

STORMWATER MANAGEMENT PLAN

FOR LORSON RANCH EAST PHASE 1

Stormwater Permit # _____

Certification # _____

Owner/Developer:

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Contact: Jeff Mark
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SWMP Administrator:

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Engineers:

Core Engineering Group, LLC
15004 1st Avenue S.
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SWMP Location

On-site (copy) and Lorson, LLC (original)

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APPENDIX A: VICINITY MAP, FEMA FLOODPLAIN MAP, DISCHARGE PERMIT

APPENDIX B (EARLY GRADING & EROSION CONTROL PLANS BY REFERENCE ONLY, NOT ATTACHED)

- EXHIBIT 1: LORSON RANCH EAST (EARLY GRADING PLANS), DATED OCTOBER 20, 2017 (PHASE I)

APPENDIX C: STORMWATER INSPECTION REPORTS **(BY REFERENCE ONLY NOT ATTACHED)**

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APPENDIX E: RECORD OF STABILIZATION AND CONSTRUCTION ACTIVITY DATES

APPENDIX F: FEDERAL, STATE, OR LOCAL STORM WATER OR OTHER ENVIRONMENTAL INSPECTOR SITE VISIT LOG

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SWMP REPORT REVISION LOG

REVISION #	DATE	BY:	COMMENTS
1.			
2.			
3.			
4.			
5.			

1.0 INTRODUCTION

The proposed **Lorson Ranch East** development is currently farm and ranching land consisting of 274.585 acres. This SWMP report only covers Phase 1 which will disturb approximately 115 acres (on-site and offsite) in phase 1. The property is bounded on the west by The East Tributary of Jimmy Camp Creek, the east side by a 325' electric transmission line, and on the south by Peaceful Valley Estates, and the north by unplatted land in Lorson Ranch. The property drains generally southwest towards the East Tributary of Jimmy Camp Creek where runoff is treated/detained before discharge into Jimmy Camp Creek.

Lorson Ranch East Phase 1 consists of 300 residential lots and the supporting street infrastructure that will be graded in one phase. The future phases will require a separate SWMP report as they are constructed. Lorson, LLC is the overall developer and will construct major infrastructure (grading, roads, utilities, etc.) to serve the entire site. This Stormwater Management Plan (SWMP) will only cover construction activities that are provided as the overall developer. As the Lorson Ranch development progresses, this SWMP plan may need to be updated to reflect the revised scope of infrastructure.

The major infrastructure for **Lorson Ranch East** includes but is not limited to construction of residential streets, offsite/onsite utilities, and grading the site for residential lots. Detention/Water quality for this development is located in two on-site ponds which will also function as sediment basins. This on-site ponds will treat and detain stormwater runoff prior to discharging into The East Tributary of Jimmy Camp Creek.

The legal description for **Lorson Ranch East** is:

LEGAL DESCRIPTION:

A TRACT OF LAND BEING TRACT E, TRACT I, AND TRACT J OF "PIONEER LANDING AT LORSON RANCH FILING NO. 2", ACCORDING TO THE PLAT RECORDED UNDER RECEPTION NO. 217713888 IN THE RECORDS OF EL PASO COUNTY COLORADO, TOGETHER WITH A PORTION OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 14, AND TOGETHER WITH A PORTION OF THE SOUTH ONE-HALF (S1/2) OF SECTION 13, AND TOGETHER WITH A PORTION OF THE NORTH ONE-HALF (N1/2) OF SECTION 24, AND TOGETHER WITH A PORTION OF THE NORTH ONE-HALF (N1/2) OF SECTION 23, ALL IN TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO BEING MORE DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF "PIONEER LANDING AT LORSON RANCH FILING NO. 1", MONUMENTED BY A REBAR AND ORANGE SURVEYORS CAP STAMPED "RAMPART PLS 26965" FROM WHICH THE EAST ONE-QUARTER CORNER (E1/4) OF SAID SECTION 14, AS MONUMENTED BY A 2-1/2" PIPE WITH 3" GALVANIZED SCREW ON CAP ONLY PARTIALLY STAMPED, BEARS N89°42'02"E, A DISTANCE OF 1873.45 FEET AND IS THE BASIS OF BEARINGS USED HEREIN;

THENCE N89°42'02"E ALONG THE NORTH LINE OF "PIONEER LANDING AT LORSON RANCH FILING NO. 2", A DISTANCE OF 1460.77 FEET TO THE NORTHWEST CORNER OF TRACT E AND THE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED.

THENCE CONTINUING N89°42'02"E ALONG THE NORTH LINE OF TRACT E AND ALONG THE NORTH LINE OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 14, A DISTANCE OF 412.68 FEET TO THE EAST QUARTER CORNER THEREOF;

THENCE N89°32'06"E, ALONG THE NORTH LINE OF THE SOUTH HALF (S 1/2) OF SECTION 13, A DISTANCE OF 2686.16 FEET.

THENCE S00°52'02"E A DISTANCE OF 266.98 FEET TO A POINT OF CURVE,

THENCE ALONG THE ARC OF A CURVE TO THE LEFT SAID CURVE HAVING A RADIUS OF 533.00 FEET, A CENTRAL ANGLE OF 51°09'19", (THE LONG CHORD OF WHICH BEARS S26°26'41"E A DISTANCE OF 460.23 FEET), AN ARC DISTANCE OF 475.88 FEET TO A POINT OF TANGENCY .

