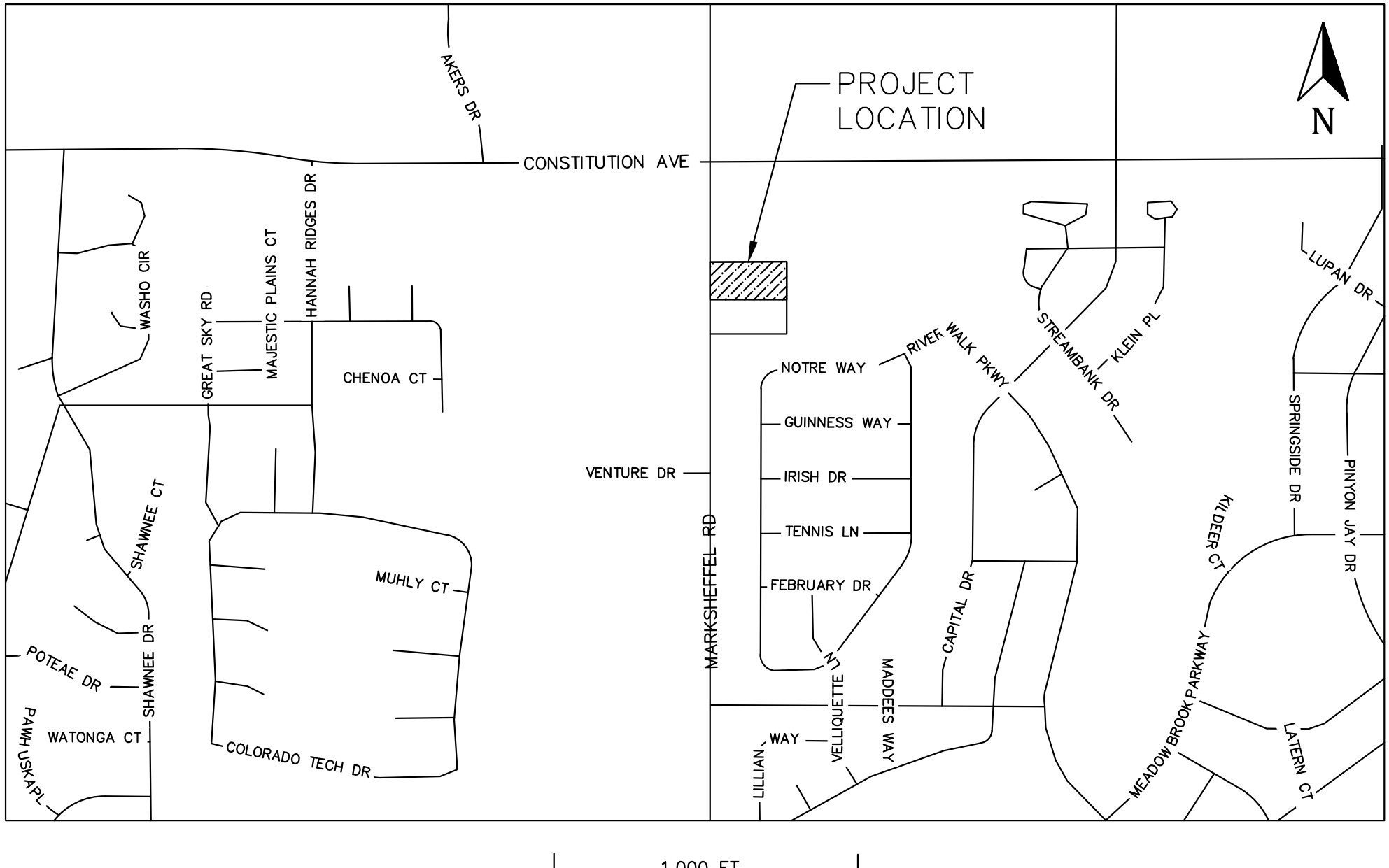


QUICK QUACK - Grading & Erosion Control Plan

Constitution Colorado Springs, CO

VICINITY MAP



INDEX

C-0 Cover Sheet
C-1 Notes
C-2 Grading Plan
C-2.1 Drainage Plan
C-3 Stormwater Pollution Prevention Plan
C-4 SWPPP Details

PROJECT ENGINEER:
LARVIN POLLOCK
ELEVATE ENGINEERING
492 WEST 1200 NORTH
SPRINGVILLE, UT 84663
(801) 718-5993
LARVIN@ELEVATENG.COM

DEVELOPER:
JOSEPH EARNEST
LONESTAR BUILDERS
QQ UTAH COUNTY PO BOX 887
SPRINGVILLE, UT 84663
(801) 400-1944
JOSEPH@LONESTARBUILDERSINC.COM

SITE DATA

LOT AREA:	45,370	SF (1.04 ACRES)
BUILDING AREA:	3,980	SF± 8.8%
PAVEMENT AREA:	28,554	SF± 62.9%
LANDSCAPE AREA:	12,836	SF± 28.3%

ZONING: CR (COMMERCIAL REGIONAL)
PERMITTED USE

BUILDING DATA

CONSTRUCTION TYPE: V-E
OCCUPANCY TYPE: B
SPRINKLERS: NO
BUILDING HEIGHT: 29'6"
SETBACKS:
FRONT=50 FEET
REAR=0 FEET
SIDE=0 FEET

