STORMWATER MANAGEMENT PLAN (SWMP)

for

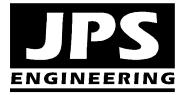
WALDEN PRESERVE 2 - FILING NO. 4

Prepared for:

Walden Holdings I, LLC 1230 Scarsbrook Court Monument, CO 80132

July 12, 2019

Prepared by:



19 E. Willamette Ave. Colorado Springs, CO 80903 (719)-477-9429 www.jpsengr.com

JPS Project No. 040201 PCD File No. SF-18-034

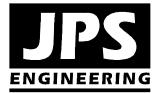
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Sheet C1.1	Site Grading & Erosion Control Plan
Sheet C3	Erosion Control Notes & Details



WALDEN PRESEVE 2 – FILING NO. 4 STORMWATER MANAGEMENT PLAN (SWMP) July, 2019

1. Applicant / Contact Information

Owner/Developer:	Walden Holdings I, LLC
	1230 Scarsbrook Court
	Monument, CO 80132
	Attn: Matt Dunston, (719)-339-2410
	mattdunston@hotmail.com
	<u> </u>

Engineer: JPS Engineering, Inc. 19 E. Willamette Avenue Colorado Springs, CO 80903 Attn: John P. Schwab, P.E. (719)-477-9429 john@jpsengr.com

Contractor: TBD

2. Site Description

- a. The Walden Preserve 2 PUD is a single-family rural residential subdivision development consisting of 116 single-family lots with 1-acre minimum lot sizes on a 209-acre parcel in northern El Paso County, Colorado. Filing No. 4 consists of 23 lots and two open space tracts on 45.3 acres located along the proposed extension of Pinehurst Circle northeast of Walden Way. Site development activities will consist of site grading, utilities, and roadway construction.
- b. Proposed sequence of major activities:
 - Mobilization / implementation of BMP's
 - Clearing and grubbing
 - Grading of proposed roads
 - Site utilities
 - Roadway paving
 - Individual lot grading
- c. Total site area = 45.3 acres; Projected disturbed area = 27.5 acres (approx.)

- d. Historic runoff coefficient, C = 0.35; Developed runoff coefficient, C = 0.40
- e. Existing vegetation on site: native meadow grasses and shrubs (approx. 70% coverage)
- f. Potential pollution sources: vehicle fueling on-site
- g. Non-stormwater components of discharge: none anticipated
- h. Receiving water: West Cherry Creek Drainage Basin; surface drainage from this site will continue to follow historic drainage patterns, draining to the existing tributary drainage channels flowing northwesterly through the property, ultimately reaching West Cherry Creek.
- i. Soil erosion potential and potential impacts upon discharge: On-site soils are comprised of a combination of Tomah-Crowfoot loamy sands, Pring sandy loam, and Elbeth sandy loam, all of which are classified as Hydrologic Soils Group B (moderate erosion hazard).
- 3. Site Map (see Construction Drawings Sheet C1.1)
- 4. BMP's for Stormwater Pollution Prevention (See Sheet C1.1):

Narrative Description of Appropriate Stormwater Controls and Measures

Construction Phasing

Phase 1 – Mobilization, Clearing & Grubbing Operations

Clearing and grubbing will be completed prior to initial grading activities for this site. Perimeter control measures will be installed prior to the start of construction operations, including clearing and grubbing, with the exception of the clearing and grubbing necessary to install perimeter controls. These perimeter controls will include silt fencing (SF) and vehicle tracking control (VTC) pads.

Phase 2 – Earthwork, Road Grading, and Utility Installation

Major earthwork activities will include site grading, backfill and compaction, utility construction, and rough grading for site improvements.

Phase 3 – Site Construction and Final Grading Activities

This phase will include final grading of subdivision development areas. Appropriate temporary BMP's will be maintained until vegetation is re-established throughout the site.

Phase 4 – Stabilization

All disturbed areas within the project will be revegetated. The specific revegetation requirements will include the following:

- Landscape plantings per approved landscape plans
- Native seeding all other disturbed areas

Phase 5 – Removal of Temporary Control Measures

Temporary sediment control measures shall remain in place until vegetation has been adequately established to prevent erosion from storm runoff. Once adequate vegetation has been established, the temporary erosion control measures will be removed and disposed of off-site.

Phasing Summary

Phase	BMP
Clearing and Grubbing necessary for perimeter controls	VTC's
Initiation of perimeter controls	Silt Fence
Remaining clearing and grubbing	
Road grading	Straw Bales
Ditch grading	Seed / ECB
Stabilization	Seeding
Rain Garden	RG
Removal of erosion control measures	

Timing Schedule

The anticipated start and completion time period of the construction activities is from August, 2019 through August, 2020. The estimated schedule for erosion control activities is as follows:

•	Install BMP's:	August, 2019
٠	Site Grading:	August, 2019
٠	Seeding & Mulching:	April, 2020
٠	Stabilization:	August, 2021

Control Measures

- a. Erosion and Sediment Controls
 - 1) Structural Practices:
 - Silt fence at toe of slope along downstream limits of disturbed areas
 - Straw bales along drainage swales
 - Inlet protection at culvert inlets
 - Rain Garden C2
 - Protect existing Retention Pond B
 - 2) Non-Structural Practices:
 - Preserve existing vegetation beyond limits of work
 - Temporary seeding of areas to remain disturbed for significant periods of time
 - Permanent seeding/mulching upon completion of rough grading
- b. Materials Handling and Spill Prevention
 - General Materials Handling Practices:

- Potential pollutants shall be stored and used in a manner consistent with the manufacturer's instructions in a secure location. To the extent practical, material storage areas should not be located near storm drain inlets and should be equipped with covers, roofs, or secondary containment as required to prevent storm water from contacting stored materials. Chemicals that are not compatible shall be stored and segregated areas so that spilled materials cannot combine and react.
- Disposal of materials shall be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations.
- Materials no longer required for construction shall be removed from the site as soon as possible.
- Adequate garbage, construction waste, and sanitary waste handling and disposal facilities shall be provided as necessary to keep the site clear of obstruction and BMPs clear and functional.
- Specific Materials Handling Practices:
 - All pollutants, including waste materials and demolition debris, that occur on-site during construction shall be handled in a way that does not contaminate storm water.
 - All chemicals including liquid products, petroleum products, water treatment chemicals, and wastes stored on site shall be covered and contained and protected from vandalism.
 - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, degreasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants, shall be conducted under cover during wet weather and on an impervious surface to prevent release of contaminants onto the ground. Materials spilled during maintenance operations shall be cleaned up immediately and properly disposed of.
 - Wheel wash water shall be settled and discharged on site by infiltration. Wheel wash water shall not be discharged to the storm water system.
 - Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and ad application rates that will not result in loss of chemical to storm water runoff. Follow manufacturer's recommendations for application rates and procedures.
 - pH-modifying sources shall be managed to prevent contamination of runoff and storm water collected on site. The most common sources of pH-modifying materials are bulk cement, cement kiln dust (CKD), fly ash, new concrete

washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, and concrete pumping and mixer washout waters.

- Equipment maintenance and fueling: Contractor shall implement appropriate spill prevention and response procedures
- Spill Prevention and Response Procedures:
 - The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize their migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on site and prevent their release into receiving waters.
 - Spill Response Procedures:
 - Notify site superintendent immediately when a spill, or the threat of a spill, is observed. The superintendent shall assess the situation and determine the appropriate response.
 - If spills represent an imminent threat of escaping onsite facilities and entering the receiving waters, site personnel shall respond immediately to contain the release and notify the superintendent after the situation has stabilized.
 - The site superintendent, or his designee, shall be responsible for completing a spill reporting form and for reporting the spill to the appropriate agency.
 - Spill response equipment shall be inspected and maintained as necessary to replace any materials used in spill response activities.
 - Spill kits shall be on-hand at all fueling sites. Spill kit location(s) shall be reported to the SWMP Administrator.
 - Absorbent materials shall be on-hand at all fueling areas for use in containing inadvertent spills. Containers shall be onhand at all fueling sites for disposal of used absorbents.
 - Recommended components of spill kits include the following:
 - Oil absorbent pads (one bale)
 - Oil absorbent booms (40 feet)
 - 55-gallon drums (2)
 - 9-mil plastic bags (10)
 - Personal protective equipment including gloves and goggles
- Concrete Wash Water: Unless confined in a pre-defined, bermed containment area, the cleaning of concrete truck delivery chutes is prohibited at the job site. The discharge of water containing waste cement to the storm drainage system is prohibited.
- No Concrete Batch Plants are proposed at this site.

- Notification Procedures:
 - In the event of an accident or spill, the SWMP Administrator shall be notified as a minimum.
 - Depending on the nature of the spill material involved, the Colorado Department of Public Health and Environment (24hour spill reporting line: 877-518-5608), downstream water users, or other agencies may also need to be notified.
 - Any spill of oil which 1) violates water quality standards, 2) produces a "sheen" on a surface water, or 3) causes a sludge or emulsion, or any hazardous substance release, or hazardous waste release which exceeds the reportable quantity, must be reported immediately by telephone to the National Response Center Hotline at (800)-424-8802.

5. Final Stabilization and Long-term Stormwater Management

- 1. Permanent seeding will be provided to achieve long-term stabilization of the site.
- 2. Seed Mix: "Foothills Mix" or approved equal.
- 3. Seeding Application Rate: Drill seed 0.25" to 0.5" into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25" to 0.5" into the soil. Apply seed at the following rates:
 - Dryland: 20-25 lbs/acre
 - Irrigated: 40 lbs/acre
- 4. Soil Stabilization Practices:
 - Mulching Application: Apply 1-1/2 tons of certified weed free hay per acre mechanically crimped into the soil in combination with an organic mulch tackifier. On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of much and mulch tackifier.
- 5. Soil Conditioning and Fertilizer Requirements:
 - Soil conditioner, organic amendment shall be applied to all seeded areas at 3 CY / 1000 SF.
 - Fertilizer shall consist of 90% fungal biomass (mycelium) and 10% potassium-magnesia with a grade of 6-1-3 or approved equal. Fertilizer shall be applied as recommended by seed supplier.
- 6. Final stabilization is reached when all soil-disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.