THENCE S52°01'21"E A DISTANCE OF 254.47 FEET TO A POINT ON THE NORTHWESTERLY LINE OF A 100 FOOT WIDE ELECTRICAL EASEMENT RECORDED IN BOOK 2665 AT PAGE 715 OF THE EL PASO COUNTY, COLORADO RECORDS .

THENCE S38°22'41"W ALONG SAID NORTHWESTERLY LINE, A DISTANCE OF 1384.65 FEET TO THE NORTHEASTERLY CORNER OF TRACT I "PIONEER LANDING AT LORSON RANCH FILING NO. 2".

THENCE S38°22'41"W, A DISTANCE OF 0.03 FEET.

THENCE S18°59'47"W, ALONG THE EASTERLY LINE THEREOF, 99.98 FEET.

THENCE N70°06'29"W, ALONG THE SOUTHERLY LINE OF SAID TRACT I, A DISTANCE OF 34.99 FEET.

THENCE S38°22'41"W, ALONG THE NORTHWESTERLY LINE OF AFORESAID 100 FOOT WIDE ELECTRICAL EASEMENT, 447.46 FEET TO THE EAST CORNER OF THAT PARCEL DESCRIBED IN SPECIAL WARRANTY DEED UNDER RECEPTION NO. 206041590 OF THE EL PASO COUNTY RECORDS.

THENCE N51°37'27"W ALONG THE NORTHEASTERLY LINE THEREOF, A DISTANCE OF 295.16 FEET TO THE NORTH CORNER THEREOF.

THENCE S38°22'33"W ALONG THE NORTHWESTERLY LINE THEREOF, A DISTANCE OF 295.16 FEET THE WEST CORNER THEREOF.

THENCE S51°37'28"E ALONG THE SOUTHWESTERLY LINE, A DISTANCE OF 295.16 FEET TO THE SOUTH CORNER THEREOF ON THE WESTERLY LINE OF AFORESAID 100 FOOT WIDE ELECTRICAL EASEMENT.

THENCE S38°22'41"W ALONG THE NORTHWESTERLY LINE THEREOF, A DISTANCE OF 2995.68 FEET TO A POINT OF A NON-TANGENTIAL CURVE.

THENCE ALONG THE ARC OF A CURVE TO THE RIGHT SAID CURVE HAVING A RADIUS OF 780.00 FEET, A CENTRAL ANGLE OF 11°45'40", (THE LONG CHORD OF WHICH BEARS N58°05'27"W A DISTANCE OF 159.83 FEET), AN ARC DISTANCE OF 160.11 FEET TO A POINT OF TANGENCY .

THENCE N52°12'37"W A DISTANCE OF 365.17 FEET TO A POINT OF CURVE.

THENCE ALONG THE ARC OF A CURVE TO THE RIGHT SAID CURVE HAVING A RADIUS OF 595.00 FEET, A CENTRAL ANGLE OF 51°48'35", (THE LONG CHORD OF WHICH BEARS N26°18'20"W A DISTANCE OF 519.88 FEET), AN ARC DISTANCE OF 538.03 FEET, TO A POINT OF TANGENCY.

THENCE N00°24'02"W A DISTANCE OF 473.91 FEET TO A POINT OF CURVE.

THENCE ALONG THE ARC OF A CURVE TO THE LEFT SAID CURVE HAVING A RADIUS OF 20.00 FEET, A CENTRAL ANGLE OF 90°00'00", (THE LONG CHORD OF WHICH BEARS N45°24'02"W A DISTANCE OF 28.28 FEET), AN ARC DISTANCE OF 31.42 FEET, TO A POINT OF TANGENCY.

THENCE S89°35'58"W A DISTANCE OF 133.65 FEET.

THENCE N86°49'27"W A DISTANCE OF 128.25 FEET.

THENCE S89°35'58"W A DISTANCE OF 232.72 FEET.

THENCE N00°24'06"W A DISTANCE OF 72.00 FEET TO THE SOUTHEAST CORNER OF "THE MEADOWS AT LORSON RANCH FILING NO. 3" ACCORDING TO THE PLAT THEREOF RECORDED UNDER RECEPTION NO. 213713396 IN THE EL PASO COUNTY RECORDS.

THENCE ALONG THE EASTERLY LINES THEREOF THE FOLLOWING THIRTEEN (13) COURSES.

