°20'41" EAST 435.00 FEET TO A POINT ON SAID SOUTHERLY RIGHT-OF-WAY LINE OF PROPOSED CONSTITUTION AVENUE; (4) SOUTH 89°53'50" WEST ON SAID SOUTHERLY RIGHT-OF-WAY LINE OF PROPOSED CONSTITUTION AVENUE, 172.42 FEET TO THE POINT OF BEGINNING.

EXCEPT THAT PORTION CONVEYED TO THE BOARD OF COUNTY COMMISSIONER, EL PASO COUNTY, COLORADO IN WARRANTY DEED RECORDED JUNE 9, 2010 UNDER RECEPTION NO. 210054574.

COUNTY OF EL PASO,
STATE OF COLORADO.

PARCEL B:

THAT PORTION OF THE NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER OF SECTION 5, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, SITUATE IN COUNTY EL PASO, STATE OF COLORADO AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

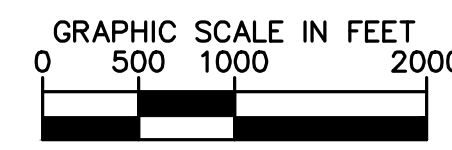
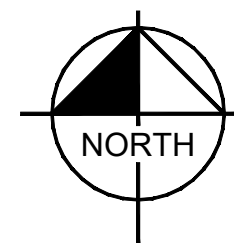
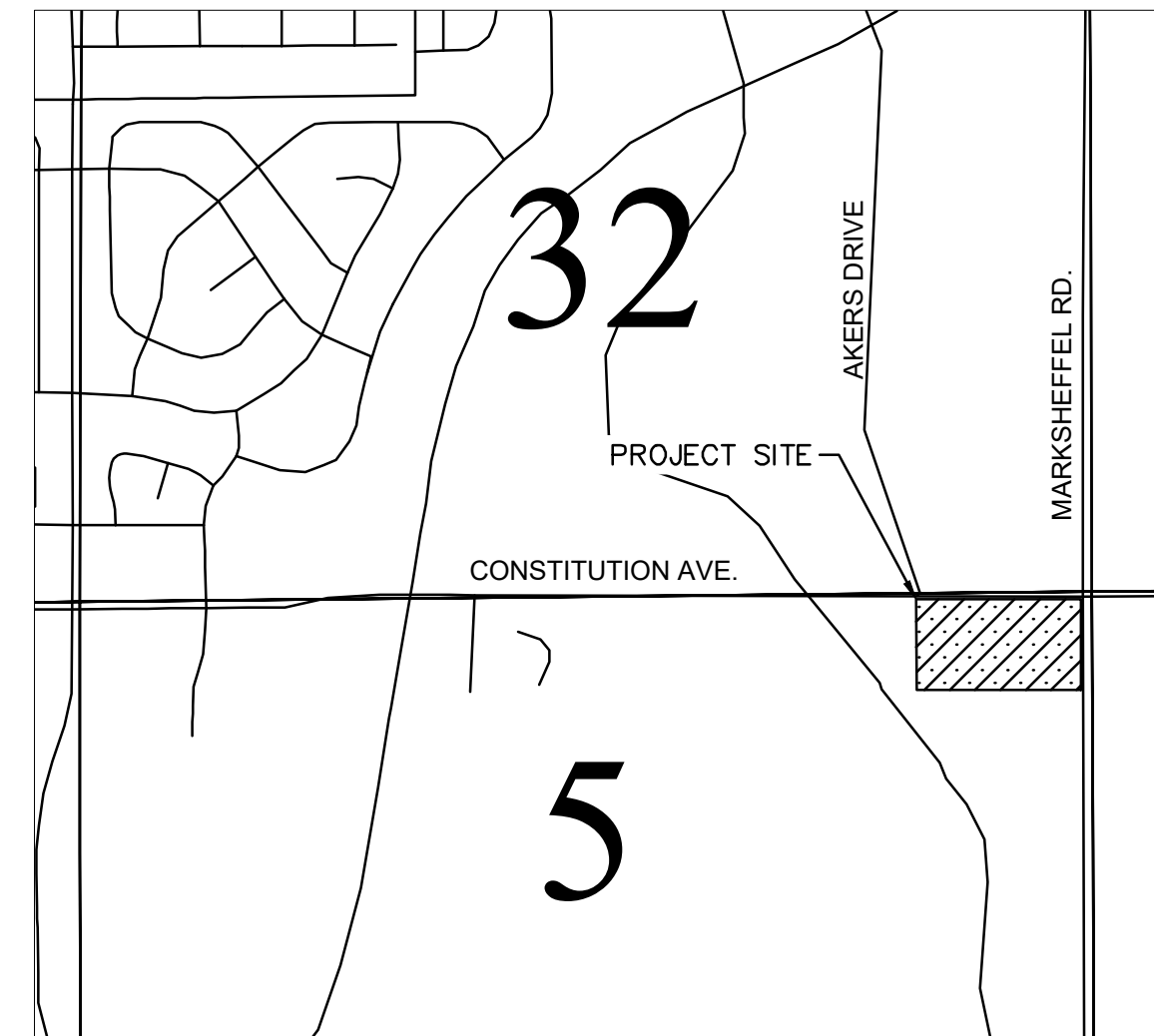
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COUNTY OF EL PASO,
STATE OF COLORADO.

(PER TITLE COMMITMENT FILE NO. NCS-1074278-INDY AS PROVIDED BY FIRST AMERICAN TITLE INSURANCE COMPANY.)

GENERAL NOTES

1. BASED ON ELEVATION DATA, THE APPLICANT WILL NEED TO FILE FEDERAL AVIATION ADMINISTRATION (FAA) FORM 7460-1 "NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION" FOR ANY NEW VERTICAL DEVELOPMENT AT THIS SITE, INCLUDING TEMPORARY CONSTRUCTION EQUIPMENT, AND PROVIDE FAA DOCUMENTATION TO THE AIRPORT BEFORE THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES; FAA'S WEBSITE (HTTPS://OEA.AA.FAA.GOV/OEA.AA/EXTERNAL/PORTAL.ISP).



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C1.8	GEC DETAILS (4 OF 4)

CONTACTS:

OWNER:
THE GARRETT COMPANIES, INC.
1051 GREENWOOD SPRINGS BLVD, SUITE 101
GREENWOOD, IN 46143
TEL: (317) 497-8275
CONTACT: ANDREW WHITE

EL PASO COUNTY:
EL PASO COUNTY
PCD DEPARTMENT
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, CO 80910
PHONE: (719) 520-6300

ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
2 NORTH NEVADA AVENUE, SUITE 300
COLORADO SPRINGS, CO 80903
TEL: (719) 453-0180
CONTACT: MITCHELL HESS, P.E.

SURVEYOR:
BARRON LAND, LLC
2790 N. ACADEMY BLVD. SUITE 311
COLORADO SPRINGS, CO 80917
TEL: (719) 360-6827
CONTACT: SPENCER BARRON, PLS

LAND AREA:

TOTAL PROPERTY AREA: +/- 12.26 ACRES

BENCHMARK:

ELEVATIONS ARE BASED UPON CITY OF COLORADO SPRINGS FIMS BENCHMARK "BLT104" (ELEVATION=6452.43 NGVD29)

SOIL TYPE:

THE SOIL ON SITE IS USGS HYDROLOGIC SOIL GROUP A/B.

FLOOD ZONE DESIGNATION

FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP, MAP NUMBER 08041C0756G, EFFECTIVE DATE DECEMBER 7, 2018, INDICATES THIS PARCEL OF LAND TO BE LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

SITE INFORMATION:

TIMING:
ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING:
START: JANUARY 2023
END: SPRING 2024

EXPECTED DATE ON WHICH THE FINAL STABILIZATION WILL BE COMPLETE:
FALL 2023

AREAS:
TOTAL DISTURBED AREA: 12.26 ACRES

RECEIVING WATERS:
NAME OF RECEIVING WATERS: SAND CREEK EAST FORK, ULTIMATELY SAND CREEK

DESCRIPTION OF EXISTING VEGETATION:
THE EXISTING SITE IS CURRENTLY UNDEVELOPED AND GROUND COVER CONSISTS OF 100% WEEDS, BRUSH, GRASSES, AND TREES.

DESCRIPTION OF PERMANENT BMPS:
FULL SPECTRUM EXTENDED DETENTION BASIN

SOILS INFORMATION:
SOIL GROUP: 80% A, 20% B
SOIL SLOPES: 2.5 H: 1V OR LESS FOR ALL UN-RETAINED AREAS

DEVELOPER'S STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

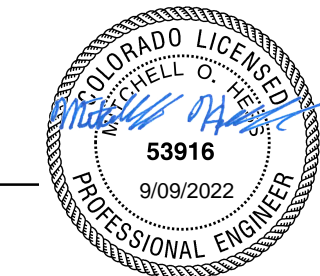
THE CITIZEN ON CONSTITUTION, LLC
DEVELOPER SIGNATURE

10/26/22
DATE

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

MITCHELL HESS, PE — KIMLEY-HORN AND ASSOCIATES, INC. 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 DIRECTOR'S DISCRETION.

JOSHUA PALMER, P.E.
COUNTY ENGINEER/ECM ADMINISTRATOR

DATE

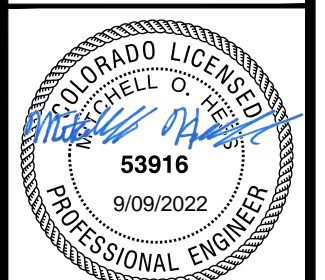
NO.	REVISION	BY	DATE	APPR.

Kimley»Horn

2022 KIMLEY-HORN AND ASSOCIATES, INC.
2 North Nevada Avenue, Suite 300
Colorado Springs, CO 80903 (303) 228-2300

DESIGNED BY: MOH
DRAWN BY: JWM
CHECKED BY: DLS
DATE: 9/09/2022

THE CITIZEN ON CONSTITUTION
EL PASO COUNTY, COLORADO
GRADING EROSION CONTROL AND
CONSTRUCTION DOCUMENTS
GEC COVER SHEET



PROJECT NO.
096481004

SHEET

C1.0



THE CITIZEN ON CONSTITUTION

GRADING EROSION CONTROL AND PUBLIC IMPROVEMENT PLAN

A PORTION OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH P.M., CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

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

1. 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.
2. 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 TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. 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. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP HAS BEEN APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED 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 STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLAN DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE 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. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE, UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUT SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK, OR STREAM.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
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. 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. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.

20. 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.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. OWNER/DEVELOPER AND THEIR AGENTS 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 OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY KUMAR AND ASSOCIATES, INC., DATED 9/10/2020 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (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



NO.	REVISION	BY	DATE	APPR.

