

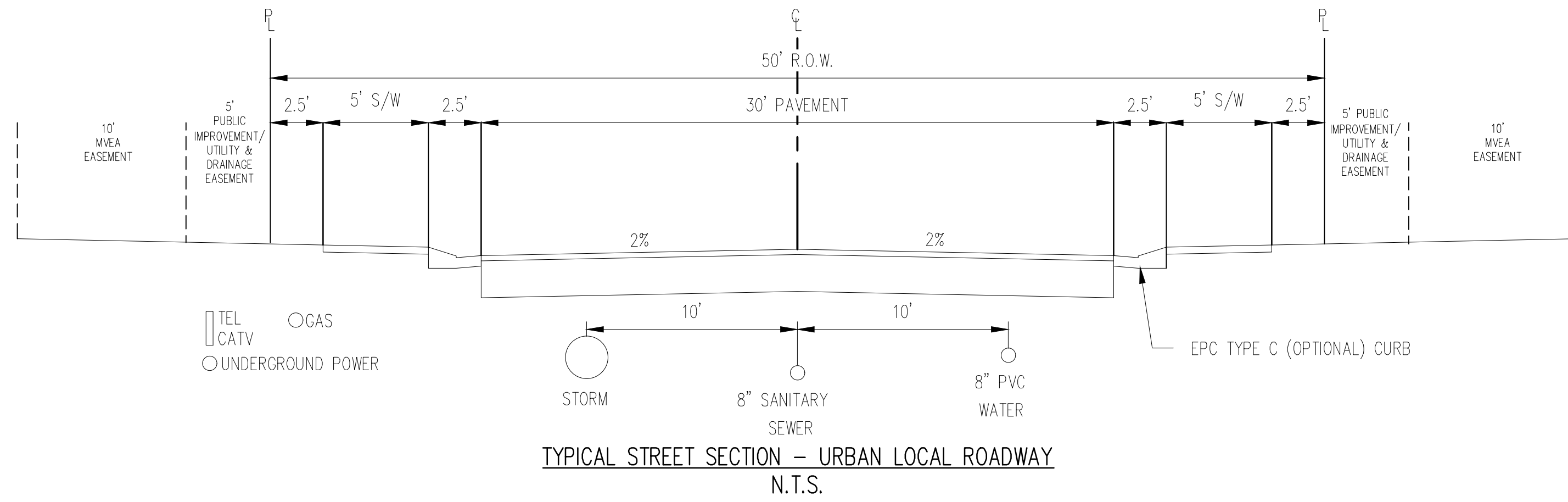




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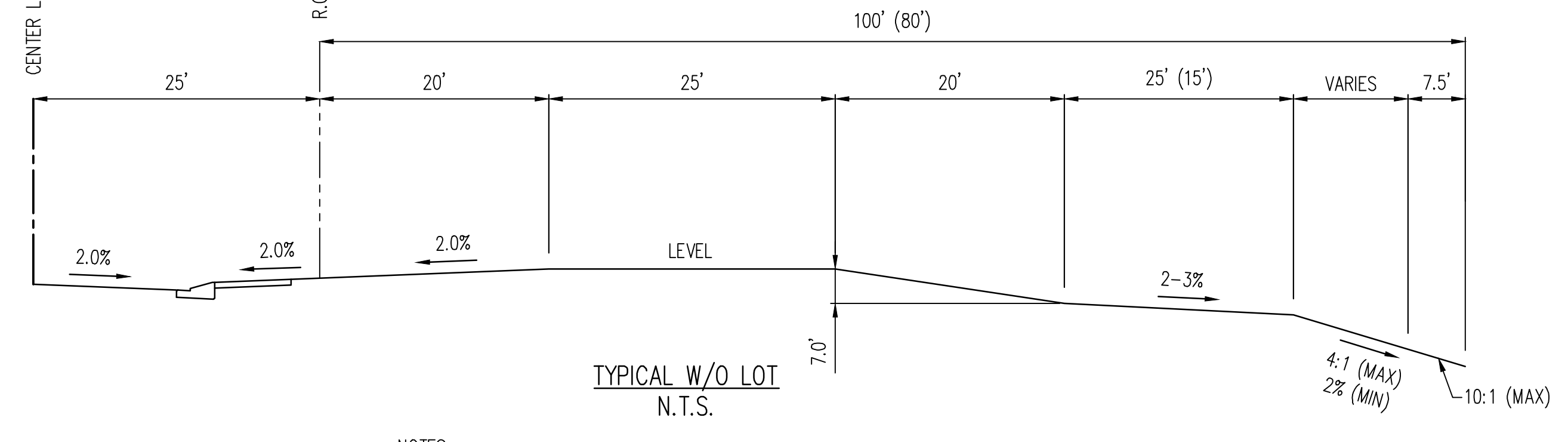
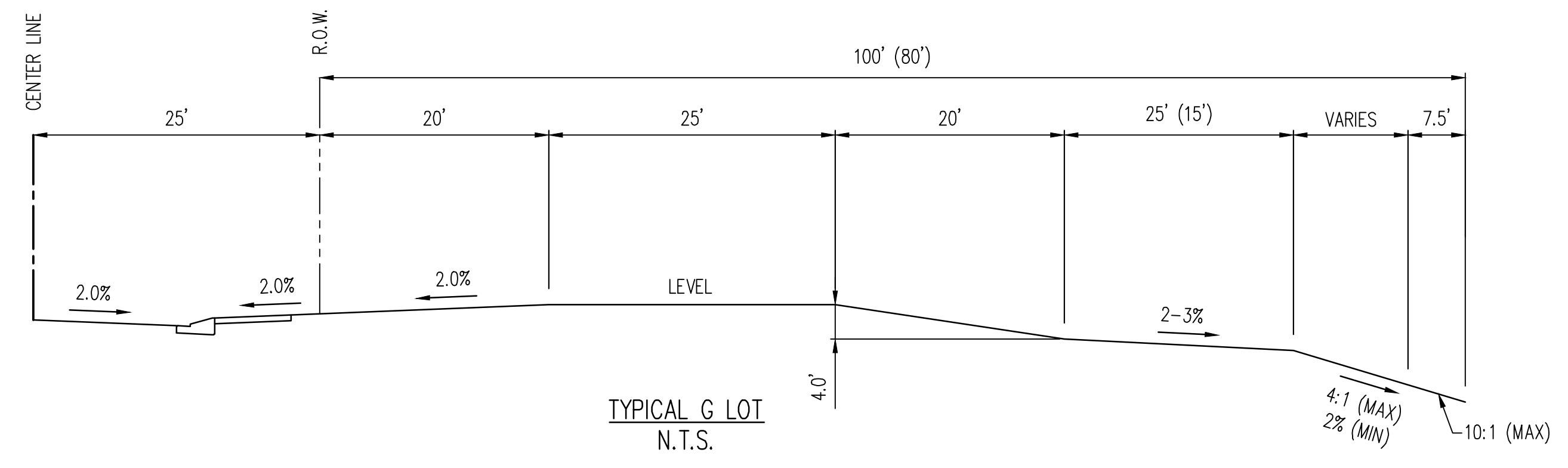
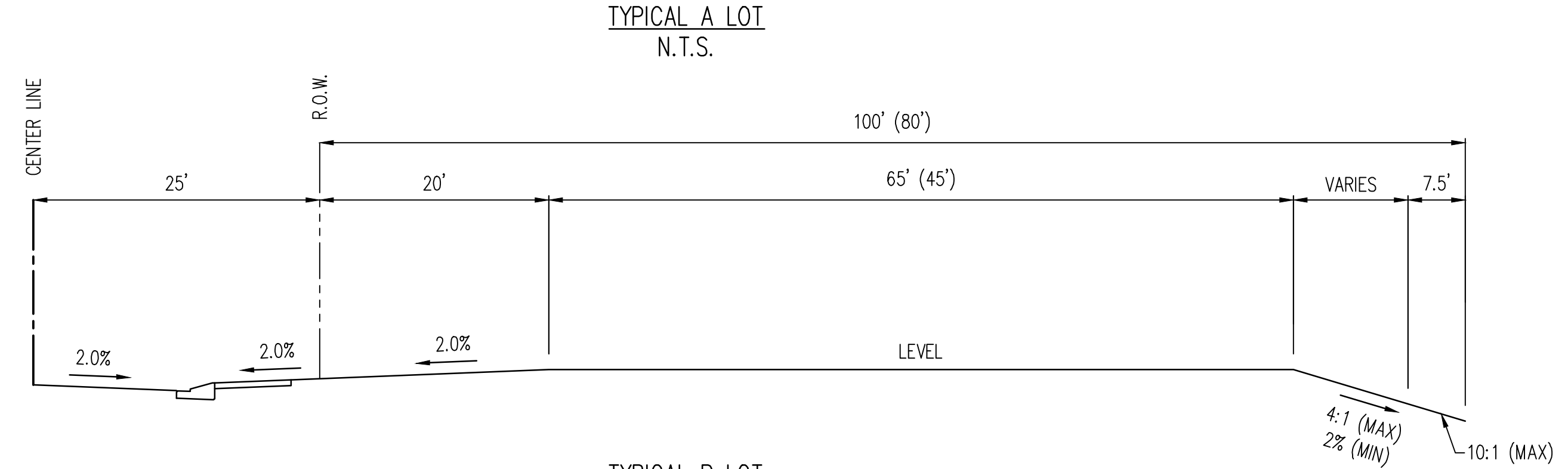
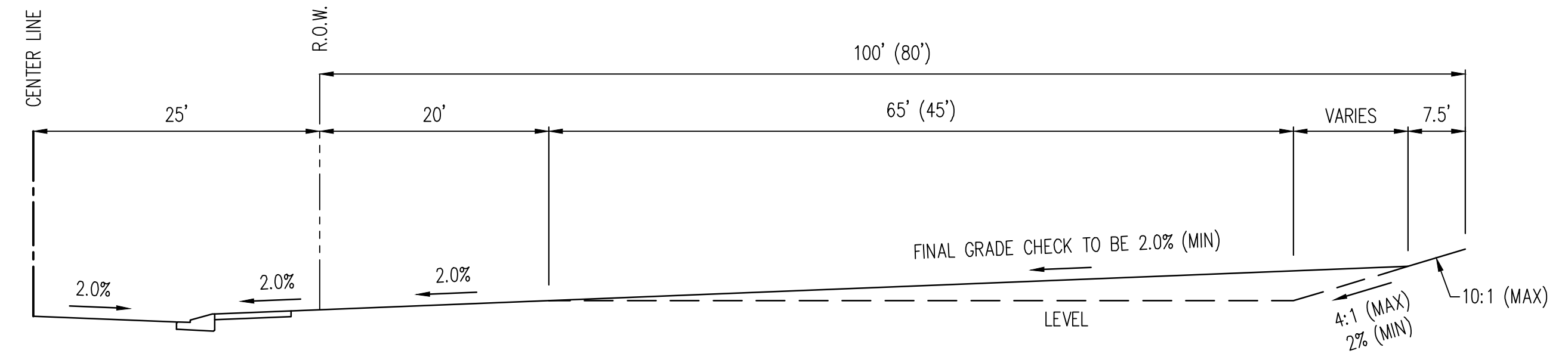
Project No: CLH000021  
Drawn By: CMWJ  
Checked By: RGD  
Date: 07/01/2022

GRADING & EROSION CONTROL TYPICAL SECTIONS

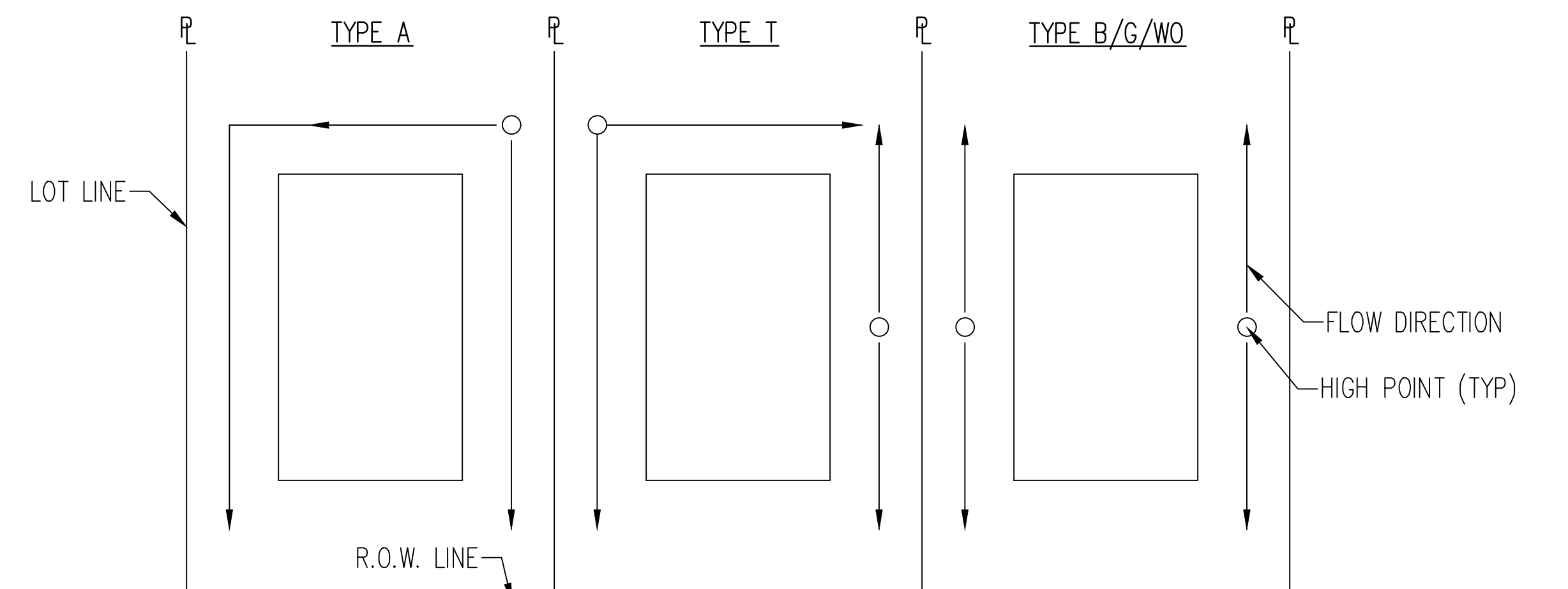


Add note referencing G4.1 for swale cross-sections

REVISED AS REQUESTED



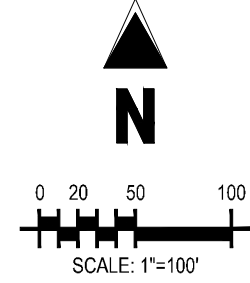
- NOTES:
1. TRANSITION LOTS IDENTIFIED BY A "T" ARE INCLUDED TO INDICATE LOTS THAT WILL REQUIRE HOME BUILDERS TO PREPARE A SITE SPECIFIC GRADING PLAN TO DETAIL THE GRADING TRANSITION FROM TYPE A/B LOTS TO GARDEN/WALKOUT LOTS
  2. THE DEVELOPER/HOME BUILDER SHALL INSTALL SIDE LOT SWALES TO MINIMIZE THE LOT TO LOT DRAINAGE.



| # | Date | Issue / Description | Init. |
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Project No: CLH000021  
Drawn By: CMWJ  
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Date: 07/01/2022

**OVERALL GRADING PLAN**



**LEGEND**

- EXISTING PROPERTY LINE
- - - - - PROPOSED PROJECT BOUNDARY
- PROPOSED RIGHT OF WAY LINE
- EXISTING LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- - - - - EXISTING SUBDIVISION BUFFER
- 6940 EXISTING MAJOR CONTOUR
- 6940 EXISTING MINOR CONTOUR
- 6939 PROPOSED MAJOR CONTOUR
- 6939 PROPOSED MINOR CONTOUR
- EXISTING STORM DRAIN PIPE
- PROPOSED STORM DRAIN PIPE
- W EXISTING WATER LINE
- W PROPOSED WATER LINE
- SS EXISTING SANITARY SEWER LINE
- SS PROPOSED SANITARY SEWER LINE
- EXISTING DRAINAGE FEATURE OUTLINE
- PROPOSED DRAINAGE FEATURE OUTLINE
- > EXISTING SWALE WITH FLOW DIRECTION
- > PROPOSED SWALE WITH FLOW DIRECTION
- > 100YR 100-YEAR FEMA FLOODPLAIN
- > CUT / FILL
- - - - - 100-YEAR FLOODPLAIN 50-FIT BUFFER
- PROPOSED 1" TO 2" CRUSHED ROCK
- PROPOSED RIP RAP
- EXISTING CONCRETE PAVING
- EXISTING CDOT CLASS 6 GRAVEL
- EXISTING 1" TO 2" CRUSHED ROCK
- EXISTING RIP RAP
- EXISTING GROUTED BOULDERS
- PROPOSED LOT #
- EXISTING LOT # (BENT GRASS FILING NO. 2)
- PROPOSED ADA RAMP
- 55.00 HP SPOT ELEVATION - HIGH POINT
- 55.00 LP SPOT ELEVATION - LOW POINT
- 55.00 FG SPOT ELEVATION - FINISH GRADE
- 2.00% EXISTING SLOPE (PERCENT)
- 4:1 EXISTING SLOPE (RISE:RUN)
- 2.00% PROPOSED SLOPE (PERCENT)
- 4:1 PROPOSED SLOPE (RISE:RUN)
- > FLOW ARROW

**NOTES**

- ADD 6900 TO ALL SPOT ELEVATIONS
- THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS TO UTILITY FACILITIES. ADDITIONALLY, THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE OR PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT.