- (1) THENCE N16°01'58"E A DISTANCE OF 99.99 FEET.
- (2) THENCE N27°11'53"E A DISTANCE OF 50.51 FEET.
- (3) THENCE N04°50'55"E A DISTANCE OF 216.26 FEET TO A POINT OF CURVE,
- (4) THENCE ALONG THE ARC OF A CURVE TO THE RIGHT SAID CURVE HAVING A RADIUS OF 269.76 FEET, A CENTRAL ANGLE OF 64°17'45", (THE LONG CHORD OF WHICH BEARS N34°59'08"E A DISTANCE OF 287.09 FEET), AN ARC DISTANCE OF 302.72 FEET, TO A POINT OF REVERSE CURVE.
- (5) THENCE ALONG THE ARC OF A CURVE TO THE LEFT SAID CURVE HAVING A RADIUS OF 30.49 FEET, A CENTRAL ANGLE OF 56°04'49", (THE LONG CHORD OF WHICH BEARS N38°38'23"E A DISTANCE OF 28.67 FEET), AN ARC DISTANCE OF 29.84 FEET, TO A POINT OF REVERSE CURVE.
- (6) THENCE ALONG THE ARC OF A CURVE TO THE RIGHT SAID CURVE HAVING A RADIUS OF 349.56 FEET, A CENTRAL ANGLE OF 44°40'15", (THE LONG CHORD OF WHICH BEARS N41°02'22"E A DISTANCE OF 265.69 FEET), AN ARC DISTANCE OF 272.54 FEET.
- (7) THENCE N44°09'15"E NON-TANGENT TO THE PREVIOUS COURSE, A DISTANCE OF 20.09 FEET.

(8) THENCE N06°46'10"E A DISTANCE OF 174.78 FEET.
 (9) THENCE N00°18'49"E A DISTANCE OF 51.25 FEET.
 (10) THENCE N54°41'02"W A DISTANCE OF 36.93 FEET.
 (11) THENCE N20°11'38"E A DISTANCE OF 214.89 FEET.
 (12) THENCE N10°51'46"E A DISTANCE OF 291.60 FEET.
 (13) THENCE N00°24'02"W A DISTANCE OF 232.81 FEET TO THE NORTHEAST CORNER OF AFORESAID "THE MEADOWS AT LORSON RANCH FILING NO. 3".
 THENCE S89°35'58"E ALONG THE NORTH LINE THEREOF, A DISTANCE OF 492.32 FEET TO THE SOUTHEAST CORNER OF FONTAINE BOULEVARD AS DESCRIBED IN SPECIAL WARRANTY DEED UNDER RECEPTION NO. 207107323 IN THE RECORDS OF EL PASO COUNTY, COLORADO.
 THENCE N00°24'02"W ALONG THE EAST LINE THEREOF, A DISTANCE OF 130.00 FEET TO THE NORTHWEST CORNER OF AFORESAID TRACT I, "PIONEER LANDING AT LORSON RANCH FILING NO. 2".
 THENCE S89°35'58"W ALONG THE NORTH LINE THEREOF, A DISTANCE OF 531.67 FEET TO THE SOUTHWEST CORNER OF TRACTE, "PIONEER LANDING AT LORSON RANCH FILING NO. 2".
 THENCE ALONG THE WESTERLY LINES THEREOF THE FOLLOWING FOUR (4) COURSES.
 (1) THENCE N08°50'55"E A DISTANCE OF 436.63 FEET.
 (2) THENCE N42°43'39"E A DISTANCE OF 313.13 FEET.
 (3) THENCE N45°28'23"E A DISTANCE OF 55.11 FEET.
 THENCE N00°17'57"W A DISTANCE OF 939.47 FEET TO THE POINT OF BEGINNING.

SAID TRACT OF LAND CONTAINS A CALCULATED AREA OF 274.585 ACRES MORE OR LESS.

2.0 SEQUENCE OF MAJOR ACTIVITIES – Exhibit 1 Construction

The anticipated date for beginning construction activities is February, 2018 and will be complete in December, 2018. Implementation of the storm water management plan should be in place prior to initiating construction activities. The anticipated sequence of construction is as follows:

Lorson Ranch East – Phase 1:

1. Installation of perimeter erosion control measures as shown on Exhibit 1.
2. Site Clearing/Grubbing and topsoil stockpiling.
3. Construct detention/sediment ponds
4. Rough grading of the site.
5. Construct underground storm for pond outlet pipes.
6. Construct underground water/sewer/storm.
7. Construct curb/gutter and pavement.
8. Final stabilize areas outside of ROW.
9. Construct gas/electric/cable/phone in the ROW areas.
10. Final stabilize ROW.
11. Final erosion control measures as areas are completed

3.0 PRE-DEVELOPMENT CONDITIONS

According to the current FEMA Flood Insurance Rate Map (FIRM) number 08041CO957 F and 08041C1000 F, this site is located within the 100-year floodplain. In 2013 the floodplain was modified per LOMR Case No. 14-08-0534P. There is an area north of Fontaine Boulevard that will require a CLOMR for placement of fill in the flood fringe. The CLOMR will also cover construction of a bridge/culvert crossing at Fontaine Boulevard and will be submitted/approved prior grading in that area. The CLOMR is not a part of this project but will be done prior to grading in the floodplain. Infrastructure for all phase 1 lots will be installed in the first phase. See Appendix A.

Existing Vegetation:

The site is currently undeveloped and has been used as a pasture for many years. Vegetation consists of native grasses that have been heavily grazed for years. There is no brush or trees within the area to be graded.

Existing Slopes:

Existing slopes are around 1-10% that direct runoff westerly to the East Tributary of Jimmy Camp Creek. The middle portions of The East Tributary of Jimmy Camp Creek was channelized 2013 and include 6:1 side slopes. No grading will be done in the East Tributary of Jimmy Camp Creek under this SWMP.