PARKING TABULATION

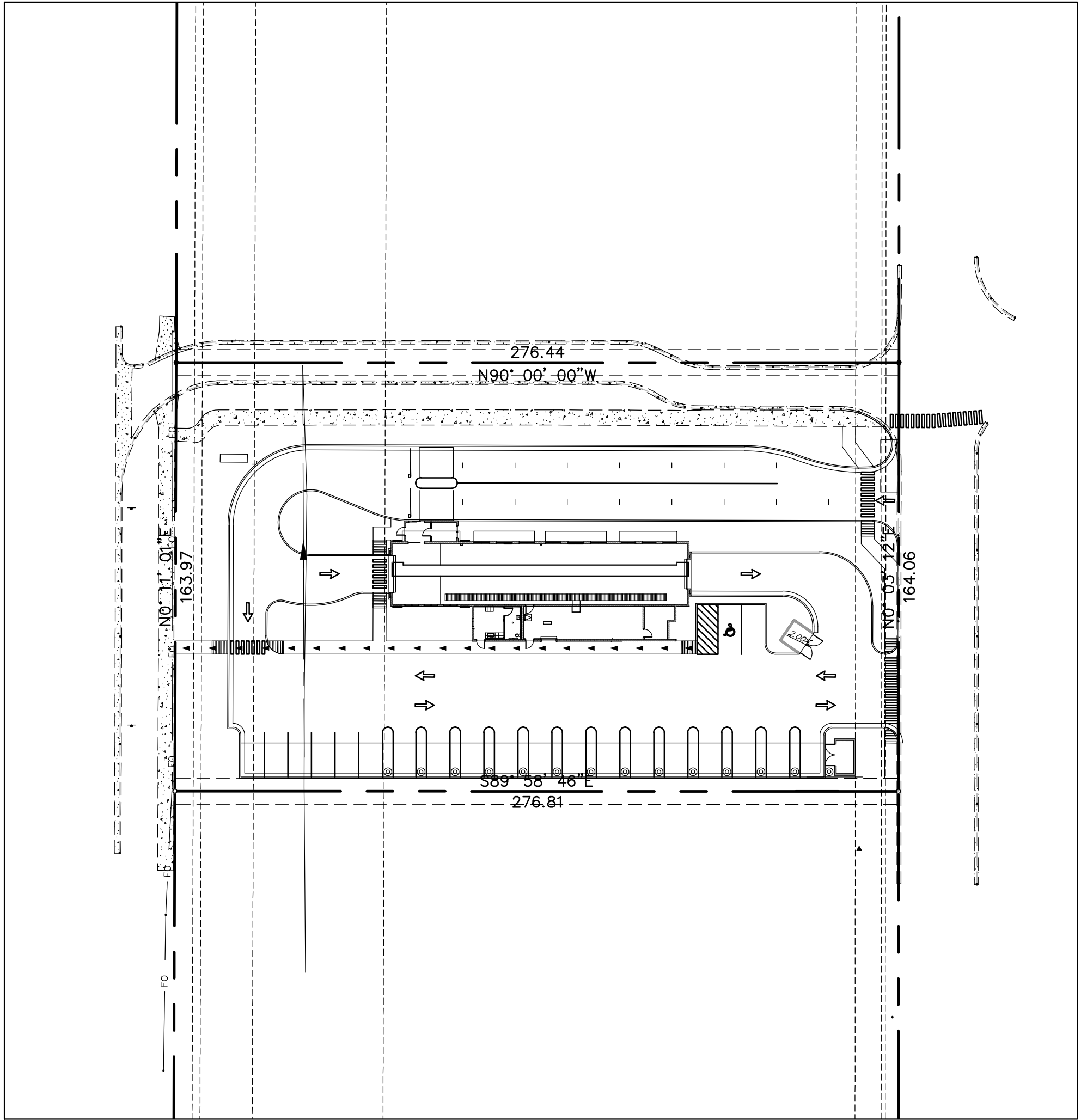
REQUIRED: 1 SPACE PER BAY OR STALL
PROVIDED: 2 STALLS
1 ADA STALL

TAX SCHEDULE NUMBER

LEGEND & ABBREVIATION TABLE

R.O.W./PROPERTY LINE		EXISTING CURB AND GUTTER	
EASEMENT LINE		PROPOSED CURB AND GUTTER	
CENTER LINE		INVERT ELEVATION	I.E.
PROPOSED TRAIL		TOP BACK CURB	TBC
PROPOSED WATER LINE		TOP ASPHALT	TA
PROPOSED PRESSURIZED IRRIGATION		TOP OF GRATE	TOG
PROPOSED GROUND WATER DRAIN		FINISHED GRADE	FG
PROPOSED SEWER LINE		TOP OF CONCRETE	TC
PROPOSED STORM DRAIN LINE		HIGH WATER ELEVATION	HWE
EXISTING SEWER LINE		CATCH BASIN	
EXISTING WATER LINE		SURFACE FLOW DIRECTION	
EXISTING STORM DRAIN LINE		PROPOSED STREET LIGHT	
EXISTING CONTOUR		STORM DRAIN MANHOLE	D
FINISHED CONTOUR		SANITARY SEWER MANHOLE	S
		PROPOSED WATER VALVE	

SITE MAP

$$1'' = 4C$$


Design 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.

LARVIN POLLOCK
[Name, P.E. #0054520]

03-04-15
Date

Owner/Developer's Statement:

I, the owner/developer have read and will comply with the requirements of the grading and erosion control plan.

DALLAS HAKES
[Name, Title] Owner
[Business Name] QQ Colorado LLC
[Address] 492 W 1200 N Springville, UT 84663

3-5-19
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/ o 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.

Approved
by Elizabeth Njama
El Paso County Planning and Community Development
on behalf of Jennifer Irvine, County Engineer, ECM Administrator

Jennifer Irvine, P.E. 04/23/2019 11:46:20 AM
County Engineer / ECM Administrator

Date _____



QUICK QUACK CONSTITUTION
COVER SHEET



EET:

$$\text{C}-\text{O}$$

TE: Apr 17, 2019

EPC 4/23/19

FILE # PPR-19-004

GRADING & EROSION CONTROL PLAN STANDARD NOTES
FOR EL PASO COUNTY

STANDARD NOTES FOR EL PASO COUNTY GRADING AND
EROSION CONTROL PLANS (REVISED 8/24/16):