**BASIS OF BEARINGS**

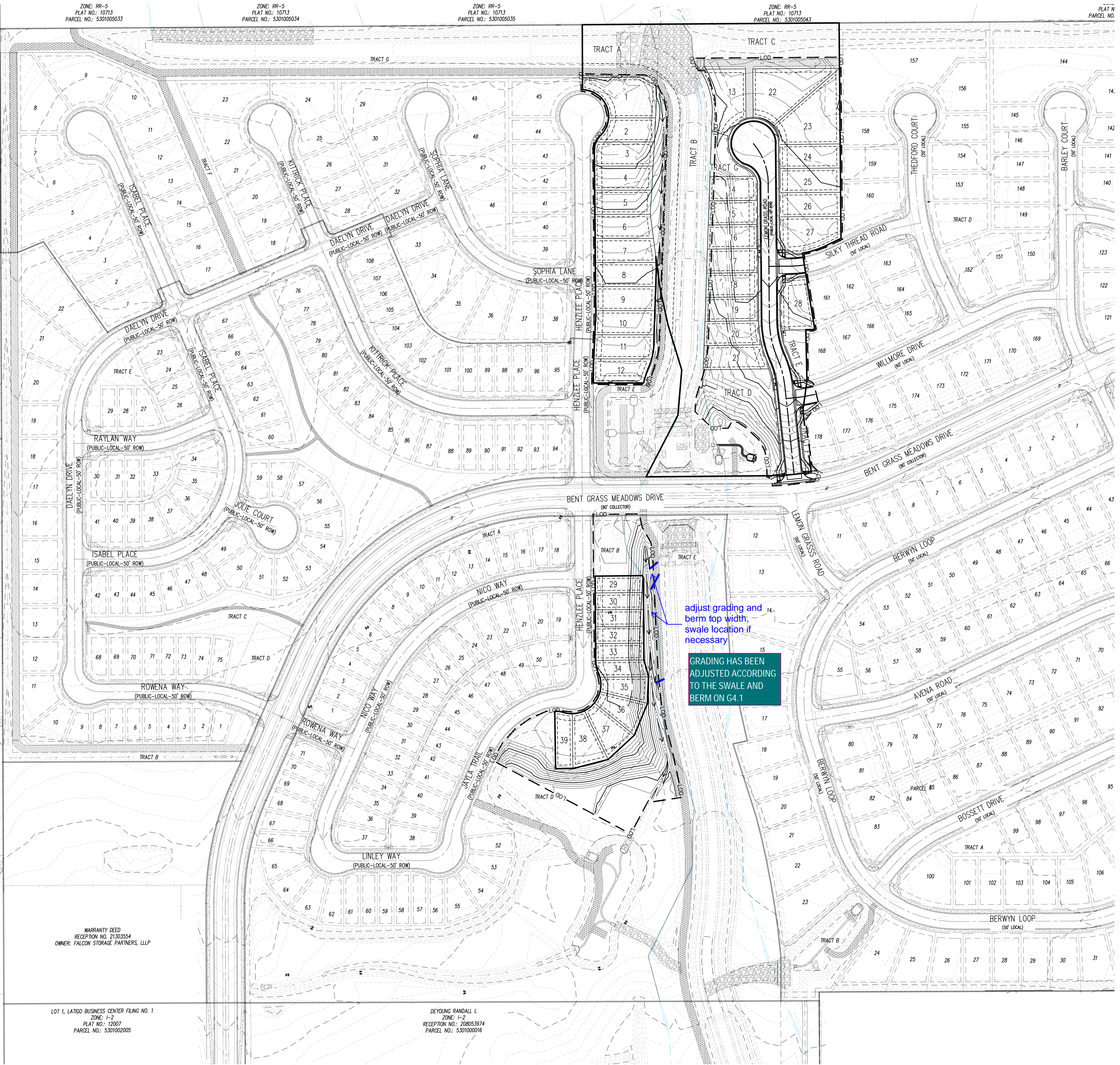
ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 1, 113S, R65W AND THE WEST QUARTER CORNER SECTION 1, 113S, R65W IS N001°54'48"W AND MONUMENTED AS SHOWN.

**BENCHMARK**

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR L&#248; 24954 ELEVATION = 6947.67

**CAUTION - NOTICE TO CONTRACTOR**

- ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE FIELD LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.



adjust grading and berm top width, swale location if necessary

GRADING HAS BEEN ADJUSTED ACCORDING TO THE SWALE AND BERM ON G4.1

LOT 1, THE MEADOWS FILING NO. 2  
ZONE: RR-5  
PLAT NO.: 10713  
PARCEL NO.: 5301005033

LOT 2, THE MEADOWS FILING NO. 2  
ZONE: RR-5  
PLAT NO.: 10713  
PARCEL NO.: 5301005034

LOT 3, THE MEADOWS FILING NO. 2  
ZONE: RR-5  
PLAT NO.: 10713  
PARCEL NO.: 5301005035

LOT 4, THE MEADOWS FILING NO. 2  
ZONE: RR-5  
PLAT NO.: 10713  
PARCEL NO.: 5301005043

LOT 5, THE MEADOWS FILING NO. 2  
ZONE: RR-5  
PLAT NO.: 12007  
PARCEL NO.: 5301002005

LOT 6, THE MEADOWS FILING NO. 2  
ZONE: RR-5  
PLAT NO.: 12007  
PARCEL NO.: 5301002006

LOT 7, THE MEADOWS FILING NO. 2  
ZONE: RR-5  
PLAT NO.: 12007  
PARCEL NO.: 5301002007

LOT 8, THE MEADOWS FILING NO. 1  
ZONE: RR-5  
PLAT NO.: 530200008  
PARCEL NO.: 530200008

LOT 9, THE MEADOWS FILING NO. 1  
ZONE: RR-5  
PLAT NO.: 530200008  
PARCEL NO.: 530200008

LOT 10, THE MEADOWS FILING NO. 1  
ZONE: RR-5  
PLAT NO.: 530200008  
PARCEL NO.: 530200008

LOT 11, THE MEADOWS FILING NO. 1  
ZONE: RR-5  
PLAT NO.: 530200007  
PARCEL NO.: 530200007

LOT 12, THE MEADOWS FILING NO. 1  
ZONE: RR-5  
PLAT NO.: 530200008  
PARCEL NO.: 530200008

LOT 13, THE MEADOWS FILING NO. 1  
ZONE: RR-5  
PLAT NO.: 530200008  
PARCEL NO.: 530200008

LOT 14, THE MEADOWS FILING NO. 1  
ZONE: RR-5  
PLAT NO.: 530200010  
PARCEL NO.: 530200010

LOT 15, THE MEADOWS FILING NO. 1  
ZONE: RR-5  
PLAT NO.: 530200011  
PARCEL NO.: 530200011

LOT 1, LATIGO BUSINESS CENTER FILING NO. 1  
ZONE: I-2  
PLAT NO.: 12007  
PARCEL NO.: 5301002005

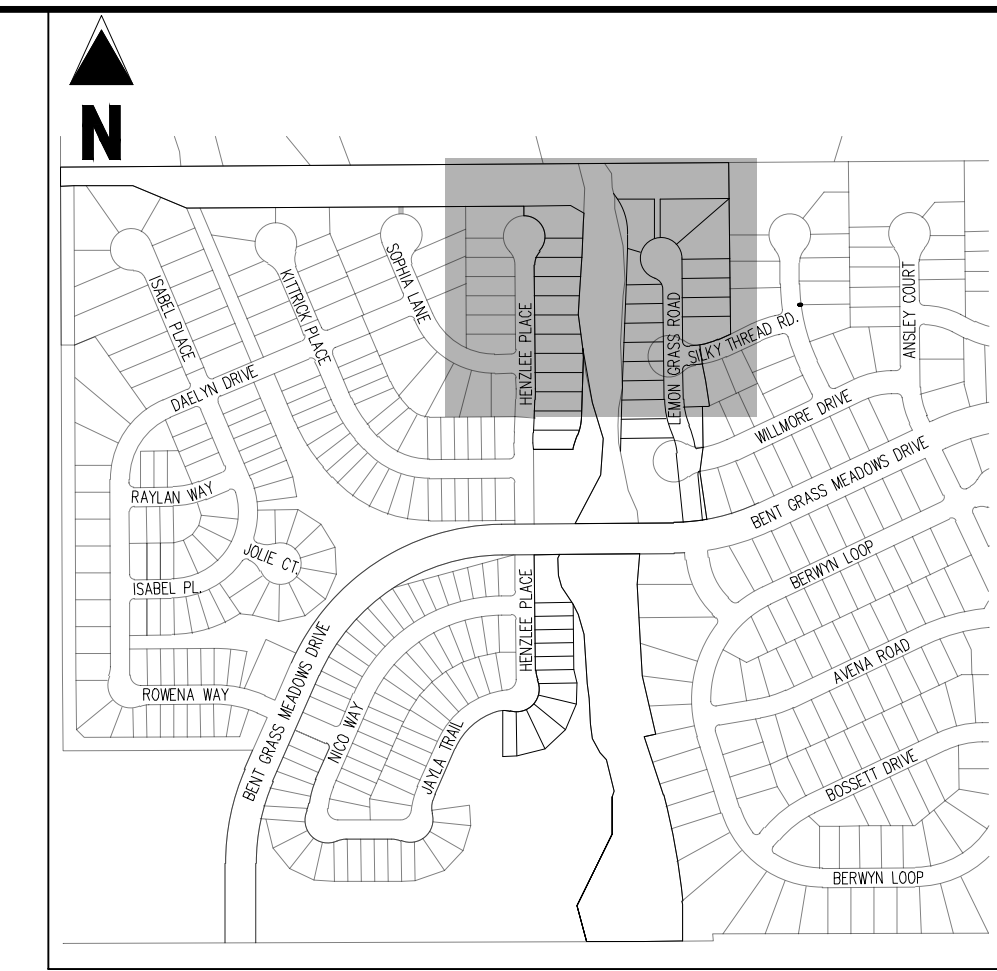
DEYOUNG RANDALL L.  
ZONE: I-2  
RECEPTION NO.: 208053974  
PARCEL NO.: 5301000018

WARRANTY DEED  
RECEPTION NO. 21303554  
OWNER: FALCON STORAGE PARTNERS, LLLP

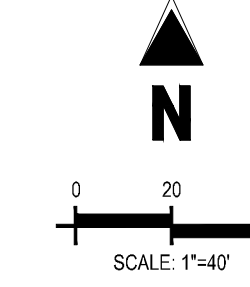
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DRAWN BY: CMWJ  
CHECKED BY: RGD  
DATE: 07/01/2022

LOT 5, THE MEADOWS FILING NO. 3  
 ZONE: RR-5  
 PLAT NO.: 10713  
 PARCEL NO.: 5301005035

LOT 13, THE MEADOWS FILING NO. 3  
 ZONE: RR-5  
 PLAT NO.: 10713  
 PARCEL NO.: 5301005043



KEY MAP  
 SCALE: 1"=500'



**EROSION CONTROL LEGEND**

- LOD LIMITS OF DISTURBANCE / CONSTRUCTION
- SF SILT FENCE
- IPS SUMP INLET PROTECTION
- IPO ON-GRADE INLET PROTECTION
- RS ROCK SOCKS
- SITE SITE (CONTACTS AND PERMITS)
- WP WASHOUT POSTING
- SCL SEDIMENT CONTROL LOG

**EROSION CONTROL PHASING SCHEDULE**

| PHASE   | DESCRIPTION   |
|---------|---|
| INITIAL | INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTING INLETS, AND CURB SOCKS ALONG BENT GRASS MEADOWS DRIVE & HENZLEE PLACE   |
| INTERIM | INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLOT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW, INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADWAYS, AND INSTALL CHECK DAMS ALONG PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER AND PAVEMENT. |
| FINAL   | CONSTRUCT CURB/GUTTER AND PAVEMENT, CONSTRUCT GAS/ELECTRIC/CABLE/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCE VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS COMPLETE.   |

**REVISED AS REQUESTED**

show drainage flow arrows on this sheet.

**LEGEND**

- 6940 EXISTING MAJOR CONTOUR
- 6941 EXISTING MINOR CONTOUR
- 6960 PROPOSED MAJOR CONTOUR
- 6961 PROPOSED MINOR CONTOUR
- EXISTING PROPERTY LINE (PROPOSED PROJECT BOUNDARY)
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE (PROPOSED PROJECT BOUNDARY)
- PROPOSED RIGHT OF WAY LINE
- EXISTING LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXISTING STORM DRAIN PIPE
- PROPOSED STORM DRAIN PIPE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER LINE
- PROPOSED SANITARY SEWER LINE
- EXISTING DRAINAGE FEATURE OUTLINE
- PROPOSED DRAINAGE FEATURE OUTLINE
- EXISTING SWALE WITH FLOW DIRECTION
- PROPOSED SWALE WITH FLOW DIRECTION
- 100-YEAR FEMA FLOODPLAIN
- PROPOSED CONCRETE
- PROPOSED CDOT CLASS 6 GRAVEL
- PROPOSED RIP RAP
- EXISTING CONCRETE PAVING
- EXISTING CDOT CLASS 6 GRAVEL
- EXISTING 1" TO 2" CRUSHED ROCK
- EXISTING RIP RAP
- EXISTING GROUDED BOULDERS
- 113 PROPOSED LOT #
- 15 EXISTING LOT #
- 2.00% EXISTING SLOPE (PERCENT)
- 4:1 EXISTING SLOPE (RISE:RUN)

**NOTES**

- ADD 6930 TO ALL SPOT ELEVATIONS
- EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF NATIVE GRASSES AND SHRUBS.
- NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS PLAN.
- NO GRADING IS TO OCCUR WITHIN THE 100-YEAR FLOODPLAIN.
- THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTORS.
- CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE OF THE CONSTRUCTION LIMITS WITH SILT FENCE OR OTHER METHOD TO PROTECT UNDISTURBED AREAS FROM EROSION.
- ALL TEMPORARY OR PERMANENT GRADING DISTURBANCES SHALL BE RE-SEEDED AND MULCHED PER EL PASO COUNTY CRITERIA AND SPECIFICATIONS.

**BASIS OF BEARINGS**

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 11, T13S, R65W AND THE WEST QUARTER CORNER SECTION 11, T13S, R65W IS N001°46'W AND MONUMENTED AS SHOWN.

**BENCHMARK**

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR IS @ 24954 ELEVATION = 6947.67

**CAUTION - NOTICE TO CONTRACTOR**

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CONSTRUCTION DOCUMENTS  
 FALCON MEADOWS AT BENT GRASS FILING NO. 4  
 FOR  
 CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD  
 FALCON, CO 80831 - EL PASO COUNTY

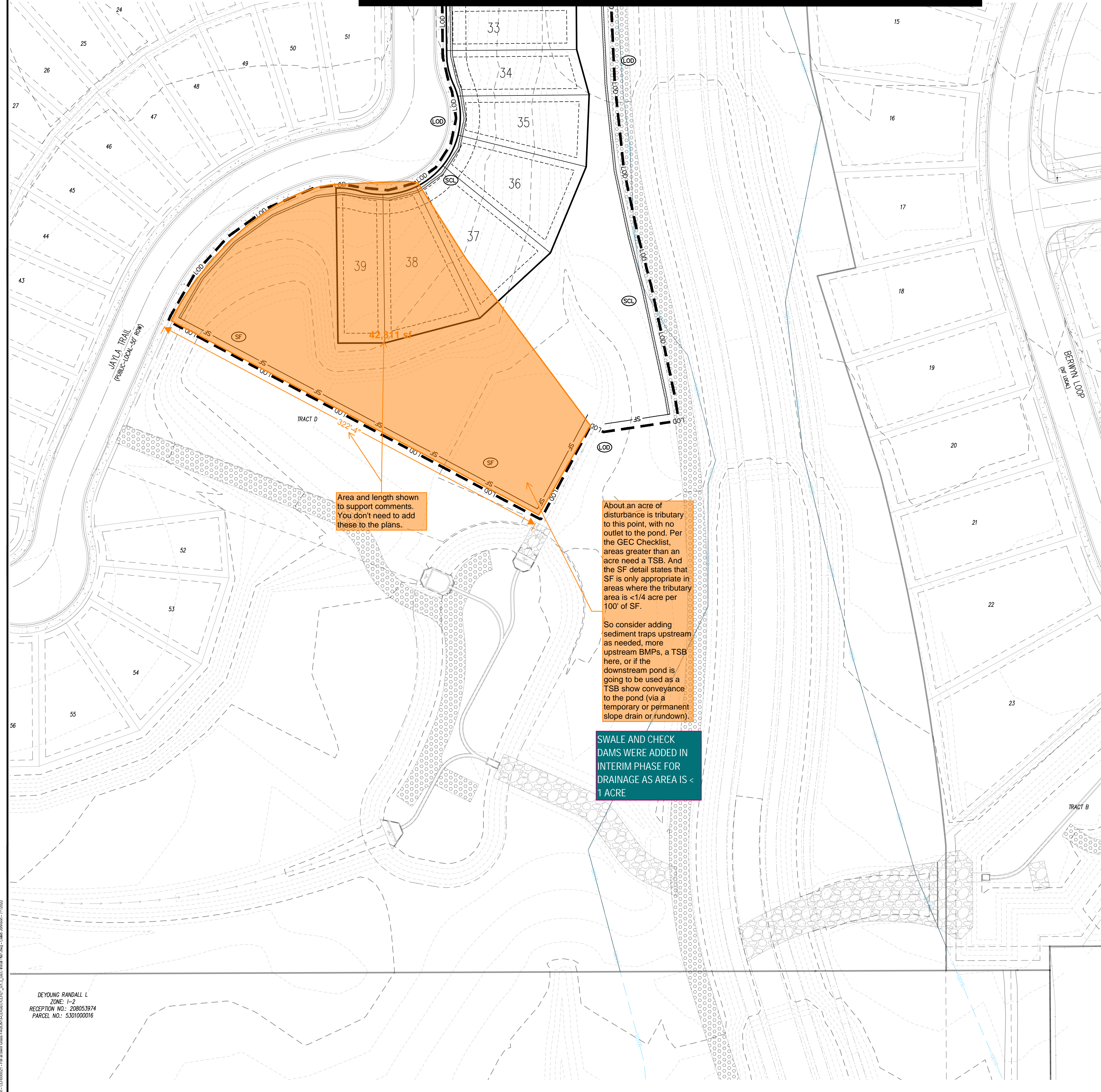
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Project No: CLH000021  
 Drawn By: CMWJ  
 Checked By: RGD  
 Date: 07/01/2022

GRADING & EROSION CONTROL INITIAL PLAN

MATCHLINE SHEET G1.2



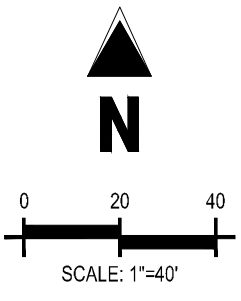


Area and length shown to support comments. You don't need to add these to the plans.

About an acre of disturbance is tributary to this point, with no outlet to the pond. Per the GEC Checklist, areas greater than an acre need a TSB. And the SF detail states that SF is only appropriate in areas where the tributary area is <1/4 acre per 100' of SF.

So consider adding sediment traps upstream as needed, more upstream BMPs, a TSB here, or if the downstream pond is going to be used as a TSB show conveyance to the pond (via a temporary or permanent slope drain or rundown).