Existing Drainage Patterns:

The East Tributary of Jimmy Camp Creek flows from north to the south through Lorson East on the west side of the development. Pre-development drainage patterns on-site include flowing overland westerly to the East Tributary of Jimmy Camp Creek. The drainage patterns will remain the same after construction. Two new on-site detention ponds will be constructed with a new outlet structures and will treat/detain runoff prior to discharge into the East Tributary of Jimmy Camp Creek. The detention ponds will be used as a temporary sediment basins during overlot grading activities.

Existing Soil Types:

The following table summarizes the characteristics of the soil type.

Table 3.1: SCS Soils Survey

Soil	Hydro. Group	Shrink/Swell Potential	Permeability	Surface Runoff Potential	Erosion Hazard
2-Ascalon Sandy Loam - (4%)	B	Moderate	Moderate	Slow to Medium	Moderate
52-Manzanola Clay Loam (17%)	C	High	Slow	Medium	Moderate
54-Midway Clay Loam (5%)	C	High	Slow	Medium to Rapid	Moderate to High
56-Nelson – Tassel Fine Sandy Loam (50%)	B	Moderate	Moderately Rapid	Slow	Moderate
75-Razor Clay Loam (10%)	C	High	Slow	Medium	Moderate
108-Wiley Silt Loam (13%)	B	Moderate	Moderate	Medium	Moderate

The existing soil types have a moderate potential for erosion which can be mitigated by employing appropriate downstream construction BMP's before/during/after construction to limit

potential impacts to discharges. Based upon the location of the different soil types and type of construction, the contractor shall employ the most appropriate method of erosion control measures based on the El Paso County/City of Colorado Springs Drainage Criteria Manual, Vol. 2 or as directed by the SWMP administrator or his representative.

More detailed soils information can be found in the SCS soils survey for El Paso County.

4.0 DEVELOPED CONDITIONS

The overall drainage concept for **Lorson Ranch East** is to direct flow to two on-site detention ponds for Water Quality and detention prior to discharge into the East Tributary of Jimmy Camp Creek.

Proper erosion protection will be installed so no sediment enters the storm sewer system or is discharged offsite into the East Tributary.

Construction Site Estimates:

- Project Site: 274.585 acres
- Disturbed Area: 115 acres (Phase 1)

- Percent Impervious before Construction: 0%
- Runoff Coefficient before Construction: 0.35

- Percent Impervious after Construction: 60%
- Runoff Coefficient after Construction: 0.65

Receiving Waters:

- East Tributary of Jimmy Camp Creek.
- Description: The creek channel is a dry creek bed that flows water intermittently after significant rainfall events in the drainage basin. Most of the creek has been armored and channelized in 2013. The East Tributary north of Fontaine Boulevard will be armored at the same time as on-site grading is occurring but will be under a separate permit.
- Description of Storm Sewer System: There is no existing storm sewer system on the site. Construction will include a new storm sewer system that outlets into constructed detention ponds that flow into the East Tributary of Jimmy Camp Creek.
- Description of impaired waters or waters subject to TMDLs: The site contains no impaired waters or waters subject to TMDLs.
- Description of unique features that are to be preserved: There are no known protected plant species within the project limits.
- Describe measures to protect these features: There are no known protected plant species

Site Features and Sensitive Areas to be Protected:

Portions of this site are located within waters of the state (100-year floodplain) but they contains no other sensitive areas including wetlands or endangered species. Grading will occur in the creek under a 404 ACOE permit previously approved for the creek construction. Work in the East Tributary north of Fontaine Boulevard will be done under a separate permit by Kiowa Engineering Corporation.

5.0 POTENTIAL SOURCES OF POLLUTION AND CONTROL STRATEGIES

Potential sources of sediment to stormwater runoff include earth moving and concrete activities associated with grading and landscaping.

Potential pollutants and sources, other than sediment, to stormwater runoff include Trash, debris, line transfer, Dewatering, fueling and equipment failure.

A dewatering permit is not required

Construction activities produce many different kinds of pollutants which may cause storm water contamination problems. Grading activities remove rocks, vegetation and other erosion controlling surfaces, resulting in the exposure of underlying soil to the elements. Because the soil surface is unprotected, soil and sand particles are easily picked up by wind and/or washed away by rain or other water sources.

The following sections highlight the potential sources of pollution at the Project Site and list the “Best Management” strategies that will be used to prevent migration of pollution offsite. Chemical materials stored indoors or that have no reasonable chance of impacting storm water quality will not be discussed in this plan.

Materials of significance stored on the project site include:

- Sediment
- Concrete Washout
- Cement
- Trash & Debris
- Sanitary Wastes
- Fuels & Oils

5.1 Wind Erosion & Dust Control

Pollutant: Sediment

Best Management Strategies:

- Daily inspections will occur for areas experiencing excessive winds, vehicle traffic, or precipitation events.
- Water trucks will spray down dust on the project Site as needed to not impact adjacent properties.
- Attention will be given to prevent the over use of water in dust control operations to minimize any muddying of the surface and possible sediment transportation.

