EPC STORMWATER REVIEW COMMENTS
IN ORANGE BOXES WITH BLACK TEXT

EROSION CONTROL AND GRADING PLAN
SUPERSTAR CARWASH
MEADOWBROOK PKWY
COLORADO SPRINGS, CO 80915

PROJECT TEAM

OWNER
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1830 N 95TH AVE, SUITE 106
PHOENIX, AZ, 85037
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TEL: 801-651-1748
EMAIL: TVARLEY@SSCWAZ.COM

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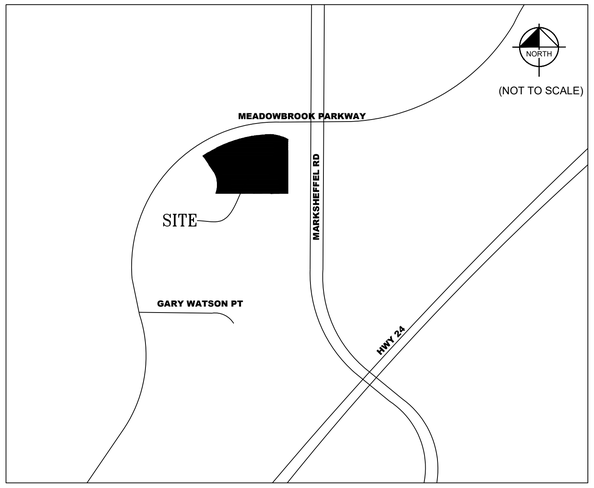
AO ARCHITECTS
144 N ORANGE STREET
ORANGE CA 92866
CONTACT: DUC HUYNH
TEL: (714)-639-9860
EMAIL: DUCH@AOARCHITECTS.COM

PROPERTY LEGAL DESCRIPTION

A TRACT OF LAND IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER (SE 1/4, SE 1/4) OF SECTION 5, T14S, R65W, OF THE 6TH P.M., EL PASO COUNTY, COLORADO

LOCATION MAP



SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
E1.0	COVER SHEET
E2.0	EROSION CONTROL PLAN
E2.1	EROSION CONTROL DETAILS
E3.0	GRADING PLAN
E3.1	RAIN GARDEN

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.

_____ _____
Scot Maier, PE # Date

Owner/Developer's Statement:

I, the owner/developer have read and will comply with all of the requirements specified in these detailed plans and specifications.

_____ _____
Tim Varley Date
Super Star Car Wash
1830 N 95th Ave, Suite 106
Phoenix, AZ, 85037

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.

_____ _____
County Engineer/ECM Administrator Date

Unresolved form Submittal 1: Add EPC's EDARP File Number: PPR2315

CONTRACTOR NOTE

CONTRACTOR SHALL KEEP A COPY OF EL PASO COUNTY STAMPED/APPROVED PLANS ON-SITE AT ALL TIMES FOR GENERAL CONTRACTOR AND MUNICIPAL INSPECTOR REFERENCE.

AYRES ASSOCIATES
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REVISION | DATE