SWALE AND CHECK DAMS WERE ADDED IN INTERIM PHASE FOR DRAINAGE AS AREA IS < 1 ACRE



- EROSION CONTROL LEGEND**
- LOD (LOD) LIMITS OF DISTURBANCE / CONSTRUCTION
  - SF (SF) SILT FENCE
  - CF (CF) CONSTRUCTION FENCE
  - IPS (IPS) SUMP INLET PROTECTION
  - IPO (IPO) ON-GRADE INLET PROTECTION
  - RS (RS) ROCK SOCKS
  - VTC (VTC) VEHICLE TRACKING CONTROL
  - CWA (CWA) CONCRETE WASHOUT AREA
  - SSA (SSA) STABILIZED STAGING AREA
  - SC (SC) PROPOSED SAWCUT LINE
  - PT (PT) PORTABLE TOILET
  - SP (SP) STOCKPILE
  - CD (CD) CHECK DAM
  - RR (RR) RIPRAP OFFFALL PADS
  - SITE (SITE) SITE (CONTACTS AND PERMITS)
  - WP (WP) WASHOUT POSTING
  - SBB (SBB) STRAW BALE BARRIER
  - SB (SB) SEDIMENT BASIN
  - SCL (SCL) SEDIMENT CONTROL LOG

- LEGEND**
- EXISTING PROPERTY LINE
  - PROPOSED PROJECT BOUNDARY
  - PROPOSED RIGHT OF WAY LINE
  - EXISTING LOT LINE
  - PROPOSED LOT LINE
  - EXISTING EASEMENT
  - PROPOSED EASEMENT
  - EXISTING SUBDIVISION BUFFER
  - EXISTING MAJOR CONTOUR (e.g., 6940)
  - EXISTING MINOR CONTOUR (e.g., 6941)
  - PROPOSED MAJOR CONTOUR (e.g., 6940)
  - PROPOSED MINOR CONTOUR (e.g., 6939)
  - EXISTING STORM DRAIN PIPE
  - PROPOSED STORM DRAIN PIPE
  - EXISTING WATER LINE
  - PROPOSED WATER LINE
  - EXISTING SANITARY SEWER LINE
  - PROPOSED SANITARY SEWER LINE
  - EXISTING DRAINAGE FEATURE OUTLINE
  - PROPOSED DRAINAGE FEATURE OUTLINE
  - EXISTING SWALE WITH FLOW DIRECTION
  - PROPOSED SWALE WITH FLOW DIRECTION
  - 100-YEAR FEMA FLOODPLAIN
  - CUT / FILL
  - 100-YEAR FLOODPLAIN 50-FT BUFFER
  - PROPOSED 1" TO 2" CRUSHED ROCK
  - PROPOSED RIP RAP
  - EXISTING CONCRETE PAVING
  - EXISTING CDOT CLASS 6 GRAVEL
  - EXISTING 1" TO 2" CRUSHED ROCK
  - EXISTING RIP RAP
  - EXISTING GROUVED BOULDERS
  - PROPOSED LOT #
  - EXISTING LOT # (BENT GRASS FILING NO. 2)
  - PROPOSED ADA RAMP
  - SPOT ELEVATION - HIGH POINT
  - SPOT ELEVATION - LOW POINT
  - SPOT ELEVATION - FINISH GRADE
  - EXISTING SLOPE (PERCENT)
  - EXISTING SLOPE (RISE:RUN) (e.g., 4:1)
  - PROPOSED SLOPE (PERCENT)
  - PROPOSED SLOPE (RISE:RUN) (e.g., 4:1)
  - FLOW ARROW

**NOTES**

- ADD 6900 TO ALL SPOT ELEVATIONS
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- NO WETLANDS ARE TO BE PERMANENTLY DISTURBED FOR THIS PLAN.
- NO GRADING IS TO OCCUR WITHIN THE 100-YEAR FLOODPLAIN.
- THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTORS.
- CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE OF THE CONSTRUCTION LIMITS WITH SILT FENCE OR OTHER METHOD TO PROTECT UNDISTURBED AREAS FROM EROSION.
- ALL TEMPORARY OR PERMANENT GRADING DISTURBANCES SHALL BE RE-SEEDED AND MULCHED PER EL PASO COUNTY CRITERIA AND SPECIFICATIONS.
- ALL TEMPORARY RIPRAP SHOWN ON THE PLANS SHALL BE TYPE 'W'. RIPRAP SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS OF 1.5' DEEP.
- ALL TEMPORARY STORM DRAIN SHOWN ON THE PLANS SHALL BE 24" DIA. HP POLYPROPYLENE. ALL PIPE SHALL BE LAD TO ACHIEVE A MIN. SLOPE OF 0.5%.

**EROSION CONTROL PHASING SCHEDULE**

| PHASE   | DESCRIPTION  |
|---------|--|
| INITIAL | INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTING INLETS, AND CURB SOCKS ALONG BENT GRASS MEADOWS DRIVE & HENZLEE PLACE  |
| INTERIM | INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLIFT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW. INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADWAYS, AND INSTALL CHECK DAMS ALONG PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER AND PAVEMENT. |
| FINAL   | CONSTRUCT CURB/GUTTER AND PAVEMENT. CONSTRUCT GAS/ELECTRIC/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCE VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS COMPLETE.  |

**REVISED AS REQUESTED**  
show drainage flow arrows on this sheet.

**BASIS OF BEARINGS**

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 1, T13S, R5W AND THE WEST QUARTER CORNER SECTION 1, T13S, R5W IS N00°13'46"W AND MONUMENTED AS SHOWN.

**BENCHMARK**

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A YELLOW PLASTIC SURVEYOR'S CAP ON A NO. 4 REBAR IS @ 24954 ELEVATION = 6947.67

**CAUTION - NOTICE TO CONTRACTOR**

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CONSTRUCTION DOCUMENTS  
FALCON MEADOWS AT BENT GRASS FILING NO. 4  
FOR  
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD  
FALCON, CO 80831 - EL PASO COUNTY

| # | Date | Issue / Description | Init. |
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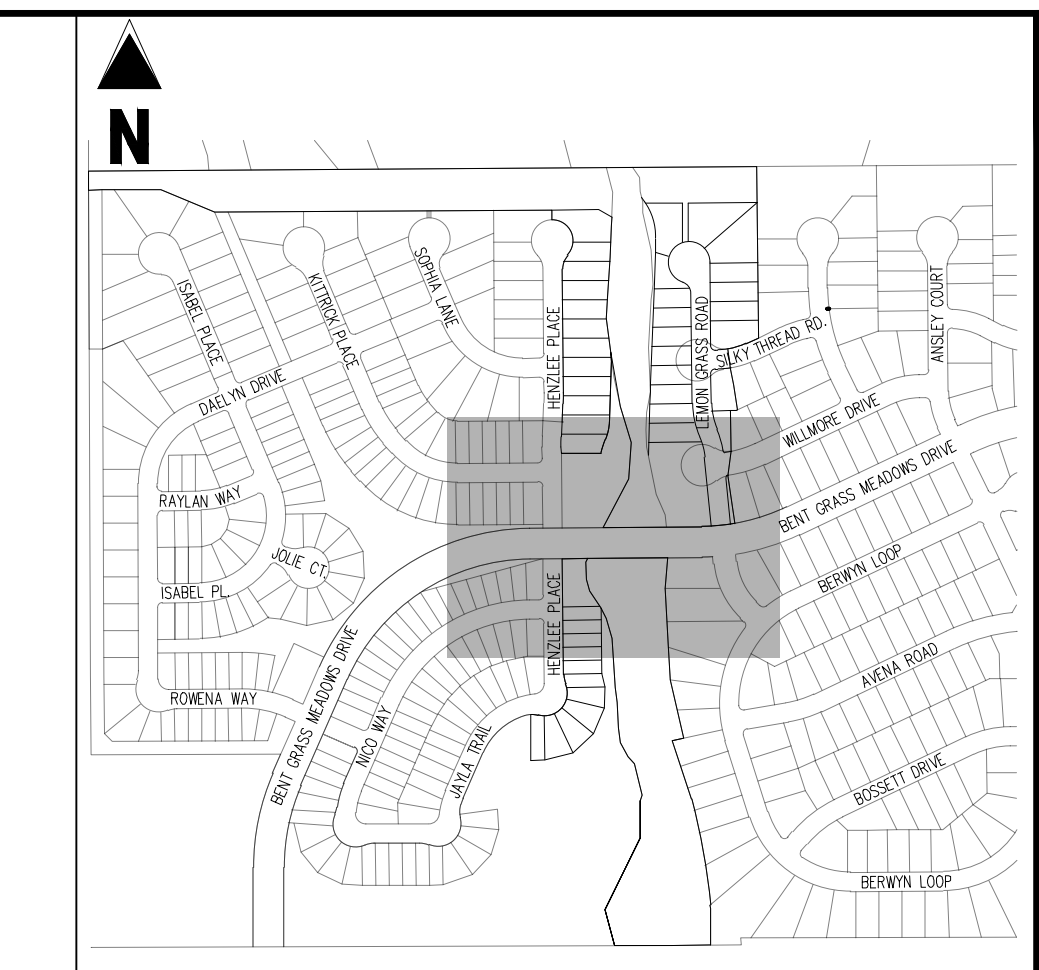
Project No: CLH000021  
Drawn By: CMIWJ  
Checked By: RGD  
Date: 07/01/2022

GRADING & EROSION CONTROL INITIAL PLAN

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KEY MAP  
SCALE: 1"=500'

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**CHALLENGER  
HOMES**

CONSTRUCTION DOCUMENTS  
**FALCON MEADOWS AT BENT GRASS FILING NO. 4**  
FOR  
**CHALLENGER COMMUNITIES, LLC**  
**BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD**  
**FALCON, CO 80831 - EL PASO COUNTY**

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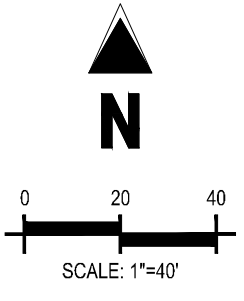
Project No: CLH000021  
Drawn By: CMWJ  
Checked By: RGD  
Date: 07/01/2022  
**GRADING & EROSION CONTROL INTERIM PLAN**

MATCHLINE SHEET G2.1

what happens to all of the runoff that is conveyed to this point by the swale? Is this an existing temporary slope drain? If so, would be good to show some form of IP here. Otherwise, add some form of protected temp conveyance from the swale to the forebay.

**PROPOSED STORM INLET IS PRESENT WITH INLET PROTECTION**

Label Pond name/number (Existing Pond 1)  
**LABEL IS PLACED**



**EROSION CONTROL LEGEND**

|         |        |                                      |
|---------|--------|--------------------------------------|
| --- LOD | (LOD)  | LIMITS OF DISTURBANCE / CONSTRUCTION |
| - SF    | (SF)   | SILT FENCE                           |
| - CF    | (CF)   | CONSTRUCTION FENCE                   |
| (IP)    | (IP)   | SUMP INLET PROTECTION                |
| (IPO)   | (IPO)  | ON-GRADE INLET PROTECTION            |
| (RS)    | (RS)   | ROCK SOCKS                           |
| (VTC)   | (VTC)  | VEHICLE TRACKING CONTROL             |
| (CWA)   | (CWA)  | CONCRETE WASHOUT AREA                |
| (SSA)   | (SSA)  | STABILIZED STAGING AREA              |
| (SC)    | (SC)   | PROPOSED SAWCUT LINE                 |
| (PT)    | (PT)   | PORTABLE TOILET                      |
| (SP)    | (SP)   | STOCKPILE                            |
| (CD)    | (CD)   | CHECK DAM                            |
| (RR)    | (RR)   | RRIPRAP OUTFALL PADS                 |
| (SITE)  | (SITE) | SITE (CONTACTS AND PERMITS)          |
| (WP)    | (WP)   | WASHOUT POSTING                      |
| (SBB)   | (SBB)  | STRAW BALE BARRIER                   |
| (SB)    | (SB)   | SEDIMENT BASIN                       |
| (SCL)   | (SCL)  | SEDIMENT CONTROL LOG                 |
| (ST)    | (ST)   | SEDIMENT TRAP                        |

**NOTES**

1. ADD 8900 TO ALL SPOT ELEVATIONS.
2. THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS TO UTILITY FACILITIES. ADDITIONALLY, THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT.
3. NO METALS ARE TO BE PERMANENTLY DISTURBED PER THIS PLAN.
4. NO GRADING IS TO OCCUR WITHIN THE 100-YEAR FLOODPLAIN.
5. THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTORS.
6. CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE OF THE CONSTRUCTION LIMITS WITH SILT FENCE OR OTHER METHOD TO PROTECT UNDISTURBED AREAS FROM EROSION.
7. ALL TEMPORARY OR PERMANENT GRADING DISTURBANCES SHALL BE RE-SEEDED AND MULCHED PER EL PASO COUNTY CRITERIA AND SPECIFICATIONS.
8. ALL TEMPORARY RRIPRAP SHOWN ON THE PLANS SHALL BE TYPE 'M'. RRIPRAP SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RRIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS OF 1.5' DEEP.
9. ALL TEMPORARY STORM DRAIN SHOWN ON THE PLANS SHALL BE 24" DIA. HP POLYPROPYLENE. ALL PIPE SHALL BE LAID TO ACHIEVE A MIN. SLOPE OF 0.5%.

**EROSION CONTROL PHASING SCHEDULE**

| PHASE   | DESCRIPTION   |
|---------|---|
| INITIAL | INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTING INLETS, AND CURB SOCKS ALONG BENT GRASS MEADOWS DRIVE & HENZLEE PLACE.  |
| INTERIM | INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLOT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW, INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADWAYS, AND INSTALL CHECK DAMS ALONG PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER AND PAVEMENT. |
| FINAL   | CONSTRUCT CURB/GUTTER AND PAVEMENT. CONSTRUCT GAS/ELECTRIC/CABLE/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCE VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS COMPLETE.   |

**LEGEND**

|     |  |
|-----|--|
| --- | EXISTING PROPERTY LINE                   |
| --- | PROPOSED PROJECT BOUNDARY                |
| --- | PROPOSED RIGHT OF WAY LINE               |
| --- | EXISTING LOT LINE                        |
| --- | PROPOSED LOT LINE                        |
| --- | EXISTING EASEMENT                        |
| --- | PROPOSED EASEMENT                        |
| --- | EXISTING SUBDIVISION BUFFER              |
| --- | EXISTING MAJOR CONTOUR                   |
| --- | EXISTING MINOR CONTOUR                   |
| --- | PROPOSED MAJOR CONTOUR                   |
| --- | PROPOSED MINOR CONTOUR                   |
| --- | EXISTING STORM DRAIN PIPE                |
| --- | PROPOSED STORM DRAIN PIPE                |
| --- | EXISTING WATER LINE                      |
| --- | PROPOSED WATER LINE                      |
| --- | EXISTING SANITARY SEWER LINE             |
| --- | PROPOSED SANITARY SEWER LINE             |
| --- | EXISTING DRAINAGE FEATURE OUTLINE        |
| --- | PROPOSED DRAINAGE FEATURE OUTLINE        |
| --- | EXISTING SWALE WITH FLOW DIRECTION       |
| --- | PROPOSED SWALE WITH FLOW DIRECTION       |
| --- | 100-YEAR FEMA FLOODPLAIN                 |
| --- | CUT / FILL                               |
| --- | 100-YEAR FLOODPLAIN 50-FT BUFFER         |
| --- | PROPOSED 1" TO 2" CRUSHED ROCK           |
| --- | PROPOSED RIP RAP                         |
| --- | EXISTING CONCRETE PAVING                 |
| --- | EXISTING CDOT CLASS 6 GRAVEL             |
| --- | EXISTING 1" TO 2" CRUSHED ROCK           |
| --- | EXISTING RIP RAP                         |
| --- | EXISTING GROUDED BOULDERS                |
| --- | PROPOSED LOT #                           |
| --- | EXISTING LOT # (BENT GRASS FILING NO. 2) |
| --- | PROPOSED ADA RAMP                        |
| --- | SPOT ELEVATION - HIGH POINT              |
| --- | SPOT ELEVATION - LOW POINT               |
| --- | SPOT ELEVATION - FINISH GRADE            |
| --- | EXISTING SLOPE (PERCENT)                 |
| --- | EXISTING SLOPE (RISE:RUN)                |
| --- | PROPOSED SLOPE (PERCENT)                 |
| --- | PROPOSED SLOPE (RISE:RUN)                |
| --- | FLOW ARROW                               |

**BASIS OF BEARINGS**

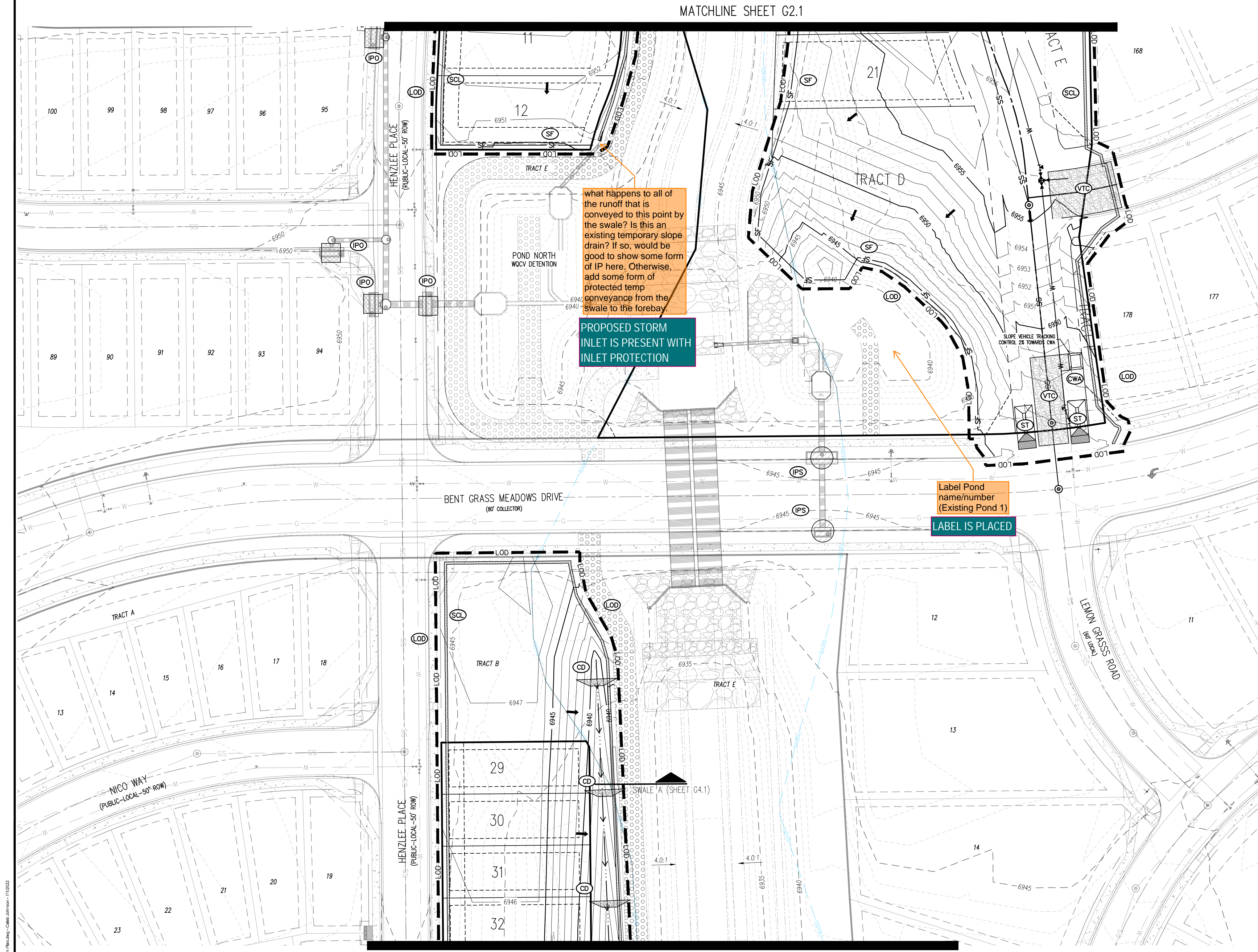
ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 1, T13S, R95W AND THE WEST QUARTER CORNER SECTION 1, T13S, R95W IS N001°34'W AND MONUMENTED AS SHOWN.