Kimley»Horn
2022 KIMLEY-HORN AND ASSOCIATES, INC.
2 North Nevada Avenue, Suite 300
Colorado Springs, CO 80903 (303) 228-2300

DESIGNED BY: MOH
DRAWN BY: JWM
CHECKED BY: DLS
DATE: 09/09/2022

THE CITIZEN ON CONSTITUTION
EL PASO COUNTY, COLORADO
GRADING EROSION CONTROL AND
CONSTRUCTION DOCUMENTS
GEC GENERAL NOTES



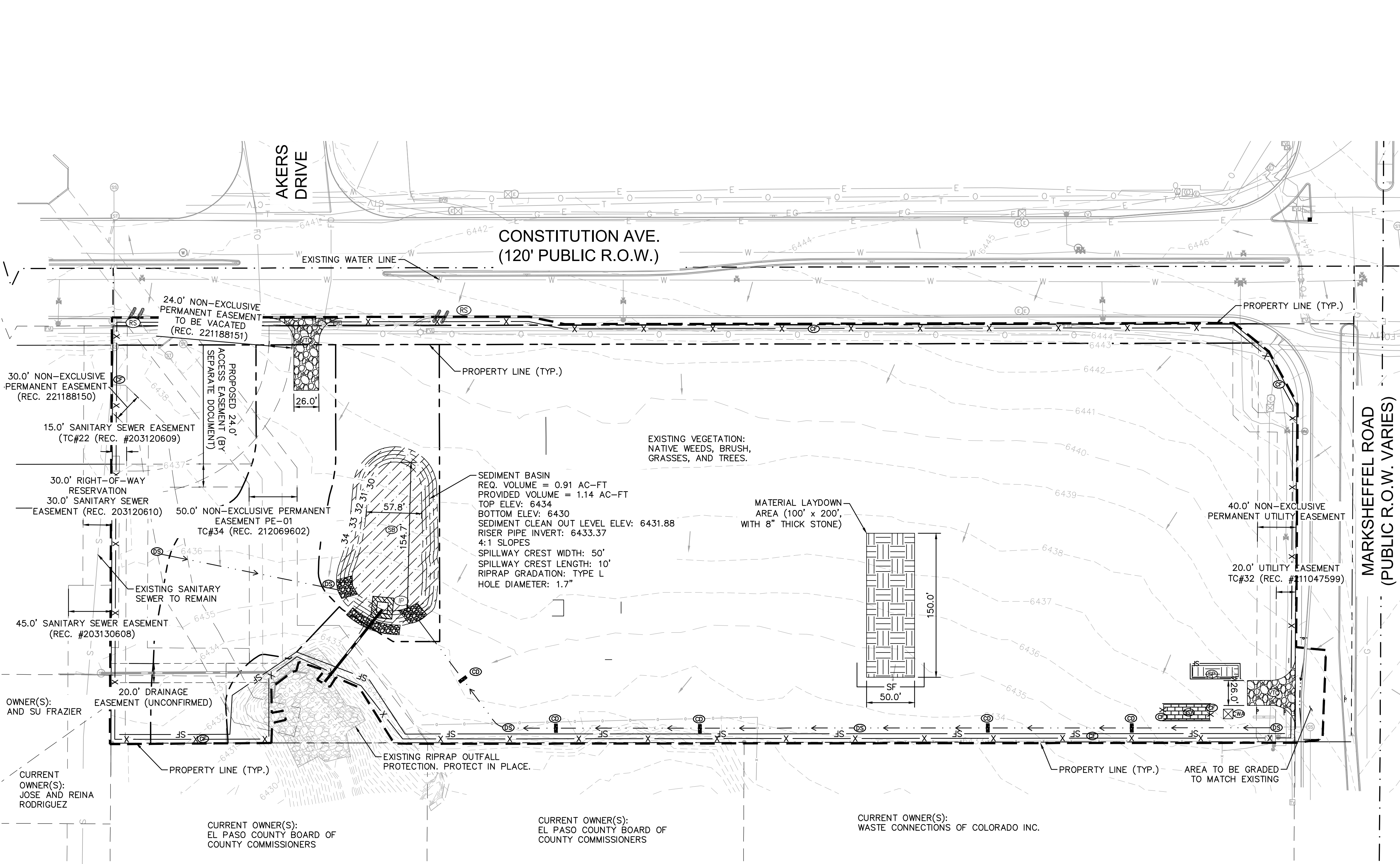
PROJECT NO.
096481004
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811 Know what's below. Call before you dig.

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES



LEGEND

- PROPERTY LINE
- 100 YEAR FLOODPLAIN
- LIMITS OF CONSTRUCTION/DISTURBANCE
- SILT FENCE
- CONSTRUCTION FENCE
- TEMPORARY OUTLET PROTECTION
- CULVERT INLET/OUTLET PROTECTION
- CONCRETE WASHOUT AREA
- STABILIZED STAGING AREA
- EROSION CONTROL BLANKET
- VEHICLE TRACKING CONTROL
- SOIL STOCKPILE
- TEMPORARY SEDIMENT BASIN
- SEEDING AND MULCHING
- CHECK DAM
- DIVERSION SWALE
- ROCK SOCKS
- EXISTING FLOW ARROW
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED DRAINAGE SWALE

LIMITS OF CONSTRUCTION

TOTAL DISTURBANCE	= ±12.26 ACRES
OFFSITE DISTURBANCE	= ±0.66 ACRES
TOTAL	= ±12.92 ACRES

Base Surface	Comparison Surface	Cut	Fill	Net
EG	FG	18276 Cu. Yd.	17846 Cu. Yd.	492 Cu. Yd. <Fill>

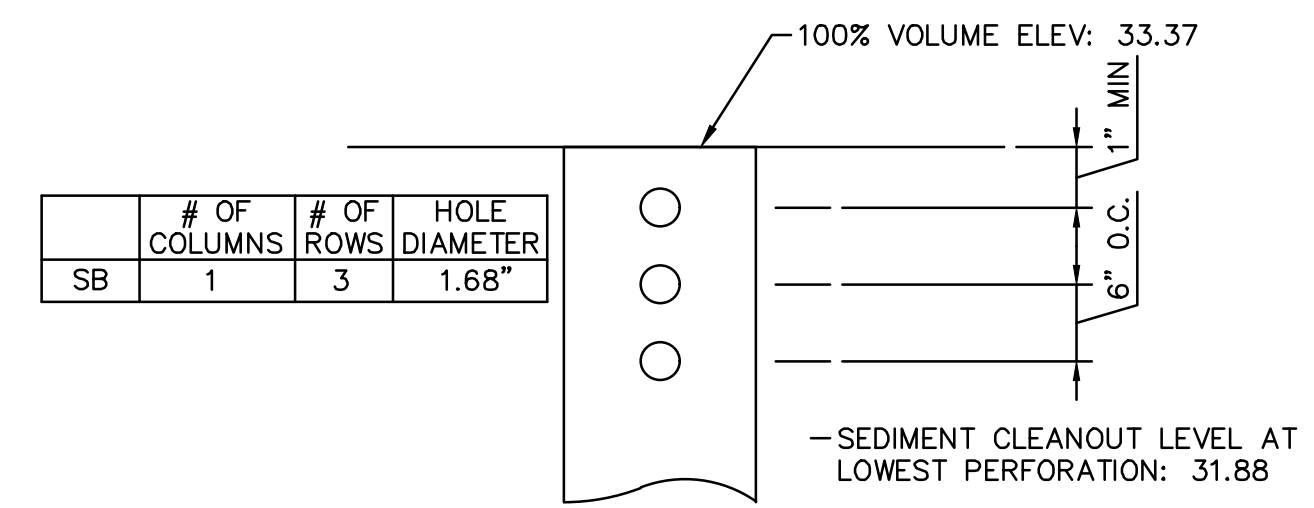
- NOTES**
- THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
 - ADJACENT STREETS SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES.
 - TEMPORARY STABILIZATION (TS) SHALL BE IMPLEMENTED WITHIN THE DISTURBED PORTIONS OF THE PROJECT SITE NO LATER THAN 14 DAYS FOLLOWING THE CEASE OF CONSTRUCTION ACTIVITIES WITHIN THE DISTURBED AREAS.
 - PERMANENT STABILIZATION (PS) MAY BE USED WITHIN AREAS OF TEMPORARY STABILIZATION (TS) AT THE CONTRACTOR'S DISCRETION. STABILIZATION SHALL BE APPLIED IN ACCORDANCE WITH APPLICABLE TEMPORARY STABILIZATION SEQUENCING REQUIREMENTS.
 - CONTRACTOR SHALL UTILIZE ROLLED EROSION CONTROL PRODUCTS ON ALL SLOPES 3H:1V OR GREATER TO ACHIEVE REQUIRED STABILIZATION.
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 - DEMOLITION, REMOVAL, OVEREXCAVATION AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
 - SEE THIS SHEET FOR RISER PIPE AND SEDIMENT BASIN DETAILS.

Temporary Sediment Basin Design Summary

BASIN NAME	TRIBUTARY AREA (AC)	REQUIRED VOLUME (AC-FT)	PROVIDED VOLUME (AC-FT)	WATER SURFACE ELEVATION (FT)	BASIN TOP ELEVATION (FT)	BASIN BOTTOM ELEVATION (FT)	SPILLWAY CREST LENGTH (FT)
A	10.96	0.91	0.91	6433.37	6434.00	6430.00	50.00

Temporary Pipe Outfall Design Summary

BASIN NAME	100% STORAGE ELEVATION (RISER TOP) (FT)	50% STORAGE ELEVATION (CENTER OF BOTTOM HOLE) (FT)	HOLE DIAMETER (IN)	NUMBER OF COLUMNS	NUMBER OF ROWS	UPSTREAM INVERT OF PIPE OUTFALL (FT)	DOWNSTREAM INVERT OF PIPE OUTFALL (FT)
A	6433.37	6431.88	1.7	1	3	6430.90	6421.00



PROFESSIONAL ENGINEER

53916
9/09/2022

GRAPHIC SCALE IN FEET
0 30 60 120

NORTH

Kimley»Horn
2022 KIMLEY-HORN AND ASSOCIATES, INC.
2 North Nevada Avenue, Suite 300
Colorado Springs, CO 80903 (303) 228-2300

DESIGNED BY: MOH
DRAWN BY: JWM
CHECKED BY: DLS
DATE: 9/09/2022

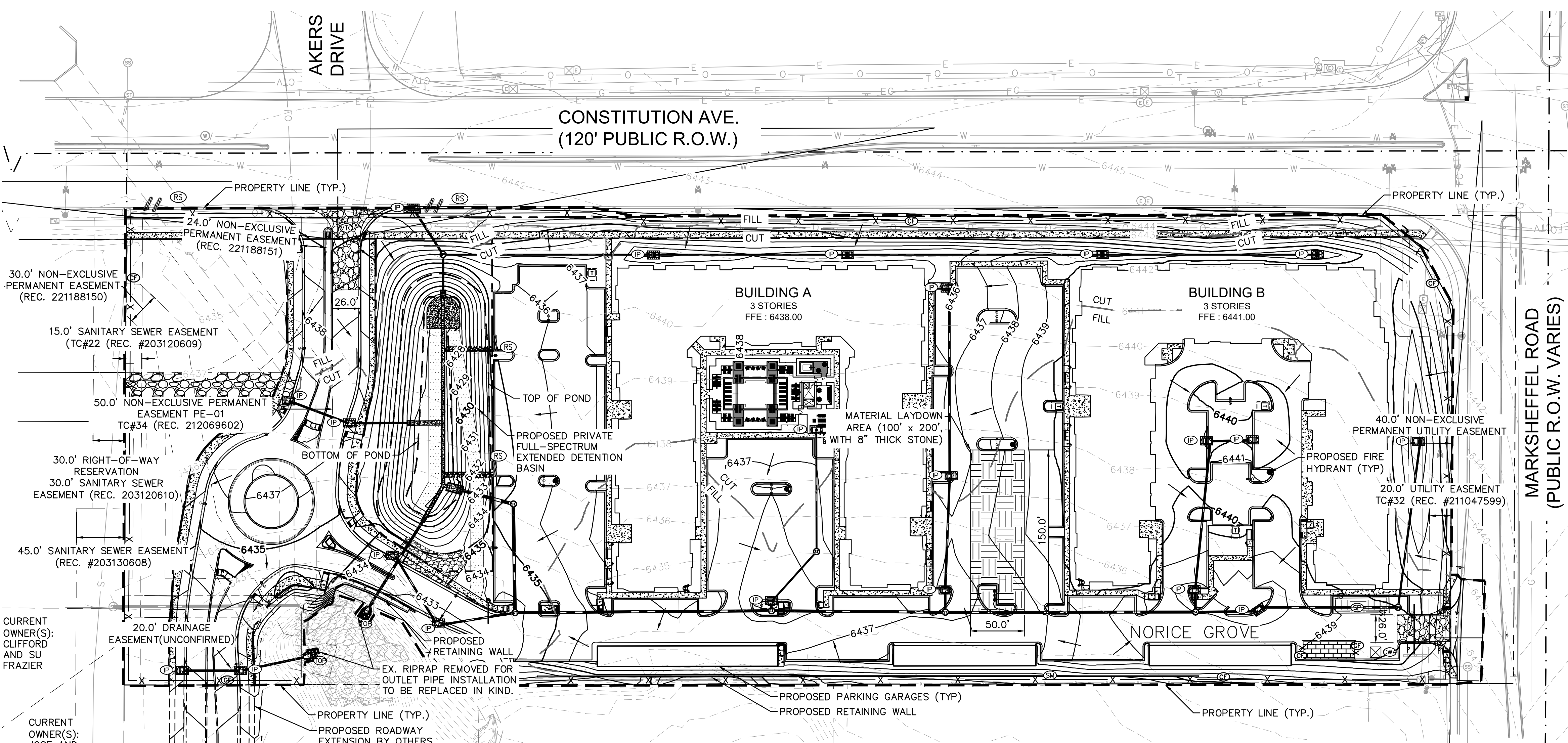
THE CITIZEN ON CONSTITUTION
EL PASO COUNTY, COLORADO
GRADING EROSION CONTROL AND
CONSTRUCTION DOCUMENTS
GEC INITIAL PLAN

PROJECT NO.
096481004

SHEET
C1.2

NO.	REVISION	BY	DATE	APPR.