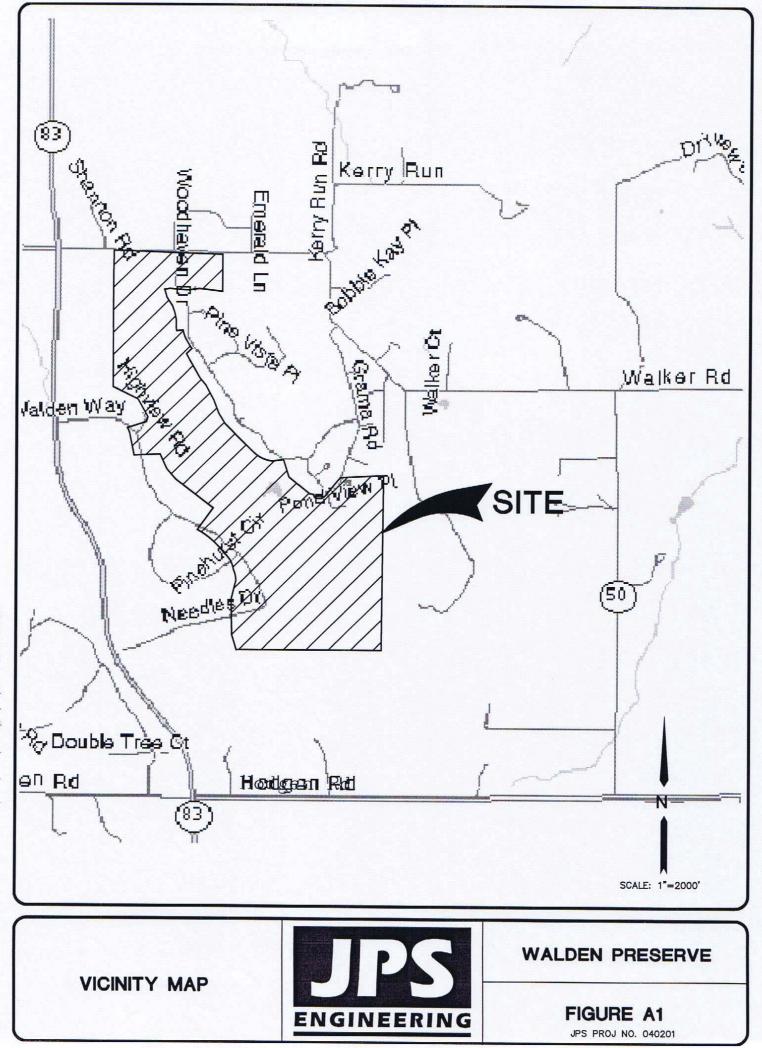
6. Other Controls

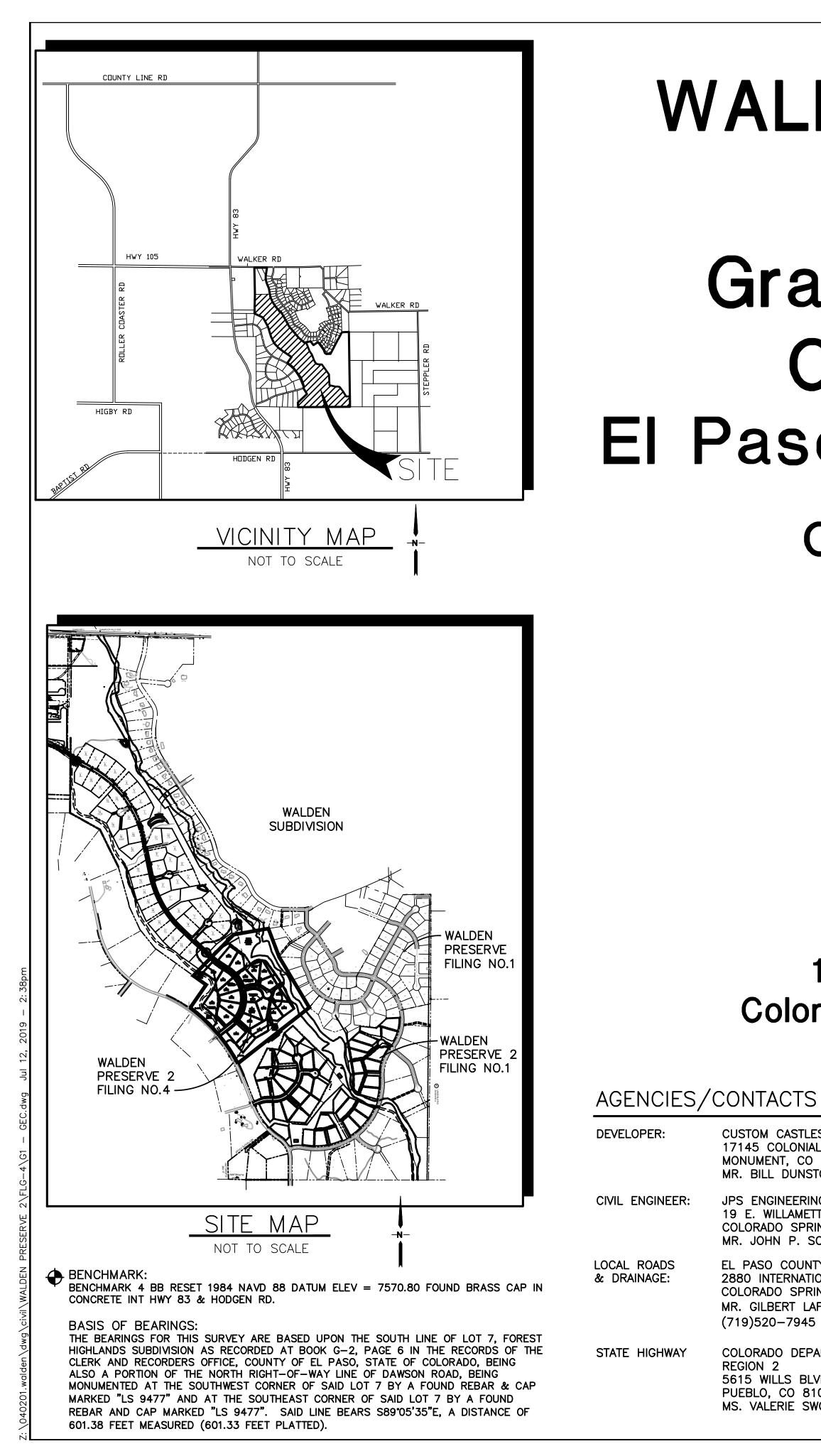
- Contractor shall dispose of all waste materials at a permitted off-site disposal site.
- Vehicle tracking pads will be installed at all access points to limit off-site soil tracking.

7. Inspection and Maintenance

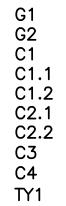
- a. Inspection Schedules:
 - Contractor shall inspect BMPs bi-weekly as a minimum, and immediately (within 24 hours) after any precipitation or snowmelt event that causes surface erosion (i.e. that results in stormwater running across the ground), to ensure that BMPs are maintained in effective operating condition.
- b. Inspection Procedures:
 - 1) Site Inspection / Observation Items:
 - Construction site perimeter and discharge points (including discharges into a storm sewer system)
 - All disturbed areas
 - Areas used for material / waste storage that are exposed to precipitation
 - Other areas having a significant potential for stormwater pollution, such as demolition areas or concrete washout locations, or locations where vehicles enter or leave the site
 - Erosion and sediment control measures identified in the SWMP
 - Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks, or the condition of spill response kits.
 - 2) Inspection Requirements:
 - Determine if there is any evidence of, or potential for, pollutants entering the drainage system.
 - Review BMPs to determine if they still meet design and operational criteria in the SWMP, and if they continue to adequately control pollutants at the site.
 - Upgrade and/or revise any BMPs not operating in accordance with the SWMP and update the SWMP to reflect any revisions.
- c. BMP Maintenance / Replacement and Failed BMPs:
 - Contractor shall remove sediment that has been collected by perimeter controls, such as silt fence and inlet protection, on a regular basis to prevent failure of BMPs, and remove potential of sediment from being discharged from the site in the event of BMP failure.
 - Removed sediment must be moved to an appropriate location where it will not become an additional pollutant source and should never be placed in ditches or streams.
 - Contractor shall update Erosion Control Plans as required with any new BMPs added during the construction period.
 - Contractor shall address BMPs that have <u>failed</u>, or have the potential to fail without maintenance or modifications, as soon as possible, <u>immediately</u> in most cases, to prevent discharge of pollutants.

- d. Record Keeping and Documenting Inspections:
 - Contractor shall maintain records of all inspection reports, including signed inspection logs, at the project site.
 - Permittee shall document inspection results and maintain a record of the results for a period of 3 years following expiration or inactivation of permit coverage.
 - Site inspection records shall include the following:
 - Inspection date
 - Name and title of personnel making the inspection
 - Location of discharges of sediment or other pollutants from the site
 - Location(s) of BMPs that need to be maintained
 - Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
 - Location(s) where additional BMPs are needed that were not in place at the time of inspection
 - Deviations from the minimum inspection schedule





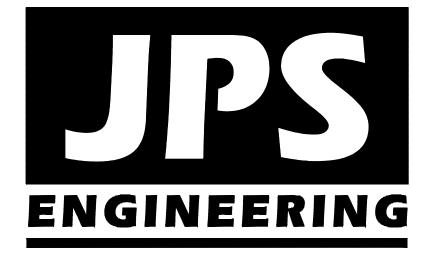
WALDEN PRESERVE 2 Filing No. 4 Grading & Erosion **Control Plans** El Paso County, Colorado



PREPARED FOR: Custom Castles, Inc.

17145 Colonial Park Drive Monument, CO 80132

PREPARED BY:



PREPARED BY: **19 East Willamette Avenue** Colorado Springs, Colorado 80903 JULY, 2019

USTOM CASTLES, INC. 7145 COLONIAL PARK DRIVE ONUMENT, CO 80132 R. BILL DUNSTON (719)243–1111	WATER/WASTEWATER:	WALDEN CORPORATION PO BOX 1870 MONUMENT, CO 80132 MR. MATT DUNSTON (719)339–2410	COUNT COUNT ACCUR WHICH APPRO
PS ENGINEERING, INC. 9 E. WILLAMETTE AVENUE OLORADO SPRINGS, CO 80903 R. JOHN P. SCHWAB, P.E. (719)477–9429	GAS DEPARTMENT:	BLACK HILLS ENERGY MR. SEBASTIAN SCHWENDER (719)399–3176	COMPL FILED II LAND D
- PASO COUNTY PCD 380 INTERNATIONAL CIRCLE DLORADO SPRINGS, CO 80910 R. GILBERT LAFORCE, P.E. 719)520–7945	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC ASSOCIATION 11140 E. WOODMEN ROAD COLORADO SPRINGS, CO 80908 MR. DAVE WALDNER (719)495–2283	AND EN IN ACC WILL BI SIGNEE STARTI
OLORADO DEPARTMENT OF TRANSPORTATION	TELEPHONE COMPANY:	CENTURY LINK COMMUNICATIONS (LOCATORS) (800)922–1987	APPRO
EGION 2 615 WILLS BLVD. UEBLO, CO 81008 S. VALERIE SWORD (719)546–5407		A.T. & T. (LOCATORS) (719)635–3674	JENNIF COUNT

SHEET INDEX

TITLE SHEET GENERAL NOTES & LEGEND OVERALL SITE PLAN SITE GRADING & EROSION CONTROL PLAN LOT GRADING NOTES & DETAILS ENLARGED SITE GRADING PLAN - SOUT ENLARGED SITE GRADING PLAN - NORTH EROSION CONTROL NOTES & DETAILS RAIN GARDEN C2 PLAN & DETAILS TYPICAL SECTIONS & DETAILS

ENGINEER: DESIGN ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER M DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

JOHN P. SCHWAB, P.E. #29891

DATE

DATE

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.