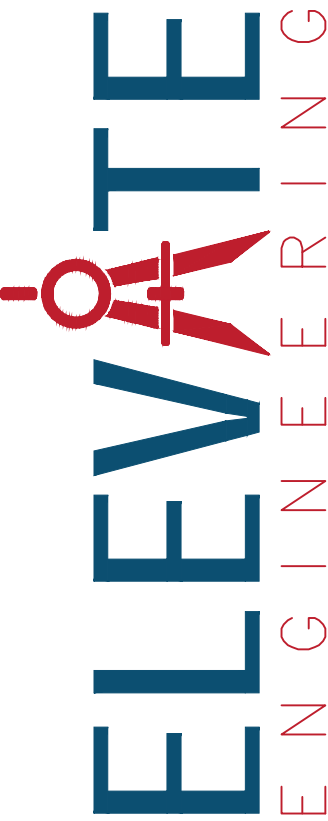
- 1.CONSTRUCTION MAY NOT COMMENCE UNTIL A
CONSTRUCTION PERMIT IS OBTAINED FROM PLANNING AND
COMMUNITY DEVELOPMENT AND A PRECONSTRUCTION
CONFERENCE IS HELD WITH PLANNING AND COMMUNITY
DEVELOPMENT INSPECTIONS.
- 2.STORMWATER DISCHARGES FROM CONSTRUCTION SITES
SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION,
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 TO 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 IS TO 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 PERMITEE 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 ENTECH ENGINEERING, INC. 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:

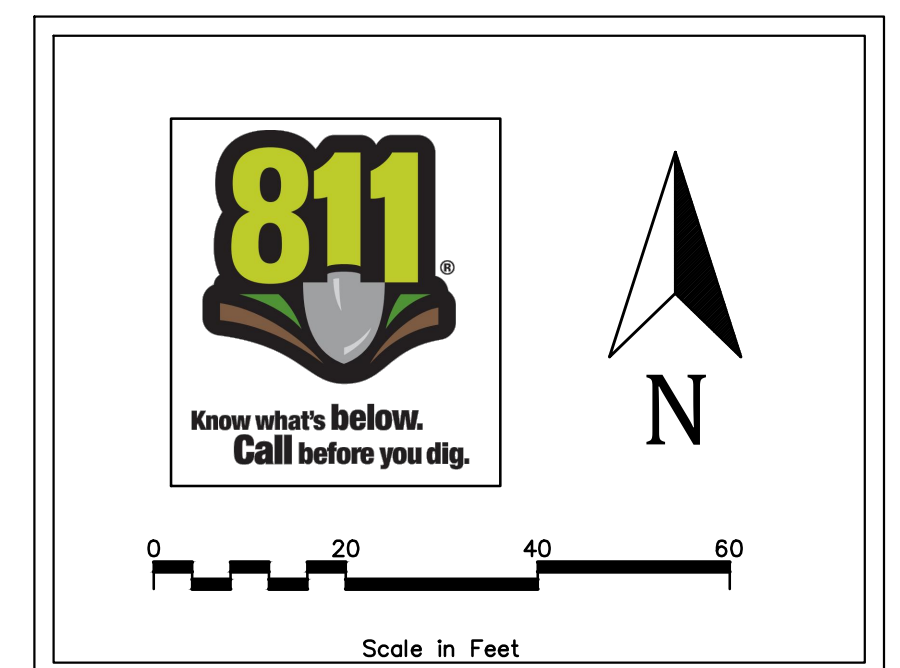
COLORADO DEPARTMENT OF PUBLIC HEALTH AND
ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD – PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246–1530
ATTN: PERMITS UNIT

ELEVATE ENGINEERING
492 WEST 1200 NORTH
SPRINGVILLE, UT 84663
PHONE: (801) 718–5993
lori@elevateeng.com