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LEGEND

- — — — — PROPERTY LINE
- — — — — 100 YEAR FLOODPLAIN
- — — — — LIMITS OF CONSTRUCTION/DISTURBANCE
- SF ——— SILT FENCE
- X ——— CONSTRUCTION FENCE
- ⊙ ——— TEMPORARY OUTLET PROTECTION
- ⊙ ——— CULVERT INLET/OUTLET PROTECTION
- ⊙ ——— CONCRETE WASHOUT AREA
- ⊙ ——— STABILIZED STAGING AREA
- ⊙ ——— EROSION CONTROL BLANKET
- ⊙ ——— VEHICLE TRACKING CONTROL
- ⊙ ——— SOIL STOCKPILE
- ⊙ ——— TEMPORARY SEDIMENT BASIN
- ⊙ ——— SEEDING AND MULCHING
- ⊙ ——— CHECK DAM
- ⊙ ——— DIVERSION SWALE
- ⊙ ——— ROCK SOCKS
- — — — — PROPOSED FLOW ARROW
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING MAJOR CONTOUR
- 64XX ——— PROPOSED MAJOR CONTOUR
- 64XX ——— PROPOSED MINOR CONTOUR
- 64XX ——— PROPOSED DRAINAGE SWALE

LIMITS OF CONSTRUCTION

TOTAL DISTURBANCE	= ±12.26 ACRES
OFFSITE DISTURBANCE	= ±0.66 ACRES
TOTAL	= ±12.92 ACRES

Base Surface	Comparison Surface	Cut	Fill	Net
EG	FG	18276 Cu. Yd.	17846 Cu. Yd.	492 Cu. Yd. <Fill>

- NOTES**
- THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
 - ADJACENT STREETS SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES.
 - TEMPORARY STABILIZATION (TS) SHALL BE IMPLEMENTED WITHIN THE DISTURBED PORTIONS OF THE PROJECT SITE NO LATER THAN 14 DAYS FOLLOWING THE CEASE OF CONSTRUCTION ACTIVITIES WITHIN THE DISTURBED AREAS.
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 - SEE DETAILS ON SHEET C1.2 FOR RISER PIPE AND SEDIMENT BASIN DETAILS.

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

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

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2 North Nevada Avenue, Suite 300
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DESIGNED BY: MOH
DRAWN BY: JWM
CHECKED BY: DLS
DATE: 9/09/2022

THE CITIZEN ON CONSTITUTION
EL PASO COUNTY, COLORADO
GRADING EROSION CONTROL AND
CONSTRUCTION DOCUMENTS
GEC INTERIM PLAN

PROJECT NO.
096481004

SHEET
C1.3

NO. REVISION BY DATE APPR.

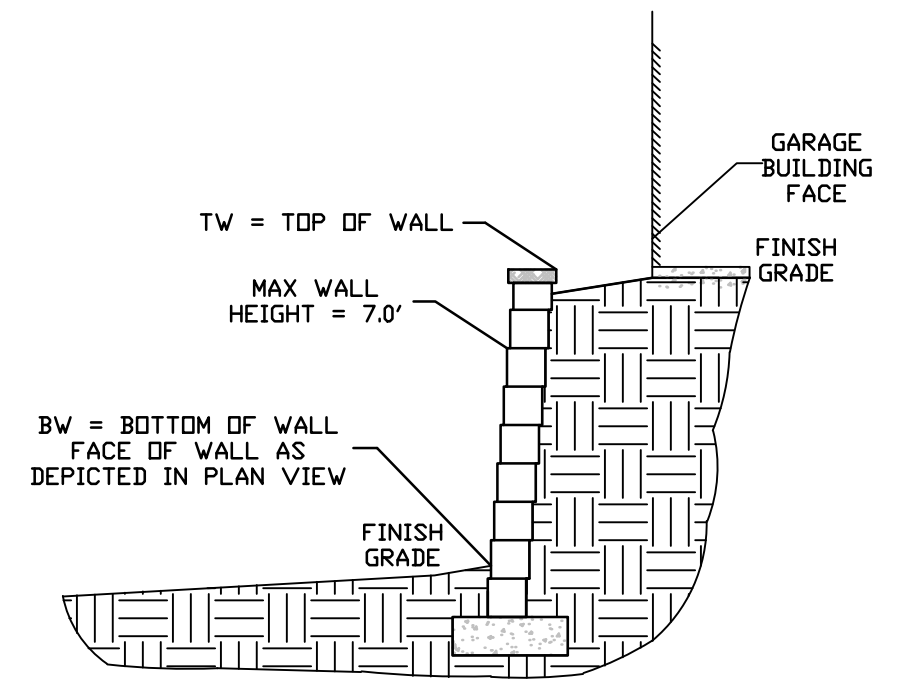
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811 Know what's below.
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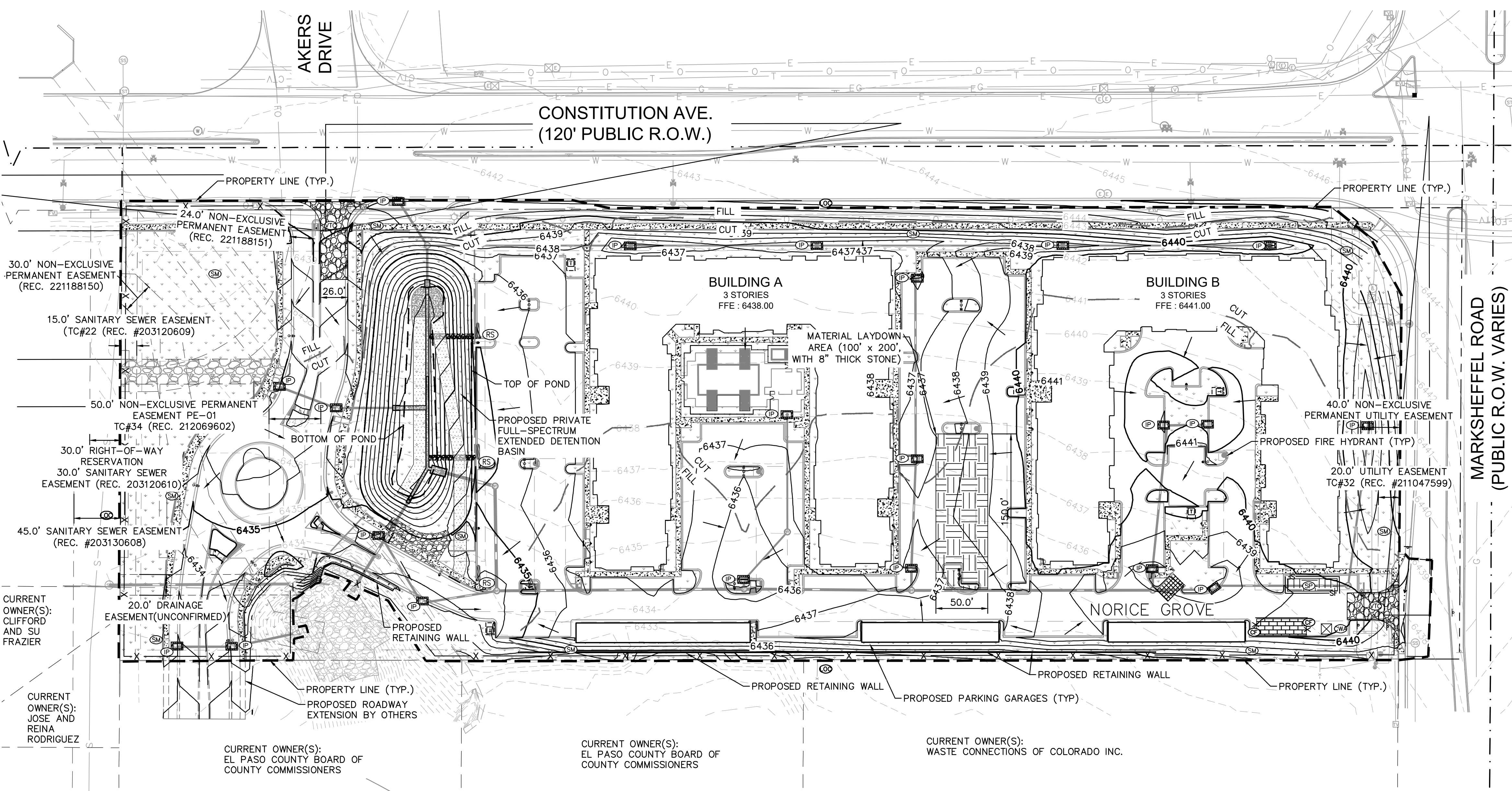
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10. SEE DETAILS ON SHEET C1.2 FOR RISER PIPE AND SEDIMENT BASIN DETAILS.



RETAINING WALL DETAIL



LEGEND

- — — — — PROPERTY LINE
- — — — — 100 YEAR FLOODPLAIN
- — — — — LIMITS OF CONSTRUCTION/DISTURBANCE
- SF — — — — — SILT FENCE
- X — — — — — CONSTRUCTION FENCE
- ⊙ — — — — — TEMPORARY OUTLET PROTECTION
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- ⊙ — — — — — STABILIZED STAGING AREA
- ⊙ — — — — — EROSION CONTROL BLANKET
- ⊙ — — — — — VEHICLE TRACKING CONTROL
- ⊙ — — — — — SOIL STOCKPILE
- ⊙ — — — — — TEMPORARY SEDIMENT BASIN
- ⊙ — — — — — SEEDING AND MULCHING
- ⊙ — — — — — CHECK DAM
- ⊙ — — — — — DIVERSION SWALE
- ⊙ — — — — — ROCK SOCKS
- — — — — PROPOSED FLOW ARROW
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING MAJOR CONTOUR
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- - - - - PROPOSED MINOR CONTOUR
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LIMITS OF CONSTRUCTION

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OFFSITE DISTURBANCE	= ±0.66 ACRES
TOTAL	= ±12.92 ACRES

Base Surface	Comparison Surface	Cut	Fill	Net
EG	FG	18276 Cu. Yd.	17846 Cu. Yd.	492 Cu. Yd. <Fill>

NO.	REVISION	BY	DATE	APPR.

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DESIGNED BY: MOH
DRAWN BY: JWM
CHECKED BY: DLS
DATE: 9/09/2022

**THE CITIZEN ON CONSTITUTION
EL PASO COUNTY, COLORADO
GRADING EROSION CONTROL AND
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GEC FINAL PLAN**