SUPERSTAR CARWASH
MEADOWBROOK PKWY
COLORADO SPRING, CO 80915
COVER SHEET

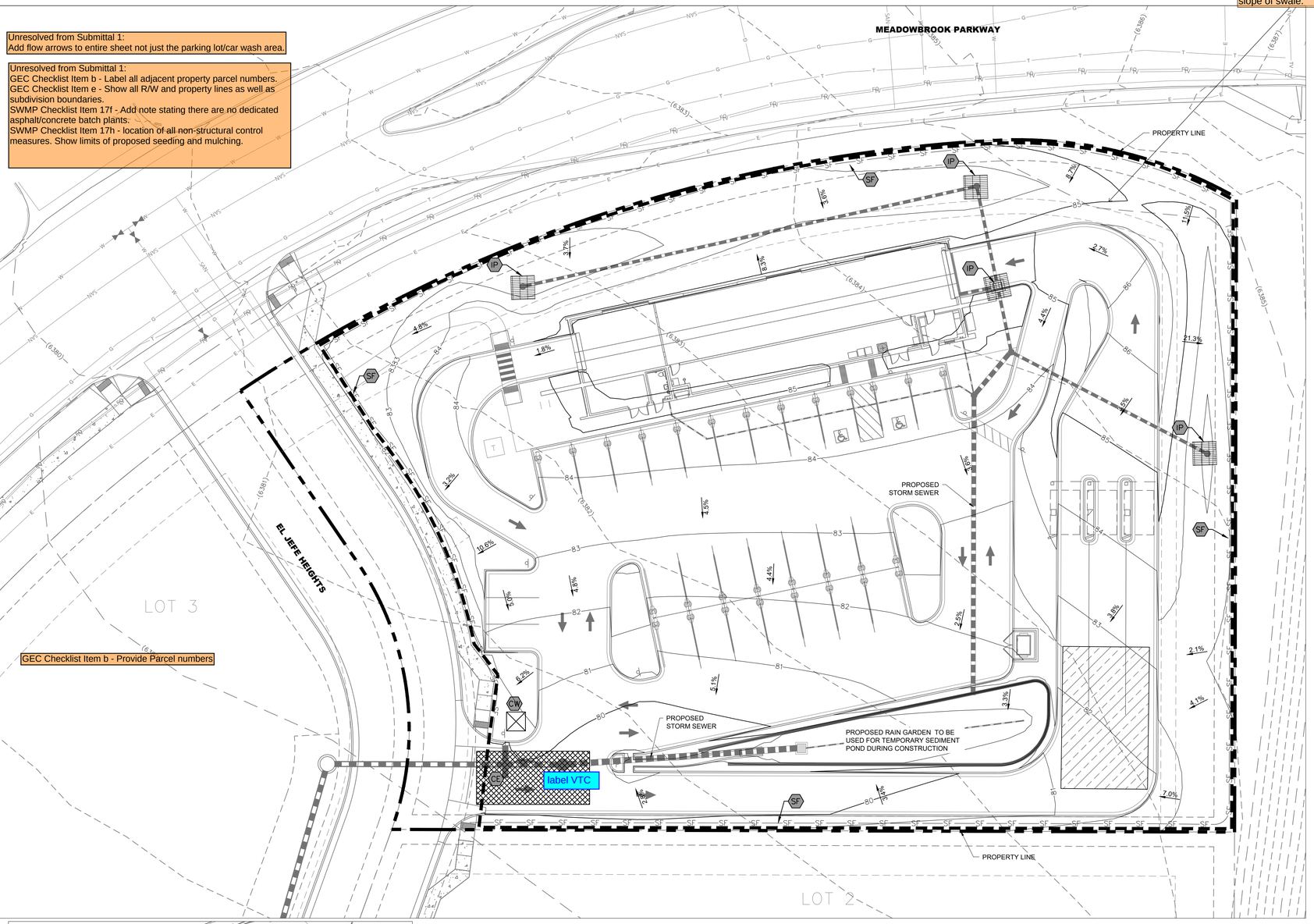
Drawn By: AJJ
Checked By: SEM
Date: 06/23/2023
Project No. 24-0409

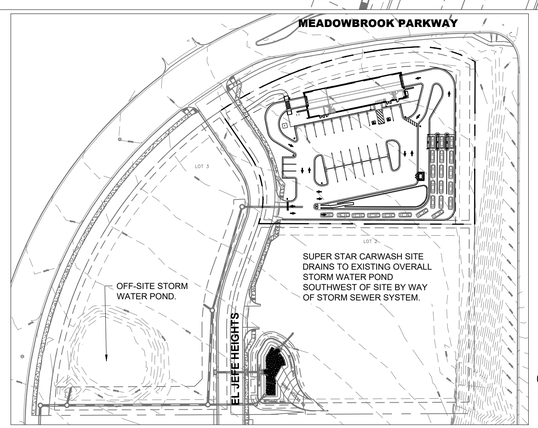
Sheet Number
E1.0

Unresolved from Submittal 1:
Add flow arrows to entire sheet not just the parking lot/car wash area.

Unresolved from Submittal 1:
GEC Checklist Item b - Label all adjacent property parcel numbers.
GEC Checklist Item e - Show all R/W and property lines as well as subdivision boundaries.
SWMP Checklist Item 17f - Add note stating there are no dedicated asphalt/concrete batch plants.
SWMP Checklist Item 17h - location of all non-structural control measures. Show limits of proposed seeding and mulching.

show longitudinal slope of swale.





N
0 50 100 200
GRAPHIC SCALE IN FEET

Unresolved from Submittal 1 - State the percent of ground cover on site. This will be required per the SWMP and checklist.

EROSION CONTROL LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR (DATUM = 6300)
- SF — SILT FENCE (INITIAL THROUGH FINAL) (SEE EROSION CONTROL DETAILS)
- LD — LIMITS OF DISTURBANCE/CONSTRUCTION LIMITS (1.40 ACRES)
- CE — CONSTRUCTION ENTRANCE (INITIAL THROUGH FINAL) (SEE EROSION CONTROL DETAILS)
- IP — INLET PROTECTION (INITIAL THROUGH FINAL) (SEE EROSION CONTROL DETAILS)
- CW — CONCRETE WASHOUT (INTERIM) (TO BE DETERMINED BY CONTRACTOR)
- AREA FOR STAGING, STORAGE OF MATERIALS, AND SOIL STOCKPILES OR WASTE (INITIAL THROUGH FINAL)
- SITE STORM SEWER DISCHARGES TO OVERALL DEVELOPMENT POND SW OF THE SITE
- NO NOTABLE VEGETATION ON EXISTING SITE, ONLY GRASSES/WEEDS

interim. unless the inlets are existing?

see comments in Drainage Report

EROSION CONTROL NOTES

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 FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) 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 IS 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 PLANT 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 MEASURES 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 WASHOUTS 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, UNCONTAMINATED GROUNDWATER 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 ON-SITE 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 ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ON-SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER 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 ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE 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 PARTNER ENGINEERING AND SCIENCE, DATE: 7/13/2023 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. THERE ARE NO DEDICATED ASPHALT OR CONCRETE PLANS DEDICATED FOR THIS SITE.
30. 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

SITE AREA

LOT AREA = : 1.48 ACRES

DISTURBED AREA = 1.38 ACRES

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.