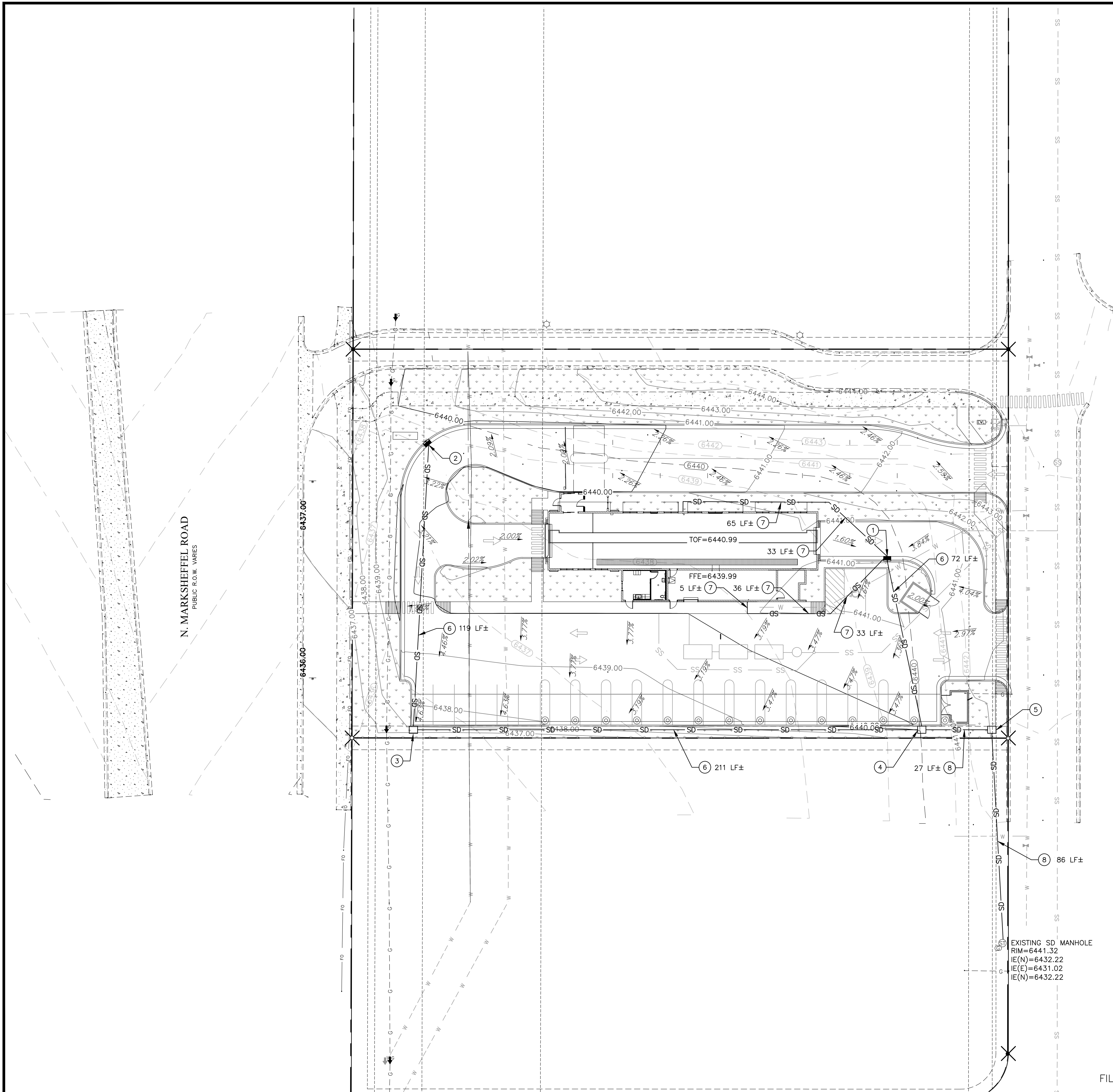
QUICK QUACK CONSTITUTION
NOTES
2437 MARKSHEFFEL ROAD COLORADO SPRINGS, CO 80951





SHEET:
C-2

DATE:
Apr 17, 2019



LEGEND

- LOT LINES (PROPERTY) ---
EXISTING CURB AND GUTTER ---
PROPOSED CURB AND GUTTER ---
PROPOSED STORM DRAIN LINE ---SD---
EXISTING STORM DRAIN LINE ---SD---
EASEMENT ---
EXISTING FENCE ---
GRADE BREAK ---GRADE BREAK---
FINISH GRADE CONTOUR LINES ---4960---
EXISTING GRADE CONTOUR LINES ---4960---
FINISH GRADE SLOPE ---SLOPE---
GRADE BREAK GB
INVERT ELEVATION IE
TOP OF GRATE TOG
TOP OF ASPHALT TA
TOP BACK OF CURB TBC
PROPOSED PROP
EXISTING EX
FINISHED GRADE FG
FINISHED FLOOR ELEVATION FFE
BACK OF SIDEWALK BOW
JUNCTION BOX □
CURB INLET BOX ■

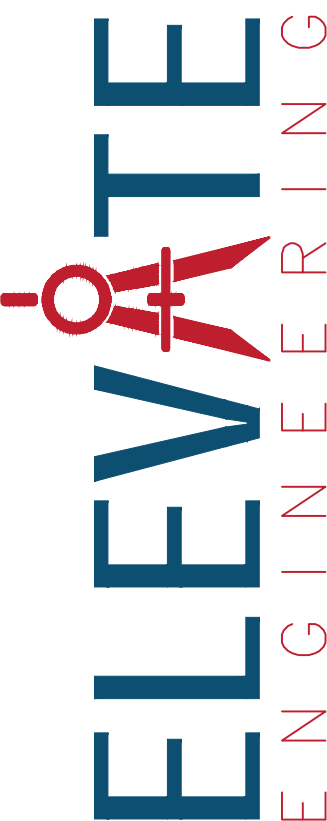
DESIGN NOTES:

1. INSTALL CURB INLET BOX PER APWA PLAN 315. SEE SHEET C-5 FOR DETAILS. RIM=6440.20 IE=6437.20
2. INSTALL CURB INLET BOX PER APWA PLAN 315. SEE SHEET C-5 FOR DETAILS. RIM=6439.29 IE=6436.29
3. INSTALL STANDARD INLET PER CITY OF COLORADO SPRINGS STANDARD INLET DETAIL. SEE SHEET C-5 FOR DETAILS. RIM=6437.42 IE=6435.69
4. INSTALL STANDARD INLET PER CITY OF COLORADO SPRINGS STANDARD INLET DETAIL. SEE SHEET C-5 FOR DETAILS. RIM=6442.39 IE=6434.63
5. INSTALL CLEANOUT BOX PER APWA PLAN 331. SEE SHEET C-5 FOR DETAILS. RIM=6440.39 IE=6434.55
6. INSTALL 12" ADS PIPE @ 0.5% MINIMUM SLOPE
7. ROOF DRAINS TO CONNECT TO STORM DRAIN SYSTEM WITH 6" ROOF DRAIN PIPE.
8. INSTALL 18" ADS PIPE @ 0.3% MINIMUM SLOPE



FILE # PPR-19-004

ELEVATE ENGINEERING
492 WEST 1200 NORTH
SPRINGVILLE, UT 84663
PHONE: (801) 718-5993
info@elevateeng.com