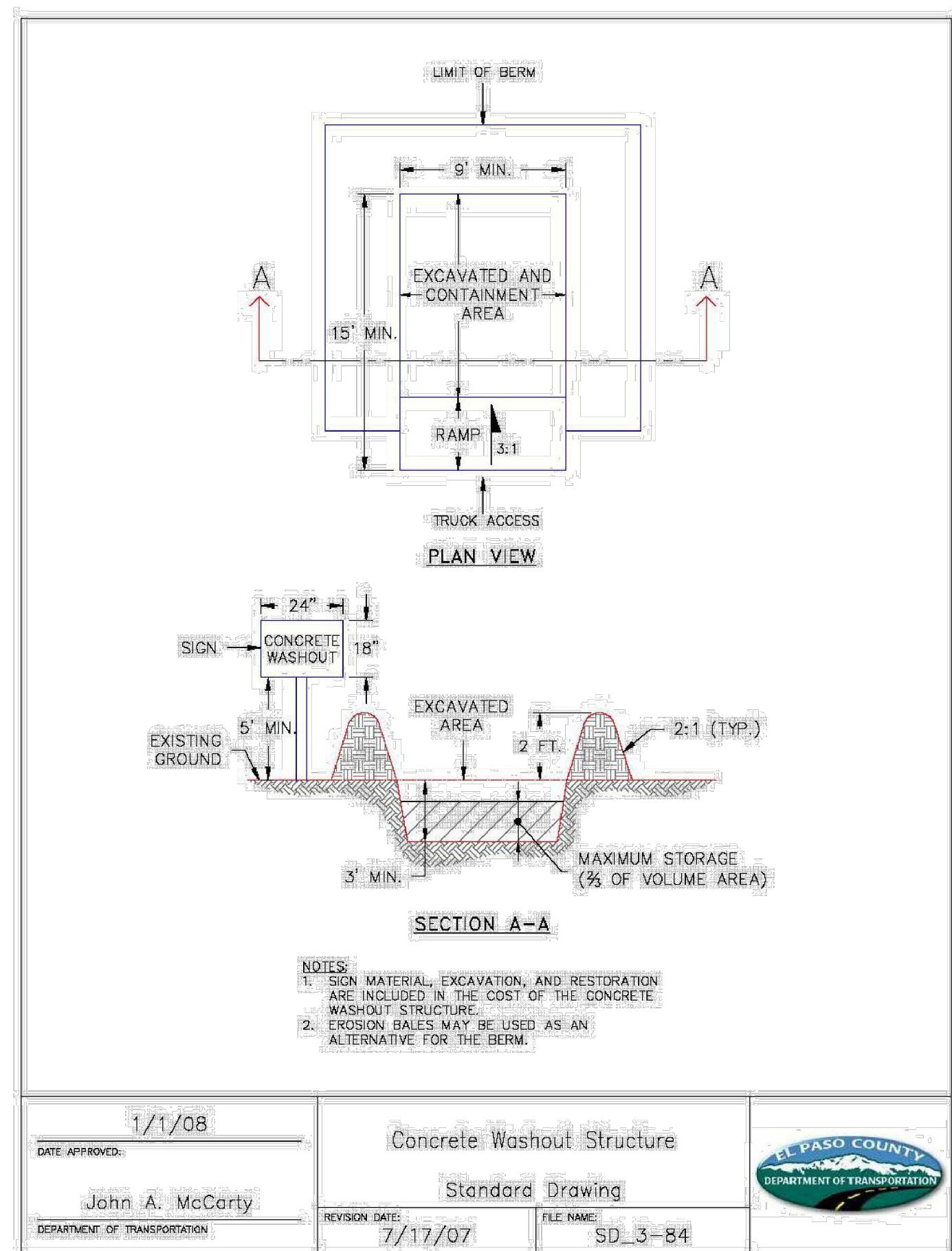
PROJECT NO.
096481004

SHEET

C1.4

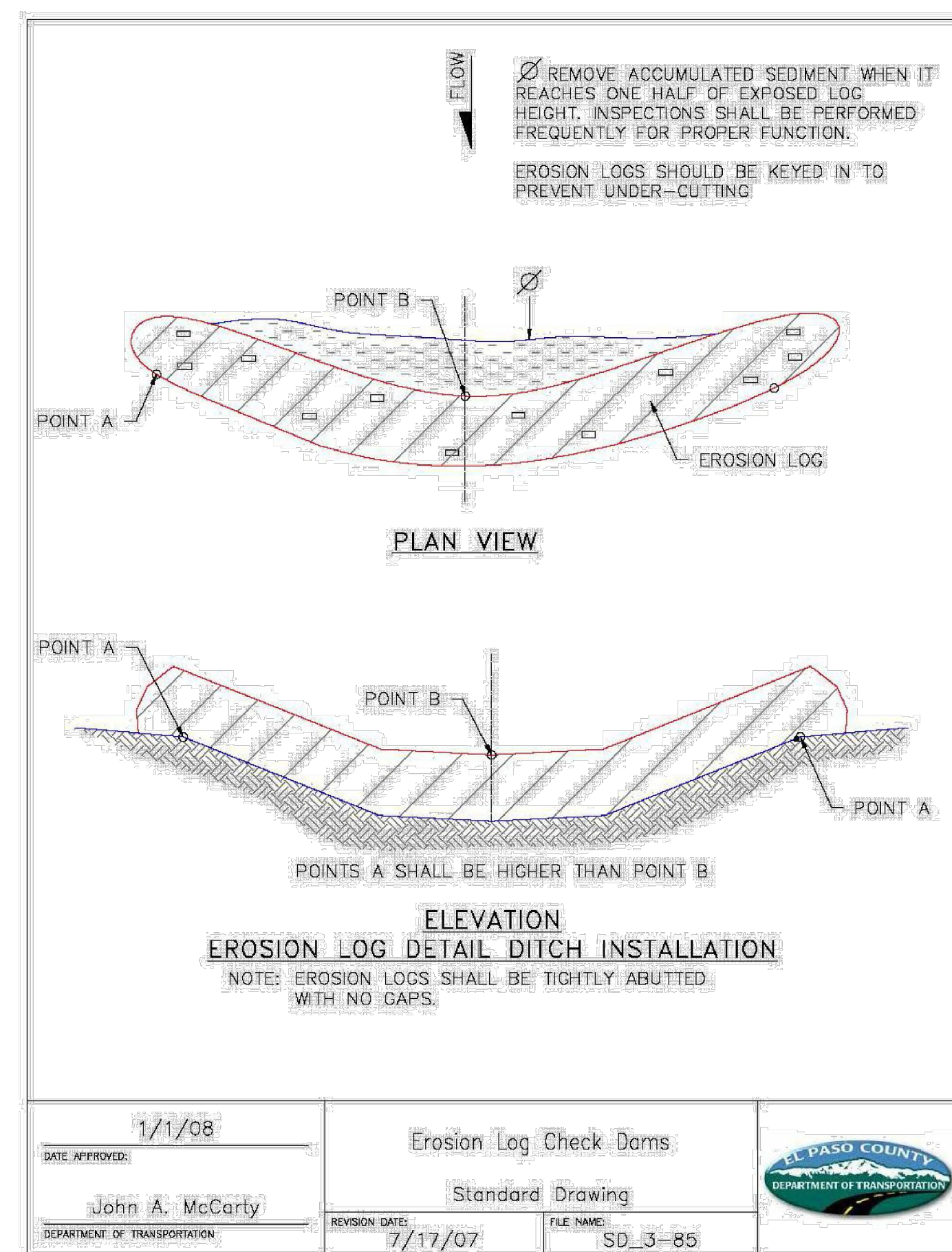
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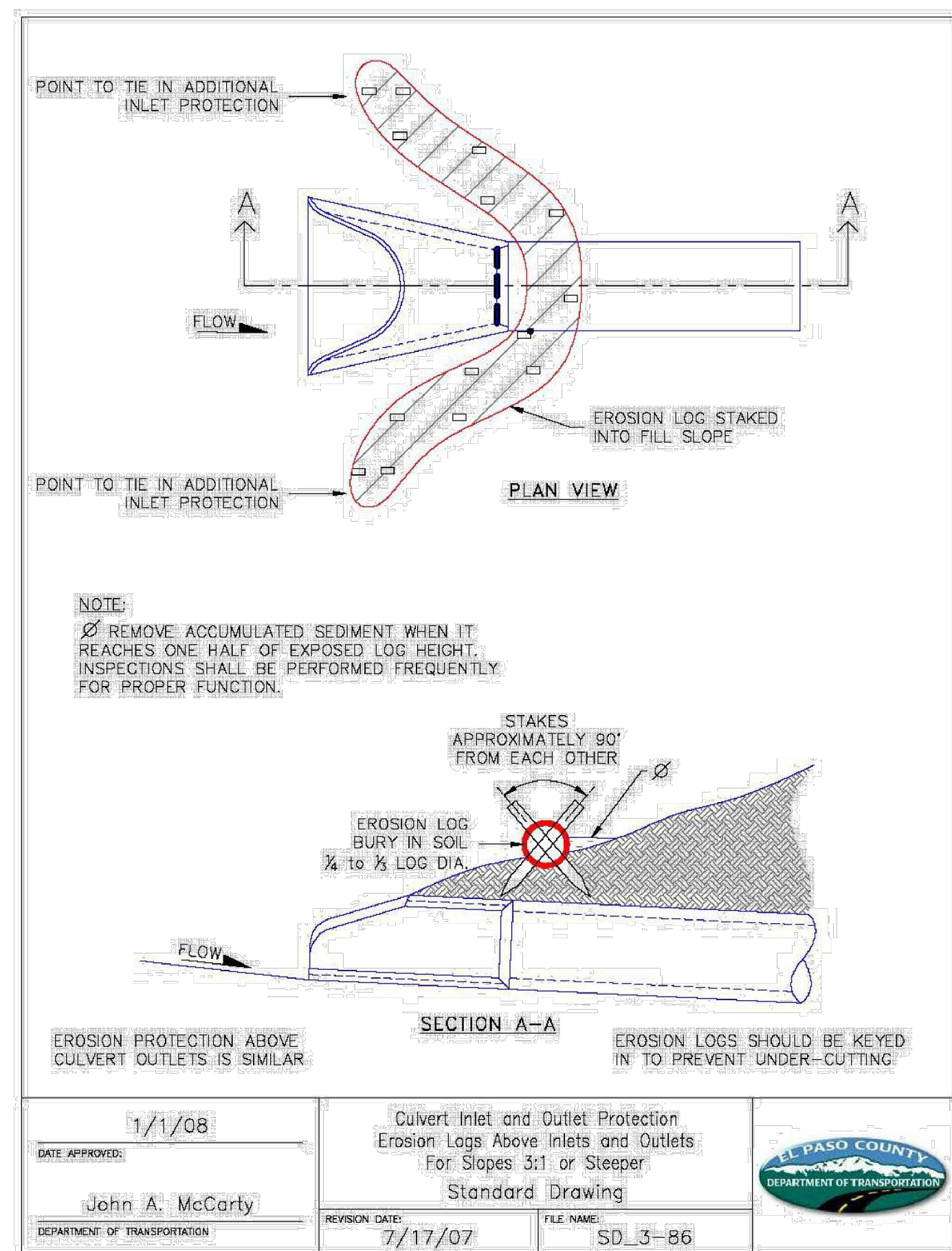
1/1/08 Concrete Washout Structure
 John A. McCarty Standard Drawing
 DEPARTMENT OF TRANSPORTATION 7/17/07 SD_3-84

SM-3 Construction Fence (CF)



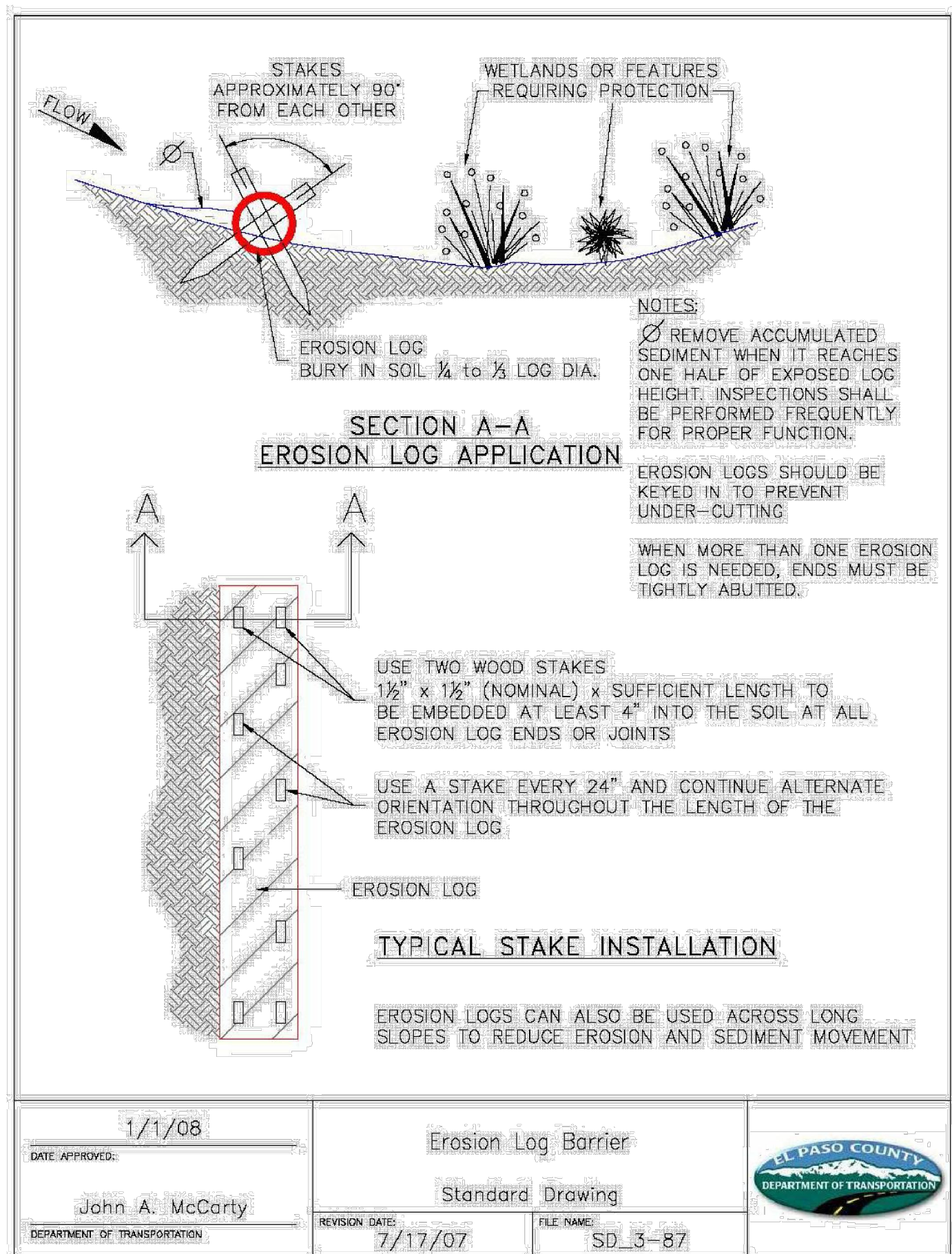
1/1/08 Erosion Log Check Dams
 John A. McCarty Standard Drawing
 DEPARTMENT OF TRANSPORTATION 7/17/07 SD_3-85