_____ _____
[SCOTT MAIER, P.E. #_____] Date

Owner/Developer's Statement:

I, the owner/developer have read and will comply with all of the requirements of the Grading and Erosion Control Plan.

_____ _____
TIM VARLEY Date
SUPER STAR CAR WASH
1830 N 95TH AVE, SUITE 106
PHOENIX, AZ, 85037

SEQUENCE OF ACTIVITIES

1. CONSTRUCT SILT FENCE
2. ALL DISTURBED AREAS SHALL BE STABILIZED AND VEGETATED
3. STRAW BALE BARRIER INLET PROTECTION SHALL BE CONSTRUCTED AT ALL EXISTING INLETS UPON COMPLETION OF CONSTRUCTION .
4. STRAW BALE BARRIERS SHALL BE REPLACED WITH GRAVEL FILTERS AT ALL INLETS UPON COMPLETION OF PAVING
5. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE IN PLACE UNTIL PERMANENT EROSION CONTROL MEASURES ARE ESTABLISHED.

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GRAPHIC SCALE IN FEET

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SUPER STAR CAR WASH

REVISION	DATE

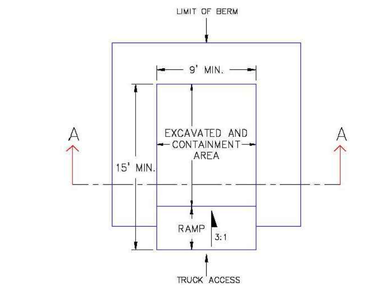
SUPERSTAR CARWASH
MEADOWBROOK PKWY
COLORADO SPRING, CO 80915

EROSION CONTROL PLAN

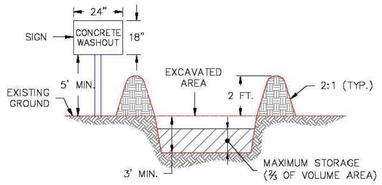
Drawn By: AJJ
Checked By: SEM
Date: 06/23/2023
Project No. 24-0409

Sheet Number
E2.0

File: I:\24\24-0409_Super Star Colorado Springs\4.Production\Civil3D\PlanSheets\C4.0 EROSION CONTROL PLAN.dwg Layout: C4.0 EROSION CONTROL PLAN User: JohrendtA Plotted: Jul 24, 2023 - 1:17pm



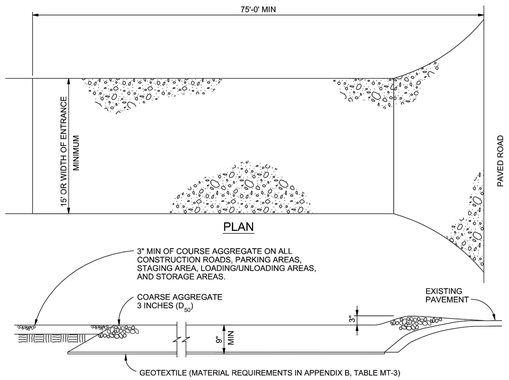
PLAN VIEW



SECTION A–A

NOTES:
1. SIGN MATERIAL, EXCAVATION, AND RESTORATION ARE INCLUDED IN THE COST OF THE CONCRETE WASHOUT STRUCTURE.
2. EROSION BALES MAY BE USED AS AN ALTERNATIVE FOR THE BERM.

1/1/08 DATE APPROVED: John A. McCarty DEPARTMENT OF TRANSPORTATION	Concrete Washout Structure Standard Drawing REVISION DATE: 7/17/07 FILE NAME: SD_3-84	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



SECTION

VEHICLE TRACKING
NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

Figure VT-2
Vehicle Tracking
Application Examples

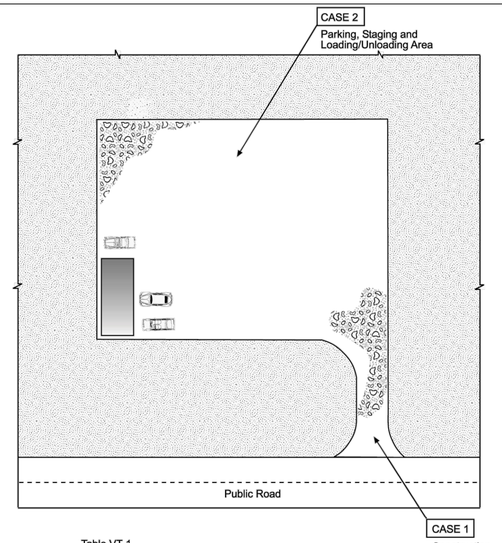


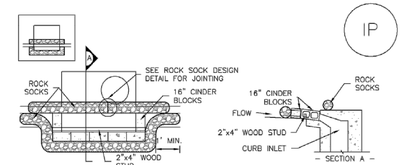
Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO

Figure VT-1
Vehicle Tracking
Application Examples

SC-6 Inlet Protection (IP)

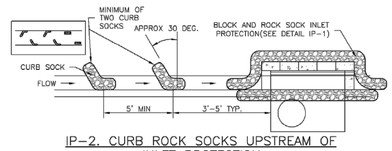
this is for curb inlets. Provide detail for grate inlets



IP–1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. 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.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.