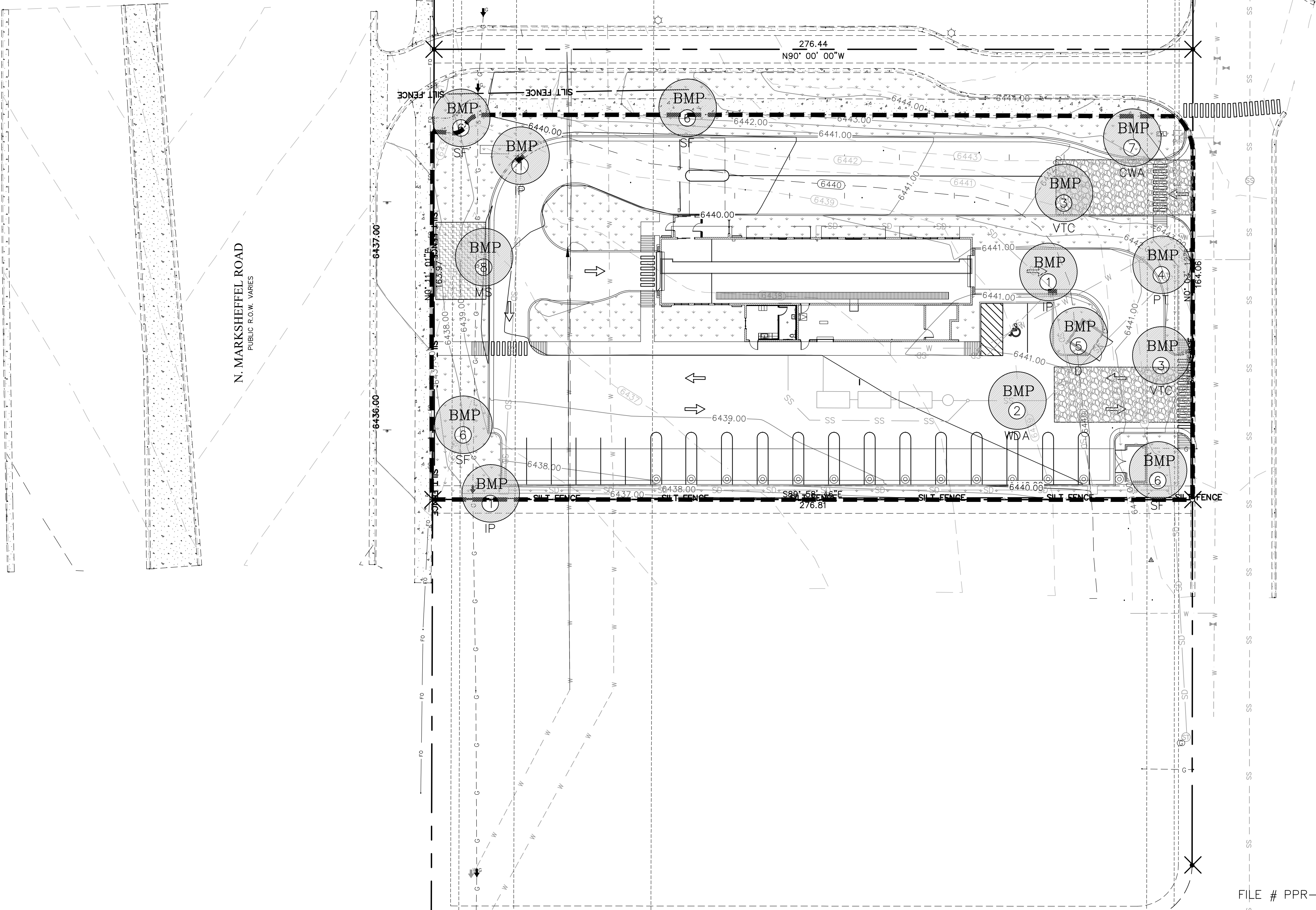
QUICK QUACK CONSTITUTION
DRAINAGE PLAN
2437 MARKSHEFFEL ROAD COLORADO SPRINGS, CO 80951



SHEET:
C-2.1

DATE:
Apr 17, 2019

	RUNOFF COEFFICIENTS	
	5-YEAR	100-YEAR
PREDEVELOPED	0.17	0.42
POSTDEVELOPED	0.73	0.81

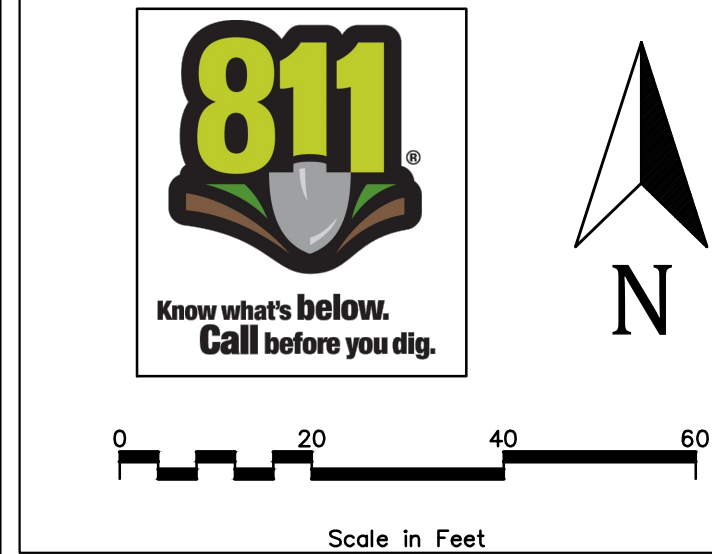


LEGEND

- PROPERTY/ROW LINE
EXISTING CURB AND GUTTER
PROPOSED CURB AND GUTTER
PROPOSED STORM DRAIN LINE
EXISTING STORM DRAIN LINE
EXISTING SEWER LINE
EXISTING WATER LINE
EXISTING CONTOUR LINE
FINISHED CONTOUR LINE
EXISTING FENCE
SILT FENCE
CLEAN OUT BOX
LIMITS OF DISTURBANCE (LOD)
MATERIAL STORAGE AREA
BEST MANAGEMENT PRACTICE
SEE BEST MANAGEMENT PRACTICE
INDEX AND SHEET C-7
FOR DETAILS.