Silt Fence (SF) SC-1



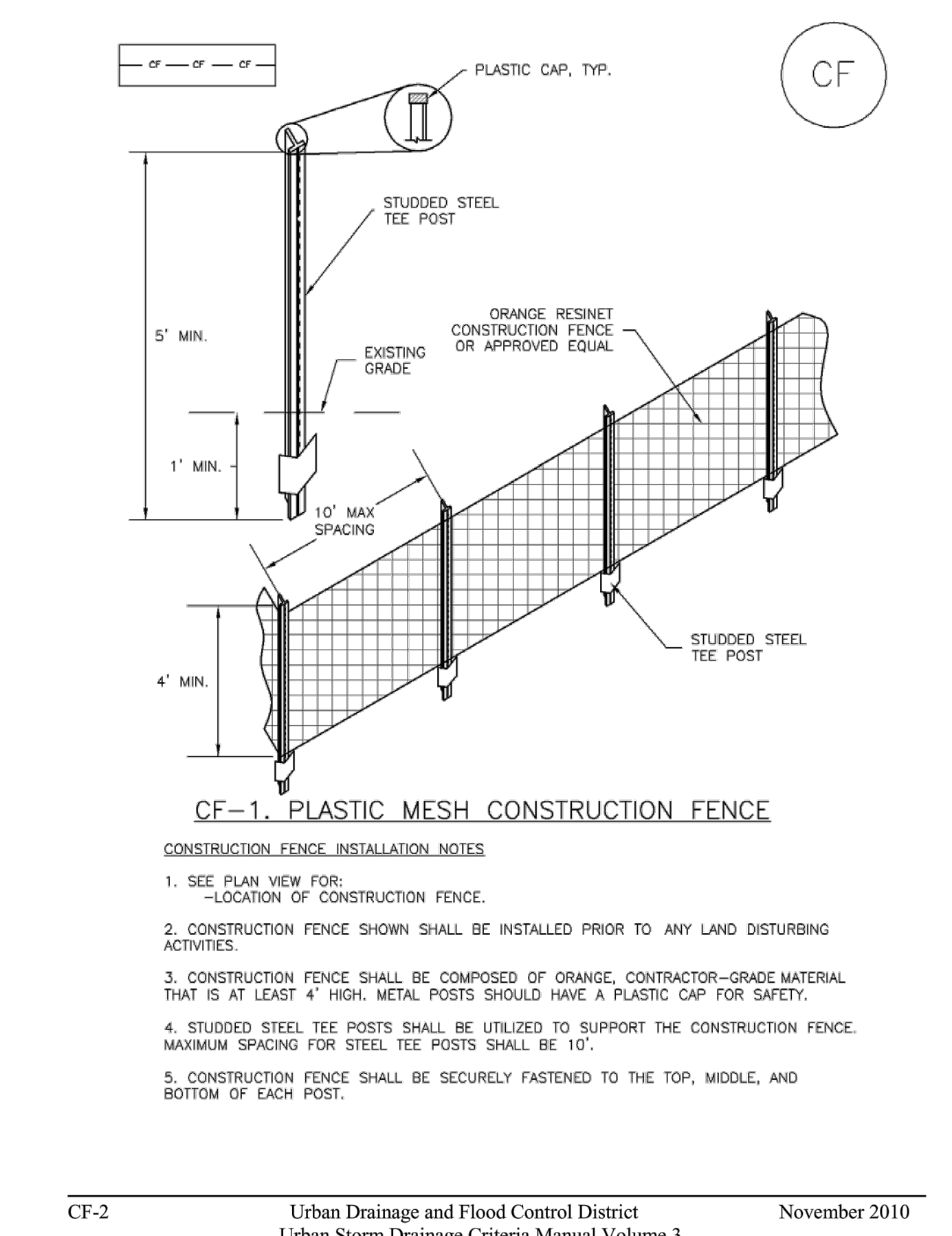
1/1/08 Culvert Inlet and Outlet Protection
 John A. McCarty Standard Drawing
 DEPARTMENT OF TRANSPORTATION 7/17/07 SD_3-86

Check Dams (CD) EC-12



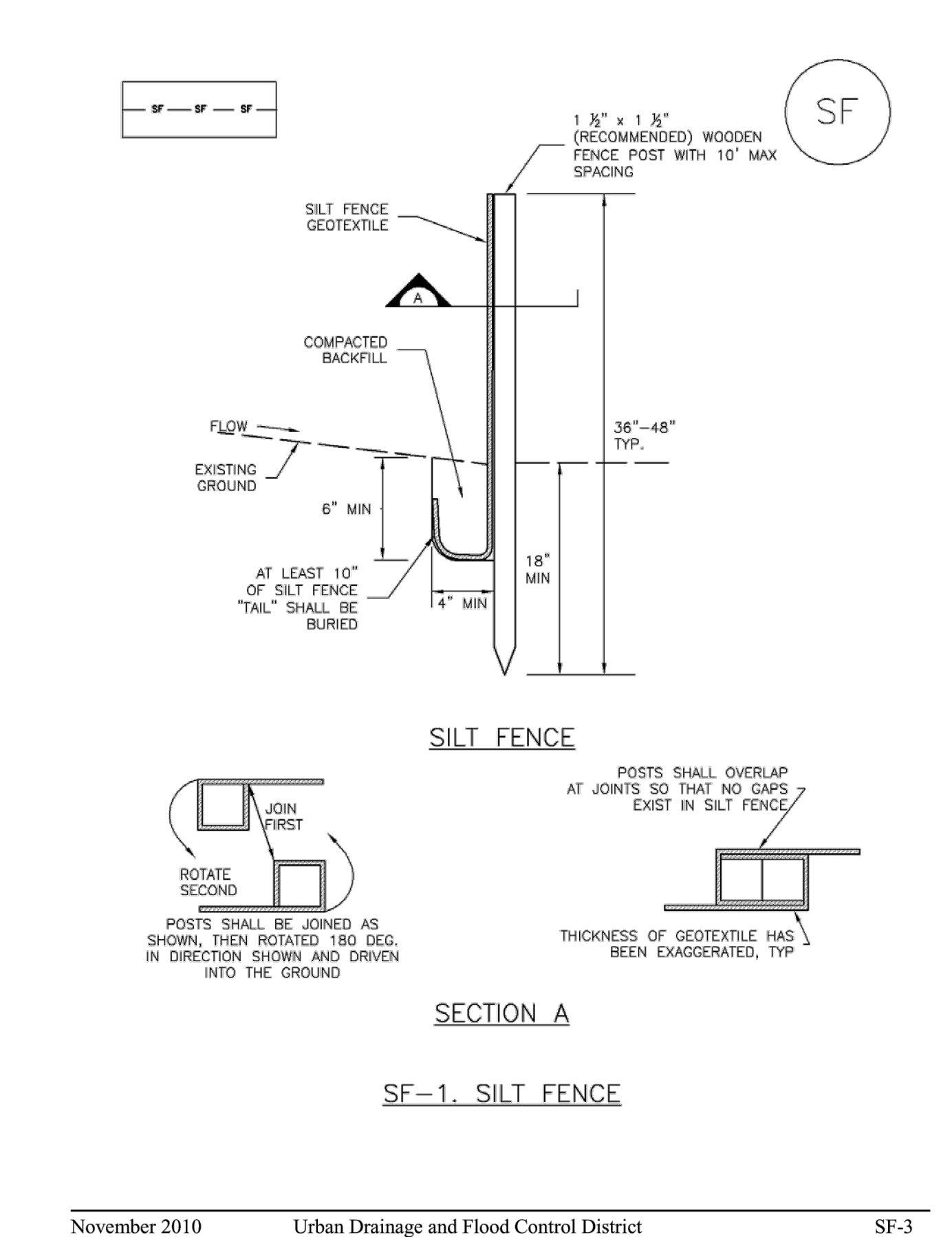
1/1/08 Erosion Log Barrier
 John A. McCarty Standard Drawing
 DEPARTMENT OF TRANSPORTATION 7/17/07 SD_3-87

Stabilized Staging Area (SSA) SM-6



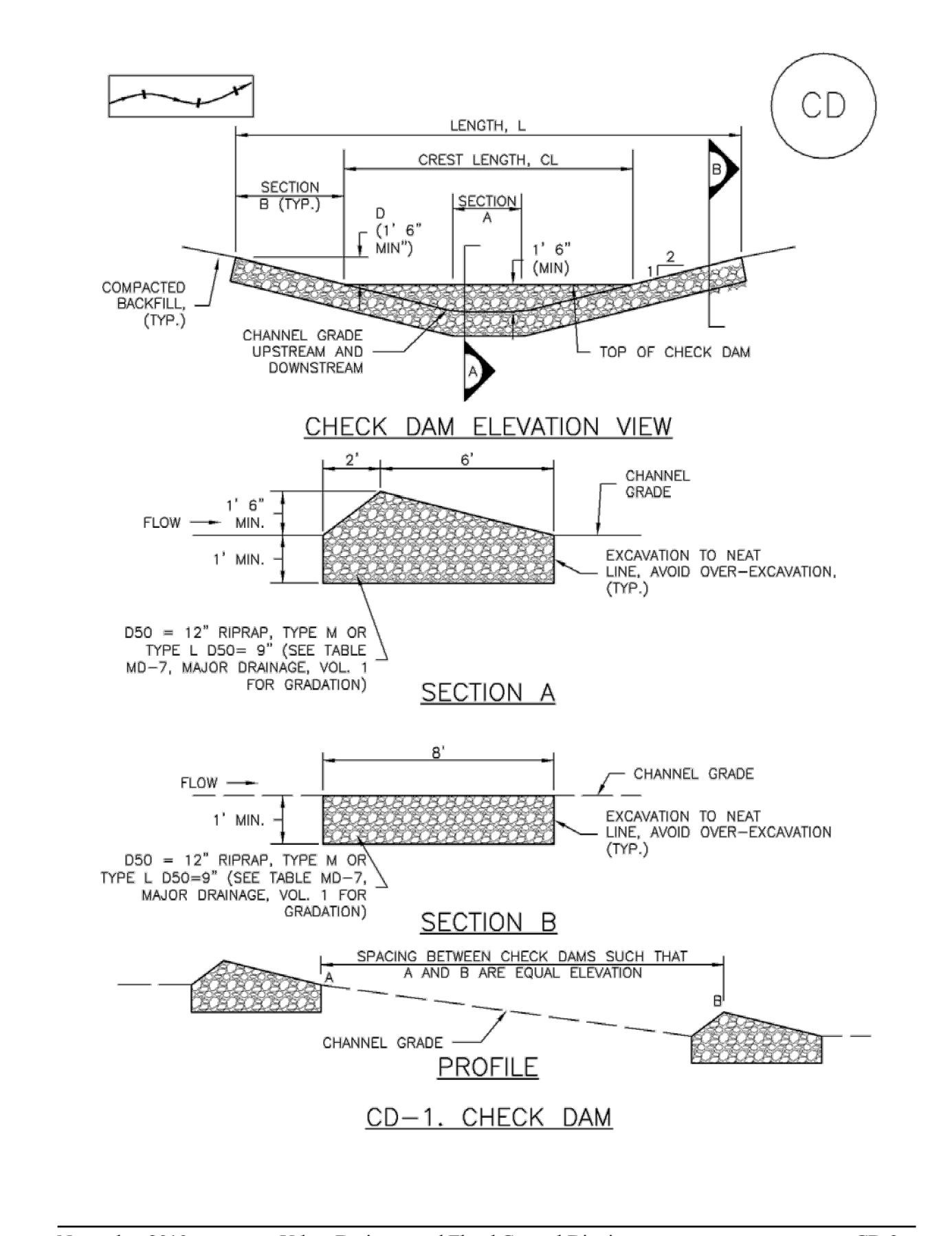
CF-1. PLASTIC MESH CONSTRUCTION FENCE
 CONSTRUCTION FENCE INSTALLATION NOTES
 1. SEE PLAN VIEW FOR LOCATION OF CONSTRUCTION FENCE.
 2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
 3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4\"/>