5.2 Vehicular Transport

Pollutant: Sediment Tracking

Best Management Strategies:

- Construct a stabilized construction entrance to provide ingress and egress of the site.
- Restrict access to the stabilized construction entrance.
- Fencing will be erected if problems with access control are evident.
- Maintain track out pads by fluffing up the rock material or by adding additional rock as needed.

- Inspect, sweep and clean adjacent streets where track out is evident.

5.3 Stockpiles

Pollutant: Sediment

Best Management Strategies:

- Locate stockpiles clear of any water flow paths.
- Locate stockpiles within the property boundary.
- Stockpiles will have erosion control devices as needed installed around the base to prevent the migration of soil.
- Topsoil stock piles and disturbed portions of the site where construction activity temporarily ceases for at least 14 days will be stabilized with temporary seed and mulch no later than 14 days from the last construction activity in the area.

5.4 Grading, Trenching, Export/Import

Pollutant: Sediment

Best management Strategies:

- Earth moving will be minimized by the engineering balancing of the site.
- Disturbed portions of the site where construction activity temporarily ceases for at least 14 days will be stabilized with temporary seed and mulch no later than 14 days from the last construction activity in the area.
- Seed bed preparation is not required if soil is in loose condition.
- Prior to seeding, fertilizer shall be applied to each acre to be stabilized in accordance with the manufacturer's specifications.
- If required seeding areas shall be mulched with straw to a uniformed cover. The straw mulch is to be tacked into place by a disk with blades set nearly straight.
- A site specific erosion control drawing has been developed showing the location of Best Management practices to be used during site construction.
- Where indicated on the erosion control plan, Best Management Practices will be installed.
- Material shall be in accordance with the plans and specifications and all construction shall be provided in accordance with the manufacturer's specifications.
- All BMP's will be inspected bi-weekly and cleaned/maintained as required.

5.5 Waste, Residual Concrete

Pollutant: Concrete, paint, and Phosphoric Acid

Best Management Strategies:

- A cleanup and washout area will be designated and posted.
- Subcontractors will be instructed on the locations and importance of the washout and cleanup areas. No on-site disposal is allowed.
- Instruct subcontractors to remove waste for which proper onsite disposal facilities are not provided back to their own facilities for ultimate transport, storage & disposal.
- Subcontractors and subcontractor employees are held responsible for improper washout.

5.6 Sanitary Facilities, Trash Containers & Littering

Pollutant: Bacteria, Ammonia, Trash

Best Management Strategies:

- Portable facilities will be regularly serviced to prevent excessive waste containment and overflow.

- All waste materials will be collected and stored in a container which will meet all local and any state solid waste management regulations.
- Trash dumpsters will be emptied prior to becoming 90% full or when debris control becomes an issue.
- Employees will be instructed on the importance of recycling and waste management, and will be held responsible for improper waste management.

5.7 Fueling, Hazardous Materials, Equipment Leakage, Fertilizer

Pollutant: Petroleum Hydrocarbons, Ethylene Glycol, Sediment

Best Management Strategies:

- MSDS sheets will be maintained in the project trailer for all onsite materials
- All dry materials such as cement will be covered and protected from rain.
- Secondary containment will be provided for stored fuel, oil, paint and any material classified as hazardous.
- Subcontractors are responsible for hazardous waste removal back to their own facilities for ultimate transportation, storage and disposal.
- Supplies will be kept onsite as necessary to control any potential spill.
- Employees will be held responsible for any illegal dumping.
- Seals will be checked by a qualified professional on all equipment and containers containing significant materials that could contribute potential pollutants and will be replaced as necessary.
- Equipment will be inspected by a qualified professional.
- Drip pans will be available for minor leaks and during fueling operations.
- Fueling nozzles, gauges, hoses, seals, and emergency shutoff valves will be inspected for leaks prior to use.
- Under no circumstances during fueling will the fueling hose/nozzle be left unattended.
- Fertilizers used will be applied only in the minimum amounts recommended by soil tests.
- Once applied, fertilizers will be worked into the soil to limit exposure to storm water.
- Stored fertilizer will be protected from exposure to precipitation and storm water runoff.

5.8 Dewatering – not needed. This shown for information only

Pollutant: Sediment, Oil and/or Grease and Phosphoric Acid

Best Management Strategies:

- All dewatering will be filtered through rock and/or woven geo mesh fabric.
- All dewatering will be tested for Pollutants per state guidelines weekly.

5.9 Concrete and Asphalt Batch Plant This shown for information only

There are no existing batch plants located on this project site and there are no proposed batch plants in the future.

6.0 BEST MANAGEMENT PRACTICES (BMP's)

Also refer to attached Erosion and Sediment Control notes and plans included in the site plans

6.1 – Erosion and Sediment Control BMP's

6.1.1 Minimize Disturbed Area and Protect Natural Features and Soil

All work will occur inside the limits of construction per the erosion Control Site Plan. See Exhibit

1

6.1.2 Phase Construction Activity

The sequence for the installation and removal of erosion and sediment control measures is as follows:

Perimeter control measures (silt barriers and fencing) installed at designated areas as noted on the site plans (Exhibit 1), cleaning of street surfaces during construction if applicable, site grading, installation of utilities, paving final and grading, installation of sod or other vegetation, removal of temporary practices and perimeter controls, and site cleanup.