- NOTES:
- DURING CONSTRUCTION
1. ALL EROSION CONTROL BEST MANAGEMENT PRACTICES SHALL BE INSPECTED AND MAINTAINED REGULARLY (ONCE A WEEK) AND AFTER EVERY STORM EVENT
 2. LAND DISTURBANCE SHALL BE KEPT TO MINIMUM TO CONTROL RUNOFF FROM THE SITE
 3. LIMIT LAND CLEARING AND RESTORE ALL GRADING AS SOON AS POSSIBLE
 4. STAGED SEEDING TO RE-VEGETATE CUT AND FILL SLOPES AS THE WORK IS IN PROGRESS
 5. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DUE TO WIND AND OTHER EROSION
 6. MAINTENANCE OF STREET: STREETS TO BE KEPT CLEAN AND FREE FROM DEBRIS.
 7. CONTRACTOR SHALL PROVIDE DUST CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION.
 8. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE KEPT ON THE SITE DURING ALL CONSTRUCTION ACTIVITY
- POST CONSTRUCTION
- SEE SHEET C-7

- BEST MANAGEMENT PRACTICE INDEX
- | | | |
|---|-----|--------------------------------------|
| 1 | IP | INLET PROTECTION |
| 2 | WDA | EQUIPMENT AND VEHICLE WASH DOWN AREA |
| 3 | VTC | VEHICLE TRACKING CONTROL |
| 4 | PT | PORTABLE TOILET |
| 5 | D | DUMPSTER LOCATION |
| 6 | SF | SILT FENCE |
| 7 | CWA | CONCRETE WASHOUT AREA |
| 8 | MS | MATERIAL STORAGE AREA |
- ADDITIONAL BMP's TO BE ONSITE:
- SPILL CLEANUP
 - VEHICLE & EQUIPMENT FUELING
- SEE SHEET C-7 FOR BMP DETAILS



FILE # PPR-19-004

ELEVATE ENGINEERING
492 WEST 1200 NORTH
SPRINGVILLE, UT 84663
PHONE: (801) 718-5993
info@elevateeng.com

ENGINEERING

QUICK QUACK CONSTITUTION
EROSION CONTROL PLAN
2437 MARKSHEFFEL ROAD COLORADO SPRINGS, CO 80951

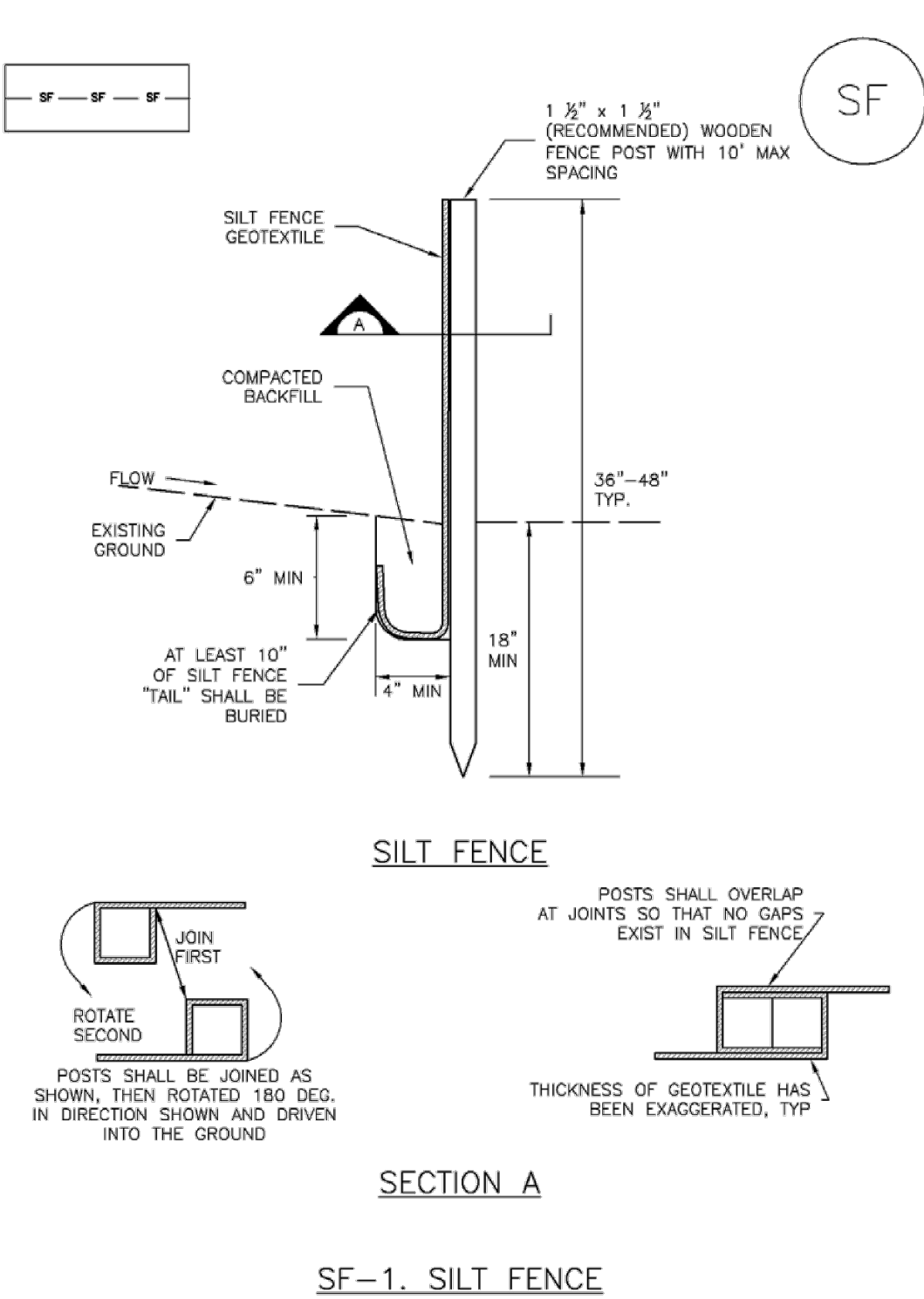


SHEET:
C-3
DATE:
Apr 17, 2019

EPC 4/23/19

Silt Fence (SF)

SC-1



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

SC-1

Silt Fence (SF)

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, SEEDS AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