CUSTOM CASTLES, INC.
17145 COLONIAL PARK DRIVE
MONUMENT, COLORADO 80132

EL PASO COUNTY:

NTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH NTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE JRACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS CH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE ROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR PLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, ENGINEERING CRITERIA MANUAL AS AMENDED.

CORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE ED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT RTED WITHIN THOSE 2 YEARS, THEY WILL NEED TO BE RESUBMITTED FOR ROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND MUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

IFER IRVINE, P.E., **ITY ENGINEER / ECM ADMINISTRATOR** PCD FILE NO. SF-18-034

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COUNTY GENERAL NOTES:

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).

3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING: A. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)

- B. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
- C. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION D. CDOT M & S STANDARDS

4. 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 DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS, ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT (PCD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND DSD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP WITH CLASS B BEDDING UNLESS OTHERWISE NOTED AND APPROVED BY PCD. 10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DSD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

- 11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- 12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.

13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO DEPARTMENT OF PUBLIC WORKS (DPW) AND MUTCD CRITERIA.

14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO DEPARTMENT OF PUBLIC WORKS (DPW), INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.

15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

PROJECT GENERAL NOTES:

1. EXISTING CONTOUR DATA CONSISTS OF AERIAL TOPOGRAPHIC SURVEY DATA PROVIDED BY OWNER. JPS ENGINEERING TAKES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING TOPOGRAPHIC MAPPING.

2. STATIONING IS AT CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE AT EDGE OF ASPHALT (EOA) UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE FROM EDGE OF ASPHALT TO EDGE OF ASPHALT UNLESS OTHERWISE NOTED.

- 3. PROPOSED CONTOURS SHOWN ARE TO FINISHED GRADE.
- 4. LENGTHS SHOWN FOR STORM SEWER PIPES ARE TO CENTER OF MANHOLE.
- 5. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, DEBRIS, WASTE AND OTHER UNSUITABLE FILL MATERIAL FOUND WITHIN THE LIMITS OF EXCAVATION.
- 6. MATCH INTO EXISTING GRADES AT 3:1 MAX CUT AND FILL SLOPES.

7. REVEGETATION OF ALL DISTURBED AREAS SHALL BE DONE WITH SPECIFIED SEED MIX WITHIN 60 DAYS AFTER FINE GRADING IS COMPLETE.

8. EROSION CONTROL SHALL CONSIST OF SILT FENCE AND BMP'S AS SHOWN ON THE DRAWING, AND TOPSOIL WITH GRASS SEED, WHICH WILL BE WATERED UNTIL VEGETATION HAS BEEN REESTABLISHED.

9. THE EROSION CONTROL MEASURES OUTLINED ON THIS PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE, AND REBUILD AS NECESSARY UNTIL VEGETATION IS RE-ESTABLISHED.

10. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT ADJACENT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.

11. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED BY SITE CONDITIONS.

12. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.

13. ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE MATERIAL SHALL BE COMPACTED PER EL PASO COUNTY AND CDOT STANDARDS AND SPECIFICATIONS.

14. ALL FINISHED GRADES SHALL HAVE A MINIMUM 1.0% SLOPE TO PROVIDE POSITIVE DRAINAGE.

15. IN CASE OF CONFLICT BETWEEN PROPOSED SLOPES AND PROPOSED SPOT ELEVATIONS, SPOT ELEVATIONS SHALL GOVERN.

16. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO BEGINNING WORK.

COUNTY SIGNING AND STRIPING NOTES:

TRAFFIC CONTROL DEVICES (MUTCD).

EXISTING PAVEMENT MARKINGS.

AND COMMUNITY DEVELOPMENT DEPARTMENT (PCD).

P2 TUBULAR STEEL POST SLIPBASE DESIGN.

10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.

WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.

REQUIRED BY CDOT S-627-1.

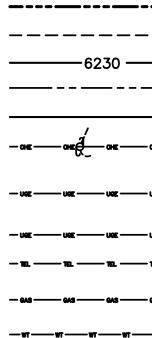
(PCD) (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.

ROADWAY.

DESIGN

<u>ROAD CLASSI</u> DESIGN SPEEL POSTED SPEE ROADWAY WIE MIN. HORIZON MIN. GRADE: MAX. GRADE: MAX. CUL-DE MIN. K-VALU MIN. K-VALU

LEGEN





GENERAL DRAINAGE NOTES:

1. INDIVIDUAL BUILDERS SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND ACCOUNT FOR POTENTIAL CROSS-LOT DRAINAGE IMPACTS WITHIN EACH

2. BUILDERS AND PROPERTY OWNERS SHALL IMPLEMENT & MAINTAIN EROSION CONTROL BEST MANAGEMENT PRACTICES FOR PROTECTION OF DOWNSTREAM PROPERTIES AND FACILITIES INCLUDING PROTECTION OF EXISTING GRASS BUFFER STRIPS ALONG THE DOWNSTREAM PROPERTY BOUNDARIES.

3. GRADING AND DRAINAGE WITHIN LOTS IS THE RESPONSIBILITY OF THE INDIVIDUAL BUILDERS AND PROPERTY OWNERS.

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM

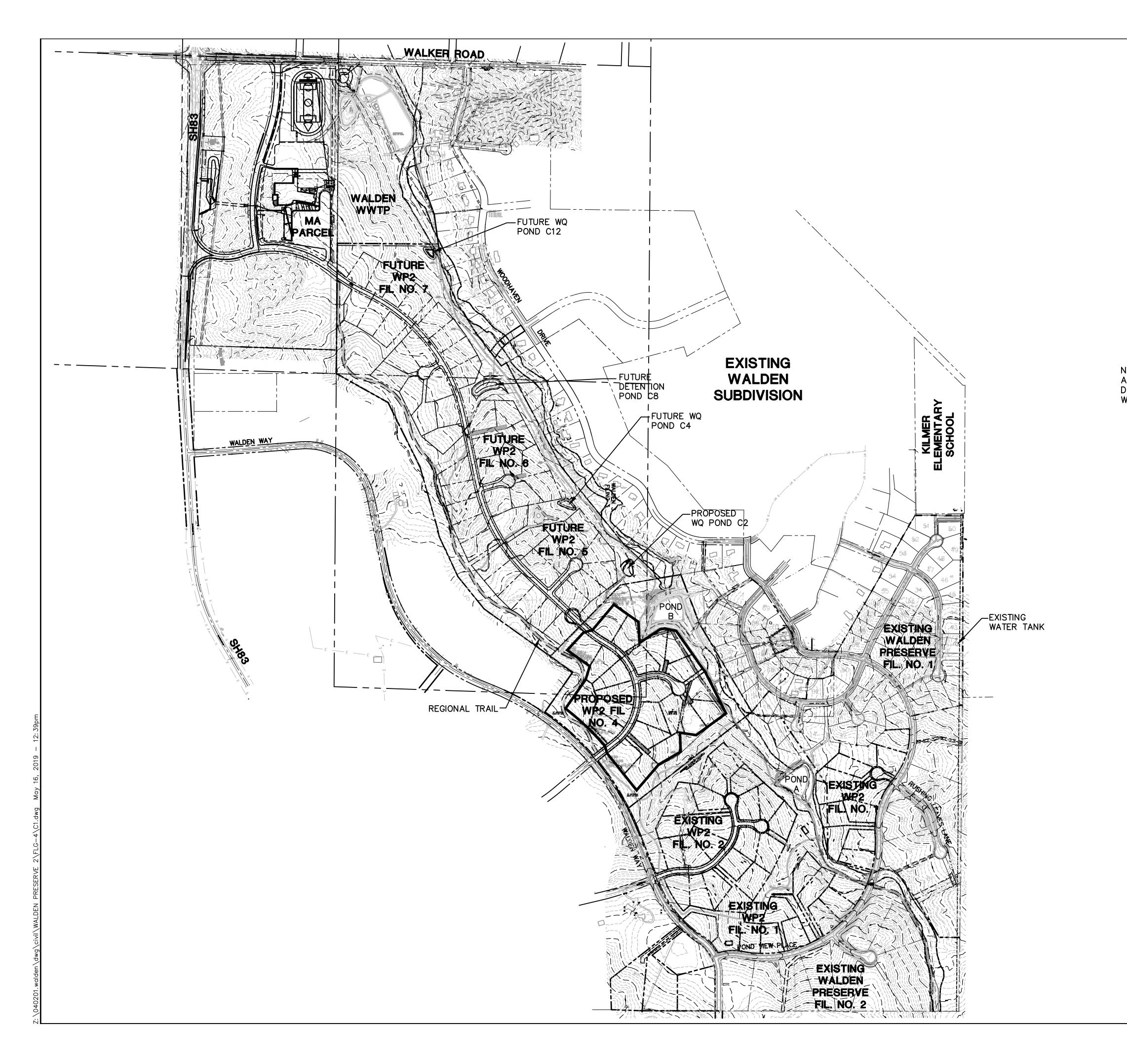
- 2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER
- 3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING
- 4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
- 5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- 6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- 7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".
- 8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
- 9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE
- 11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN
- 12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS
- 13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT
- 14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY

DATA IFICATION:	RL	IRAL LOCAL	REFERENCE <u>STANDARD</u>
D:		30 MPH	ECM TABLE 2-5
ED:		30 MPH	ECM TABLE 2-5
DTH:	28'	EOA-EOA	ECM FIGURE 2-8
NTAL RADIUS:		300'	ECM TABLE 2-5
		1.0%	ECM TABLE 2-5
		8.0%	ECM TABLE 2-5
E-SAC GRADE		2.0%	ECM TABLE 2-31
E (CREST):		19	ECM TABLE 2-12
E (SAG):		37	ECM TABLE 2-14