6.1.3 Control Stormwater Flowing onto and through the Project

Narrative:

Offsite stormwater flows onto this project site from the East Tributary of Jimmy Camp Creek. Reconstruction of the East Tributary north of Fontaine Bouelvard will be performed under a separate permit. On-site stormwater will be directed to a detention ponds that will function as sedimentation basins so that no sediment enters the downstream receiving waters into the East Tributary.

6.1.4 Stabilize Soils

No disturbed area which is not actively being worked shall remain denuded for more than 14 calendar days unless otherwise authorized by the director. Temporary cover by seeding or mulching should be provided on areas which will be exposed for a period greater than 14 days before permanent stabilization can be achieved. Permanent cover should be provided on all areas as soon as possible, by means of seeding and mulching, straw or hay mulch is required. All soil stock piles and borrow areas must protected with silt fence within 14 days after grading. All slopes within the project limits that are found to be eroding excessively within two years of permanent stabilization shall be provided additional slope stabilization methods such as seeding and mulching.

Water is to be used for dust control. The Contractor will prevent the escape of this water and any sediment it may carry from the construction site.

6.1.5 Protect Slopes

Temporary stabilization will include the installation of silt fences on level contours spaces at 10-20 foot intervals. Slopes will be seeded and covered with hay, straw or erosion control blankets on slopes greater than 3:1 as needed to provide for temporary stabilization until vegetation is permanently established.

All slopes within the project limits that are found to be eroding excessively within two years of permanent stabilization shall be provided additional slope stabilization methods such as seeding and mulching. Where slopes are steeper than 3:1 erosion control blankets (per specification requirements) will be utilized for final stabilization.

6.1.6 Protect Storm Drain Inlets

Inlet protection will be installed as soon as storm drain inlets are installed and before land-disturbance activities begin in areas with existing storm drain systems.

At the Contractor's discretion, additional temporary erosion control practices to include rock bags and sand bag barriers may be installed to prevent sediment movement. Inlet protection will include rock bags erosion logs curb inlet sediment filters where an overflow capacity is

necessary to prevent excessive ponding in front of the curb inlet. Concrete block and wire screen inlet protection if used detail will be included Appendix C prior to installation, will be used where heavy flows are expected and where an overflow capacity is necessary to prevent excessive ponding around the inlet.

Inlet protection devices will be inspected and accumulated sediment will be removed as needed.

6.1.7 Establish Perimeter Controls and Sediment Barriers

Temporary stabilization will include the installation of silt fences on the downslope perimeter of project area. The silt fence will be trenched in on the uphill side 6 inches deep and 6 inches wide as detailed in the silt fence exhibit. Sediment will be removed when it reaches 1/3 the height of the fence. Silt fence will be inspected and replaced or repaired as needed.

6.1.8 Retain Sediment On-Site

Temporary sediment traps shall be installed to detain sediment laden runoff from small watersheds for a period long enough to allow sediment to settle before discharge into receiving waters. For small drainage locations smaller sediment traps should be used. At a minimum, silt fences, vegetative buffer strips or equivalent sediment controls are required for all down-slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal will be utilized. Sediment traps will be checked regularly for sediment cleanout. Sediments shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design volume of the wet storage. Sediment shall be disposed in suitable areas and in such a manner that will not erode or cause sedimentation problems.

The gravel outlets will be checked regularly for sediment buildup which will prevent damage. If the gravel is clogged by sediment, it shall be removed and cleaned or replaced.

An alternate to sediment traps are temporary sediment basins.

6.1.9 Establish Stabilized Construction Exits

The construction entrance will be established in the entry points of roads. The construction entrance will be at least 50 feet in length and approximately 12 feet wide and graded so runoff does not leave the site. The aggregate will be established at 8 inches thick on top of 4 inch minimum thick free draining material on top of geotextile and will consist of Type G dense graded material. A stabilized stone pad with a filter fabric under liner will be placed at points of vehicular ingress and egress.

6.1.10 Additional BMP's

BMP Schedule:

All Sediment and Erosion control BMP's (detailed below and only on BMP site map and details if utilized onsite) will be installed prior to any excavation or demolition and will be coordinated with the construction schedule.

As construction changes and new temporary BMP's are needed to control sediment and erosion temporary BMP's will be installed within 24 hours of inspection report.

Recommended BMP's:

ALL RECOMMENDED BMP'S WILL BE INSTALLED PRIOR TO EXCAVATION NEAR ANY SENSITIVE AREAS.

Culvert Inlet Protection will be used to protect existing and new culvert inlets. Inlet Protection Detail will be included in Appendix before using onsite. Removal of this BMP will occur only after vegetation is established to a minimum of 70% pre construction coverage and after removal of BMP all sediment builds up will be removed and the area exposed shall be seeded.

Silt Fence is to be installed in sensitive areas to protect stream channels, pond, and overland runoff. On this site it will be used to protect runoff from the slip pits. See Silt Fence Detail. Removal of this BMP will occur only after vegetation is established to a minimum of 70% pre construction coverage and after removal of BMP all sediment builds up will be removed and the area exposed shall be seeded.