CF-2 Urban Drainage and Flood Control District
 Urban Storm Drainage Criteria Manual Volume 3 November 2010



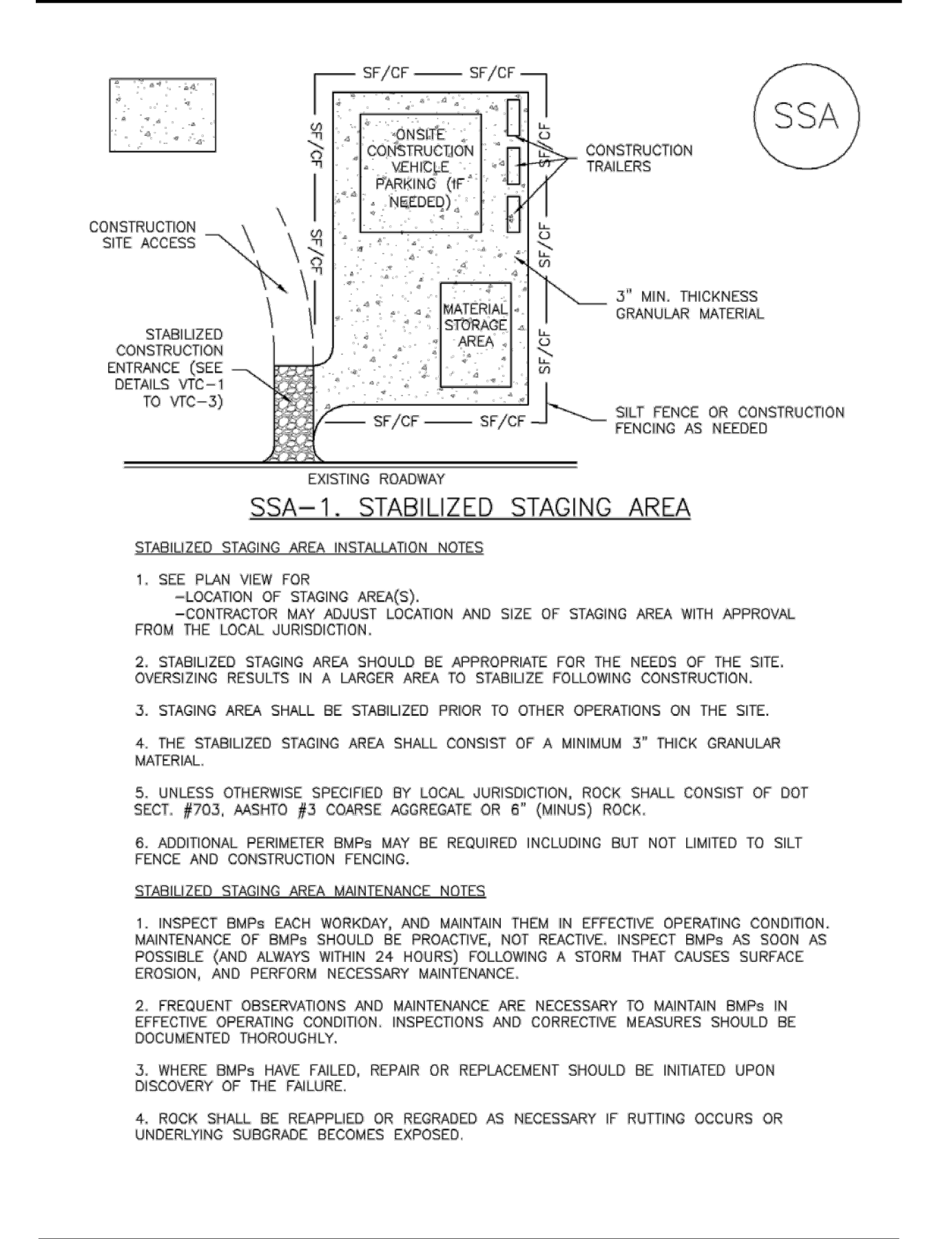
SF-1. SILT FENCE
 SILT FENCE INSTALLATION NOTES
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 2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
 3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4\"/>

SF-3 Urban Drainage and Flood Control District
 Urban Storm Drainage Criteria Manual Volume 3 November 2010



CD-1. CHECK DAM
 CHECK DAM INSTALLATION NOTES
 1. SEE PLAN VIEW FOR LOCATION OF STAGING AREA(S).
 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\"/>

CD-3 Urban Drainage and Flood Control District
 Urban Storm Drainage Criteria Manual Volume 3 November 2010



SSA-1. STABILIZED STAGING AREA
 STABILIZED STAGING AREA INSTALLATION NOTES
 1. SEE PLAN VIEW FOR LOCATION OF STAGING AREA(S).
 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.
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SSA-3 Urban Drainage and Flood Control District
 Urban Storm Drainage Criteria Manual Volume 3 November 2010

DESIGNED BY: MOH
 DRAWN BY: JWM
 CHECKED BY: DLS
 DATE: 09/09/2022

THE CITIZEN ON CONSTITUTION
 EL PASO COUNTY, COLORADO
 GRADING EROSION CONTROL AND
 CONSTRUCTION DOCUMENTS
 GEC DETAILS (1 OF 4)

PROFESSIONAL ENGINEER
 53916
 9/09/2022

PROJECT NO.
 096481004
 SHEET
C1.5

Kimley»Horn
 2022 KIMLEY-HORN AND ASSOCIATES, INC.
 2 North Nevada Avenue, Suite 300
 Colorado Springs, CO 80903 (303) 228-2300

Sediment Basin (SB)

SC-7

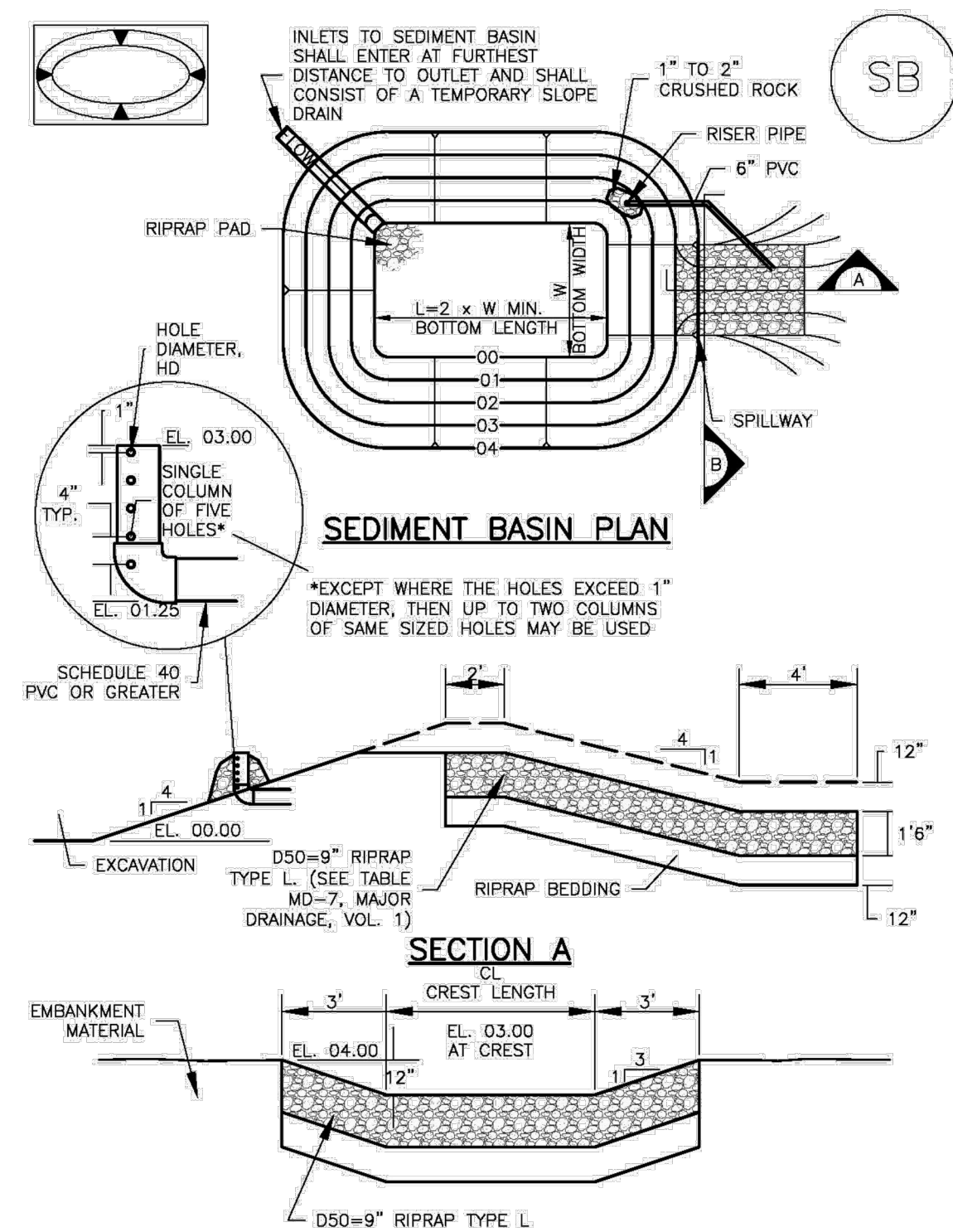


TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

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

SEDIMENT BASIN INSTALLATION NOTES

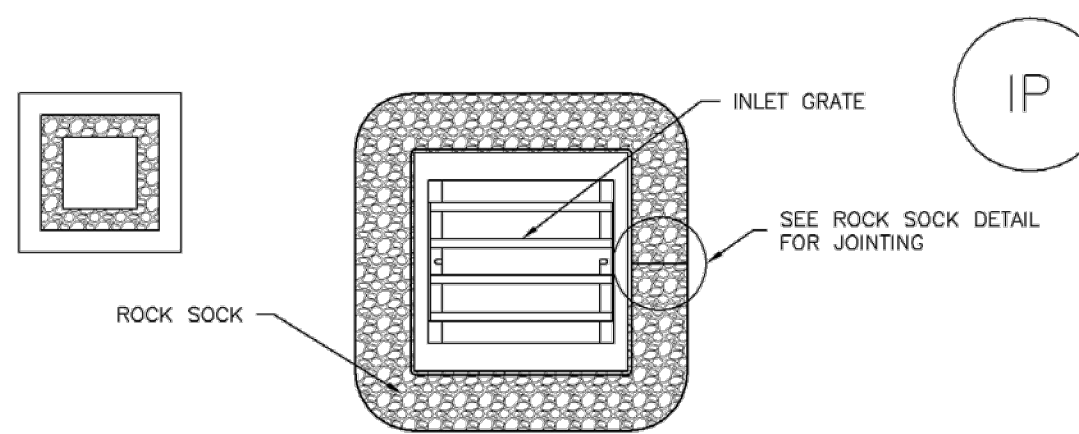
- SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
 - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
 - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON BASINS AS A STORMWATER CONTROL.
- 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.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- 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.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

SB-5

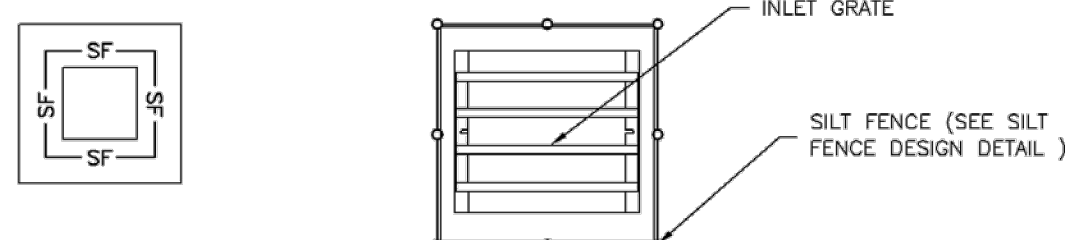
Inlet Protection (IP)

SC-6



ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

- SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
- STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



SILT FENCE INLET PROTECTION INSTALLATION NOTES

- SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
- POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
- STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