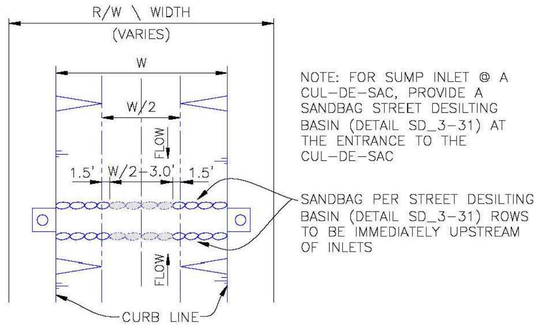


IP–2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

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

GEC Checklist item z:
-Add CWA detail.
-Add temporary sediment basin details.
-Add details for seeding and mulching.
-Add temporary soil stockpile BMP detail



TEMP. DESILTING BASIN @ SUMP
NO SCALE

LEGEND:
GRAVEL FILLED BAG..
SAND FILLED BAG.....

SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Temporary Desilting Basin At Sump Standard Drawing REVISION DATE: 11/10/04 FILE NAME: SD_3-32	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

Silt Fence (SF) SC-1

Description

A silt fence is a woven geotextile fabric attached to wooden posts and trenched into the ground. It is designed as a sediment barrier to intercept sheet flow runoff from disturbed areas.

Appropriate Uses

A silt fence can be used where runoff is conveyed from a disturbed area as sheet flow. Silt fence is not designed to receive concentrated flow or to be used as a filter fabric. Typical uses include:

- Down slope of a disturbed area to accept sheet flow.
- Along the perimeter of a receiving water such as a stream, pond or wetland.
- At the perimeter of a construction site.

Photograph SF-1. Silt fence creates a sediment barrier, forcing sheet flow runoff to evaporate or infiltrate.

Design and Installation

Silt fence should be installed along the contour of slopes so that it intercepts sheet flow. The maximum recommended tributary drainage area per 100 lineal feet of silt fence, installed along the contour, is approximately 0.25 acres with a disturbed slope length of up to 150 feet and a tributary slope gradient no steeper than 3:1. Longer and steeper slopes require additional measures. This recommendation only applies to silt fence installed along the contour. Silt fence installed for other uses, such as perimeter control, should be installed in a way that will not produce concentrated flows. For example, a "J-hook" installation may be appropriate to force runoff to pond and evaporate or infiltrate in multiple areas rather than concentrate and cause erosive conditions parallel to the silt fence.

See Detail SF-1 for proper silt fence installation, which involves proper trenching, staking, securing the fabric to the stakes, and backfilling the silt fence. Properly installed silt fence should not be easily pulled out by hand and there should be no gaps between the ground and the fabric.

Silt fence must meet the minimum allowable strength requirements, depth of installation requirement, and other specifications in the design details. Improper installation of silt fence is a common reason for silt fence failure; however, when properly installed and used for the appropriate purposes, it can be highly effective.

Silt Fence	
Functions	
Erosion Control	No
Sediment Control	Yes
Site/Material Management	No

SC-1 Silt Fence (SF)

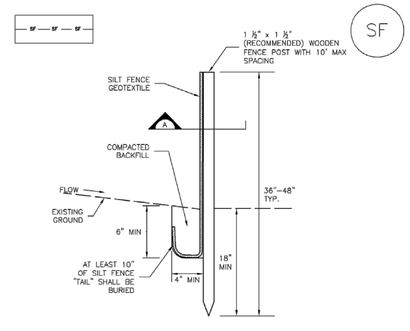
Maintenance and Removal

Inspection of silt fence includes observing the material for tears or holes and checking for slumping fence and undercut areas bypassing flows. Repair of silt fence typically involves replacing the damaged section with a new section. Sediment accumulated behind silt fence should be removed, as needed to maintain BMP effectiveness, typically before it reaches a depth of 6 inches.

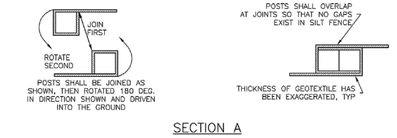
Silt fence may be removed when the upstream area has reached final stabilization.

Photograph SF-2. When silt fence is not installed along the contour, a "J-hook" installation may be appropriate to ensure that the BMP does not create concentrated flow parallel to the silt fence. Photo courtesy of Tom Gore.