**BENCHMARK**

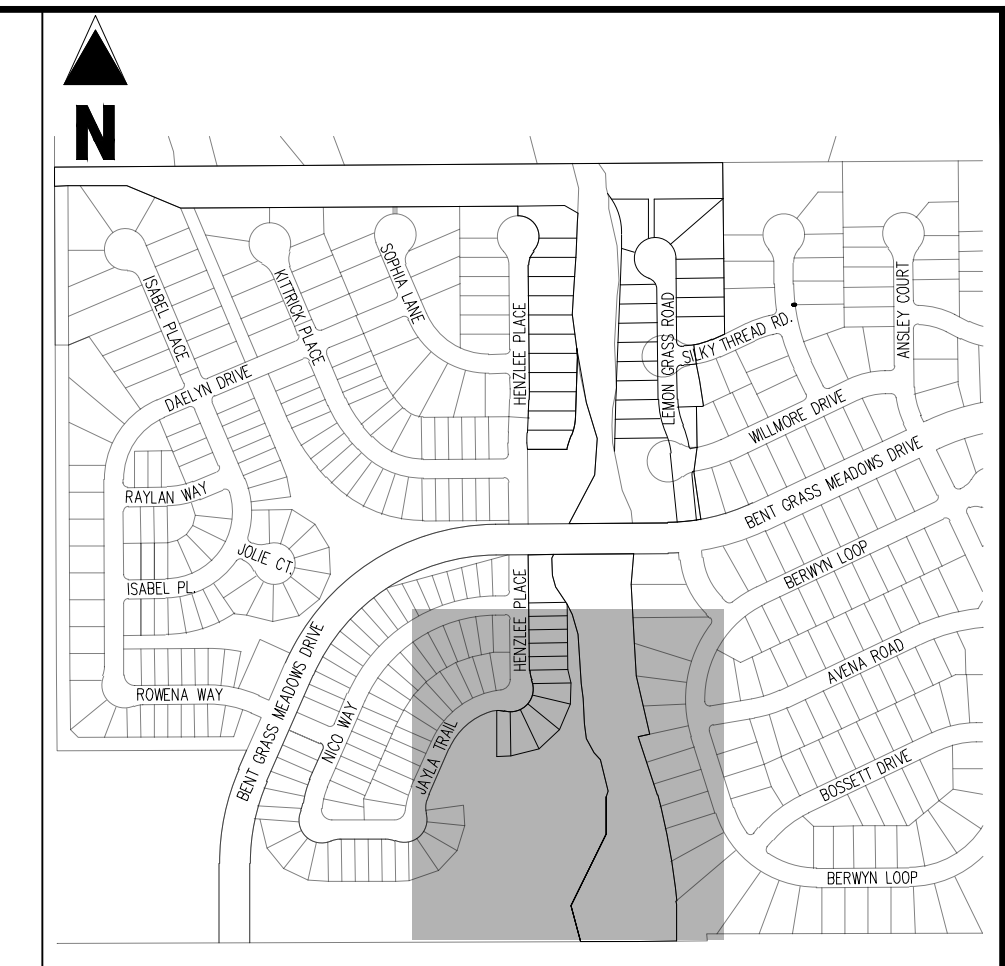
THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A YELLOW PLASTIC SURVEYOR'S CAP ON A NO. 4 REBAR L<sub>8</sub> 24954 ELEVATION = 6947.67

**CAUTION - NOTICE TO CONTRACTOR**

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.



MATCHLINE SHEET G2.3



KEY MAP  
SCALE: 1"=500'

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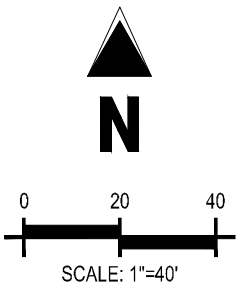


CONSTRUCTION DOCUMENTS  
FALCON MEADOWS AT BENT GRASS FILING NO. 4  
FOR  
CHALLENGER COMMUNITIES, LLC  
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD  
FALCON, CO 80831 - EL PASO COUNTY

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Project No: CLH000021  
Drawn By: CMWJ  
Checked By: RGD  
Date: 07/01/2022

GRADING & EROSION CONTROL INTERIM PLAN



Also show LOMR floodplain and elevations  
**REVISED AS REQUESTED**

If this is an existing vegetated swale, consider adding in some wattles or bales. If the existing swale has riprap in it, you can disregard this comment.  
**CHECK DAMS HAVE BEEN ADDED TO SWALE**

Label Pond name/number  
**LABEL IS PLACED**

**EROSION CONTROL LEGEND**

- LOD (LOD) LIMITS OF DISTURBANCE / CONSTRUCTION
- SF (SF) SILT FENCE
- CF (CF) CONSTRUCTION FENCE
- IPS (IPS) SUMP INLET PROTECTION
- IPO (IPO) ON-GRADE INLET PROTECTION
- RS (RS) ROCK SOCKS
- VTC (VTC) VEHICLE TRACKING CONTROL
- CWA (CWA) CONCRETE WASHOUT AREA
- SSA (SSA) STABILIZED STAGING AREA
- SC (SC) PROPOSED SAWCUT LINE
- PT (PT) PORTABLE TOILET
- SP (SP) STOCKPILE
- CD (CD) CHECK DAM
- RR (RR) RIPRAP OUTFALL PADS
- SITE (SITE) SITE (CONTACTS AND PERMITS)
- WP (WP) WASHOUT POSTING
- SBB (SBB) STRAW BALE BARRIER
- SB (SB) SEDIMENT BASIN
- SCL (SCL) SEDIMENT CONTROL LOG

**LEGEND**

- EXISTING PROPERTY LINE
- PROPOSED PROJECT BOUNDARY
- PROPOSED RIGHT OF WAY LINE
- EXISTING LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXISTING SUBDIVISION BUFFER
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING STORM DRAIN PIPE
- PROPOSED STORM DRAIN PIPE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER LINE
- PROPOSED SANITARY SEWER LINE
- EXISTING DRAINAGE FEATURE OUTLINE
- PROPOSED DRAINAGE FEATURE OUTLINE
- EXISTING SWALE WITH FLOW DIRECTION
- PROPOSED SWALE WITH FLOW DIRECTION
- 100-YEAR FEMA FLOODPLAIN
- CUT / FILL
- 100-YEAR FLOODPLAIN 50-FT BUFFER
- PROPOSED 1" TO 2" CRUSHED ROCK
- PROPOSED RIP RAP
- EXISTING CONCRETE PAVING
- EXISTING CDOT CLASS 6 GRAVEL
- EXISTING 1" TO 2" CRUSHED ROCK
- EXISTING RIP RAP
- EXISTING GROUDED BOULDERS
- PROPOSED LOT #
- EXISTING LOT # (BENT GRASS FILING NO. 2)
- PROPOSED ADA RAMP
- SPOT ELEVATION - HIGH POINT
- SPOT ELEVATION - LOW POINT
- SPOT ELEVATION - FINISH GRADE
- EXISTING SLOPE (PERCENT)
- EXISTING SLOPE (RISE:RUN)
- PROPOSED SLOPE (PERCENT)
- PROPOSED SLOPE (RISE:RUN)
- FLOW ARROW

**NOTES**

- ADD 6900 TO ALL SPOT ELEVATIONS.
- THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS TO UTILITY FACILITIES. ADDITIONALLY, THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT.
- NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS PLAN.
- NO GRADING IS TO OCCUR WITHIN THE 100-YEAR FLOODPLAIN.
- THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.
- CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE OF THE CONSTRUCTION LIMITS WITH SILT FENCE OR OTHER METHOD TO PROTECT UNDISTURBED AREAS FROM EROSION.
- ALL TEMPORARY OR PERMANENT GRADING DISTURBANCES SHALL BE RE-SEEDED AND MULCHED PER EL PASO COUNTY CRITERIA AND SPECIFICATIONS.
- ALL TEMPORARY RIPRAP SHOWN ON THE PLANS SHALL BE TYPE "M" RIPRAP AND SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS OF 1.5' DEEP.
- ALL TEMPORARY STORM DRAIN SHOWN ON THE PLANS SHALL BE 24" DIA. HP POLYPROPYLENE. ALL PIPE SHALL BE LAID TO ACHIEVE A MIN. SLOPE OF 0.5%.

**EROSION CONTROL PHASING SCHEDULE**

| PHASE   | DESCRIPTION   |
|---------|---|
| INITIAL | INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTING INLETS, AND CURB SOCKS ALONG BENT GRASS MEADOWS DRIVE & HENZIELE PLACE.   |
| INTERM  | INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL, AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLOT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW. INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADS, AND INSTALL CHECK DAMS ALONG PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER AND PAVEMENT. |
| FINAL   | CONSTRUCT CURB/GUTTER AND PAVEMENT. CONSTRUCT GAS/ELECTRIC/CABLE/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCE VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS COMPLETE.   |

**BASIS OF BEARINGS**

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS N001°46'W AND MONUMENTED AS SHOWN.

**BENCHMARK**

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR L#24954 ELEVATION = 6947.67

**CAUTION - NOTICE TO CONTRACTOR**

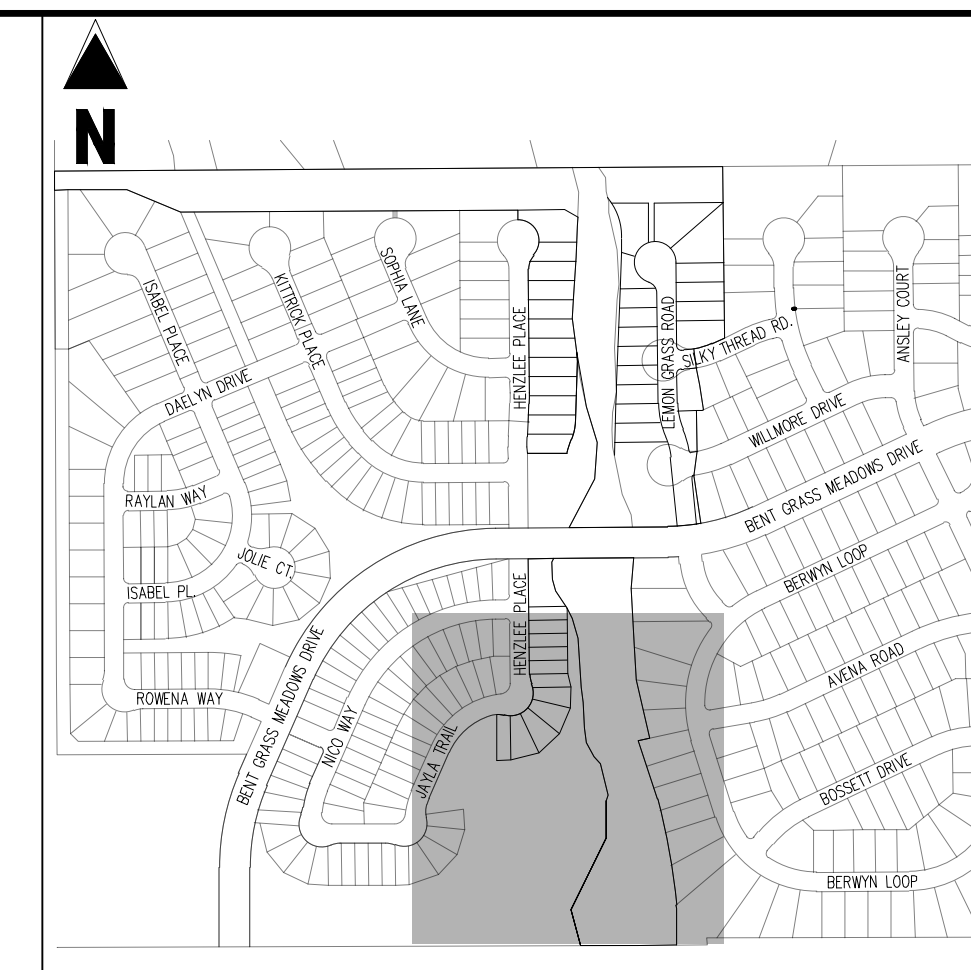
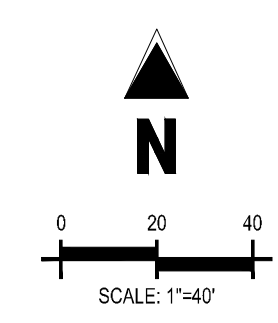
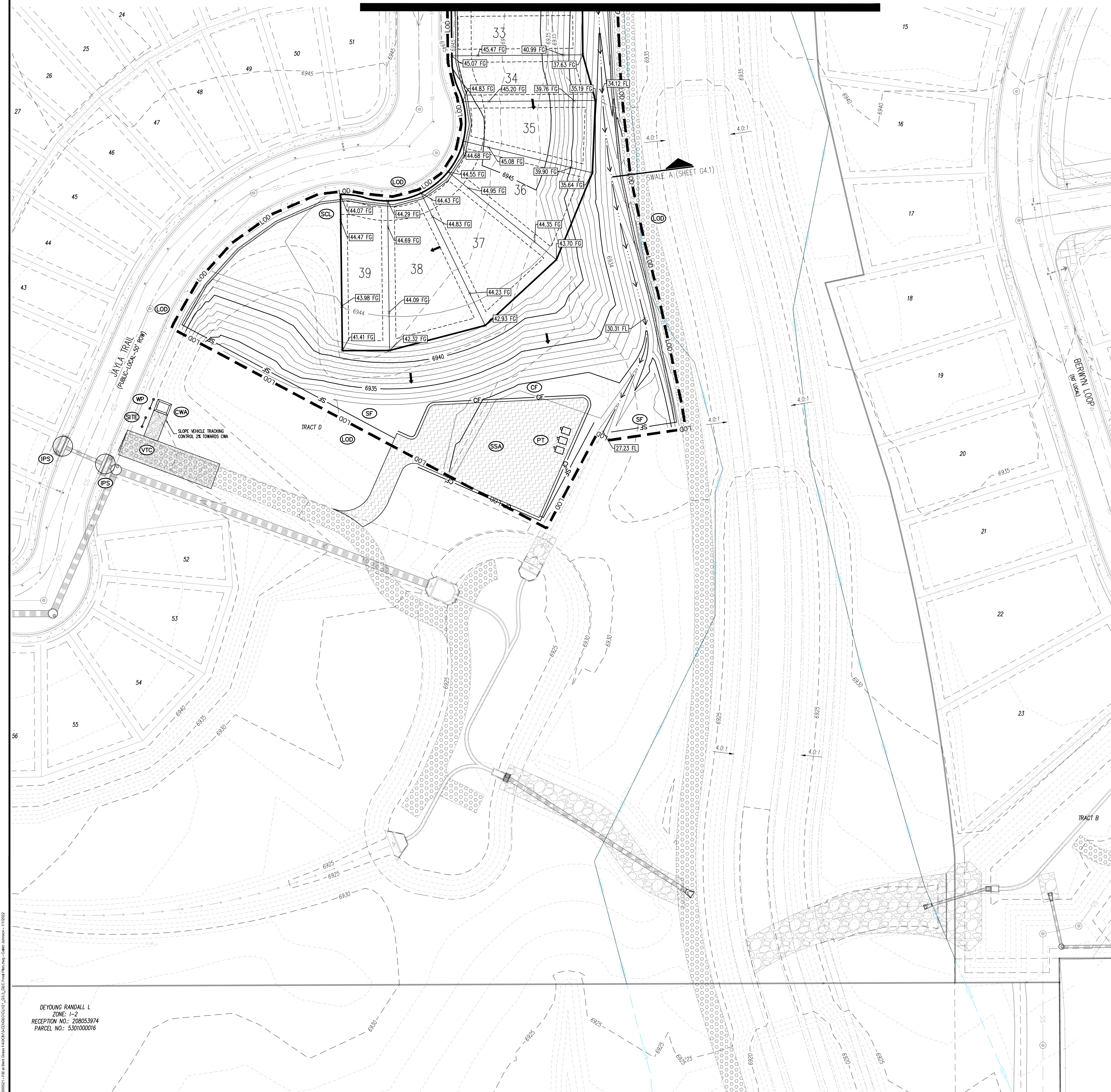
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- WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.



DEYOUNG RANDALL L  
ZONE: 1-2  
RECEPTION NO.: 208063874  
PARCEL NO.: 530100016







EROSION CONTROL LEGEND

- Legend items: LOD (Limits of Disturbance/Construction), SF (Silt Fence), CF (Construction Fence), IPS (Sump Inlet Protection), IPO (On-Grade Inlet Protection), RS (Rock Socks), VTC (Vehicle Tracking Control), CWA (Concrete Washout Area), SSA (Stabilized Staging Area), SC (Proposed Sawcut Line), PT (Portable Toilet), SP (Stockpile), CD (Check Dam), RR (Riprap Outfall Pads), SITE (Site Contacts and Permits), WP (Washout Posting), SBB (Straw Bale Barrier), SB (Sediment Basin), and SCL (Sediment Control Log).

NOTES

- Notes 1-10 detailing construction requirements for elevations, utility protection, floodplains, erosion control updates, riprap specifications, and temporary storm drains.

Table with 2 columns: PHASE and DESCRIPTION. Rows include INITIAL (site posting, silt fence), INTERM (staging area, washout area), and FINAL (curb/gutter, pavement).

LEGEND

- Legend items: Existing property line, Proposed project boundary, Proposed right of way line, Existing lot line, Proposed lot line, Existing easement, Proposed easement, Existing subdivision buffer, Existing major contour, Existing minor contour, Proposed major contour, Proposed minor contour, Existing storm drain pipe, Proposed storm drain pipe, Existing water line, Proposed water line, Existing sanitary sewer line, Proposed sanitary sewer line, Existing drainage feature outline, Proposed drainage feature outline, Existing swale with flow direction, Proposed swale with flow direction, 100-year FEMA floodplain, 100-year floodplain 50-ft buffer, Proposed 1" to 2" crushed rock, Proposed rip rap, Existing concrete paving, Existing CDOT Class 6 Gravel, Existing 1" to 2" crushed rock, Existing rip rap, Existing grooved boulders, Proposed lot #, Existing lot # (Bent Grass Filing No. 2), Proposed ADA ramp, Spot elevation - High Point, Spot elevation - Low Point, Spot elevation - Finish Grade, Existing slope (percent), Existing slope (rise:run), Proposed slope (percent), Proposed slope (rise:run), and Flow Arrow.

BASIS OF BEARINGS

All bearings are grid bearings of the Colorado State Plane Coordinate System, Central Zone, North American Datum 1983. The bearing of the line between the southwest corner of section 1, T13S, R65W and the west quarter corner section 1, T13S, R65W is N001°46'W and monumented as shown.

BENCHMARK

The southwest corner of Lot 1 Woodmen Hills Filing No. 4, monumented by a yellow plastic surveyors cap on a No. 4 Rebar L# 24954 Elevation = 6947.67

CAUTION - NOTICE TO CONTRACTOR

- 1. All utility locations shown are based on maps provided by the appropriate utility company and field surface evidence at the time of survey and is to be considered an approximate location only. It is the contractor's responsibility to field verify the location of all utilities, public or private, whether shown on the plans or not, prior to construction. Report any discrepancies to the engineer prior to construction.
2. Where a proposed utility crosses an existing utility, it is the contractor's responsibility to field verify the horizontal and vertical location of such existing utility, either through pot-holing or alternative method. Report information to the engineer prior to construction.