Vehicle Tracking Control is needed at the main construction entrance location. Vehicle tracking control shall be installed at the edge of the construction staging area where construction vehicles regularly exit onto existing asphalt road. If sediment tracking occurs it will be cleaned within 24 hours.

See Vehicle Tracking Control Detail in Appendix C. Removal of this BMP will occur only after project is substantially complete and is ready for seeding operations; the area will then be seeded per specification with the rest of the project.

Check Dams (rip rap) will be used to reduce storm water velocities in drainage channels during construction as a temporary measure until permanent stabilization can be created and vegetation has been established. Check Dam Detail will be included in the the Appendix before using onsite. Removal of this BMP will occur only after vegetation is established to a minimum of 70% pre construction coverage and after removal of BMP all sediment build-up will be removed and the area exposed shall be seeded.

Portable Toilets: Portable toilets are brought in from a service contractor and will be maintained in accordance with standard waste disposal practices using vacuum trucks and place on stable ground to minimize risk of spillage. All portable toilets will be kept a minimum of 500' from any waterway.

Waste Disposal: If needed Roll offs will be utilized for standard construction waste. A qualified contractor will remove waste weekly and take to an appropriate dump site off this project.

6.1.11 Permanent BMP'S:

Re-vegetation:

During construction any disturbed area not being currently worked left dormant longer than 14 days will be re-vegetated per specification with native seed and mulched and crimped with weed free straw.

Final Stabilization will be considered complete when all disturbed areas have a minimum of 70% preconstruction coverage for the specification requirements. Then all temporary BMP's will be removed and the exposed areas left behind will be seeded.

6.2 Good Housekeeping BMP'S

6.2.1 Material Handling and Waste Management

The site will use a private refuse collector that will remove litter twice weekly. No less than one litter receptacle will be present at the construction site. In the event that unusual items such as tanks, cylinders, unidentified containers, etc. which could contain potentially hazardous materials are discovered or disturbed, the Fire and Rescue services will be notified. Litter and debris will be picked up and disposed of properly daily. Temporary toilet facilities will be located 500 feet away from any storm drain inlets and all waters of the state.

6.2.2 Establish Proper Building Material Staging Areas

A designated staging area will be used, location to be determined based on available space in the field and plans will be redline. The staging area will be contained per SWMP guidelines. All Equipment and Materials will be brought into the site as needed.

6.2.3 Designate Washout Areas

A concrete washout will be installed to detail as shown in the APPENDIX , and will be placed more than 500 feet away from any waters of the state.

6.2.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

During construction the site will be exposed to operation and maintenance of construction equipment. The contractor shall be responsible for all activities such as fueling, oil changing, lubrication and repair which require use of petroleum products. Such products shall be transported to and from the site in special trucks equipped for that purpose. No waste petroleum products, rags, residue, or equipment parts shall be left on site. In the event of a spill or leak, causing soil to be contaminated, that soil shall be excavated placed in sealed barrels and removed from the site for transport to an approved location for disposal.

See section 6.2.6 for the Spill Plan.

6.2.5 Control Equipment/Vehicle Washing

This activity will not be allowed onsite.

6.2.6 Any Additional BMPs

Additional BMP's will be added to this SWMP as needed.

6.2.7 Allowable Non-Stormwater Discharge Management

There are no visible natural springs or irrigation or other non-stormwater discharges anticipated to be encountered. The existing FMIC irrigation ditch was removed from this site in 2006.

6.2.8: SELECTING POST-CONSTRUCTION BMPs

Post Construction BMPs. Re-vegetation including seeding, mulching and erosion control blanket will be final BMP's. Permanent stabilization will be achieved with 70% pre construction vegetative establishment.

7.0 SPILL PREVENTION AND CONTROL PLAN

The SITE SUPERINTENDENT will act as the point of contact for any spill that occurs at this jobsite. The project manager will be responsible for implementation of prevention practices, spill containment / cleanup, worker training, reporting and complete documentation in the event of a spill. The ECO shall immediately notify the Owner, /Construction Manager, STATE and the

Local Fire Department in addition to the legally required Federal, State, and Local reporting channels (including the National Response Center, 800.424.8802) if a reportable quantity is released to the environment

7.1 SPILL PREVENTION BEST MANAGEMENT PRACTICES

This section describes spill prevention methods Best Management Practices (BMP) that will be practiced to eliminate spills before they happen.

7.1.a Equipment Staging and Maintenance

Store and maintain equipment in a designated area Reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials. Use secondary containment (drain pan) to catch spills when removing or changing fluids. Use proper equipment (pumps, funnels) to transfer fluids Keep spill kits readily accessible Check incoming vehicles for leaking oil and fluids. Transfer used fluids and oil filters to waste or recycling drums immediately following generation. Inspect equipment routinely for leaks and spills Repair equipment immediately, if necessary implement a preventative maintenance schedule for equipment and vehicles.

7.1.b Fueling Area

Perform fueling in designated fueling area minimum 50' away from federal waters Use secondary containment (drain pan) to catch spills Use proper equipment (pumps, funnels) to transfer fluids Keep spill kits readily accessible Inspect fueling areas routinely for leaks and spills

Hazardous Material Storage Areas

Reduce the amount of hazardous materials by substituting non-hazardous or Less hazardous materials.