Silt Fence (SF) SC-1



SILT FENCE



SECTION A

SF–1. SILT FENCE

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SUPERSTAR CAR WASH

DATE

REVISION

SUPERSTAR CARWASH
MEADOWBROOK PKWY
COLORADO SPRING, CO 80915

EROSION CONTROL DETAILS

Drawn By: AJJ
Checked By: SEM
Date: 06/23/2023
Project No. 24-0409

Sheet Number

E2.1

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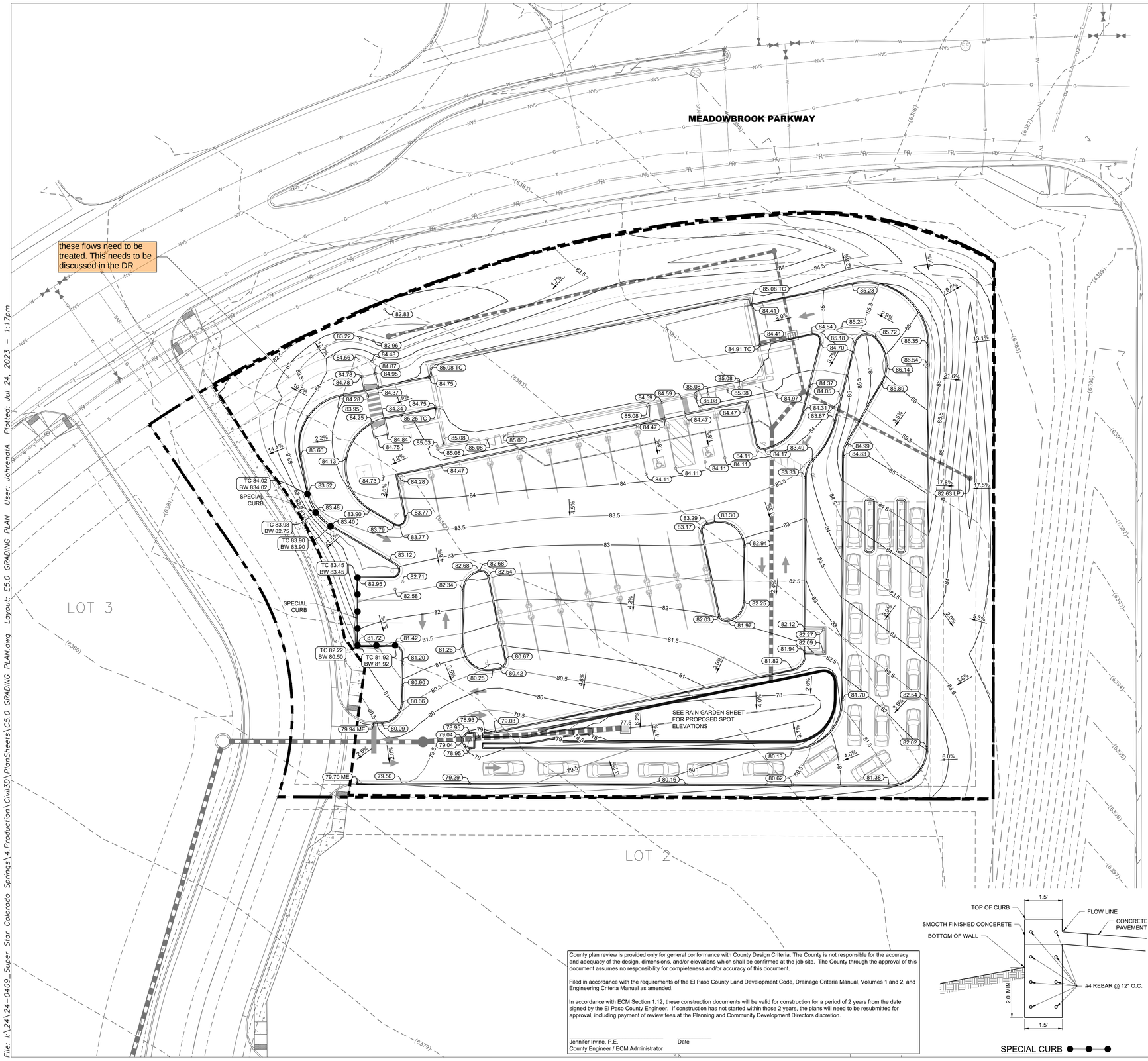