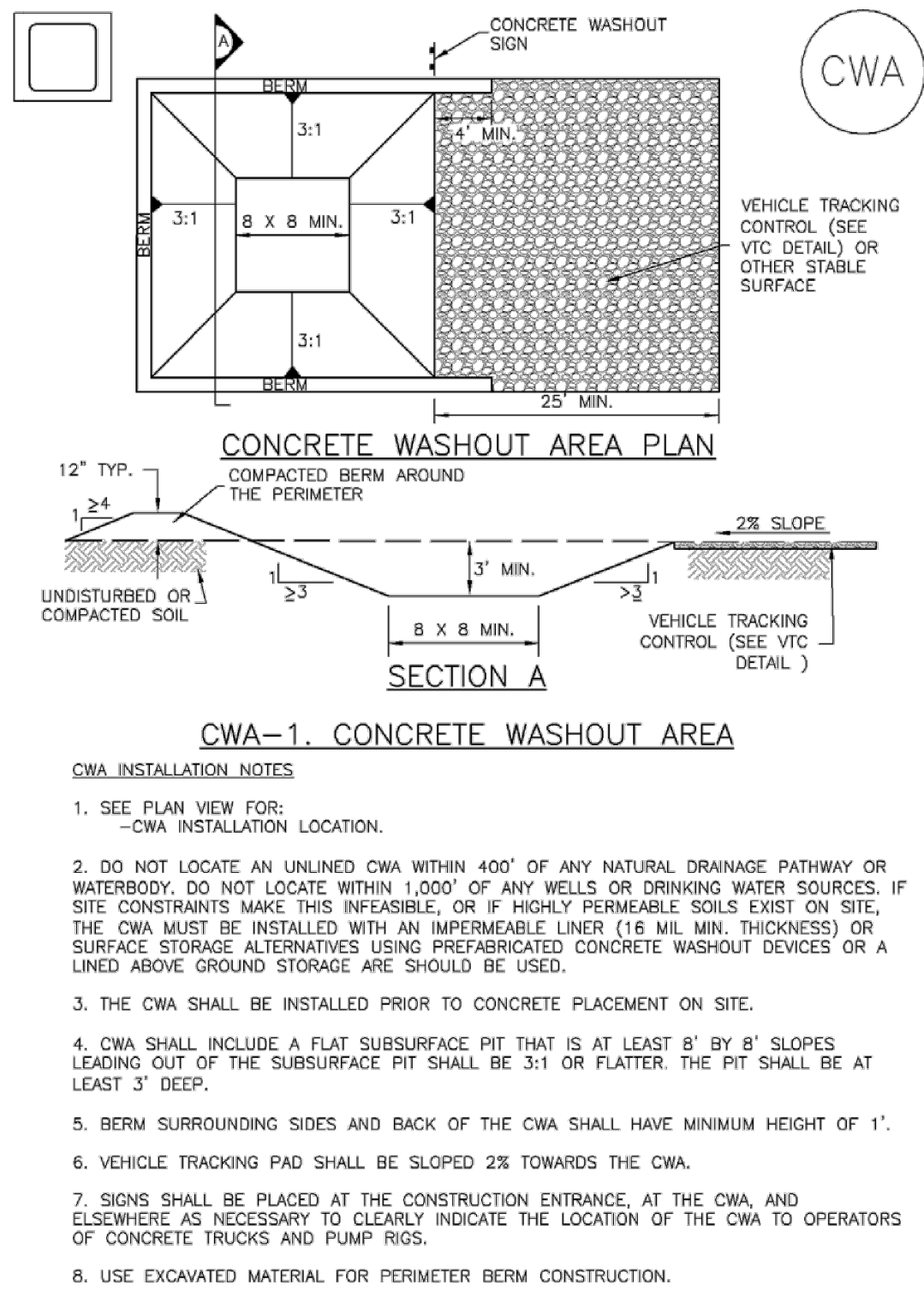
(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

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.

SF-4 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3 November 2010

Concrete Washout Area (CWA)

MM-1



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

MM-1

Concrete Washout Area (CWA)

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 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.

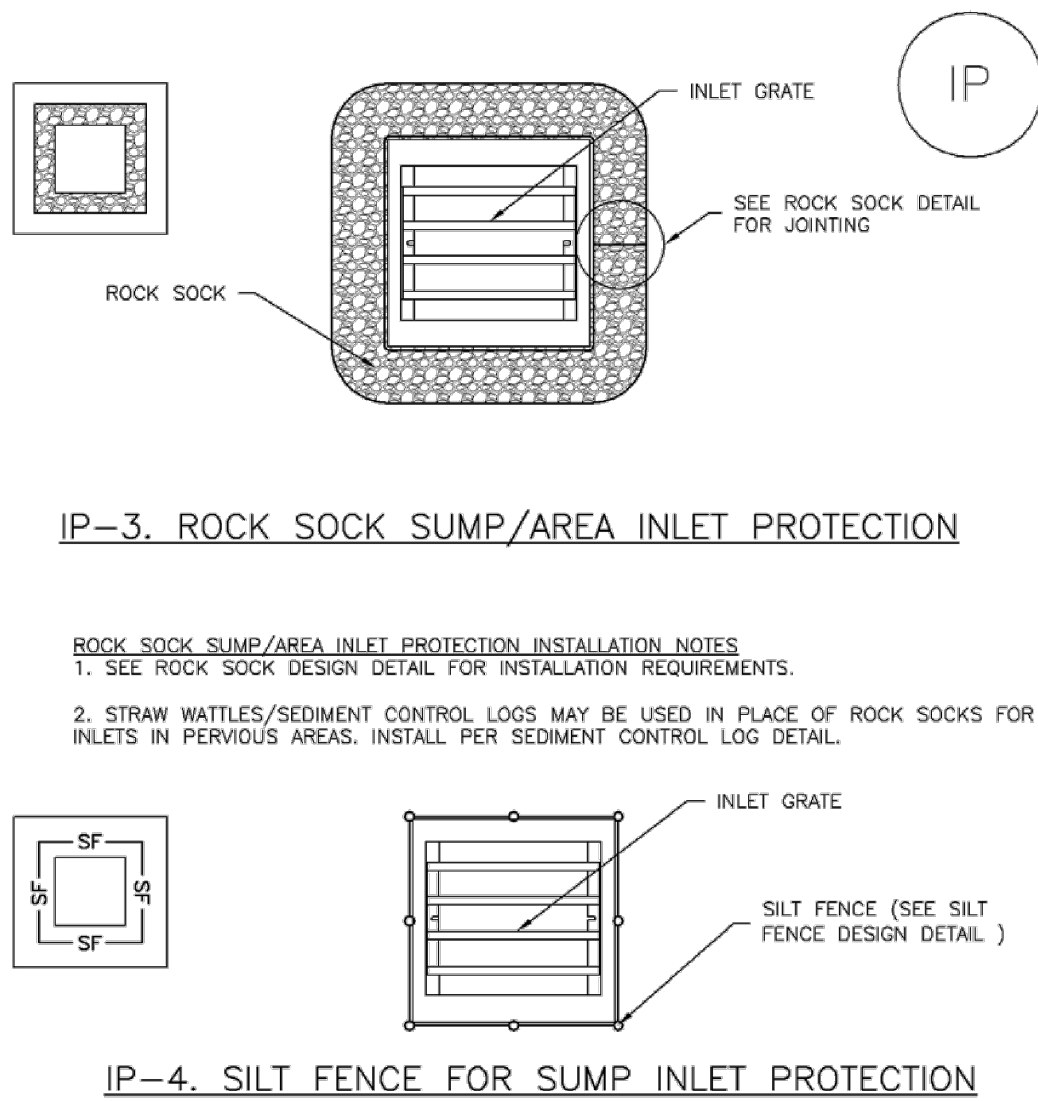
(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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.