Galloway logo and contact information: 1155 Kelly Johnson Blvd., Suite 305, Colorado Springs, CO 80920, 719.900.7220, GallowayUS.com

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CHALLENGER HOMES logo

CONSTRUCTION DOCUMENTS
FALCON MEADOWS AT BENT GRASS FILING NO. 4
FOR
CHALLENGER COMMUNITIES, LLC
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

Table with 4 columns: #, Date, Issue / Description, Init. (Revision table)

Project No: CLH000021
Drawn By: CMWJ
Checked By: RGD
Date: 07/01/2022

GRADING & EROSION CONTROL FINAL PLAN

G3.3 Sheet 13 of 20

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FALCON MEADOWS AT BENT GRASS FILING NO. 4  
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CHALLENGER COMMUNITIES, LLC  
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD  
FALCON, CO 80831 - EL PASO COUNTY

| # | Date | Issue / Description | Init. |
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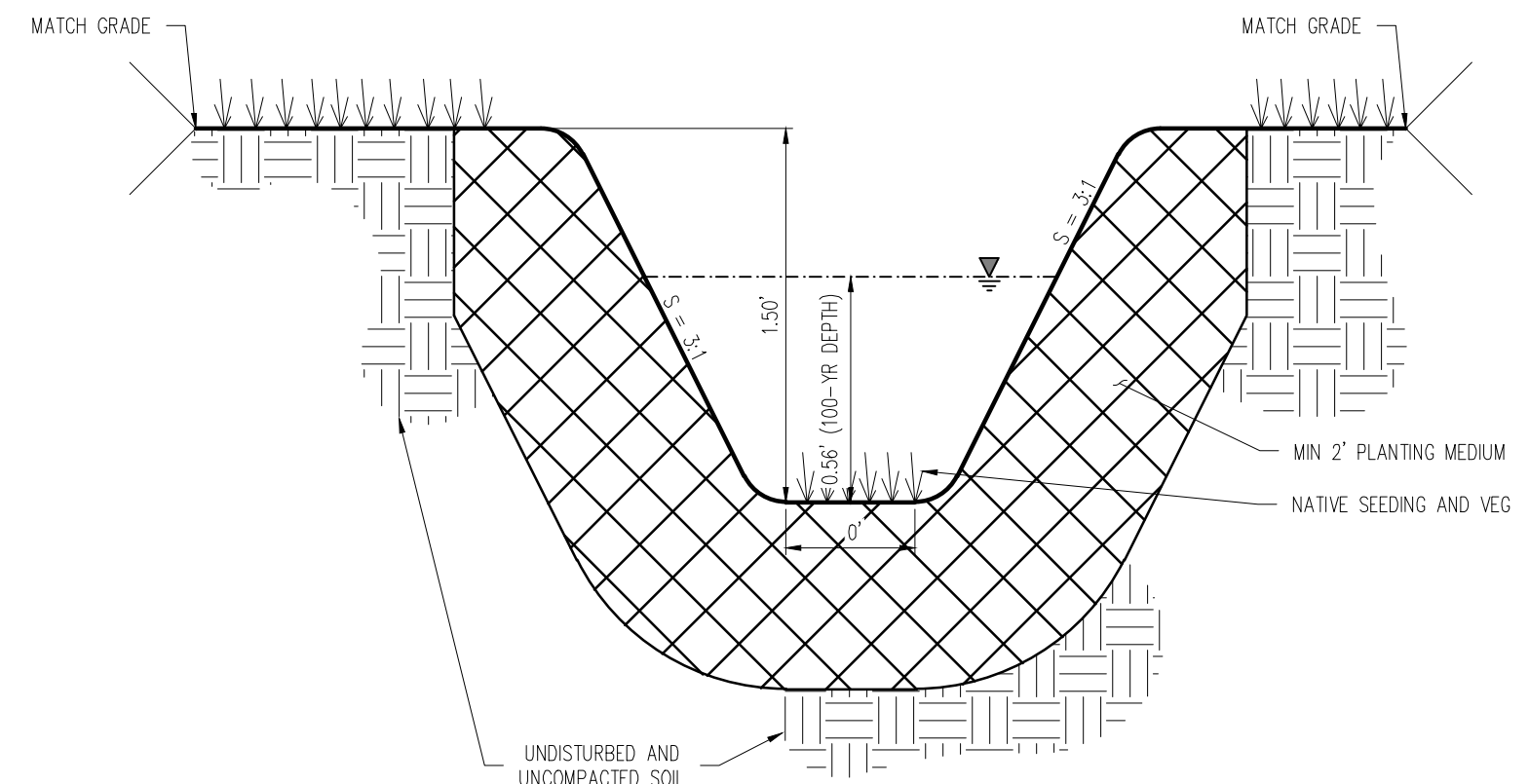
Project No: CLH000021  
Drawn By: CMWJ  
Checked By: RGD  
Date: 07/01/2022

SWALE CROSS SECTIONS

REVISED AS REQUESTED

Add details for berm width and slopes where needed

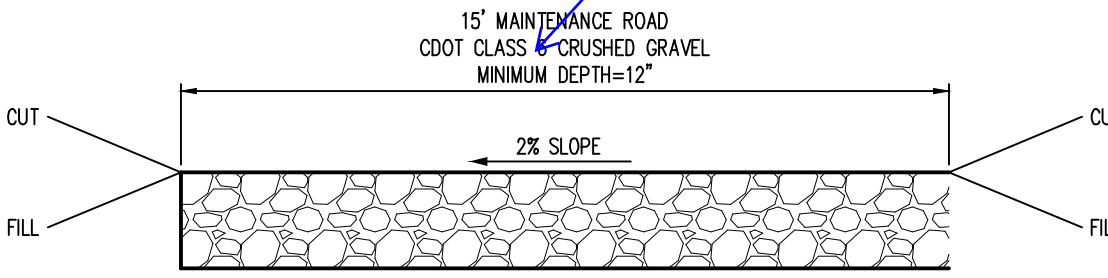
VELOCITY = 4.25 FT/S  
LONGITUDINAL SLOPE = 2.00%  
Q100 = 4.00 CFS



DETAIL - SWALE A  
NOT TO SCALE

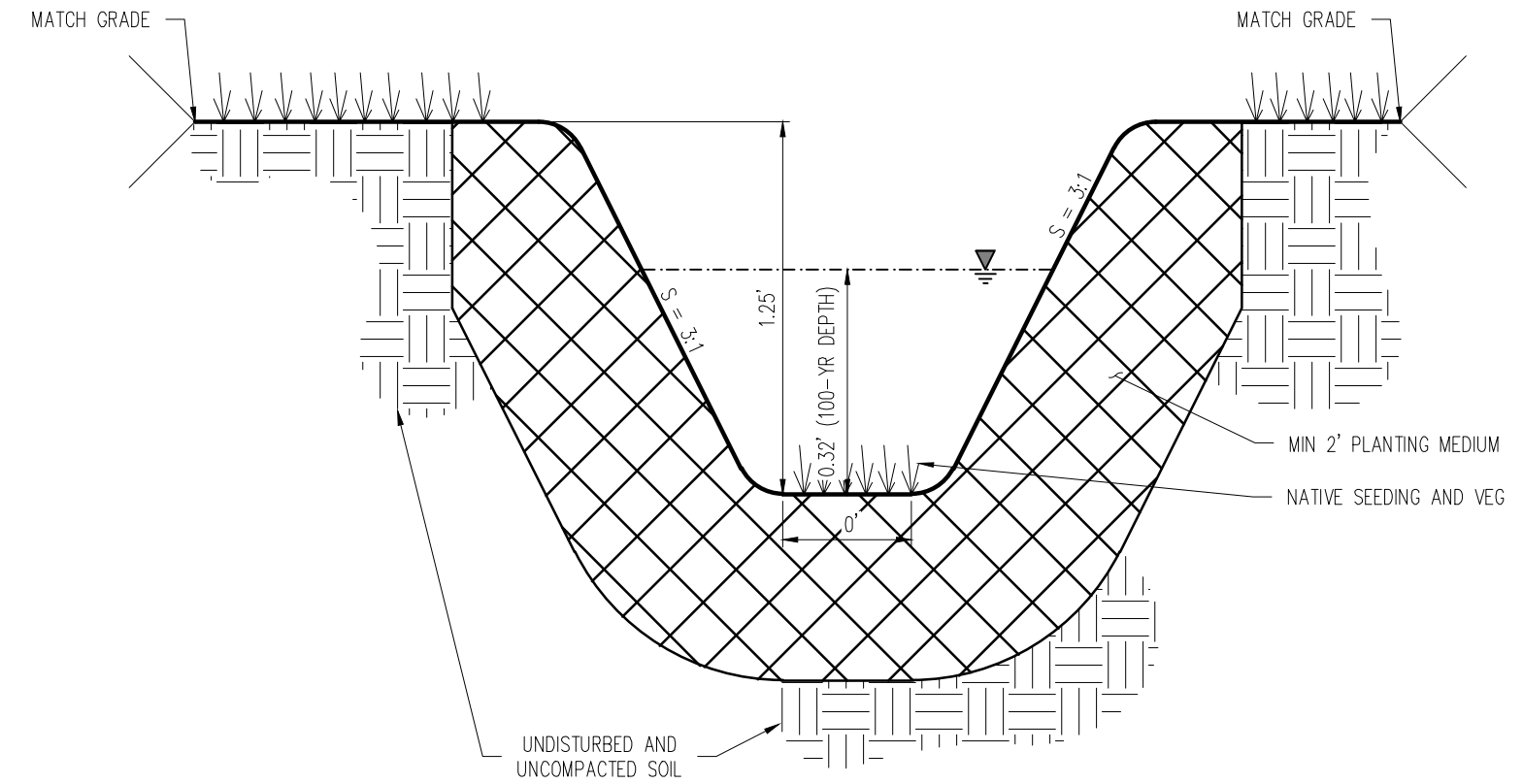
REVISED AS REQUESTED

This should be gravel per ECM Table D-7



DETAIL - MAINTENANCE ROAD/TRAIL  
NOT TO SCALE

VELOCITY = 3.67 FT/S  
LONGITUDINAL SLOPE = 2.00%  
Q100 = 2.30 CFS

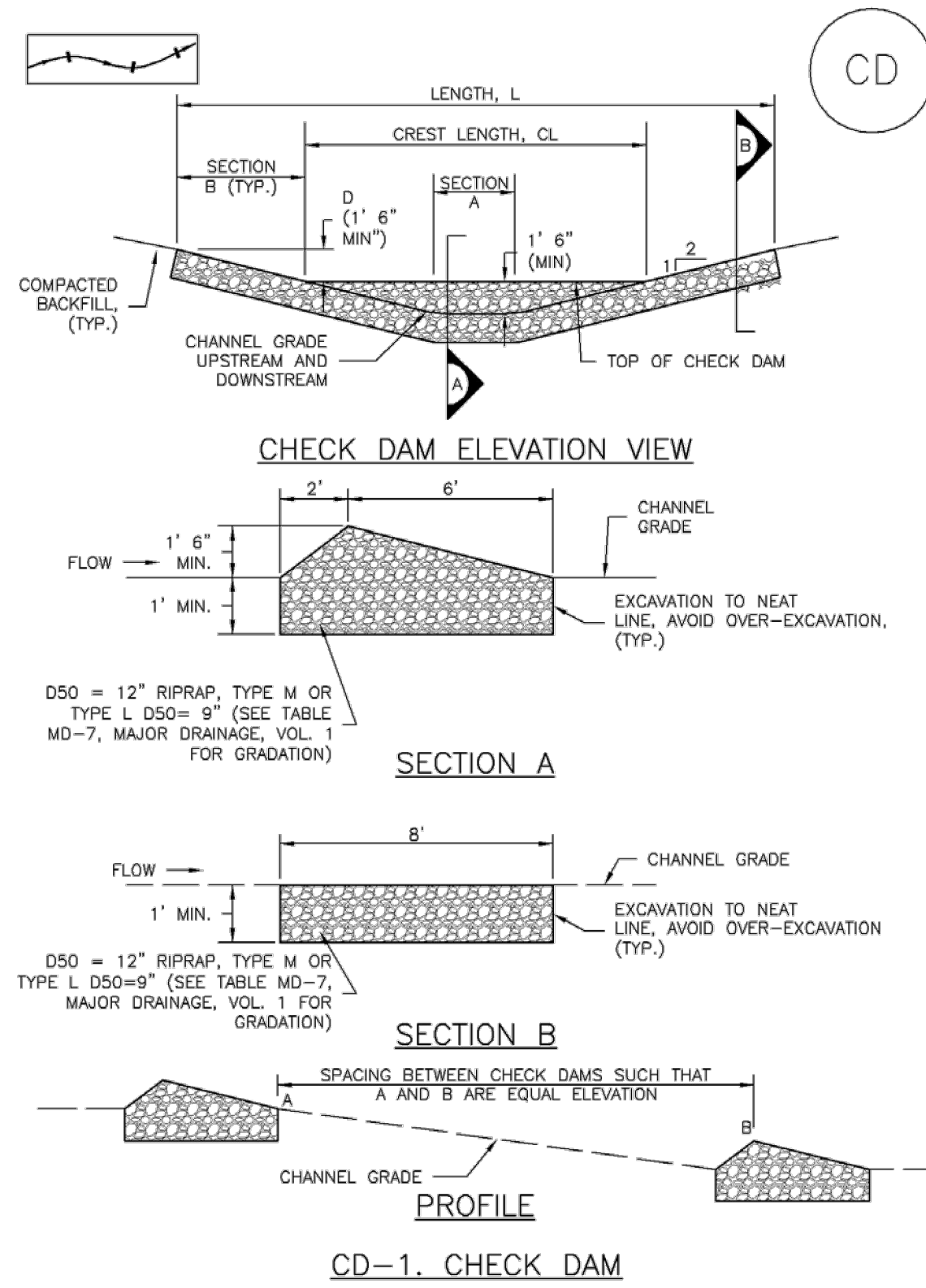


DETAIL - SWALE C  
NOT TO SCALE

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**Check Dams (CD)**

EC-12



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

EC-12

**Check Dams (CD)****CHECK DAM INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF CHECK DAMS.
  - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
  - LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).
- CHECK DAMS INDICATED ON INITIAL SWMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.
- RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (D50 12") OR TYPE L (D50 9").
- RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.
- THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

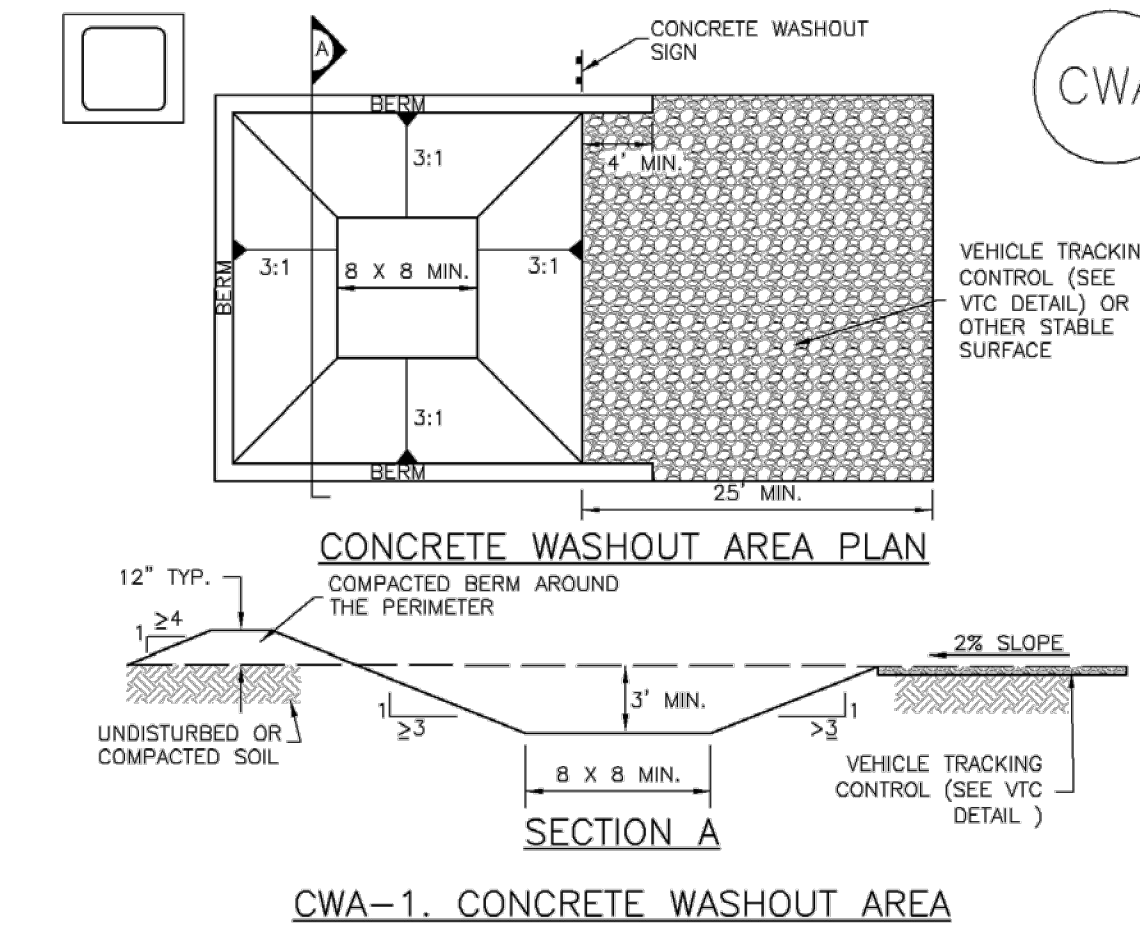
**CHECK DAM MAINTENANCE NOTES**

- 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.
  - SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN  $\frac{1}{2}$  OF THE HEIGHT OF THE CREST.
  - CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
  - WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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**Concrete Washout Area (CWA)**

MM-1

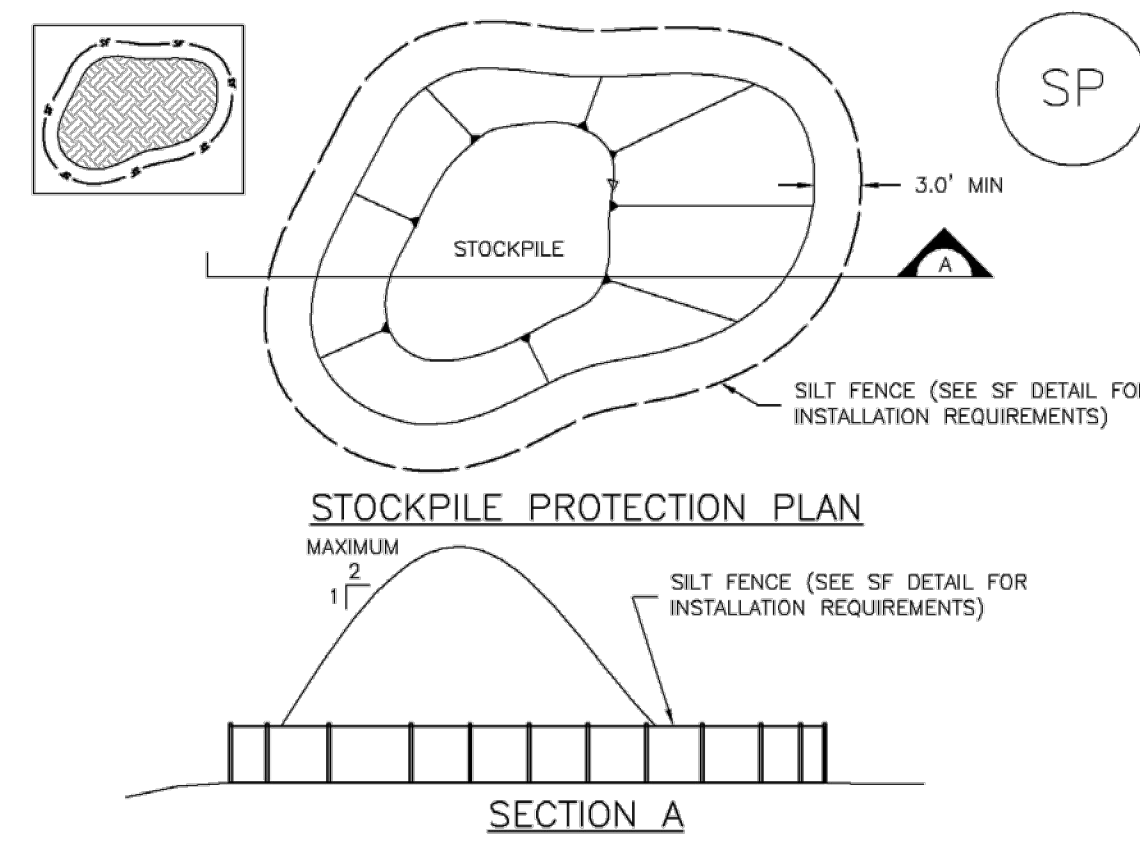
**CWA INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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**Stockpile Management (SP)**