GRADING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK. THE CONTRACTOR SHALL ENSURE THAT POSITIVE DRAINAGE OCCURS AT ALL JOINTS WITH EXISTING CONDITIONS.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
4. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
5. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2.0% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES.
6. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
7. MATCH EXISTING ELEVATIONS AT THE PROPERTY LINE.
8. NO GRADING SLOPES SHALL EXCEED 4:1 SLOPES.
9. WATER TRUCK CALLED FOR BY THE CITY INSPECTOR WILL BE PROVIDED TO KEEP WIND EROSION IN CHECK.
10. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.
11. ANY CONSTRUCTION DEBRIS OR MUD TRACKING IN THE PUBLIC RIGHT-OF-WAY RESULTING FROM THIS DEVELOPMENT SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATIONS OR EXCESSIVE PAVEMENT FAILURES CAUSED BY THE DEVELOPMENT AND SHALL PROPERLY BARRICADE THE SITE UNTIL CONSTRUCTION IS COMPLETE. FAILURE BY THE CONTRACTOR TO CORRECT ANY OF THE ABOVE WITHIN 48 HOURS OF WRITTEN NOTICE BY THE COUNTY SHALL CAUSE THE CITY TO ISSUE A STOP WORK ORDER (RED TAG) AND/OR DO THE WORK AND MAKE A CLAIM AGAINST THE LETTER OF CREDIT FOR ANY COST INCURRED BY THE CITY.
12. AREAS BEING DISTURBED BY THE GRADING SHALL BE RESEEDED WITH NATIVE VEGETATION OR AS APPROVED ON THE DEVELOPMENT PLAN.
13. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUEST SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
14. THE DUTY OF THE COUNTY TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURE IN, ON, OR NEAR THE CONSTRUCTION SITE.
15. CONTRACTOR SHALL CONTACT UTILITY NOTIFICATION CENTER OF COLORADO (1-800-922-1967) FOR LOCATION OF UNDERGROUND GAS, ELECTRIC, AND TELEPHONE UTILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
16. CONTRACTOR SHALL REFERENCE GEOTECHNICAL SOILS REPORT FOR GRADING DESIGN OF SLOPES, EMBANKMENTS, MATERIALS, MITIGATION, ETC.

GRADING CUT/FILL NOTES

PROPOSED SITE IS PRIMARILY A FILL SITE.

GRADING LEGEND

Unresolved from Submittal 1 - Cut and fill needs to be shown on the plans - add to legend or add cut/fill limits to a new sheet.

- BW = BOTTOM OF WALL
- TC = TOP OF CURB
- ME = MATCH EXISTING ELEVATION
- LP = LOW POINT
- FG = FINISHED GRADE
- X.XX% — SLOPE AND FLOW DIRECTION
- 6300 — EXISTING CONTOUR
- 99 — PROPOSED CONTOUR (DATUM = 6300)
- LIMITS OF DISTURBANCE
- SPECIAL CURB

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.

[SCOTT MAIER, P.E. #_____] Date

Owner/Developer's Statement:

I, the owner/developer have read and will comply with all of the requirements of the Grading and Erosion Control Plan.

Date

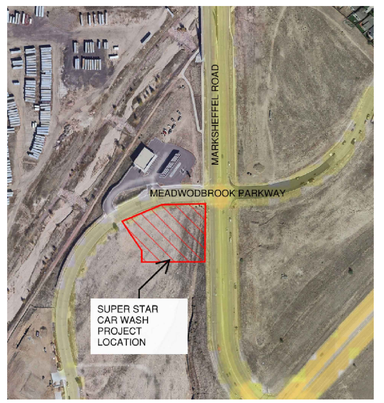
TIM VARLEY
SUPER STAR CAR WASH
1830 N 95TH AVE, SUITE 106
PHOENIX, AZ, 85037

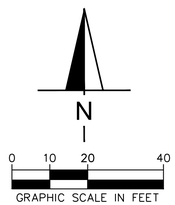
County plan review is provided only for general conformance with County Design Criteria. The County is not responsible for the accuracy and adequacy of the design, dimensions, and/or elevations which shall be confirmed at the job site. The County through the approval of this document assumes no responsibility for completeness and/or accuracy of this document.

Filed in accordance with the requirements of the El Paso County Land Development Code, Drainage Criteria Manual, Volumes 1 and 2, and Engineering Criteria Manual as amended.

In accordance with ECM Section 1.12, these construction documents will be valid for construction for a period of 2 years from the date signed by the El Paso County Engineer. If construction has not started within those 2 years, the plans will need to be resubmitted for approval, including payment of review fees at the Planning and Community Development Directors discretion.