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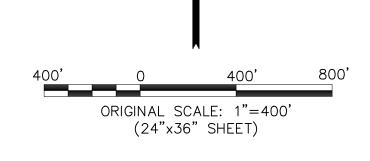
ND.						
					NEW/EXISTING	
					SECTION LINE - NEW/EXISTING	
					EASEMENT LINE - NEW/EXISTING	
		- 6230			CONTOUR - NEW/EXISTING	
					PROPERTY LINE - NEW/EXISTING	
		/			FENCE - NEW/EXISTING	
— CHE ———	OHE	OHE -	OHE	OHE	OVERHEAD ELECTRIC LINE W/ POWER POLE NEW/EXISTING	
— VQE ———	UGE	UGE	UGE	UGE	UNDERGROUND ELECTRIC LINE NEW/EXISTING	
— UGE ———	UGE	UGE	UGE	UGE	UNDERGROUND ELECTRIC - NEW/EXISTING	
- 16L	TEL	TEL	TEL	TEL	TELEPHONE - NEW/EXISTING	
— CAS ——	— GAS —	GAS	— gas ——	GAS	GAS – NEW/EXISTING	
	WT	— wt —— wt	r WT	WT	WATER - NEW/EXISTING	HORZ. S
					ECB - DITCH LINING	VERT. S
						SURVEYE
				\checkmark	- SECTION NUMBER	CREATE
		(1	5		PROJEC
			P1		-SHEET ON WHICH SECTION IS SHOWN	SHEET:



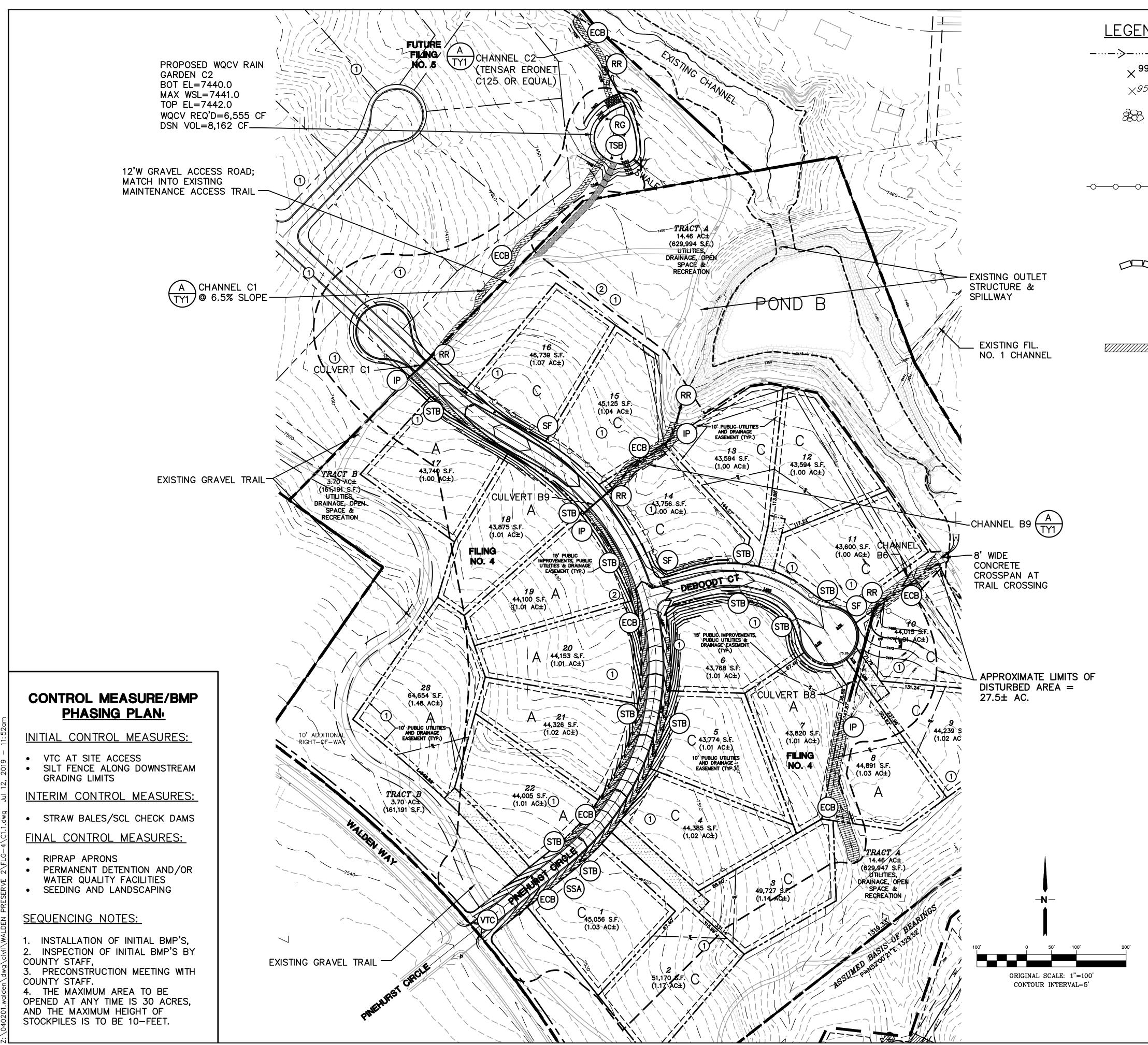


DRIVEWAY							
CULVERT							
FIL 4 LOT NO.	SIZE (D)						
FIL 4 LOT NO. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	SIZE (D) 18" 18" 18" 18" 18" 18" 18" 42" 42" 42" 42" 18" 18" 18" 18" 18" 18" 18" 18						
20 21 22	18" 18" 18"						
22 23	18"						

NOTE: AT LOCATIONS WHERE ROADSIDE DITCHES ARE MINIMAL, DRIVEWAY CULVERTS MAY BE DELETED IN SOME CASES UPON FIELD REVIEW WITH COUNTY APPROVAL



FILING NO. 4	Col 809 PH: FA)	orado 003 71 (: 71 (: 71 w. jp	o Sp 19-4 19-4 seng	CALL 2-BUSINESS DAYS IN ADVANCE	, CC 9429 766 m			
ч Л	BY DATE	JPS 9/05/18	JPS 2/25/19	JPS 5/15/19				
PRESERVE	No. REVISION	A DP SUBMITTAL	COUNTY COMMENTS	COUNTY COMMENTS				
HORZ. SCALE: 1"=4 VERT. SCALE: N SURVEYED: CREATED: 10/05/ PROJECT NO: 0402 SHEET:	/A /17	DES CHE LAS		D: D: ODIFII	-D:	BJJ JPS JPS /19 BJJ		



ND:		
· — · >>		FLOWLINE
99.00		PROPOSED SPOT ELEVATION (FLOWLINE)
95.10		EXISTING SPOT ELEVATION
3	RR	RIPRAP (10'L x 6'W x 2'D; d50=12" RR UNLESS OTHERWISE NOTED)
		INLET PROTECTION (GRAVEL FILTER)
—0—	SF	SILT FENCE
	VTC	VEHICLE TRACKING CONTROL PAD
	TM	TEMPORARY SEED AND MULCH ON DISTURBED SLOPES
	STB SCL	STRAW BALE BARRIER @ 300' SPACING IN ALL ROADSIDE DITCHES (TYP.) OR SEDIMENT CONTROL LOGS
	TSB	TEMPORARY SEDIMENT BASIN (SEE DETAILS ON SH. C3)
	ECB	EROSION CONTROL BLANKET (TENSAR ERONET SC150 OR APPROVED EQUAL); UNLESS NOTED OTHERWISE
	RG	RAIN GARDEN
	SSA	STABILIZED STAGING AREA
	A B C	RECOMMENDED LOT GRADING TYPES PER SHEET C1.2
		ESTIMATED EARTHWORK QUANTITY:
UN	ICLASSIF	FIED EXCAVATION (TOTAL CUT) = 14,069 CY * EMBANKMENT FILL = 2,759 CY NET (CUT) = 11,310 CY
		* (ASSUMES 15% COMPACTION FACTOR)
OI E/ AI C¢	NLY, RE ARTHWO NY ADJU ONTRAC	IS ESTIMATE IS PROVIDED FOR INFORMATION PRESENTING THE CALCULATED BULK RK VOLUME TO FINISHED GRADE, EXCLUDING JSTMENT FOR PAVEMENT DEPTHS, ETC. TOR SHALL MAKE HIS OWN DETERMINATION

DISCREPANCIES.

(1) CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MATCH INTO EXISTING GRADES WITH 3:1 MAX CUT AND FILL SLOPES AND MAINTAIN POSITIVE DRAINAGE IN ALL AREAS.

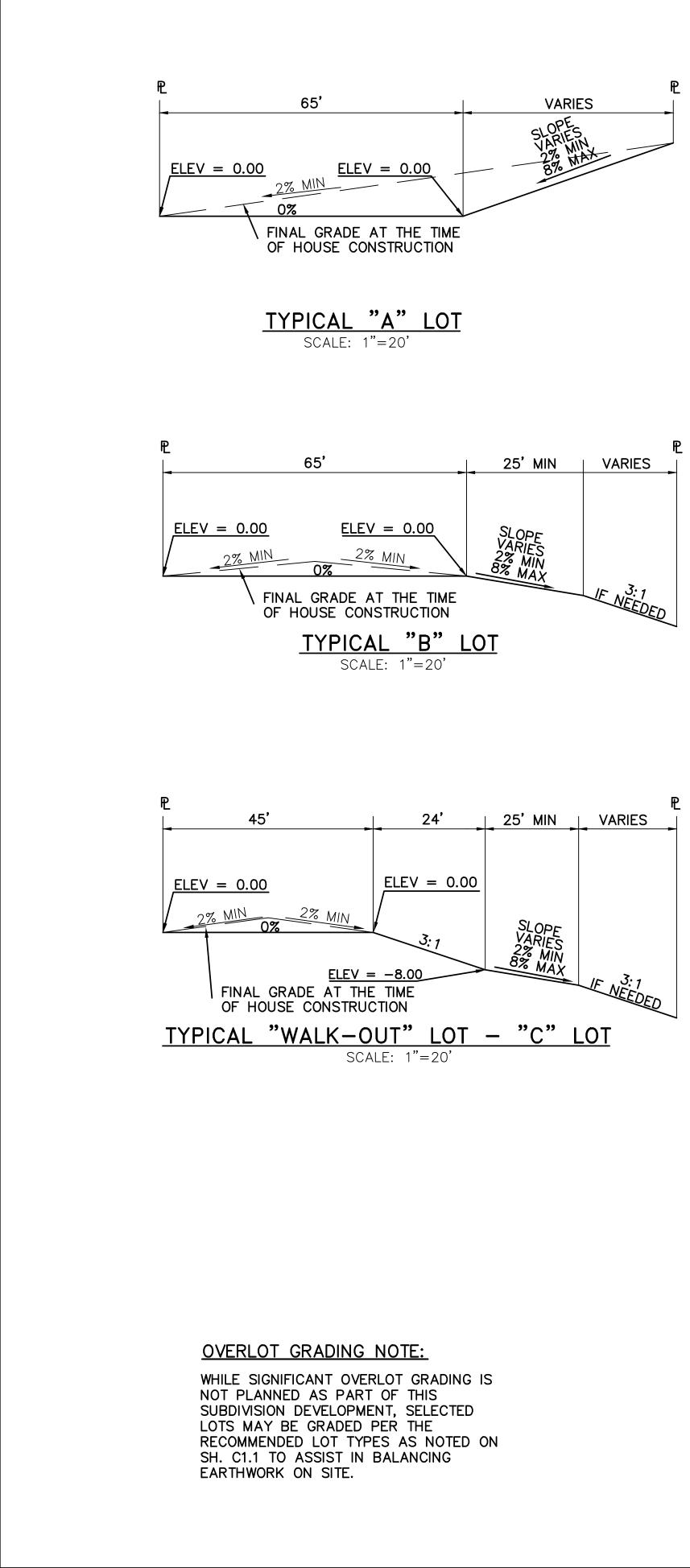
OF EARTHWORK QUANTITIES AS BASIS FOR BID