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Inlet Protection (IP)

SC-6



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Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF INLET PROTECTION.
 - TYPE OF INLET PROTECTION (IP-1, IP-2, IP-3, IP-4, IP-5, IP-6)
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
3. 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.

INLET 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.
4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDS AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

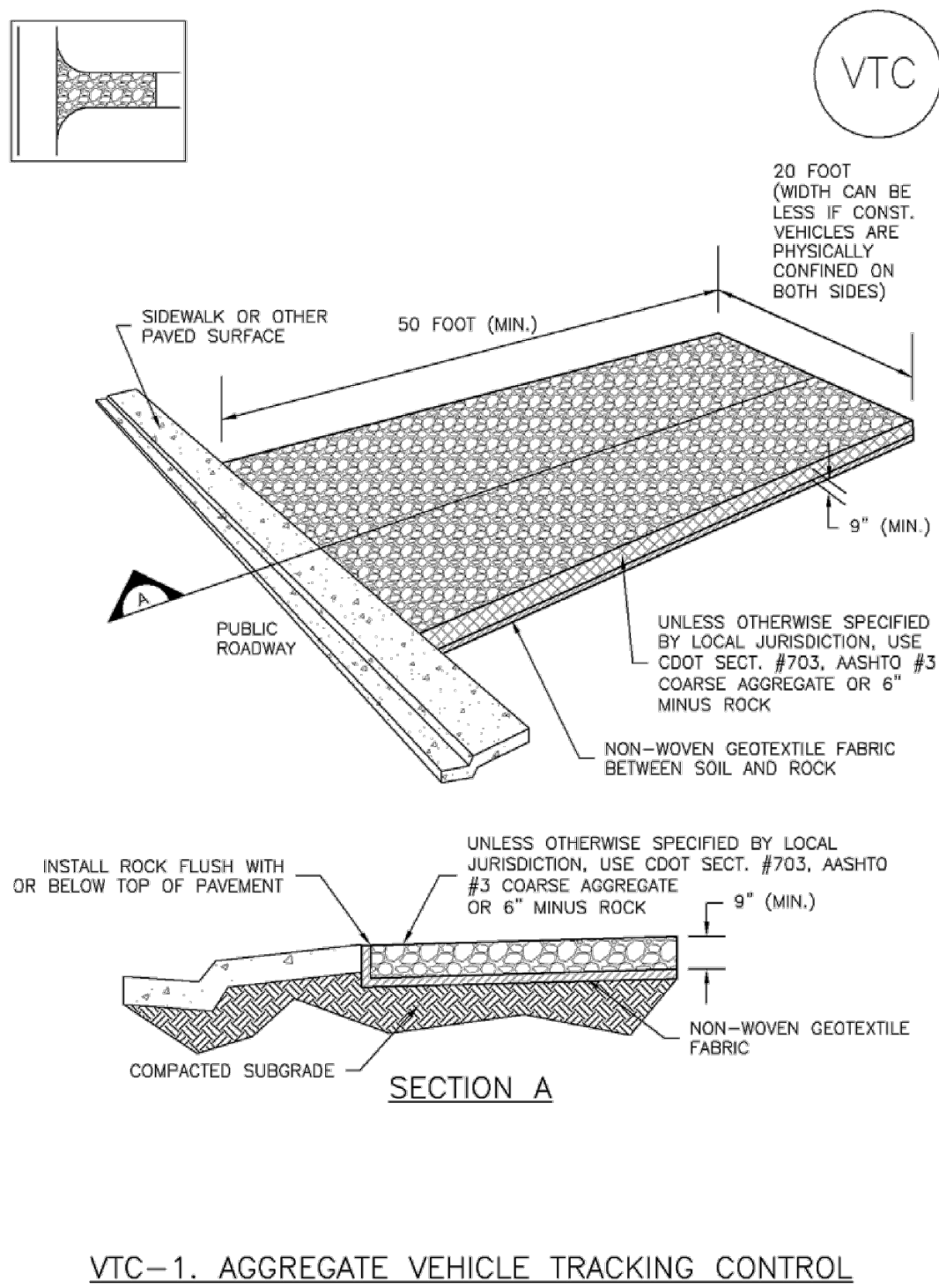
NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION. HOWEVER, IN THE 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.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

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Vehicle Tracking Control (VTC)

SM-4



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SM-4

Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
 - TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(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 REPLACED 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)

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Apr 17, 2019