MM-2

**STOCKPILE PROTECTION INSTALLATION NOTES**

- 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 DOWNSTREAM CONTROLS INCLUDING PERIMETER CONTROL ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

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MM-2

**Stockpile Management (SM)****STOCKPILE PROTECTION 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.

**STOCKPILE PROTECTION MAINTENANCE NOTES**

- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
  - STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.
- (DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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MM-1

**Concrete Washout Area (CWA)****CWA 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.
  - 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'.
  - CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
  - THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
  - 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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FALCON MEADOWS AT BENT GRASS FILING NO. 4  
FOR  
CHALLENGER COMMUNITIES, LLCBENT GRASS MEADOWS DRIVE & MERIDIAN ROAD  
FALCON, CO 80831 - EL PASO COUNTY

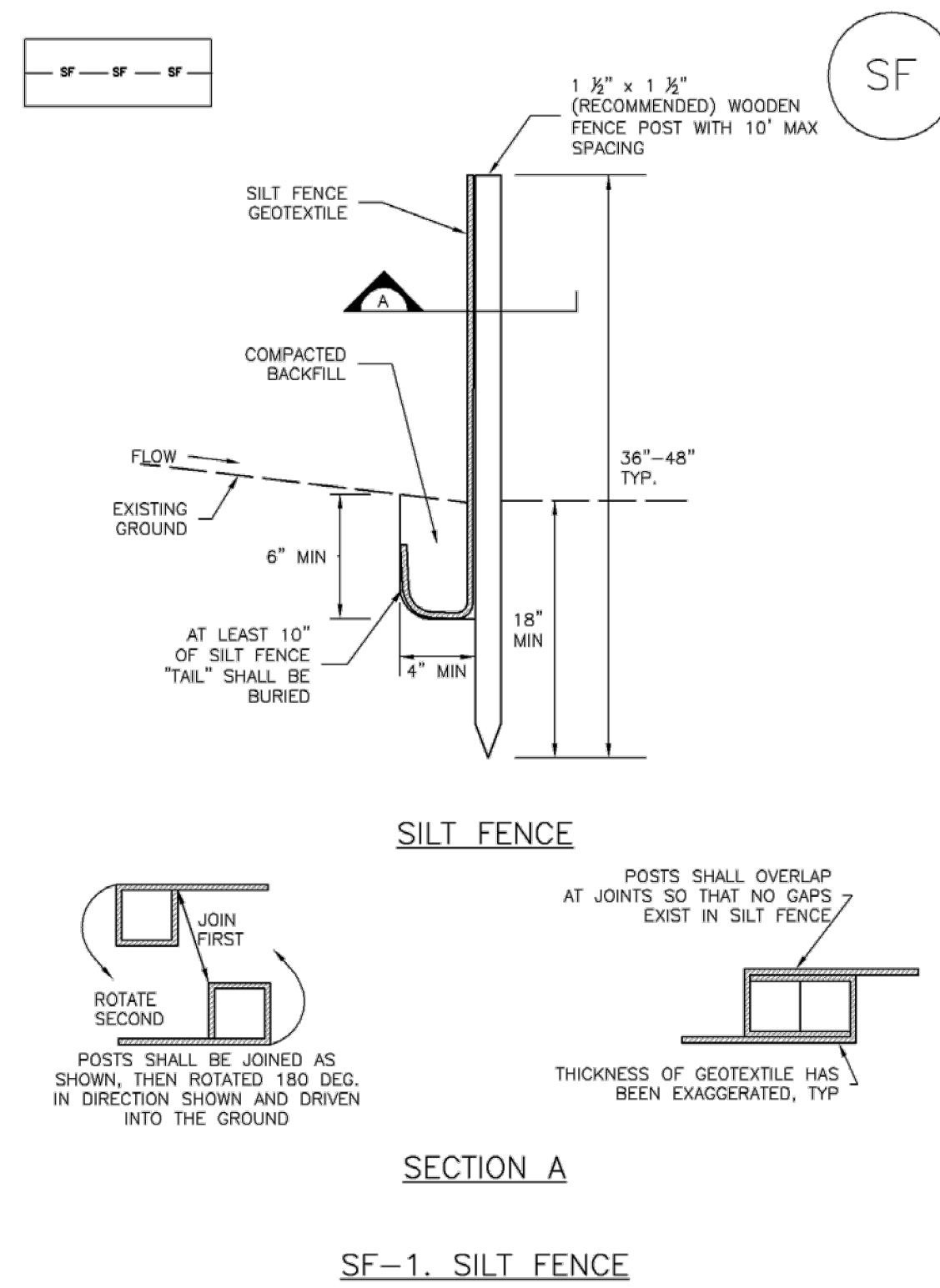
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Project No: CLH000021  
Drawn By: CMWJ  
Checked By: RGD  
Date: 07/01/2022

SWALE CROSS SECTIONS

**Silt Fence (SF)**

SC-1



**Silt Fence (SF)**

SC-1

**SILT FENCE INSTALLATION NOTES**

- 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.
- 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.
- COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTATION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- 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.
- 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.
- 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').
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

**SILT FENCE MAINTENANCE NOTES**

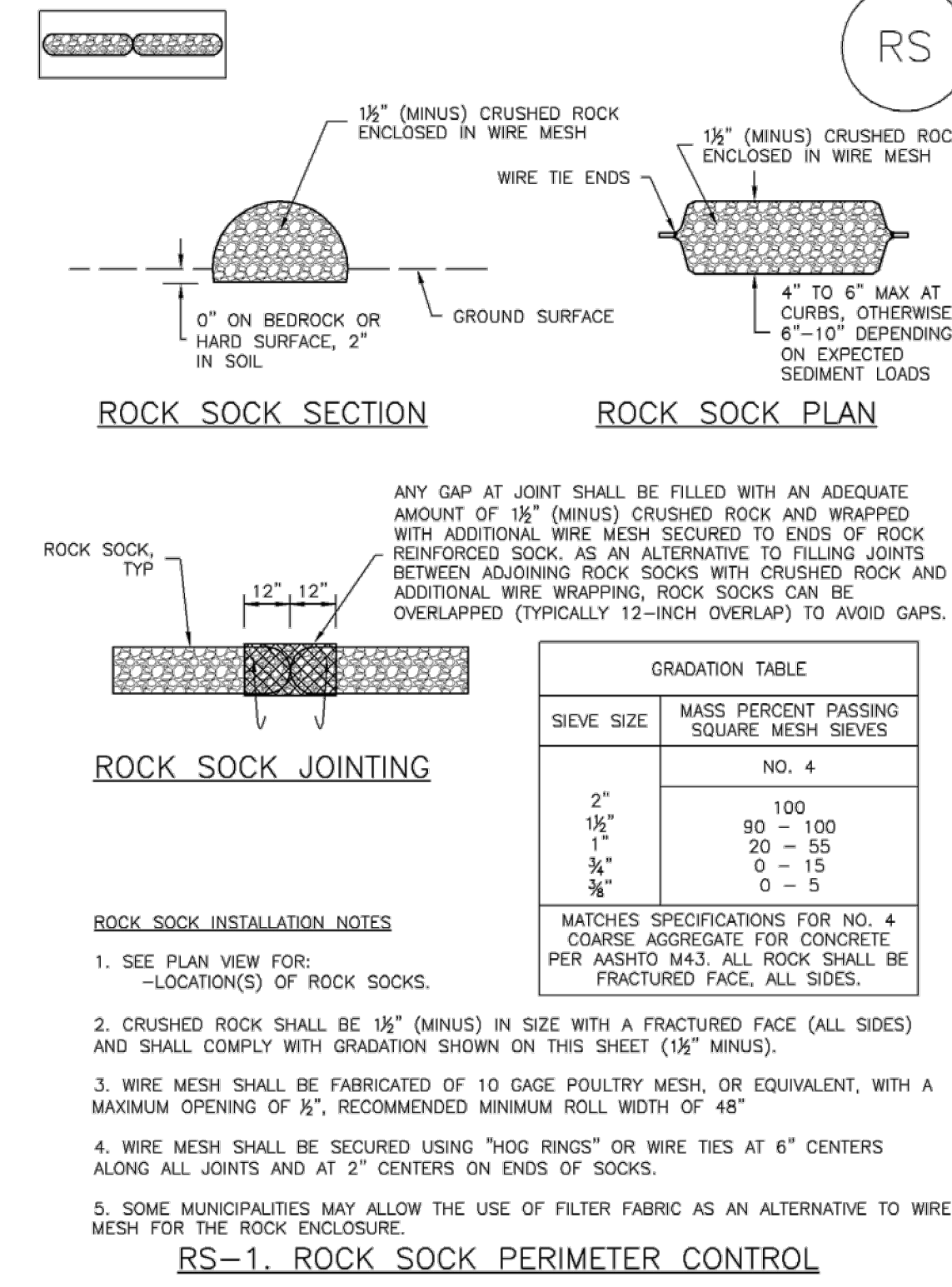
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS 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.
- 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".
- REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
- 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.
- WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

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

**Rock Sock (RS)**

SC-5



**Construction Fence (CF)**

SM-3

**CONSTRUCTION FENCE 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.
- CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

**Rock Sock (RS)**

SC-5

**ROCK SOCK 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.
- ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
- SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.
- ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

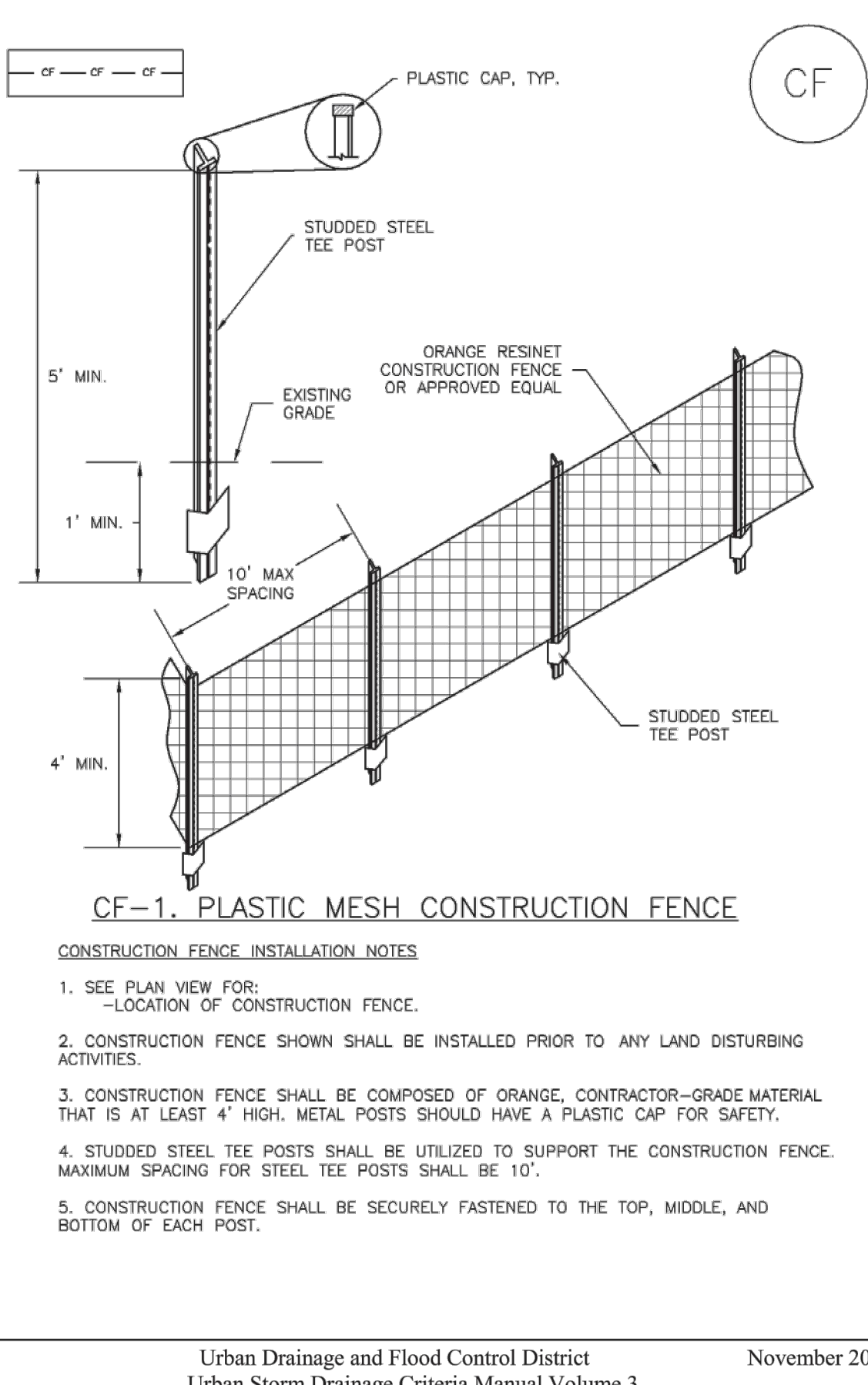
(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

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

**Construction Fence (CF)**

SM-3



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

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

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

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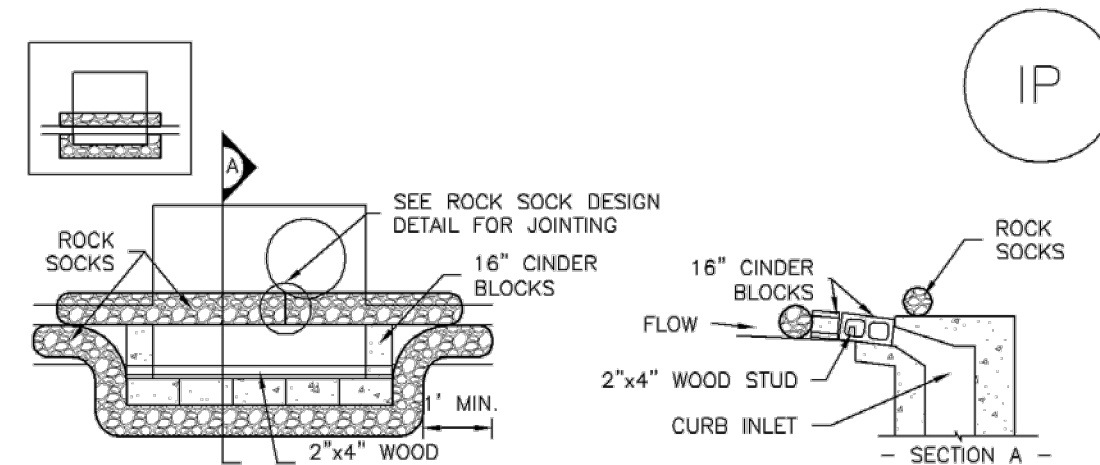
Project No: CLH000021  
Drawn By: CMWJ  
Checked By: RGD  
Date: 07/01/2022

GEC DETAILS



SC-6

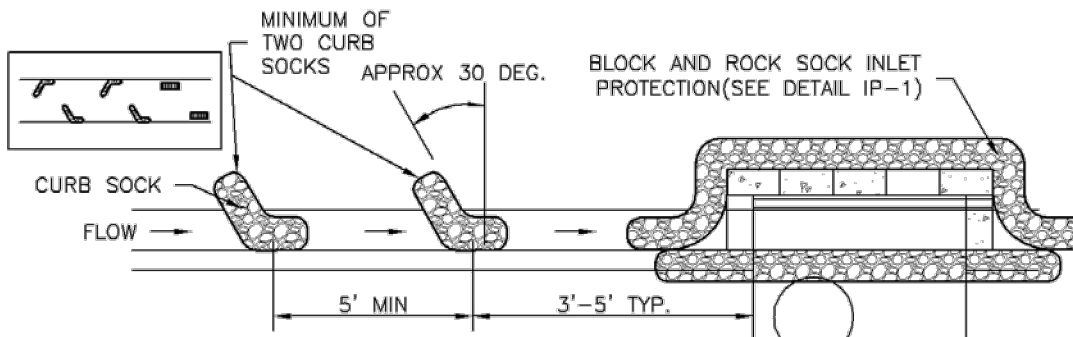
Inlet Protection (IP)



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.

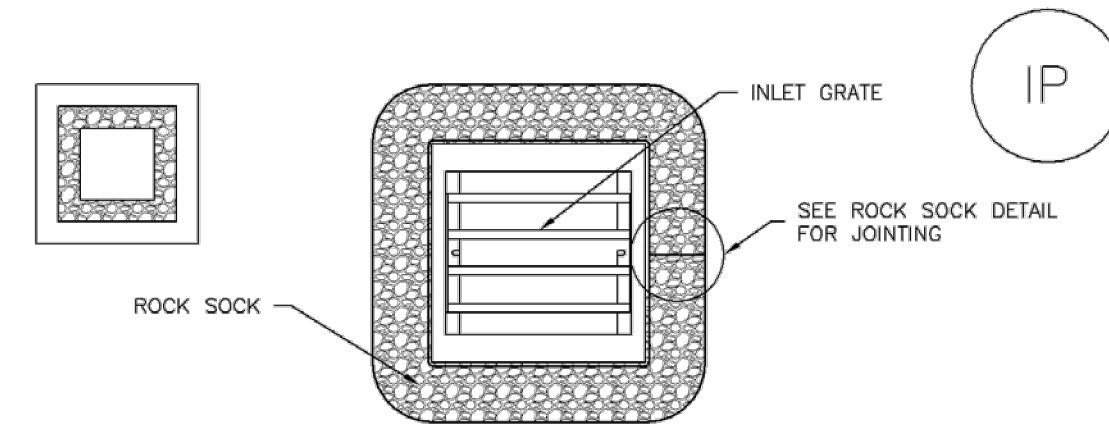
IP-4

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August 2013

Inlet Protection (IP)

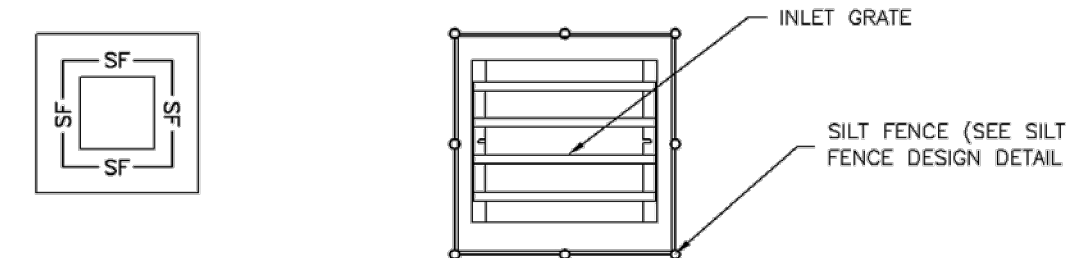
SC-6



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

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



IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

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

August 2013

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

IP-5

SC-6

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

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF 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.