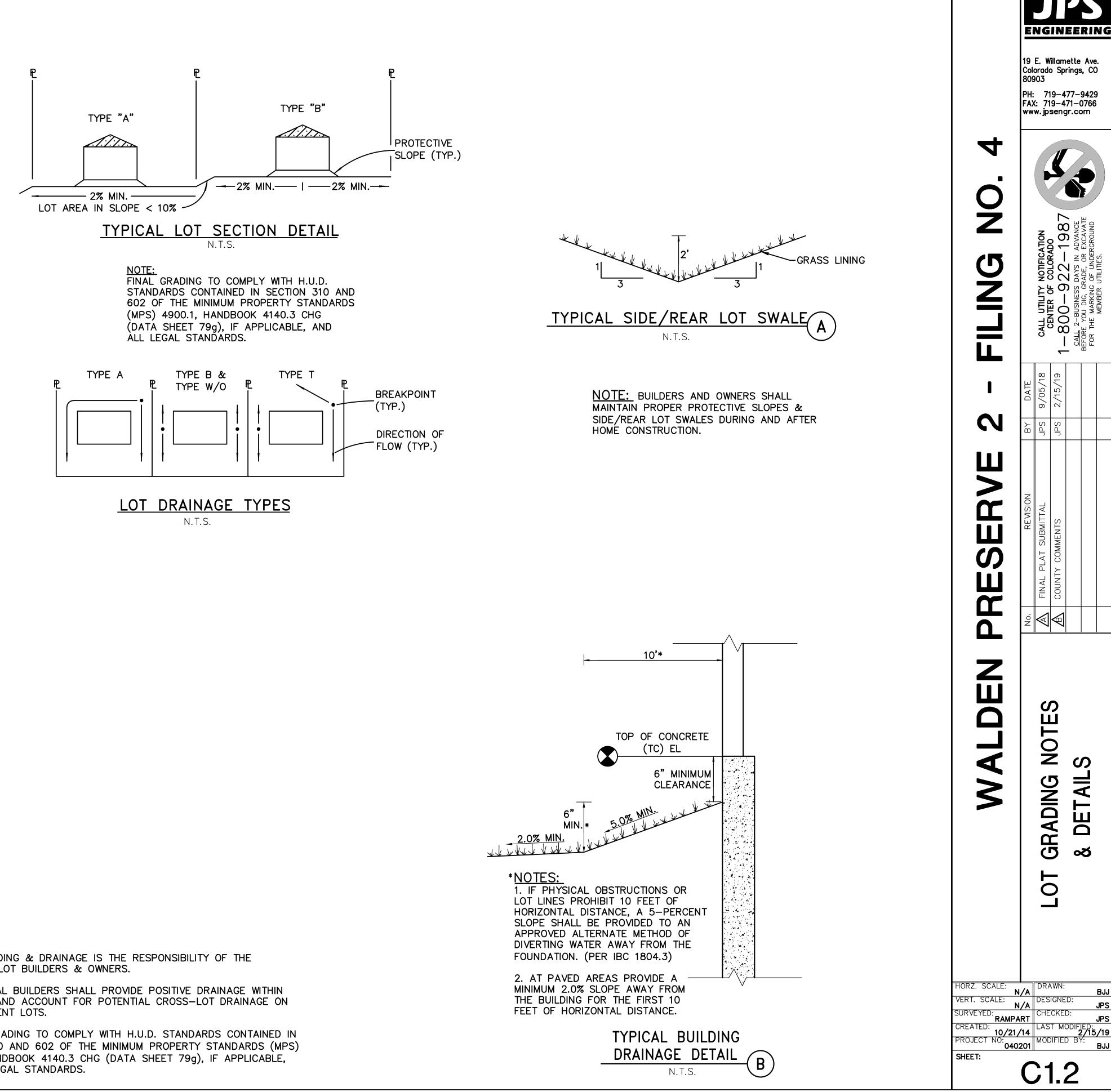
PRICING AND NOTIFY ENGINEER OF ANY

(2) TOPSOIL STOCKPILE AREA

 BENCHMARK:	HORZ. SCALE
BENCHMARK 4 BB RESET 1984 NAVD	VERT. SCALE
88 DATUM ELEV.=7570.80 FOUND	SURVEYED:
BRASS CAP IN CONCRETE INT HWY 83	CREATED:
& HODGEN RD.	PROJECT NO
NOTE: REFER TO LOT GRADING NOTES & DETAILS ON SHEET C1.2	SHEET:

WALDEN	L L	ESERVE	2		FILING NO.	4		
	No.	REVISION	BY [DATE			Cold 809 PH: FAX	E
	\triangleleft	FINAL PLAT SUBMITTAL	JPS 9/05/18	05/18				NG
	$\overline{\mathbb{A}}$	COUNTY COMMENTS	JPS 2/25/19	25/19	1-800-900-1987	K	9-4 9-4	
	$\overline{\mathbb{A}}$	COUNTY COMMENTS	JPS 5/15/19	15/19	CALL 2-BUSINESS DAYS IN ADVANCE		rings 77– 71–(EE
ONINOL FLAN	$\overline{\mathbb{Q}}$	COUNTY COMMENTS	JPS 7/11/19	11/19	BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND		9429 9766	
					MEMBER UTILITIES.)	NG



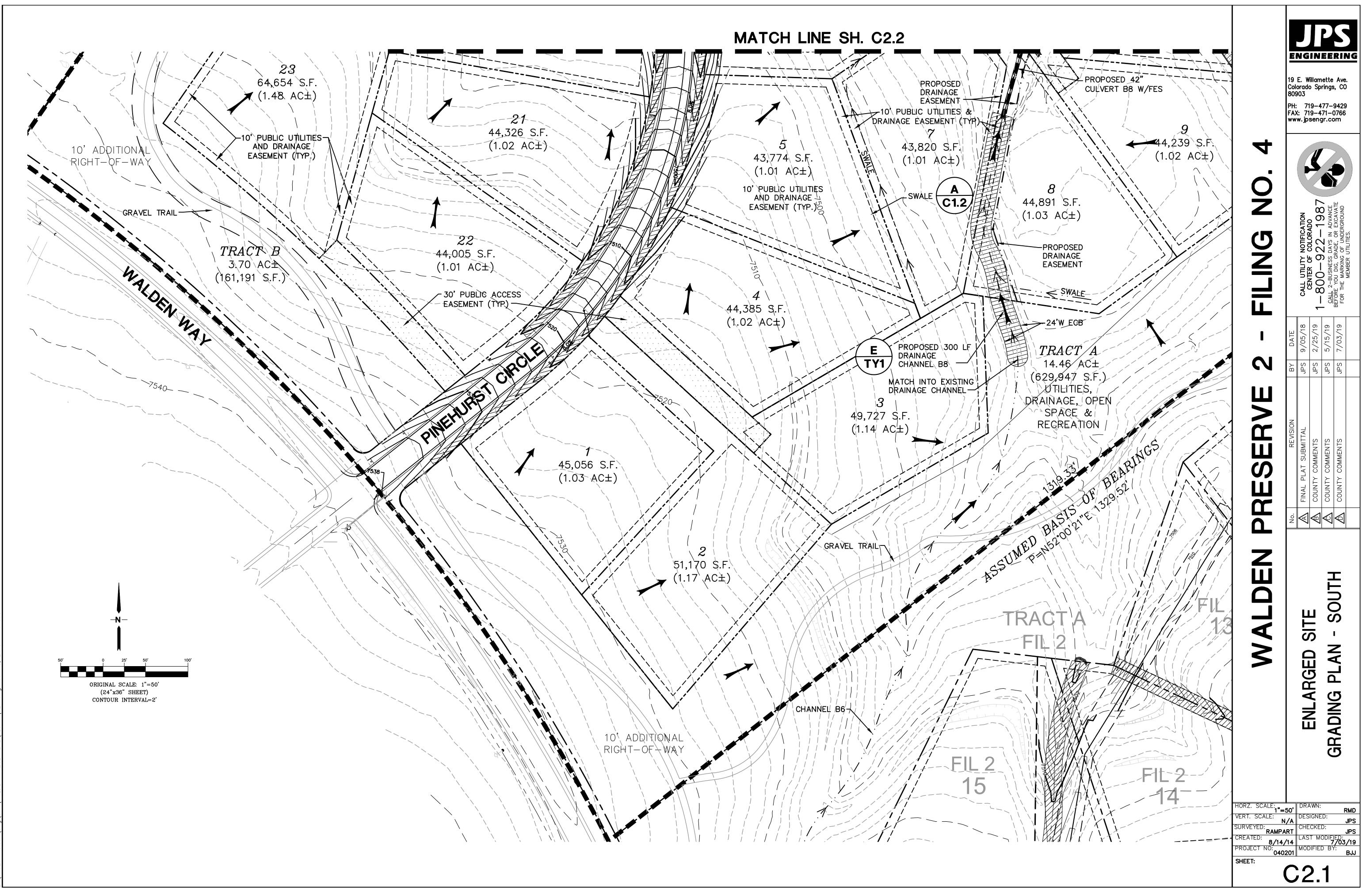


NOTES:

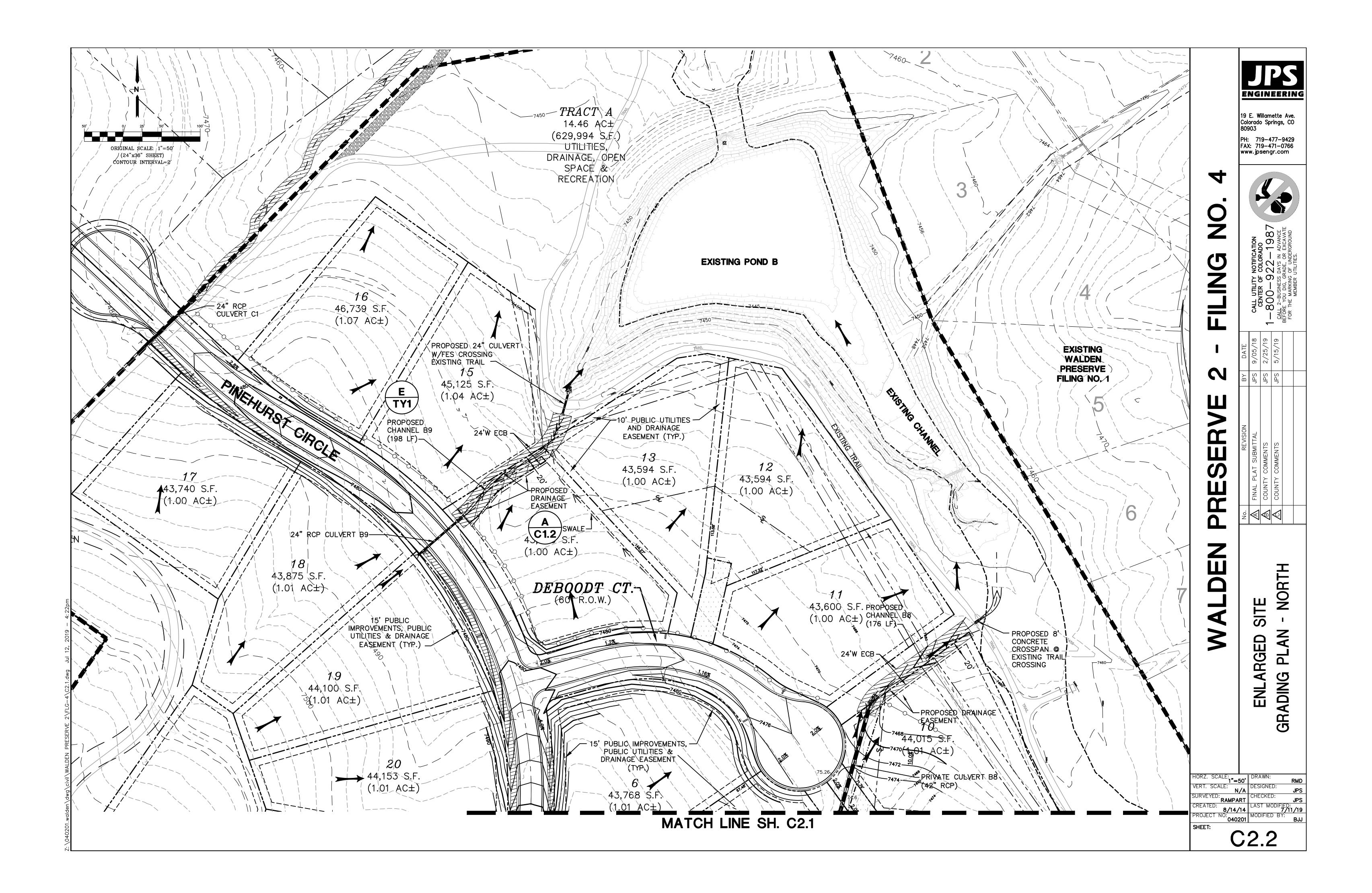
1. LOT GRADING & DRAINAGE IS THE RESPONSIBILITY OF THE INDIVIDUAL LOT BUILDERS & OWNERS.

2. INDIVIDUAL BUILDERS SHALL PROVIDE POSITIVE DRAINAGE WITHIN EACH LOT AND ACCOUNT FOR POTENTIAL CROSS-LOT DRAINAGE ON DOWNGRADIENT LOTS.

3. FINAL GRADING TO COMPLY WITH H.U.D. STANDARDS CONTAINED IN SECTION 310 AND 602 OF THE MINIMUM PROPERTY STANDARDS (MPS) 4900.1, HANDBOOK 4140.3 CHG (DATA SHEET 79g), IF APPLICABLE, AND ALL LEGAL STANDARDS.







Standard Notes for El Paso County Grading and Erosion Control Plans

Revised 7/07/10

- 1. Construction may not commence until a Construction Permit is obtained from Development Services and a Preconstruction Conference is held with Development Services Inspectors.
- 2. Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters. All work and earth disturbance shall be done in a manner that minimizes pollution of any on-site or off site waters, including wetlands.
- 3. Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations to regulations and standards must be requested, and approved, in writing.
- 4. A separate Stormwater Management Plan (SMWP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. During construction the SWMP is the responsibility of the designated Stormwater Manager, shall be located on site at all times and shall be kept up to date with work progress and changes in the field.
- 5. Once the ESQCP has been issued, the contractor may install the initial stage erosion and sediment control BMPs as indicated on the GEC. A preconstruction meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County DSD inspections staff.
- 6. Soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within 21 calendar days after final grading, or final earth disturbance, has been completed. Disturbed areas and stockpiles which are not at final grade but will remain dormant for longe than 30 days shall also be mulched within 21 days after interim grading. An area that is going to remain in an interim state for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMPs shall be maintained until permanent soil erosion control measures are implemented and established.
- 7. Temporary soil erosion control facilities shall be removed and earth disturbance areas graded and stabilized with permanent soil erosion control measures pursuant to standards and specification prescribed in the DCM Volume II and the Engineering Criteria Manual (ECM) appendix I.
- 8. All persons engaged in earth disturbance shall implement and maintain acceptable soil erosion and sediment control measures including BMPs in conformance with the erosion control technical standards of the Drainage Criteria Manual (DCM) Volume II and in accordance with the Stormwater Management Plan (SWMP).
- 9. All temporary erosion control facilities including BMPs and all permanent facilities intended to control erosion of any earth disturbance operations, shall be installed as defined in the approved plans, the SWMP and the DCM Volume II and maintained throughout the duration of the earth disturbance operation.
- 10. Any earth disturbance shall be conducted in such a manner so as to effectively reduce accelerated soil erosion and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the exposed area of any disturbed land shall be limited to the shortest practical period of time.
- 11. Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be designed to limit the discharge to a non-erosive velocity.
- 12. Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to runof to State Waters, including any surface or subsurface storm drainage system or facilities.
- 13. Erosion control blanketing is to be used on slopes steeper than 3:1.
- 14. Building, construction, excavation, or other waste materials shall not be temporarily placed or stored in the street, alley, or other public way, unless in accordance with an approved Traffic Control Plan. BMP's may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.
- 15. Vehicle tracking of soils and construction debris off-site shall be minimized. Materials tracked offsite shall be cleaned up and properly disposed of immediately.
- 16. Contractor shall be responsible for the removal of all wastes from the construction site for disposal in accordance with local and State regulatory requirements. No construction debris, tree slash, building material wastes or unused building materials shall be buried, dumped, or discharged at the site.
- 17. The owner, site developer, contractor, and/or their authorized agents shall be responsible for the removal of all construction debris, dirt, trash, rock sediment, and sand that may accumulate in the storm sewer or other drainage conveyance system and stormwater appurtenances as a result of site development.
- 18. The quantity of materials stored on the project site shall be limited, as much as practical, to that quantity required to perform the work in an orderly sequence. All materials stored on-site shall be stored in a neat, orderly manner, in their original containers, with original manufacturer's labels.
- 19. No chemicals are to be used by the contractor, which have the potential to be released in stormwater unless permission for the use of a specific chemical is granted in writing by the ECM Administrator. In granting the use of such chemicals, special conditions and monitoring may be required.
- 20. Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to contain all spills and prevent any spilled material from entering State Waters, including any surface or subsurface storm drainage system or facilities.
- 21. No person shall cause the impediment of stormwater flow in the flow line of the curb and gutter or in the ditchline.

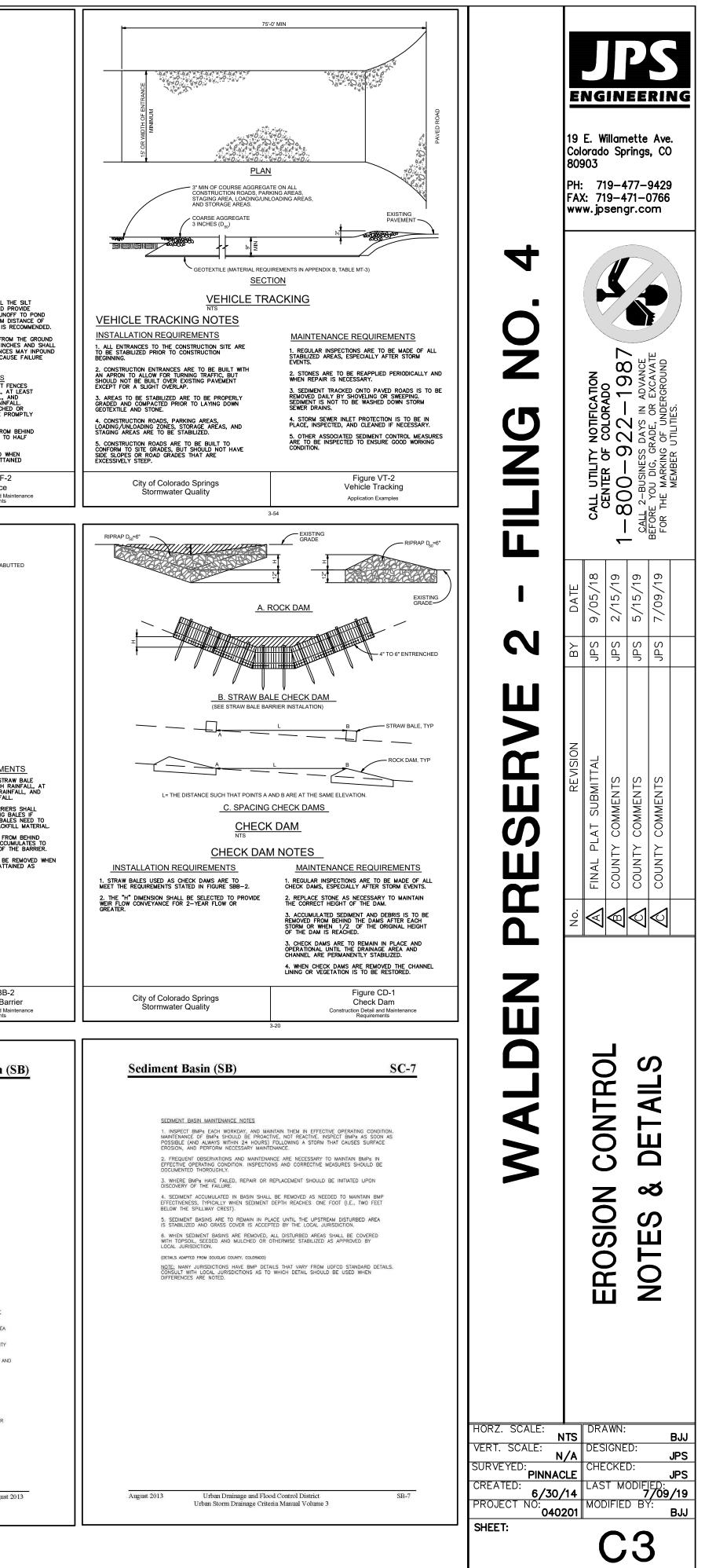
22. Individuals shall comply with the "Colorado Water Quality Control Act" (Title 25, Article 8, CRS), and the "Clean Water Act" (33 USC 1344), in addition to the requirements included in the DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and laws, rules, or regulations of other Federal, State, or County agencies, the more restrictive laws, rules, or regulations shall apply.