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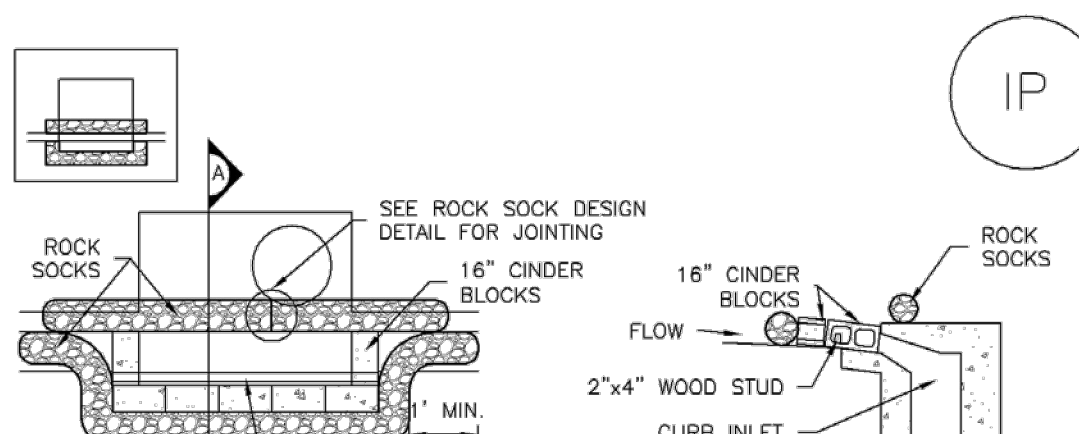
IP-5

SC-7

SC-6

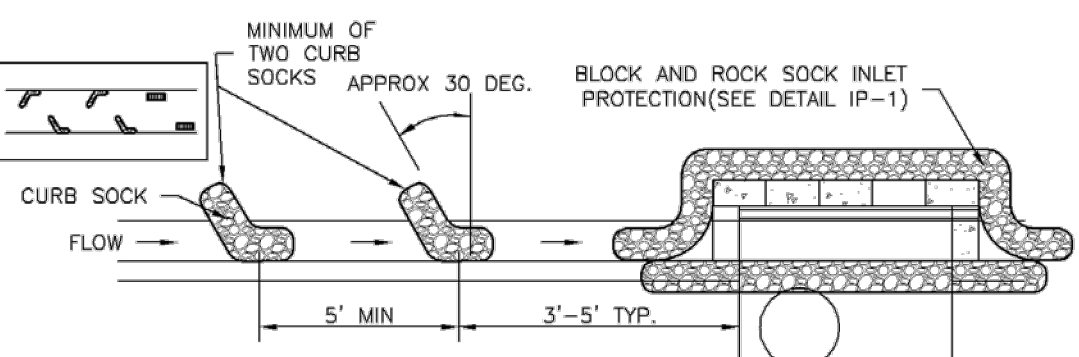
Sediment Basin (SB)

Inlet Protection (IP)



BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

- SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
- CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
- GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

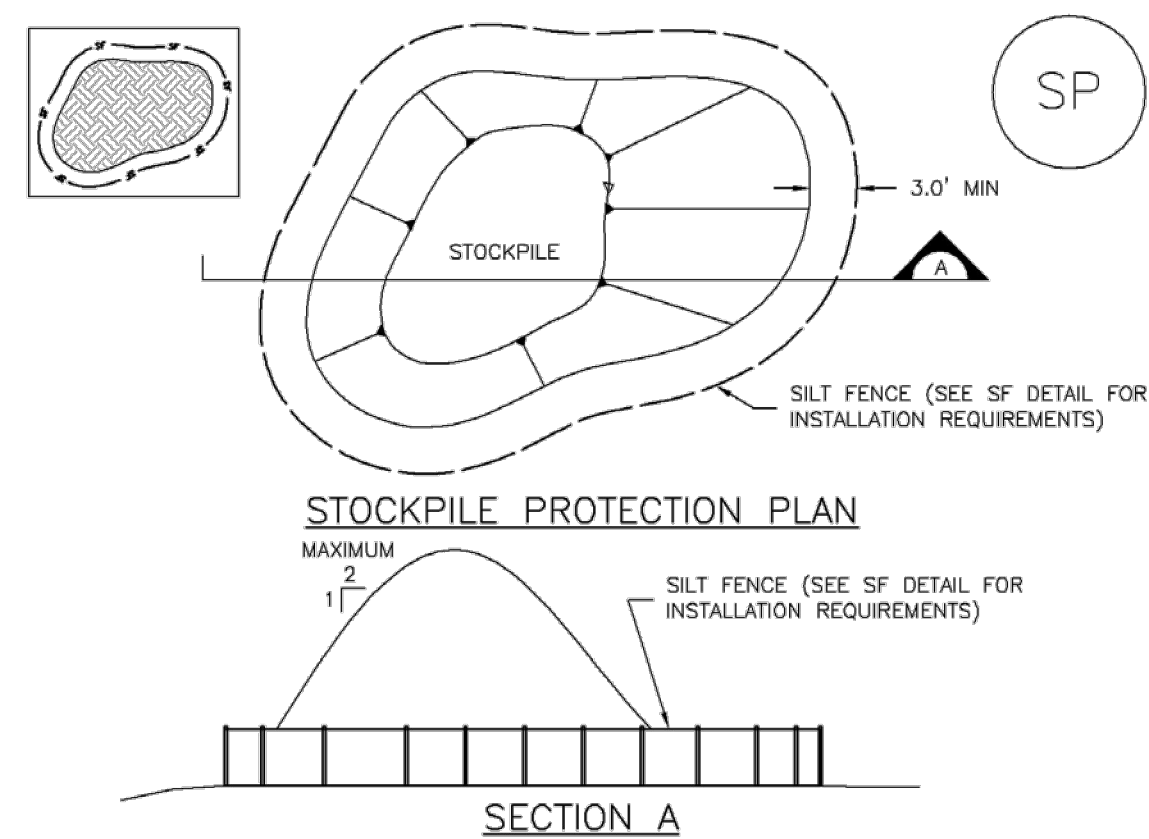
- SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
- PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
- SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
- AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

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IP-4

Stockpile Management (SP)

MM-2



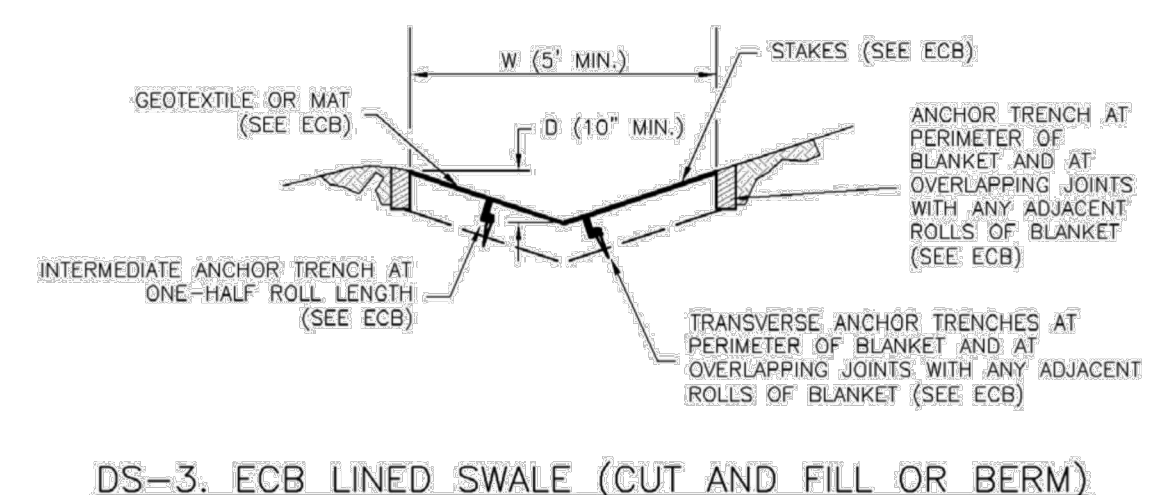
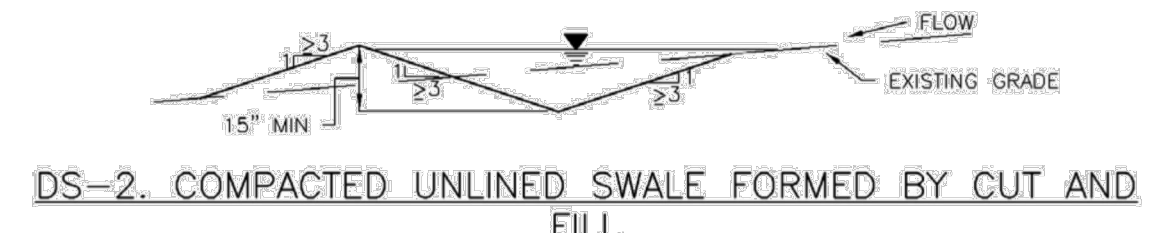
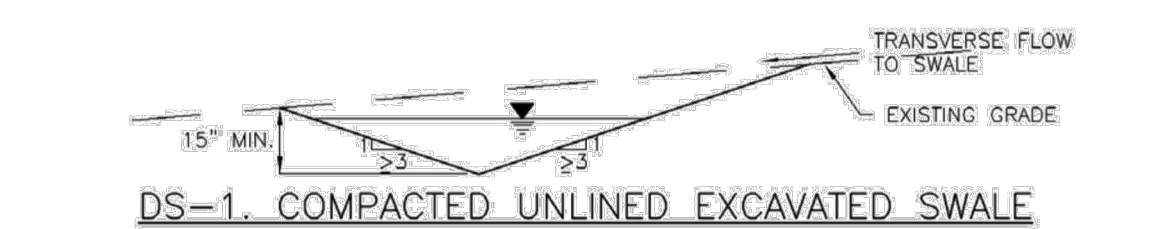
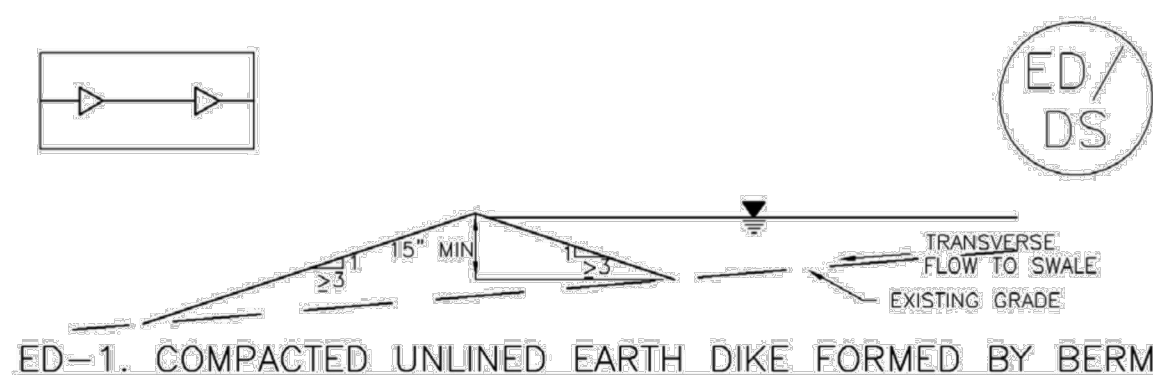
- SEE PLAN VIEW FOR:
 - LOCATION OF STOCKPILES.
 - TYPE OF STOCKPILE PROTECTION.
- INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK 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.
- 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).
- 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.