Jennifer Irvine, P.E. Date
County Engineer / ECM Administrator





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SUPER STAR CAR WASH

DATE

REVISION

SUPERSTAR CARWASH
MEADOWBROOK PKWY
COLORADO SPRING, CO 80915

GRADING AND DRAINAGE PLAN

Drawn By: AJJ
Checked By: SEM
Date: 06/23/2023
Project No. 24-0409

Sheet Number

E3.0

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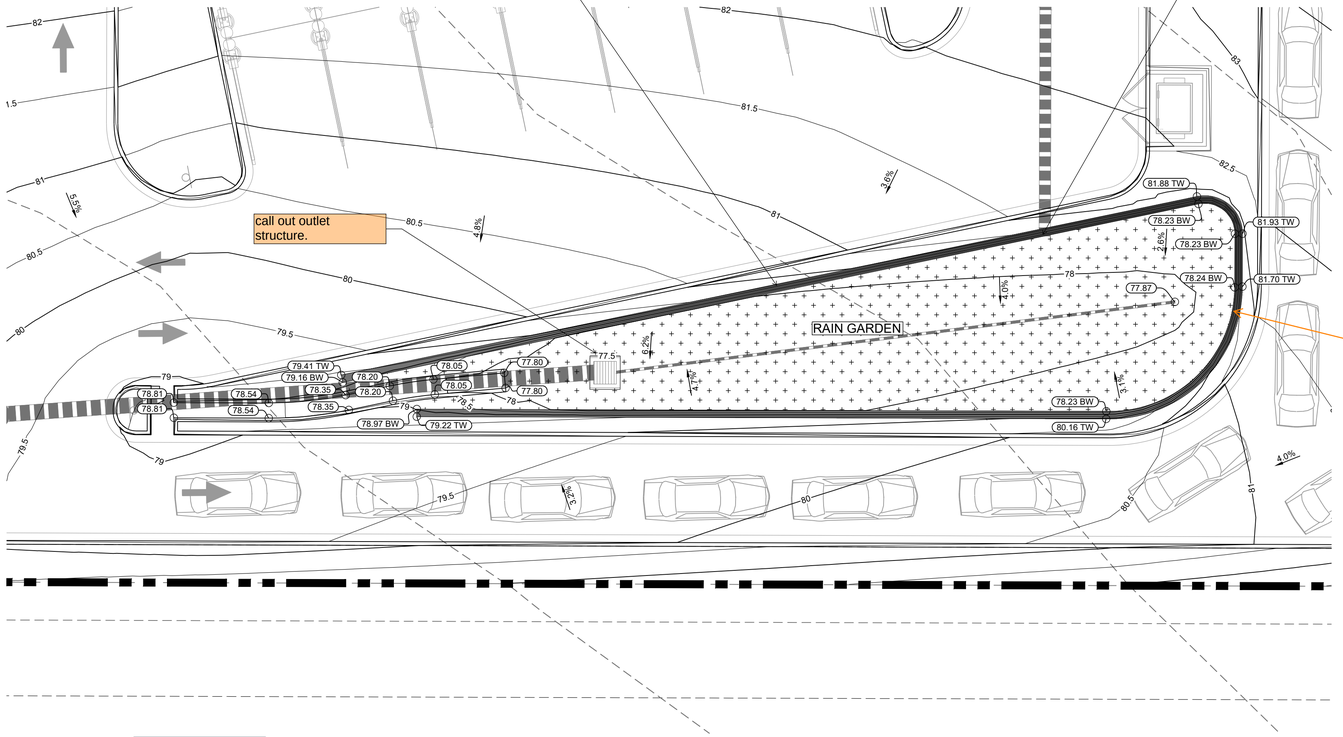
Assign a name/number to all PBMPs and then update all submitted text and drawings accordingly with consistent labeling throughout (example: “Pond A” or “Pond 1”)

Per MHFD DCMv2 Chap 12, pg 12-29, “The use of retaining walls within detention basins is generally discouraged due to the potential increase in long-term maintenance access and costs as well as concerns regarding the safety of the general public and maintenance personnel. Where walls are used, limit the length of the retaining walls to no more than 50% of the basin perimeter.”

cal out as inlet and show riprap protection

call out outlet structure.



Show retaining wall in legend

provide calcs in the DR and update the note for the properly sized riprap

MATERIAL SPECIFICATION FOR RAIN GARDEN

Material		Specification			Submittals	Testing	Notes
Bioretention Growing Media (soil + organics)	Bioretention soil	Particle Size Distribution 80-90% sand (0.05-2.0 mm diameter) 3-17% silt (0.002-0.5 mm diameter) 3-17% clay (<0.002 diameter) Chemical attribute and nutrient analysis: pH 6.8 - 7.5 organic matter > 15% nitrogen < 15 ppm phosphorus < 15 pp, salinity < 6 mmhoslom			Particle size distribution and nutrient analysis required.		Percentages are in weight
	Bioretention organics	3 to 5% shredded mulch (by weight of growing media)					bioretention soil required. Aged 6 months (minimum).
Landscape mulch		Shredded hardwood					Aged 6 months (minimum). No weed fabric allowed.
Underdrain aggregate	CDOT filter material (Class B or C as specified)		Max Percent Passing Square Mesh		Particle Size Distribution Required		
		Sieve Size	Class B	Class C			
		37.5 mm (1.5")	100				
		19.0 mm (0.75")		100			
		4.75 mm (No. 4)	20-60	60-100			
		1.18 um (No. 16)	30-Oct				
		300 um (No. 50)	0-10	10-30			
		150 um (No. 100)		0-10			
		75 um (No. 200)	0-3	0-3			
Underdrain Pipe		Pipe diameter and type	Maximum slot width (inches)	Minimum open area (per foot)	Required	Pipe must conform to requirements of ASTM designation F949. There shall be no evidence of splitting cracking or breaking when the pipe is tested per ASTM test method D2412 in accordance with F949 section 7.5 and ASTM F794 section 8.5.	Contech A-2000 slotted pipe (or equal)
		4-inch slotted PVC	0.032	1.90 in²			
		6-inch slotted PVC	0.032	1.98 in²			
Impermeable Liner			Thickness 0.76 mm (30 mil)	Test Method	Required	Thermal welding required for fully lined facilities (no a cutain). Leaktesing in the field required.	
		Thickness % Tolerance	+/- 5	ASTM D 1593			
		Tensile Strength, kNm (lb/in)	12.25 (70)	ASTM D8 82, Method B			
		Modulus at 100% elongation, kNm	55.25 (30)	ASTM D8 82, Method B			
		Ultimate elongation %	350	ASTM D8 82, Method A			
		Tear Resistance N(lbs)	38 (8.5)	ASTM D 1004			
		Low temperature impact °C(°F)	-29 (-20)	ASTM D 1790			
		Volatile loss % maximum	0.7	ASTM D8 82, Method A			
		Pinholes, no. per 8 m² (no. per 10 yd²)	1(max)	N/A			
		Bonded seam strength, % of tensile	80	N/A			