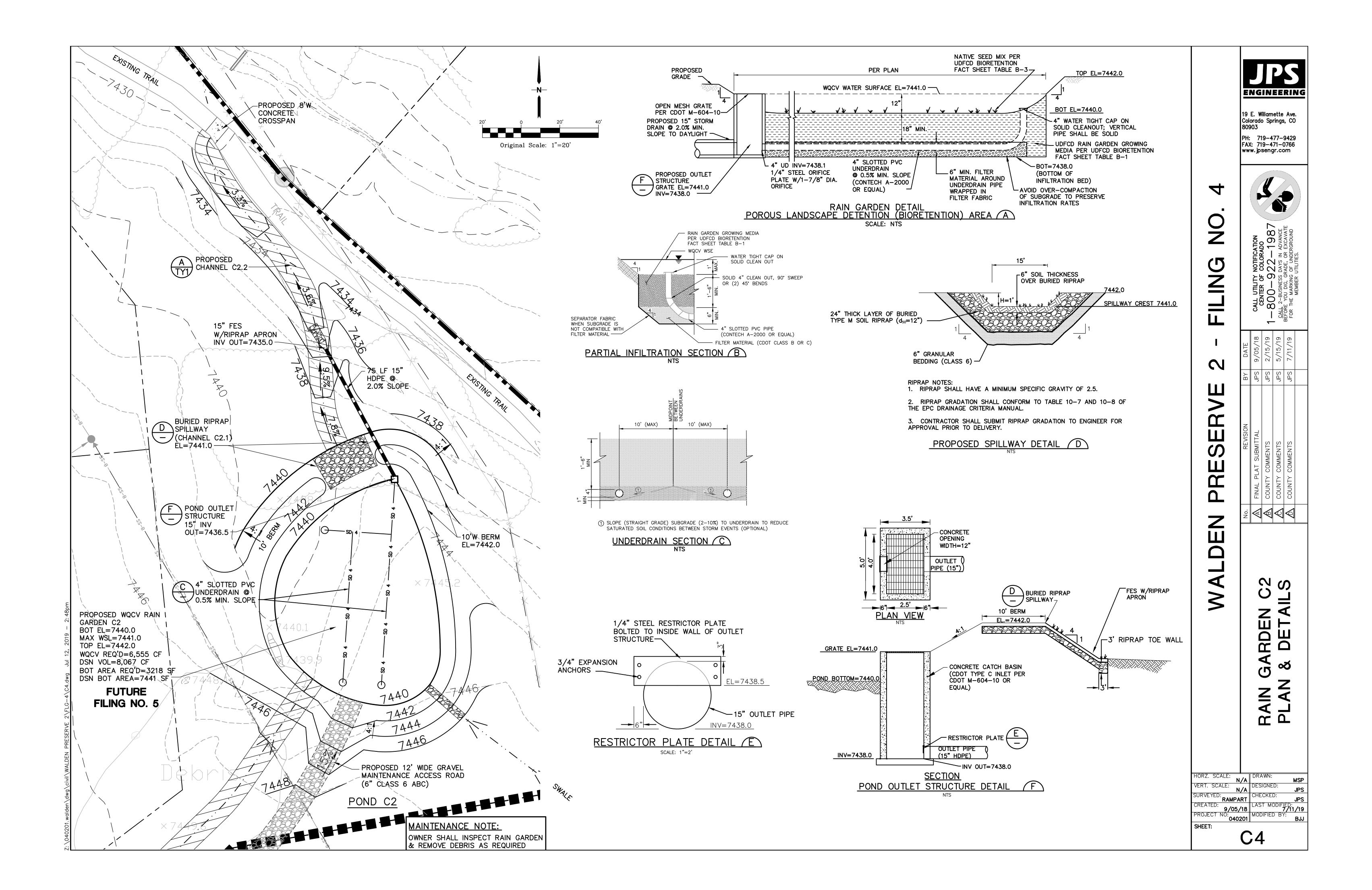
- 23. All construction traffic must enter/exit the site at approved construction access points.
- 24. Prior to actual construction the permitee shall verify the location of existing utilities.
- 25. A water source shall be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and wind
- 26. The preliminary soils report for this site prepared by Himmelreich & Assoc., dated 1/24/05 shall be considered a part of these plans.

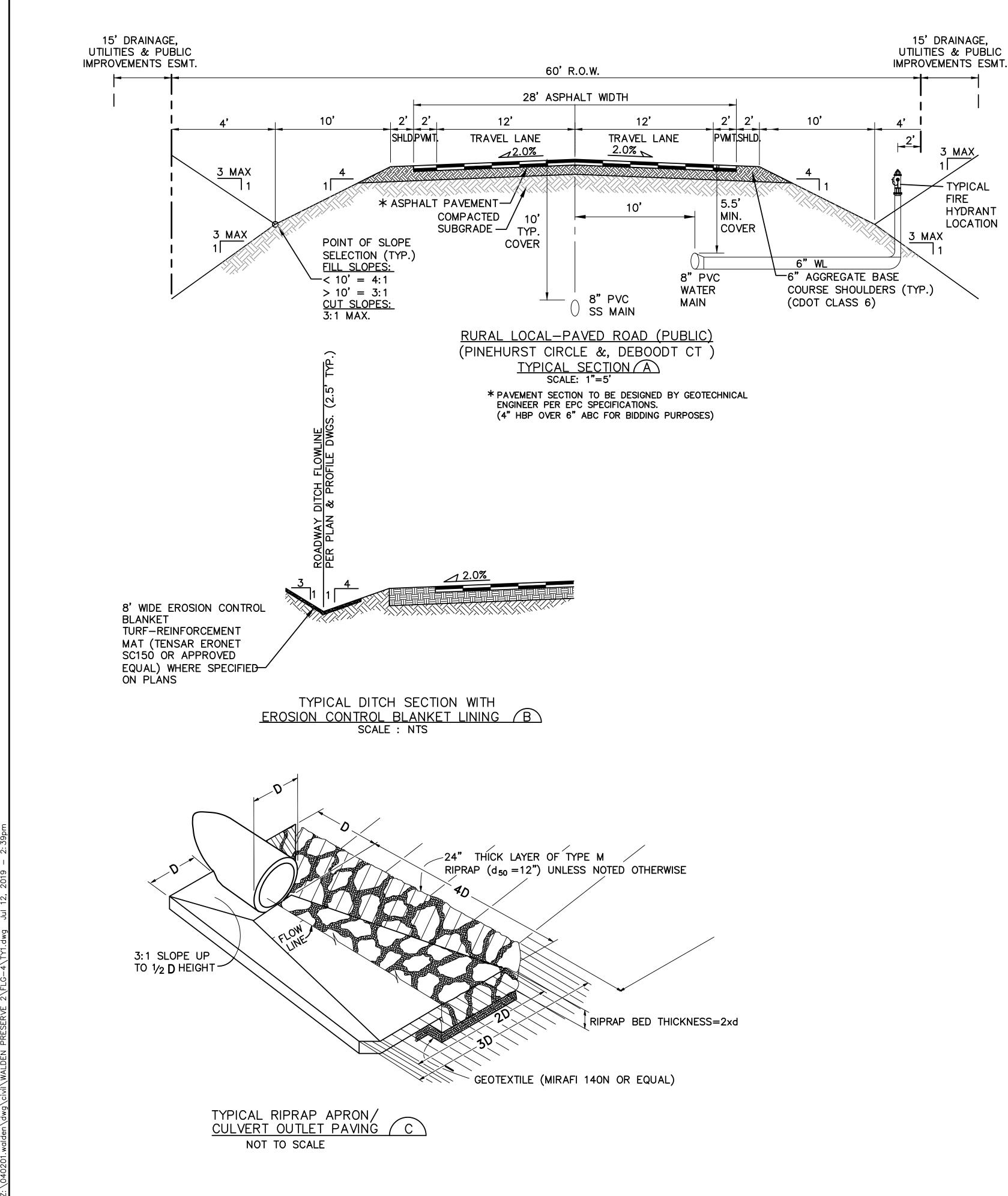
27. At least ten days prior to the anticipated start of construction, for projects that will disturb 1 acre or more, the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SWMP), of which this grading and erosion control plan may be a part. For information or application materials contact:

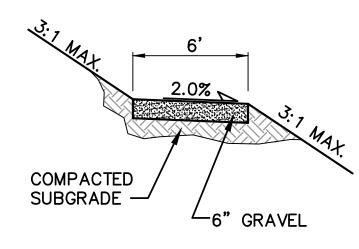
Colorado Department of Public Health and Environment Water Quality Control Division WQCD - Permits 4300 Cherry Creek Drive South	TEMPORAR BASIN DE		
Denver, CO 80246-1530 Attn: Permits Unit	BASIN	DRAINA AREA (A	
	C2	22.8	