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SP-3

Earth Dikes and Drainage Swales (ED/DS)

EC-10

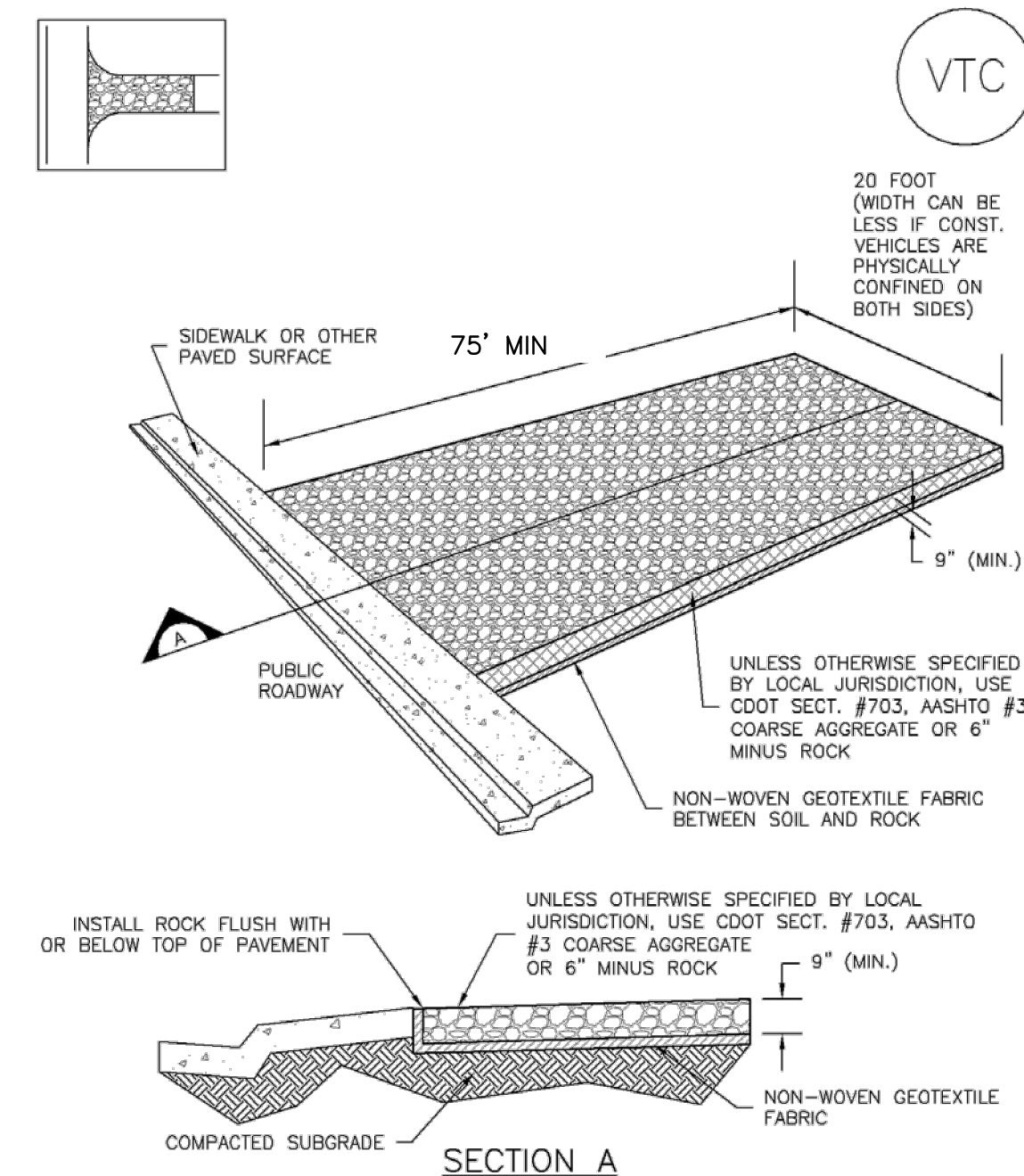


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ED/DS-3

Vehicle Tracking Control (VTC)

SM-4



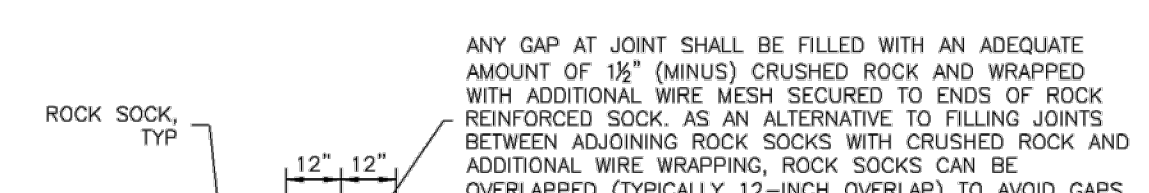
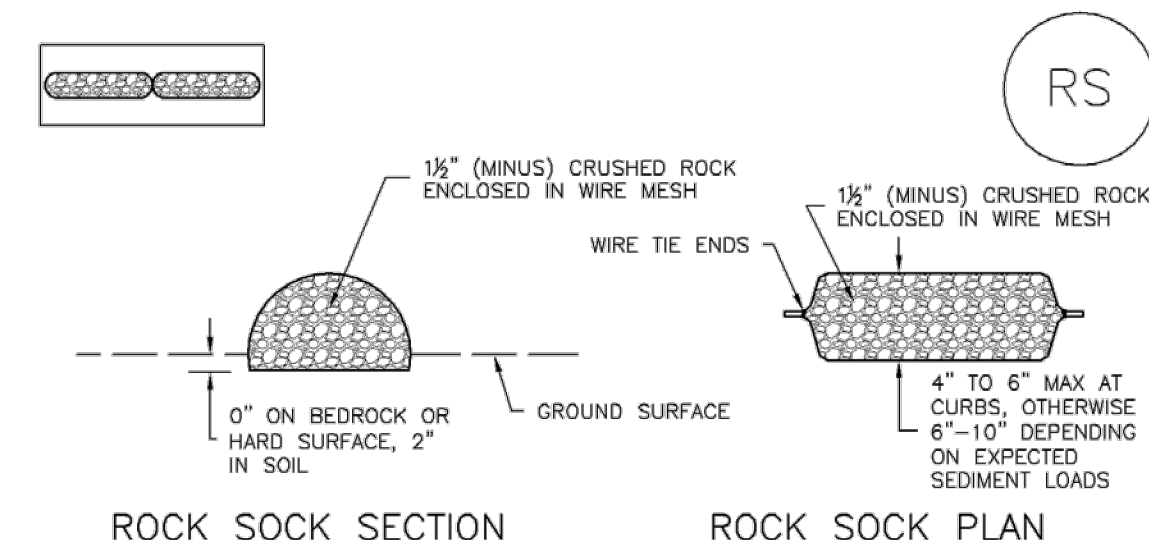
INSTALL ROCK FLUSH WITH OR BELOW TOP OF PAVEMENT

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VTC-3

Rock Sock (RS)

SC-5



GRADATION TABLE

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
No. 4	100
2"	90 - 100
1 1/2"	20 - 55
3/4"	0 - 15
0"	0 - 5

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER ASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

- ROCK SOCK INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION(S) OF ROCK SOCKS.
 - CRUSHED ROCK SHALL BE 1 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1 1/2" MINUS).
 - WIRE MESH SHALL BE FABRICATED OF 10 GAUGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 1/2", RECOMMENDED MINIMUM ROLL WIDTH OF 48"
 - 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.
 - 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

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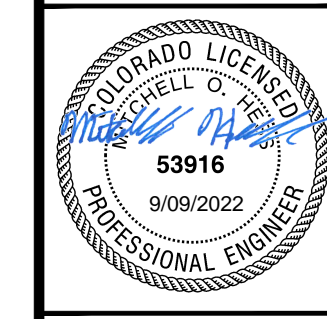
RS-2

NO.	REVISION	BY	DATE	APPR.

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CHECKED BY: DLS
DATE: 9/09/2022

THE CITIZEN ON CONSTITUTION
EL PASO COUNTY, COLORADO
GRADING EROSION CONTROL AND
CONSTRUCTION DOCUMENTS
GEC DETAILS (2 OF 4)



PROJECT NO.
096481004

SHEET
C1.6

Temporary Outlet Protection (TOP)

EC-8

Description

Outlet protection helps to reduce erosion immediately downstream of a pipe, culvert, slope drain, rundown or other conveyance with concentrated, high-velocity flows. Typical outlet protection consists of riprap or rock aprons at the conveyance outlet.



Photograph TOP-1. Riprap outlet protection.

Appropriate Uses

Outlet protection should be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow. Outlet protection should be provided where the velocity at the culvert outlet exceeds the maximum permissible velocity of the material in the receiving channel.

Note: This Fact Sheet and detail are for temporary outlet protection, outlets that are intended to be used for less than 2 years. For permanent, long-term outlet protection, see the *Major Drainage* chapter of Volume 1.

Design and Installation

Design outlet protection to handle runoff from the largest drainage area that may be contributing runoff during construction (the drainage area may change as a result of grading). Key in rock, around the entire perimeter of the apron, to a minimum depth of 6 inches for stability. Extend riprap to the height of the culvert or the normal flow depth of the downstream channel, whichever is less. Additional erosion control measures such as vegetative lining, turf reinforcement mat and/or other channel lining methods may be required downstream of the outlet protection if the channel is susceptible to erosion. See Design Detail OP-1 for additional information.

Maintenance and Removal

Inspect apron for damage and displaced rocks. If rocks are missing or significantly displaced, repair or replace as necessary. If rocks are continuously missing or displaced, consider increasing the size of the riprap or deeper keying of the perimeter.

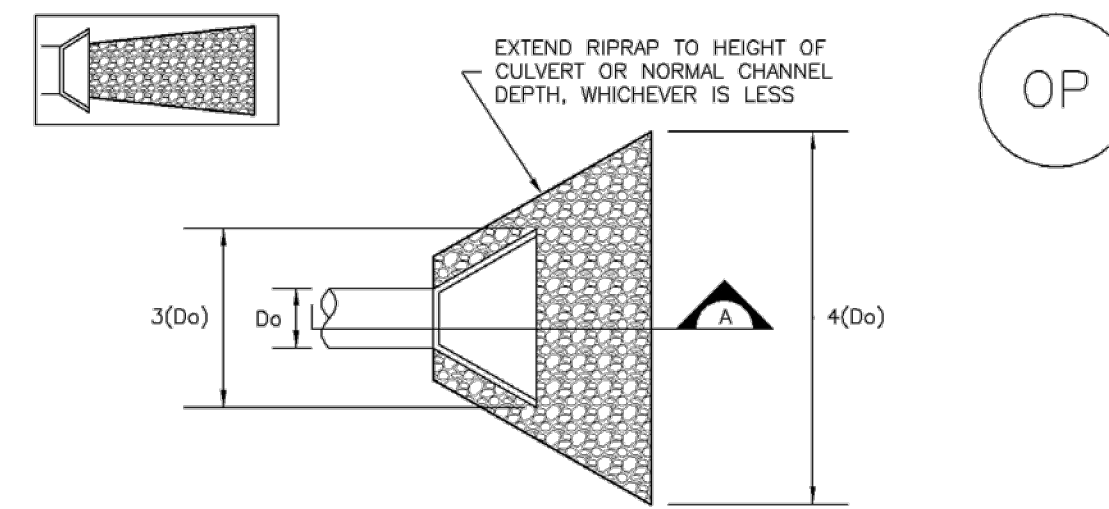
Remove sediment accumulated at the outlet before the outlet protection becomes buried and ineffective. When sediment accumulation is noted, check that upgradient BMPs, including inlet protection, are in effective operating condition.

Outlet protection may be removed once the pipe is no longer draining an upstream area, or once the downstream area has been sufficiently stabilized. If the drainage pipe is permanent, outlet protection can be left in place; however, permanent outlet protection should be designed and constructed in accordance with the requirements of the *Major Drainage* chapter of Volume 2.

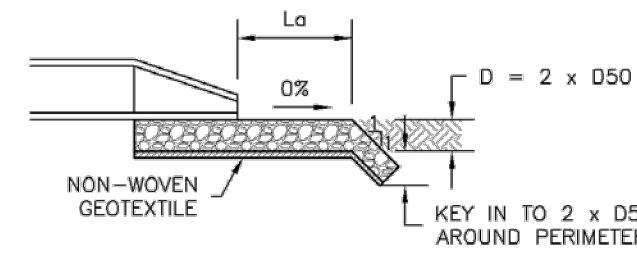
Outlet Protection	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

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EC-8 Temporary Outlet Protection (TOP)



TEMPORARY OUTLET PROTECTION PLAN



SECTION A

PIPE DIAMETER, Do (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, La (FT)	RIPRAP D50 DIAMETER MIN (INCHES)
8	2.5	5	4
	5	10	6
12	5	10	4
	10	13	6
	20	16	9
18	30	23	12
	40	26	16
	60	30	16
24	30	16	9
	40	26	9
	60	26	12

OP-1. TEMPORARY OUTLET PROTECTION

TOP-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Temporary Outlet Protection (TOP)

EC-8

TEMPORARY OUTLET PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF OUTLET PROTECTION.
 - DIMENSIONS OF OUTLET PROTECTION.
- DETAIL IS INTENDED FOR PIPES WITH SLOPE \leq 10%. ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.
- TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED LESS THAN 2 YEARS.

TEMPORARY OUTLET PROTECTION INSPECTION AND MAINTENANCE NOTES

- 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.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

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

(DETAILS ADAPTED FROM AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

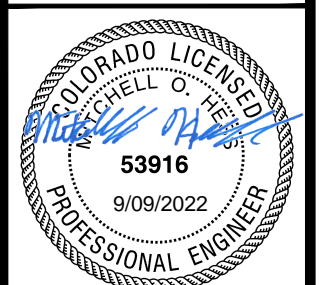
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 TOP-3

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