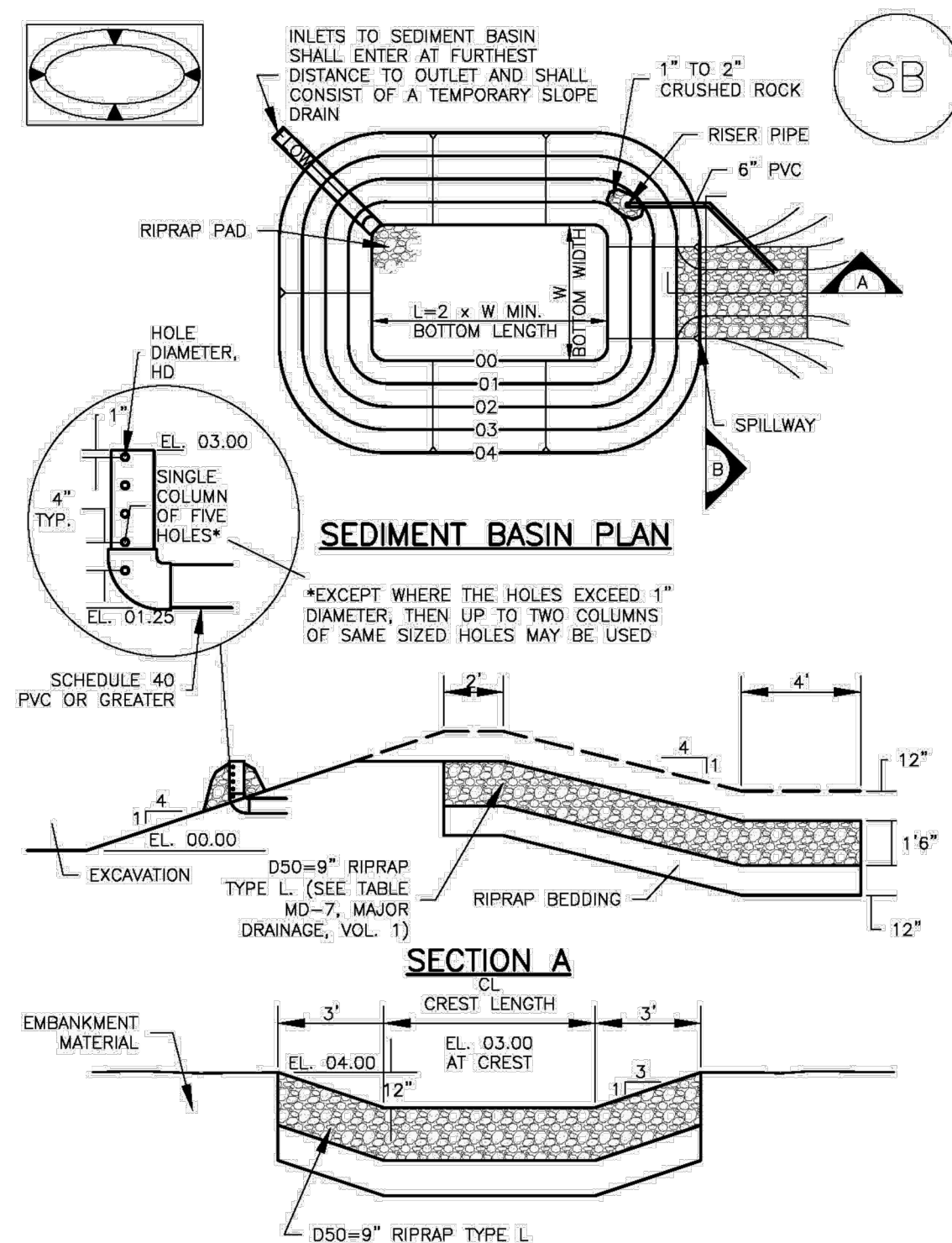
IP-8

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

August 2013

Sediment Basin (SB)

SC-7



August 2013

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

SB-5

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Sediment Basin (SB)

Table SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN. Columns: Upstream Drainage Area (ac), Basin Bottom Width (ft), Spillway Crest Length (ft), Hole Diameter (in). Rows 1-15.

SEDIMENT BASIN INSTALLATION NOTES

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

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SC-7

SEDIMENT BASIN MAINTENANCE NOTES

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

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

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

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SB-7

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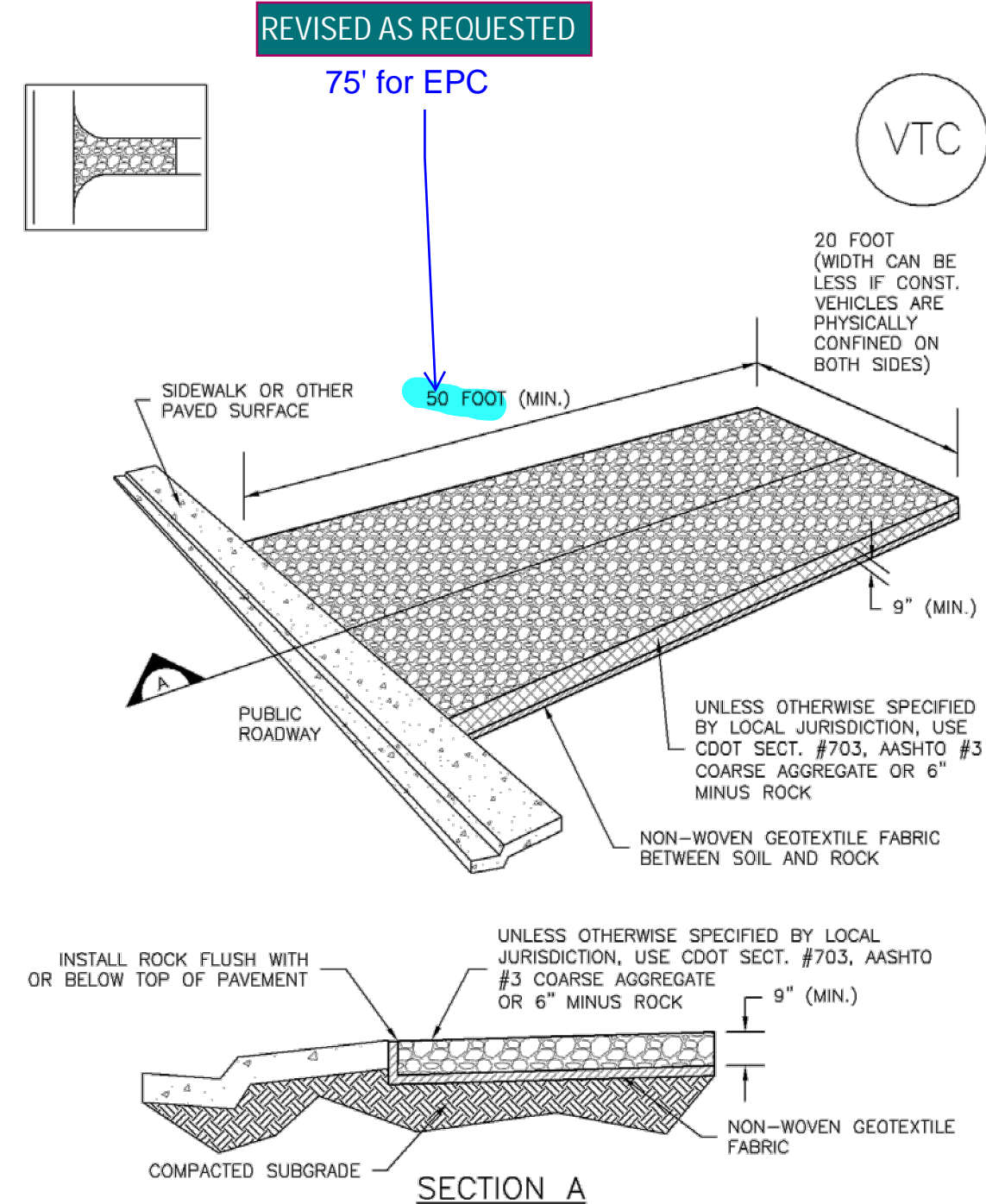
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Table with 4 columns: #, Date, Issue / Description, Init. It contains a list of revision entries.

Project No: CLH000021
Drawn By: CMWJ
Checked By: RGD
Date: 07/01/2022

GEC DETAILS

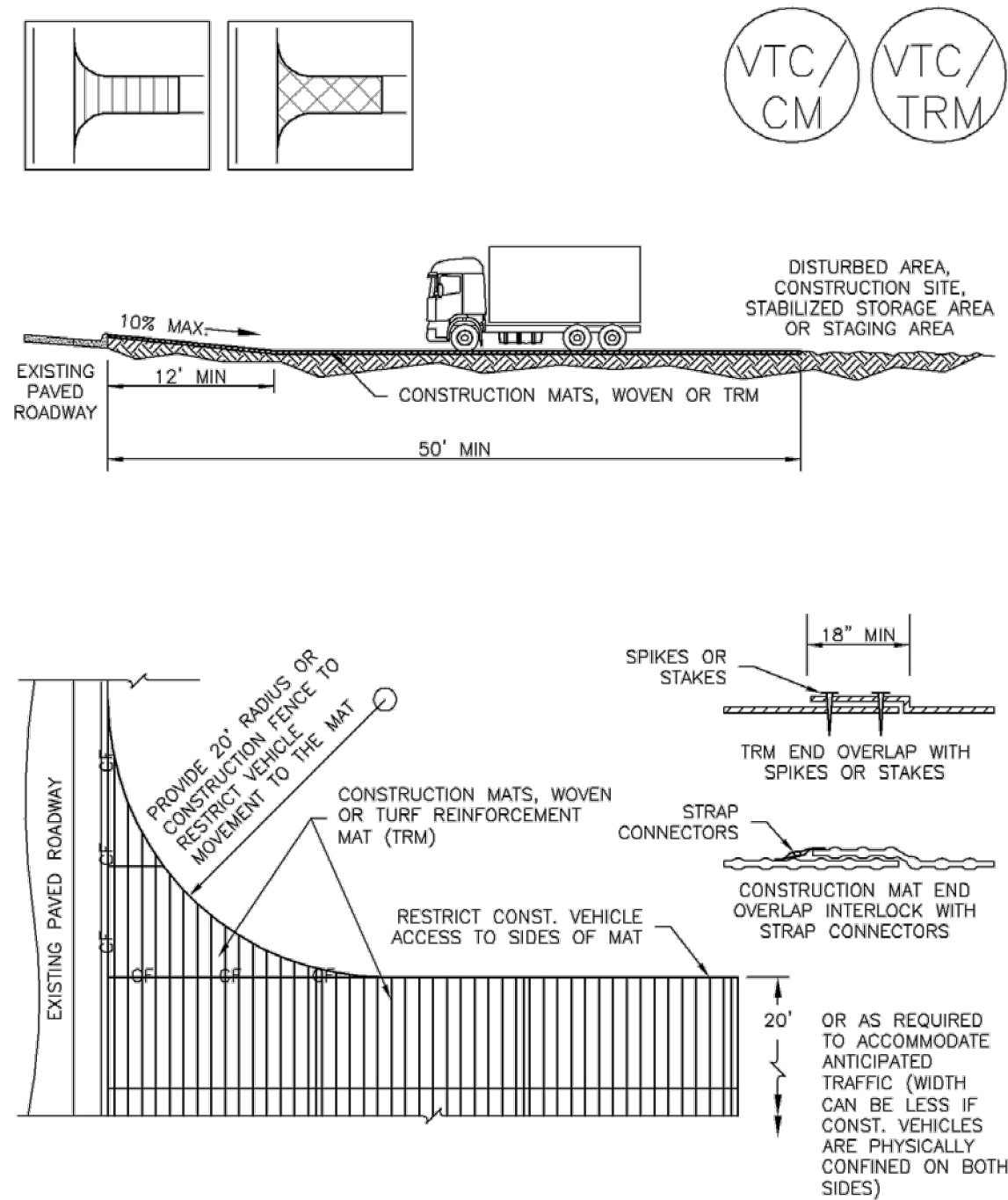
**Vehicle Tracking Control (VTC) SM-4**



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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

**Vehicle Tracking Control (VTC) SM-4**



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

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**SM-4 Vehicle Tracking Control (VTC)**

**STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES**

- 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).
- 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.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

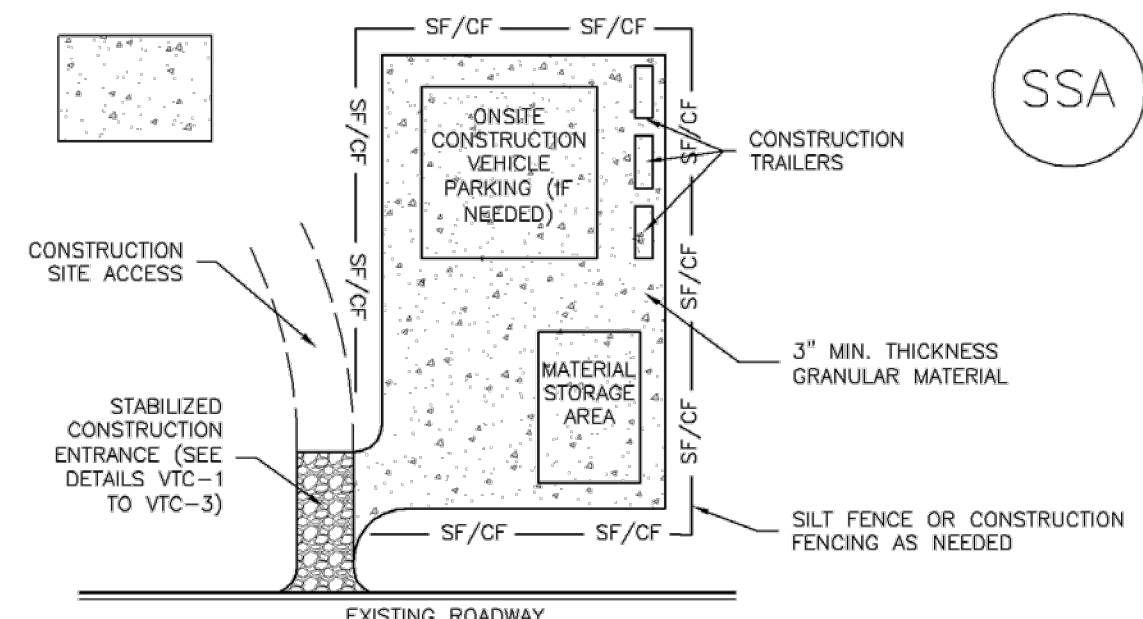
**STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES**

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

VTC-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

**Stabilized Staging Area (SSA) SM-6**



SSA-1. STABILIZED STAGING AREA

**STABILIZED STAGING AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR
  - LOCATION OF STAGING AREA(S).
  - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

**STABILIZED STAGING AREA 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.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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**SM-6 Stabilized Staging Area (SSA)**

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

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

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.  
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