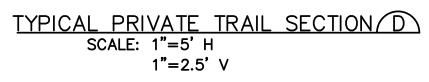
	SEEDING	MIX:				24.
I	PERENIAL RYE	VARIETY T GRASS EPHRAIM OR HYO LINN	2.0 LBS.	- Silt Fe Fabric Anchor		COMPACTED BACKFILL
rk	WESTERN WHEA SMOOTH BROME SIDEOATS GRAM	GRASS LINCOLN OR MAN	3.0 LBS. NCHAR 5.0 LBS. 2.5 LBS.	in tren and att firmly	POST (2" X 2" NOMINAL) SILT	FENCE FABRIC
nd		TOTAL: TILIZER APPLICATION:	16.5 LBS. DRILL SEED OR		ANC ANC 24* MIN. 42* MIN. 18*	HORED IN TRENCH FIRMLY ATTACHED POST 6" x 6" TRENCH FLOW
all			HYDRO-SEED PER PEC. SECTION 212.			CF
	MULCHING APPL		CONFORM TO CDOT PEC-SECTION 213.	SILT FENCE NOTES INSTALLATION REQUIREME 1. SILT FENCES SHALL BE INST. DISTURBING ACTIVITIES. 2. WHEN JOINTS ARE NECESSAF SHALL BE SPLICED TOGETHER C AND SECURELY SEALED. 3. METAL POSTS SHALL BE "ST WITH MINIMUM WEIGHT OF 1.33	ENTS ALLED PRIOR TO ANY LAND RY, SILT FENCE GEOTEXTILE DNLY AT SUPPORT POST	6. ALONG THE TOE OF FILLS, INSTALL THE FANCE ALONG A LEVEL CONTOUR AND PR AN AREA BEHIND THE FENCE FOR KUNOFF AND SEDIMENT TO SETTLE. A MINIMUM DIS 5 FEET FROM THE TOE OF THE FILL IS RE 7. THE HEIGHT OF THE SILT FENCE FROM SURFACE SHALL BE MINIMUM OF 24 INCHE
ger hall	ESTIMATED	TIME SCHEDULE:		WOOD POSTS SHALL HAVE A M SECTION DIMENSION OF 2 INCHE 4. THE FILTER MATERIAL SHALL TO METAL OR WOOD POSTS USI POSTS WITH 3/4" LONG #9 HE SILT FENCE GEOTEXTILE SHALL TO EXISTING TREES.	INIMUM DIAMETER OR CROSS) ES. (BE FASTENED SECURELY ING WIRE TIES, OR TO WOOD AVY-DUTY STAPLES. THE NOT BE STAPLED	NOT EXČED 36 INCHES; HIGHER FENCËS VOLUMES OF WATER SUFFICIENT TO CAUSE OF THE STRUCTURE. MAINTENANCE REQUIREMENTS 1. CONTRACTOR SHALL INSPECT SILT FEN IMMEDIATELY AFTER EACH RAINFALL, ANI MAILY DURING PERIODS OF NO RAINFAL
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	<u>SEDIMENT</u>	CONTROL MAINTENA	ANCE PROGRA <u>frequen</u>	M:	er Quality 3-36	Silt Fence Construction Detail and Maint Requirements
I	PERIODIC SITE INS RE-VEGETATION C SEDIMENT REMOVA REMOVAL OF BM	OF EXPOSED SOILS WITH AL FROM BMP'S	BI-WEEK IN 21 DAYS OF GRAD MONTH STABILIZATION ACHIE	ING ² ILY		WOODEN OR METAL STAKES 2 PER BALE, MIN STRAW BALE- TIGHTLY ABUTT TO ADJACENT BALES
	CAUSES SURFAC				6. MN MN MN MN	
off	THE SEDIMENT L BMP OR AT AN	SEDIMENT AND DEBRIS SHA LEVEL REACHES ONE HALF Y TIME THAT SEDIMENT OR UNCTION OF THE BMP.	THE HEIGHT OF TH	IE	STRAW BALE BAI	RRIER
ific				INSTALLATION RE	STRAW BALE BARRI	ER NOTES
of				1. STRAW BALE BARRIERS PRIOR TO ANY LAND DIST CUBIC FEET OF CERTIFIED STRAW AND WEIGH NOT LE 3. BALES ARE TO BE PL WITH THE END OF THE BA ONE ANOTHER.	URBING ACTIVITIES. T OF APPROXIMATELY 5 WEED FREE HAY OR ESS THAN 35 POUNDS.	1. CONTRACTOR SHALL INSPECT STRAW BARRIERS IMMEDIATELY AFTER EACH RAI LEAST DAILY DURING PROLONGED RAINF/ WEEKLY DURING PERIODS NO RAINFALL. 2. DAMAGED OR INEFFECTIVE BARRIERS PROMPTLY BE REPAIRED, REPLACING BA NECESSARY, AND UNENTRENCHED BALES BE REPAIRED WITH COMPACTED BACKFILL
he				TO BE DRIVEN TOWARD TH TO FORCE THE BALES TOO	Gether. MINIMUM OF 42 INCHES IALL BE STANDARD "T" OR WEIGHT OF 1.33 POUNDS	 SEDIMENT SHALL BE REMOVED FROM STRAW BALE BARRIERS WHEN IT ACCUM APPROXIMATELY 1/2 THE HEIGHT OF THI STRAW BALE BARRIERS SHALL BE R ADEQUATE VEGETATIVE COVER IS ATTAIN APPROVED BY THE CITY.
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rly				City of Color Stormwate	ado Springs	Figure SBB-2 Straw Bale Barri Construction Detail and Maint Requirements
		Sediment Basin (SB)	SC	C-7 SC-7	3-42	Sediment Basin (S
or		RIPRAP PAD HOLE	NT BASIN FURTHEST LET AND SHALL 1" TO 2" SB)	TABLE SB-1. SIZING INFORMATION FO Upstream Drainage Basin Bottam Width Area (rounded to nearest acre), (ac) 1 1/2 2 2 1 12 2 2 2 2 2 2 3 2 2 3 2 2 3 3 ½ 5 3 8 ½ 6 4 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 ½ 5 3 1 <t< td=""><td>R STANDARD SEDIMENT BASIN Spillway Crest Length (CL). (ft) 2 952 3 13/46 5 1/2 6 91/8 8 2/52 9 2/52</td></t<>	R STANDARD SEDIMENT BASIN Spillway Crest Length (CL). (ft) 2 952 3 13/46 5 1/2 6 91/8 8 2/52 9 2/52
ind.		EL 01.25 *EXCEPT WHERE DIAMETER, THEN OF SAME SIZED	T BASIN PLAN THE HOLES EXCEED 1" UP TO TWO COLUMNS HOLES MAY BE USED 2'	1. SEE L	7 47 ½ 8 51 9 55 10 58 ½ 11 61 12 64 13 67 ½ 14 70 ½ 15 73 ½ NT BASIN INSTALLATION NOTES PLAN VIEW FOR: .OCATION OF SEDIMENT BASIN. UPCF OF BASIN. DVEF OF BASIN. DVEF OF BASIN.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
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SEDIMENT GN DATA		MATERIAL	L 03.00 IT CREST 3 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	5. EMBJ DENSITY 6. PIPE 7. THE FOR DR EMBANK ANY SEI	ANKMENT MATERIAL SHALL BE COMPACTED 'IN ACCORDANCE WITH ASTM D698. SCH 40 OR GREATER SHALL BE USED. DETAILS SHOWN ON THESE SHEETS PERT. ININGE AREAS LESS THAN 15 ACRES. SEI	TO AT LEAST 95 PERCENT OF MAXIMUM AIN TO STANDARD SEDIMENT BASIN(S) E CONSTRUCTION DRAWINGS FOR ET, AND OUTLET PROTECTION DETAILS FOR
AC) (FT) (I	HD N) 5/16"	August 2013 Urban Drainage and Fl Urban Storm Drainage Cri		3-5 SB-6	Urban Drainage and Flood Co Urban Storm Drainage Criteria	
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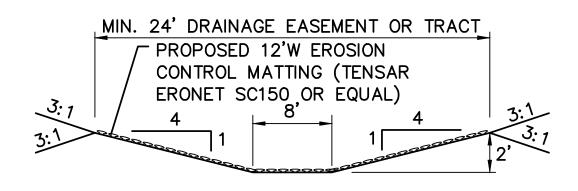




Table	MD-7-	-Classification	and	Gra

Riprap Designation	% Smaller Than Given Size by Weight	Intermediate Rock Dimensions (inches)	d ₅₀ (inches)*
Type VL	70-100	12	
	50-70	9	
	35-50	6	6**
	2-10	2	
Type L	70-100	15	
	50-70	12	
	35-50	9	9**
	2-10	3	
Туре М	70-100	21	
	50-70	18	
	35-50	12	12**
	2-10	4	
Туре Н	70-100	30	
	50-70	24	
	35-50	18	18
	2-10	6	
Type VH	70-100	42	
	50-70	33	
	35-50	24	24
	2-10	9	

* d_{50} = mean particle size (intermediate dimension) by weight. ** Mix VL, L and M riprap with 35% topsoil (by volume) and bury it with 4 to 6 inches of topsoil, all vibration compacted, and revegetate.

Basic requirements for riprap stone are as follows:

- Rock shall be hard, durable, angular in shape, and free from cracks, overburden, shale, and organic matter.
- Neither breadth nor thickness of a single stone should be less than one-third its length, and rounded stone should be avoided.
- The rock should sustain a loss of not more than 40% after 500 revolutions in an abrasion test (Los Angeles machine—ASTM C-535-69) and should sustain a loss of not more than 10% after 12 cycles
- of freezing and thawing (AASHTO test 103 for ledge rock procedure A). • Rock having a minimum specific gravity of 2.65 is preferred; however, in no case should rock have a specific gravity less than 2.50.
 - RIPRAP DETAILS (F)



radation of Ordinary Riprap



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	DATE	JPS 9/05/18	2/15/19	5/15/19	2/11/19		
Έ2	BΥ	Sdr	Sdl	Sdl	Sdr		
RESERV	REVISION	FINAL PLAT SUBMITTAL	COUNTY COMMENTS	COUNTY COMMENTS	COUNTY COMMENTS		
ЦЦ	No.	\triangleleft	\blacksquare	\triangleleft	\triangleleft		
NALDEN					AND DE LAILO		
HORZ. SCALE: AS SHO VERT. SCALE: AS SHO SURVEYED: RAMPA CREATED: 9/05/ PROJECT NO: 0402 SHEET:	WN RT ⁄18	DES		D: DDIF		BJJ JPS JPS /19 BJJ	

Markup Summary

dsdlaforce (1)

st will be revegetated. The specific revegetation ing: sr approved landscape plans r distarbed areas insertslidentify the temporary sediment basin in the phasing. Subject: Text Box Page Index: 4 Lock: Unlocked Author: dsdlaforce Date: 8/22/2019 1:56:02 PM Color:

Identify the temporary sediment basin in the phasing.