GRADING LEGEND

	BW = BOTTOM OF WALL
	TC = TOP OF CURB
	ME = MATCH EXISTING ELEVATION
	LP = LOW POINT
	FG = FINISHED GRADE
X.XX%	SLOPE AND FLOW DIRECTION
6300	EXISTING CONTOUR
99	PROPOSED CONTOUR (DATUM = 6300)
	LIMITS OF DISTURBANCE
	SPECIAL CURB

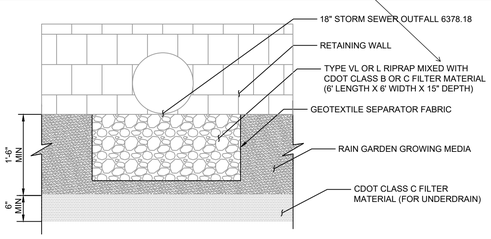
RAIN GARDEN SEED MIX

Common Name	Scientific Name	Variety	PLS² lbs per Acre	Ounces per Acre
Sand Bluestem	Andropogon hallii	Garden	3.5	
Sidecoats grama	Bouteloua curtipendula	Butte	3	
Prairie sandreed	Calamovilfa longifolia	Goshen	3	
Indian ricegrass	Oryzopsis hymenoides	Paloma	3	
Switchgrass	Panicum virgatum	Blackwell	4	
Western Wheatgrass	Pascopyrum smithii	Ariba	3	
Little Bluestem	Schizachyrium scoparium	Patura	3	
Alkali Sacaton	Sporobolus airoides		3	
Sand Dropseed	Sporobolus cryptandrus		3	
Pasture Sage [1]	Artemisia frigida			2
Blue Aster [1]	Aster laevis			4
Blanket Flower [1]	Gaillardia aristata			8
Prairie Coneflower [1]	Ratibida columnifera			4
Purple Prairieclover [1]	Dalea (Petalostemum) purpurea			4
Sub-Totals			27.5	22
Total labs per acre:			**28.9**	

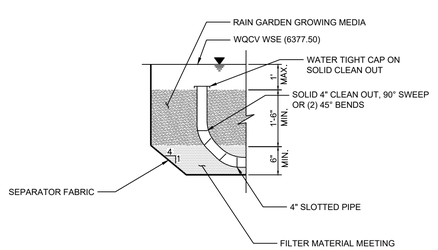
[1] Wildflower seed (optional) for a more diverse and natural look

[2] PLS = Pure Live Seed

RAIN GARDEN INLET

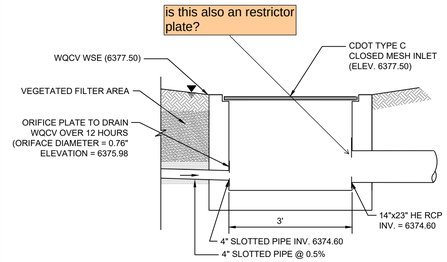


RAIN GARDEN SECTION



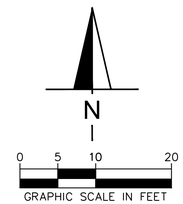
RAIN GARDEN OUTLET

is this also an restrictor plate?



SEPARATOR FABRIC

Property	Class B		Test Method
	Elongation <50%²	Elongation > 50% ²	
Grab Strength, N (lbs.)	800 (180)		ASTM D 4632
Puncture Resistance, N (lbs.)	310 (70)		ASTM D 4833
Trapezoidal Tear Strength , N (lbs.)	310 (70)		ASTM D 4533
Apparent Opening Size, mm (US Sieve Size)	AOS < 0.3 mm (US Sieve Size No. 50)		ASTM D 4751
Permittivity, sec $^{-1}$	0.02 default value, must also be greater than that of soil		ASTM D 4491
Permeability cm/sec	k fabric > k soil for all classes		ASTM D 4491
Ultraviolet Degradation at 500 hours	50% strength retained for all classes		ASTM D 4355



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RAIN GARDEN

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