**T-2 Grass Swale**

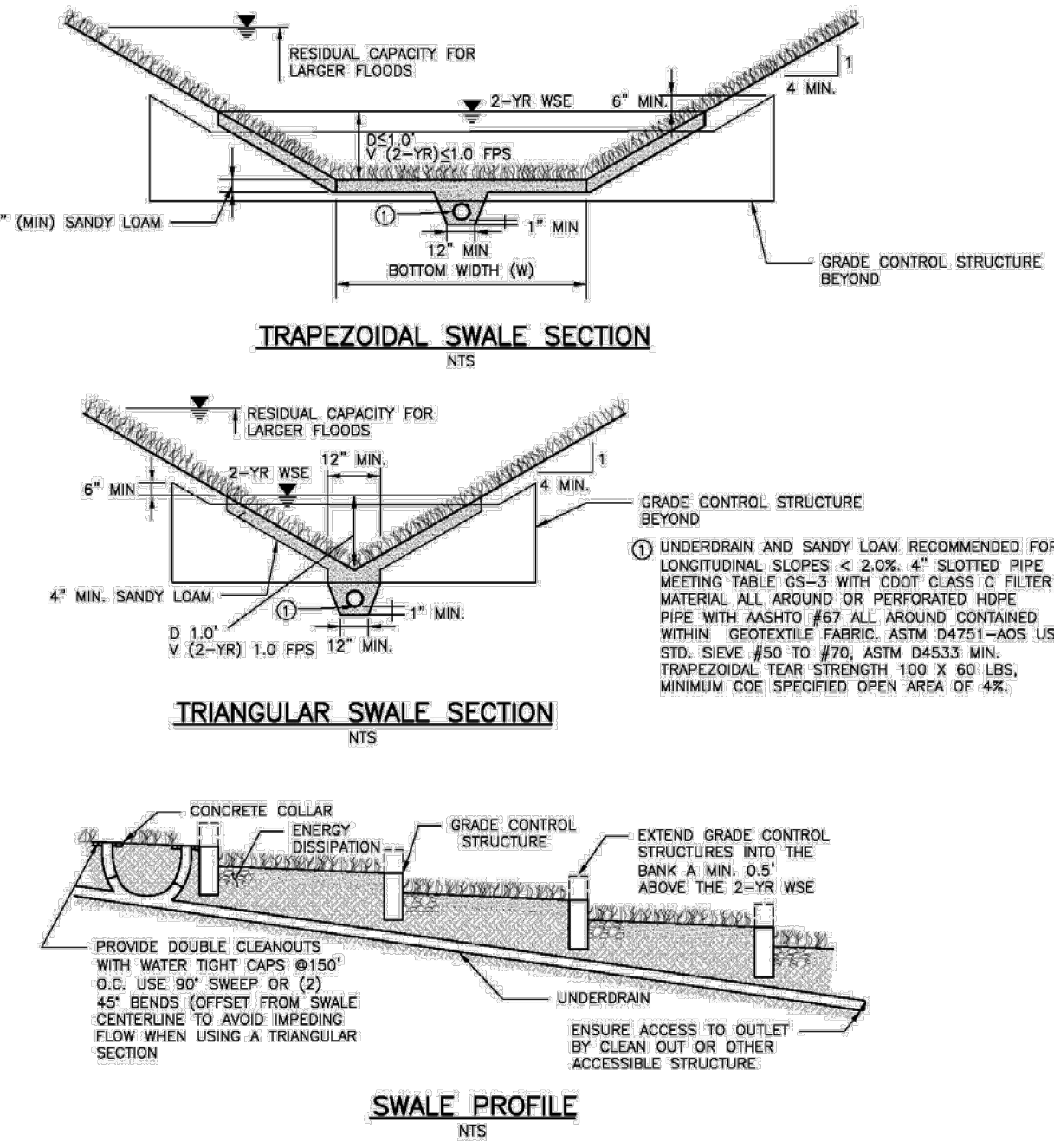


Figure GS-1. Grass Swale Profile and Sections

**Design Example**

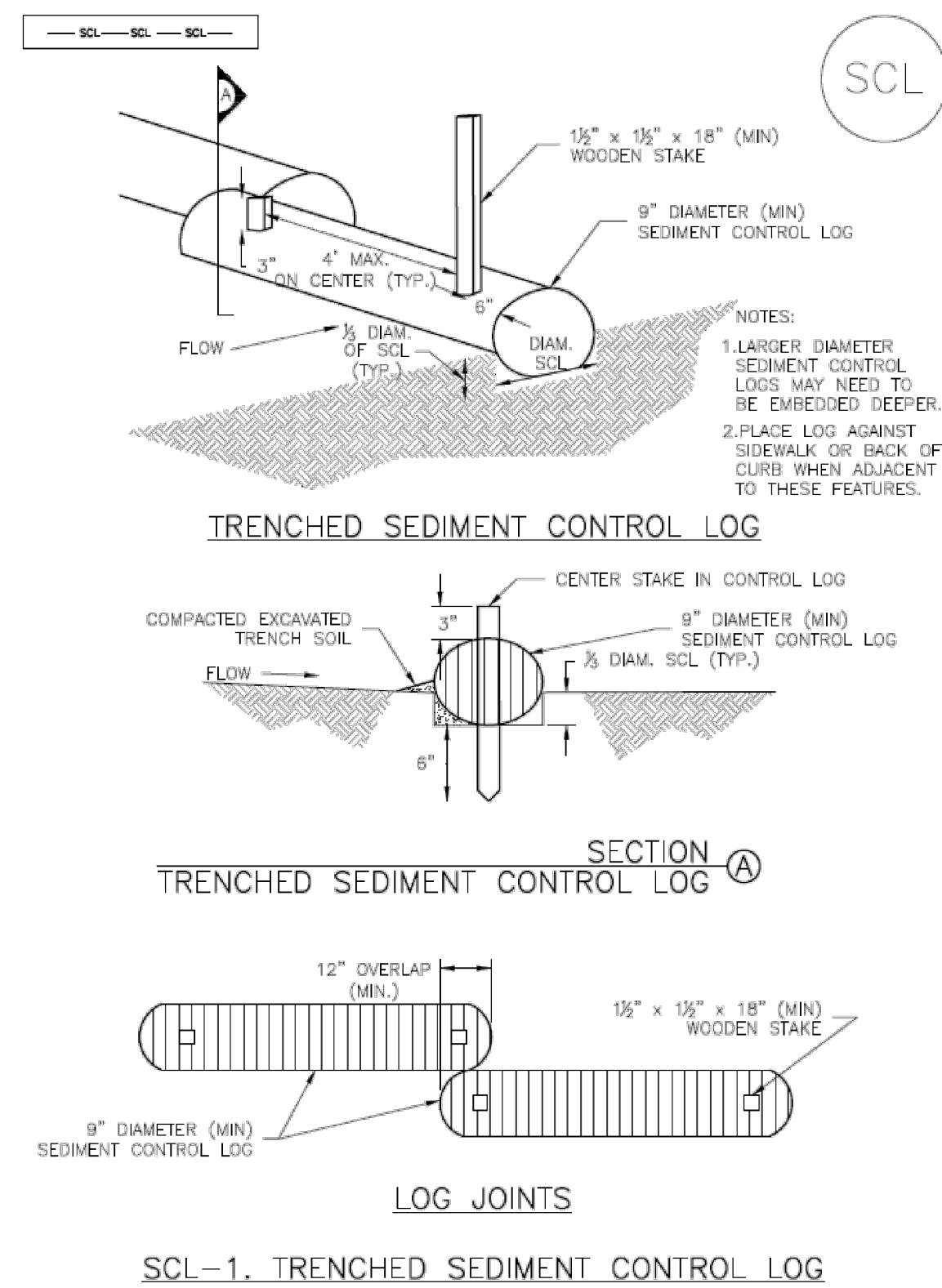
The UD-BMP workbook, designed as a tool for both designer and reviewing agency is available at [www.udfcd.org](http://www.udfcd.org). This section provides a completed design form from this workbook as an example.

GS-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

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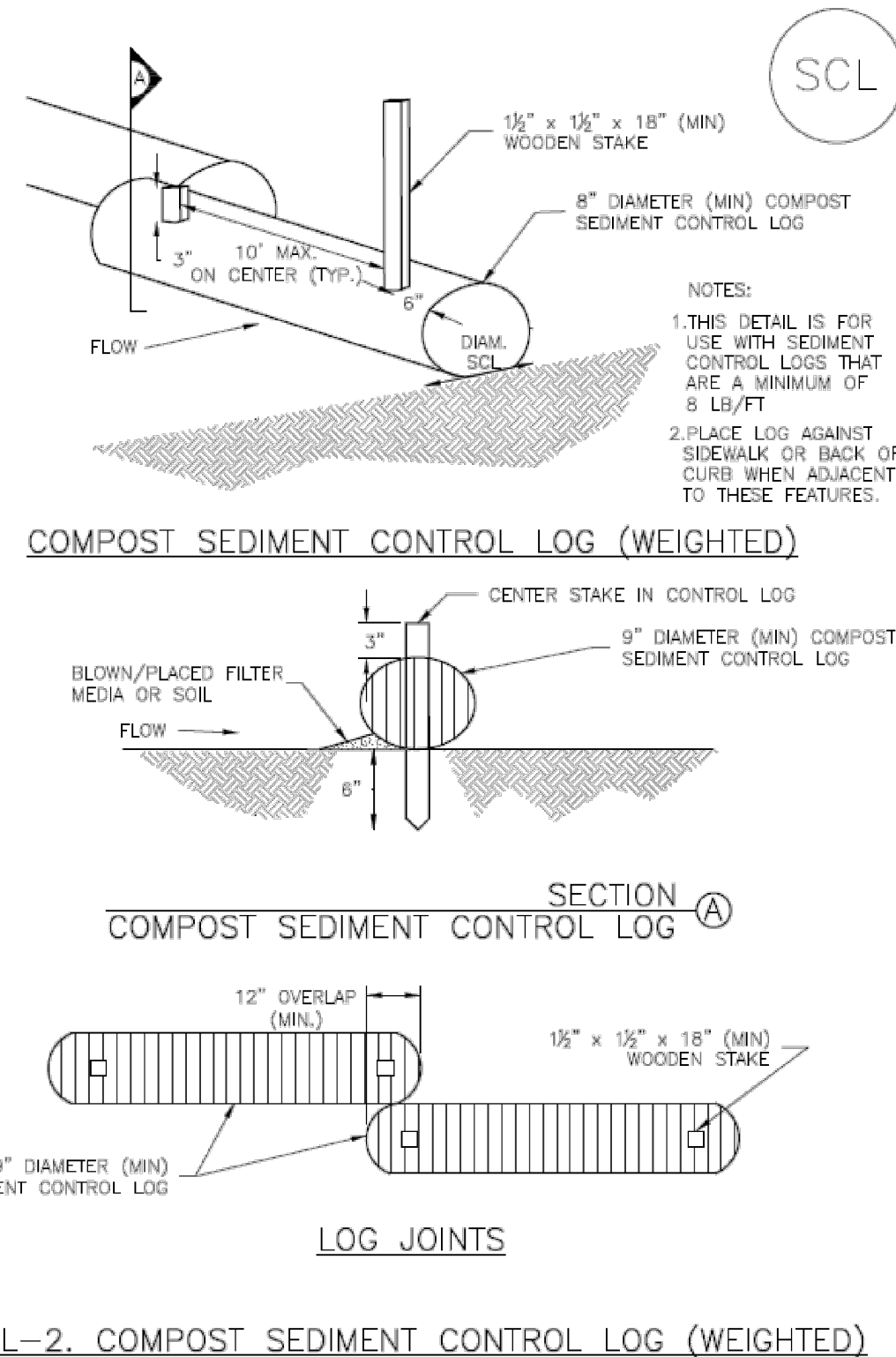
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Date: 07/01/2022

**Sediment Control Log (SCL) SC-2**



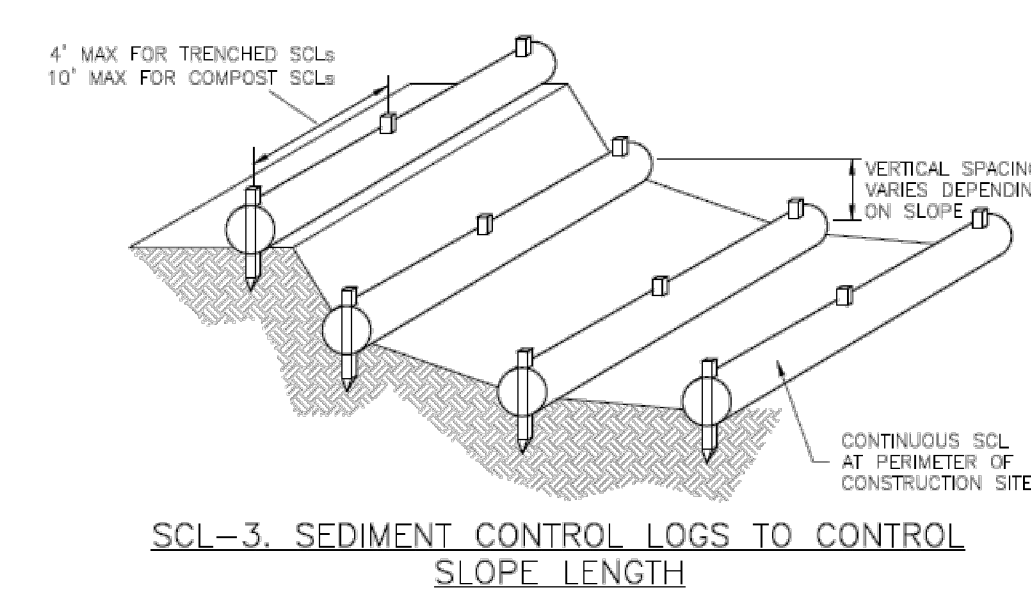
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**SC-2 Sediment Control Log (SCL)**



SCL-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

**Sediment Control Log (SCL) SC-2**



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**SC-2 Sediment Control Log (SCL)**

**SEDIMENT CONTROL LOG INSTALLATION NOTES**

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
- IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/2 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
- THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
- FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

**SEDIMENT CONTROL LOG MAINTENANCE NOTES**

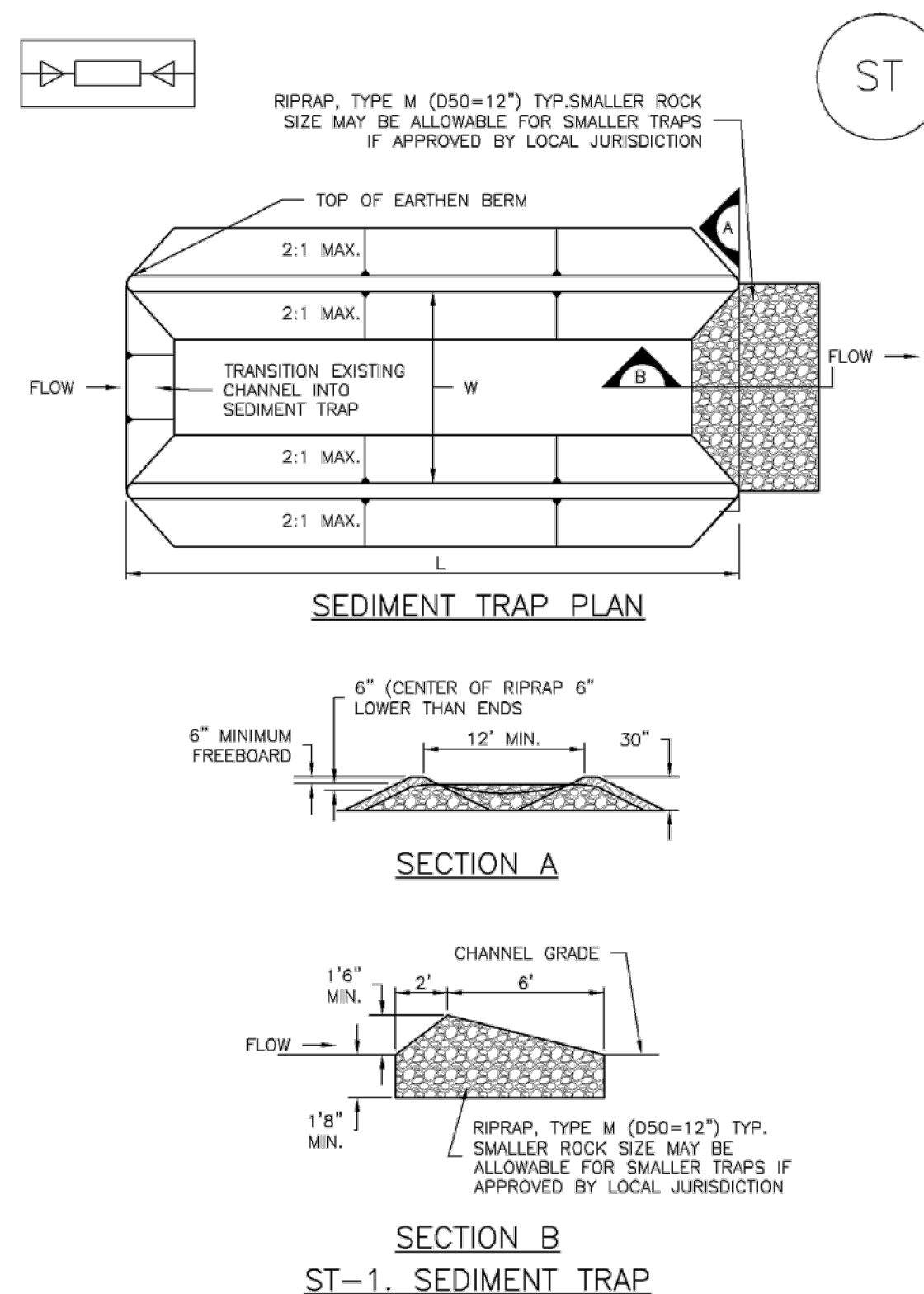
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS 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.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

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

SCL-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

**SC-8 Sediment Trap (ST)**



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

**Sediment Trap (ST) SC-8**

**SEDIMENT TRAP INSTALLATION NOTES**

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

**SEDIMENT TRAP MAINTENANCE NOTES**

- 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.
- REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WHEN THE SEDIMENT DEPTH REACHES 1/2 THE HEIGHT OF THE RIPRAP OUTLET.
- SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

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

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

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Drawn By: CMWJ  
Checked By: RGD  
Date: 07/01/2022

**GEC DETAILS**

**Straw Bale Barrier (SBB)**

**SC-3**

STRAW\_BALE\_INSTALLATION\_NOTES

1. SEE PLAN VIEW FOR:  
-LOCATION(S) OF STRAW BALES.
2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
4. WHEN STRAW BALES ARE USED IN SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.
5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"x18"x18".
6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S). ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALE(S) AND COMPACTED.
7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2"x2"x24". WOODEN STAKES SHALL BE DRIVEN 6" INTO THE GROUND.

STRAW\_BALE\_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. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/4 OF THE HEIGHT OF THE STRAW BALE BARRIER.
6. STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

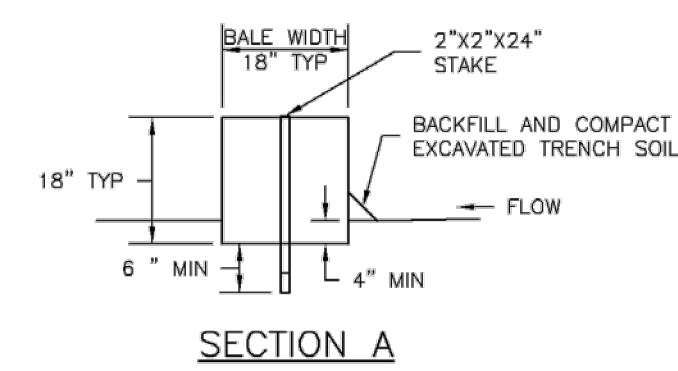
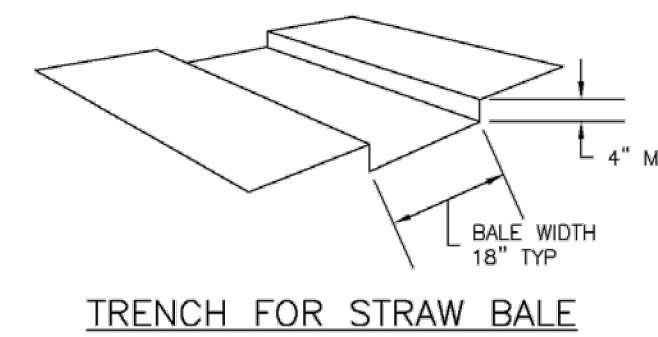
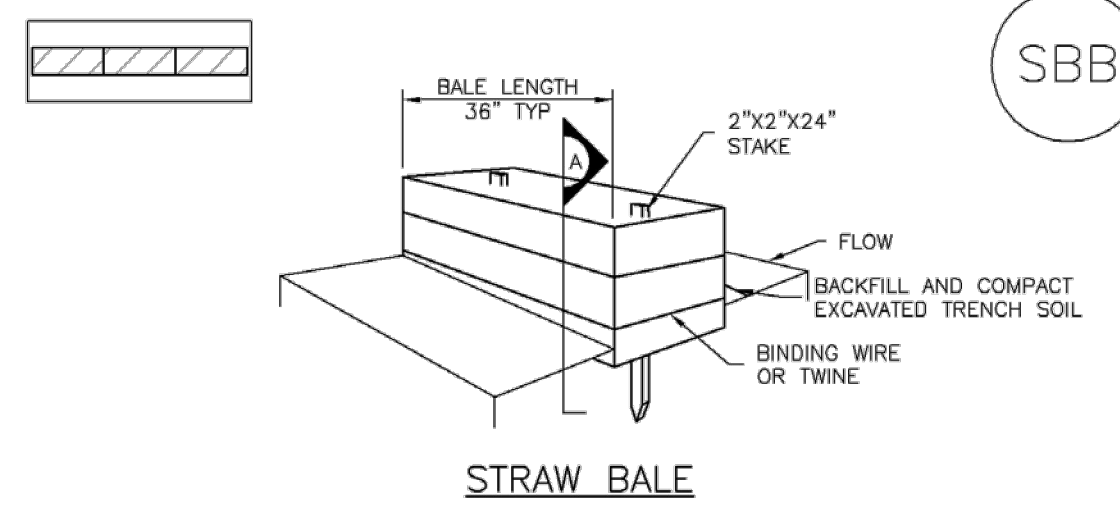
(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

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

**SC-3**

**Straw Bale Barrier (SBB)**



**SBB-1. STRAW BALE**

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

CONSTRUCTION DOCUMENTS  
FALCON MEADOWS AT BENT GRASS FILING NO. 4  
FOR  
CHALLENGER COMMUNITIES, LLC  
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD  
FALCON, CO 80831 - EL PASO COUNTY

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Project No: CLH000021  
Drawn By: CMWJ  
Checked By: RGD  
Date: 07/01/2022

GEC DETAILS

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