7.1. c Hazardous Material Storage Areas

Minimize the quantity of hazardous materials brought onsite Store hazardous materials in a designated area away from drainage points.

7.1. d Unexpected Contaminated Soil and Water

- Investigate historical site use
- Perform all excavation activities carefully and only after the Owner/Construction Manager directed any activities

7.2 SPILL CONTAINMENT METHODS

The following discussion identifies the types of secondary containment that will be used in the event of a spill. Table 1 summarizes the containment methods for each potential source.

- **Equipment Staging and Maintenance Area.** An equipment leak from a fuel tank, equipment seal, or hydraulic line will be contained within a spill containment cell placed beneath all stationary potential leak sources. An undetected leak from parked equipment will be cleaned up using hand shovels and containerized in a 55-gallon steel drum for offsite disposal.
- **Fueling Area.** A small spill during fueling operations will be contained using fuel absorbent pads at the nozzle. The transfer of fuel into portable equipment will be performed using a funnel and/or hand pump and a spill pad used to absorb any

incidental spills/drips. Any leaking tanks or drums will have fluids removed and transferred to another tank, drum, or container for the fluids. A spill response kit will be located near the fueling area or on the fuel truck for easy access. The spill response kit will include plastic sheeting, tarps, over pack drums, absorbent litter, and shovels.

- **Hazardous Material Storage Area.** A spill from containers or cans in a hazardous material storage area will be contained within the storage cabinet these materials are kept in.

- **Unexpected Contaminated Soil.** If contaminated soil is encountered during the project, the Owner/Construction Manager will be notified immediately. Small quantities of suspected contaminated soil will be placed on a 6-mil plastic liner and covered with 6-mil plastic. A soil berm or silt fence will be used to contain the stockpile and prevent migration of contaminated liquids in the soil.

Table 1: Spill Prevention and Containment Methods

Potential Spill Source	Potential Spill Source
Equipment Staging and Maintenance Area	Spill containment pad, spill kit, pumps, funnels
Fueling Area (site equipment only)	Spill containment pad, spill kit, pumps, funnels
Hazardous Material Staging Area	Spill containment pad, spill kit, pumps, funnels
Unexpected Contaminated Soil	Plastic liner, plastic cover, soil berm, hay bales, lined super sacks

7.3 SPILL COUNTERMEASURES

Every preventative measure shall be taken to keep contaminated or hazardous materials contained. If a release occurs, the following actions shall be taken:

1. **Stop the Spill:** The severity of a spill at the site is anticipated to be minimal as large containers/quantities of Hazardous Materials (HM) are not anticipated. The type of spill would occur while dispensing material at the HM storage facility and would likely be contained in secondary containment. Thus, the use spill kits or other available absorbent materials should stop the spill.

2. **Warn Others:** Notify co-workers and supervisory personnel of the release. Notify emergency responders if appropriate. For site personnel, an alarm system will consist of three one second blasts on an air horn sounded by the person discovering a spill or fire. In the event of any spill, the Superintendent and Project Manager shall be notified **if the spill is 5 gallons or more the STATE will be contacted along with the Fire Department.**

3. **Isolate the Area:** Prevent public access to the area and continue to minimize the spread of the material. Minimize personal exposure throughout emergency response actions.

4. **Containment:** A spill shall only be contained by trained personnel and if it is safe to do so. **DO NOT PLACE YOURSELF IN DANGER.** Attempt to extinguish a fire only if it is in the incipient stage; trash can size or smaller. For larger spills, wait for the arrival of emergency response personnel and provide directions to the location of the emergency.

5. Complete a Spill and Incident Report: For each spill of a Hazardous Material a spill and incident report shall be completed and submitted to the Owner/Construction Manager and if applicable to the Engineer and the State of Colorado Department of Public Health and Environment

8.0 INSPECTIONS

8.1 Inspections

Inspections will occur at least every 14 days and within 24 hours of a precipitation event producing runoff, which from past experience this occurs with precipitation of 1/4 inch of rain or more, the primary site for tracking weather data and rainfall measurements will be taken from Weather Underground and a rain gauge will be onsite for verification only.

1. Inspection Personnel:

The contract Stormwater Inspector will conduct the site inspections as mentioned above in Section 1.

2. Inspection Schedule and Procedures:

The inspection schedule will be routinely accomplished every 14 days and after every storm event for the entire site with all BMP's evaluated for performance and need. Any BMP found to be ineffective will be re-accomplished or replaced with a new BMP to provide the level of protection needed. BMP's found to be no longer needed will be removed. Inspections will also be accomplished as soon as practical, but within 24 hours of the end of a precipitation event causing surface erosion, over 1/4" or more.

The general procedures for correcting problems when they are identified will be to document the problem in the log and devise a solution utilizing all resources available to formulate BMP's that will correct the problem as soon as possible.

A copy of the inspection report to be used for the site is attached. See Appendix.

8.2 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Authorized representatives for the SWMP plan will be: Jeff Mark – Primary Contact
SWMP INSPECTOR – Trevor Terril

9.0 RECORDKEEPING AND TRAINING

9.1 Recordkeeping

Records will be retained for a minimum period of at least 3 years after the permit is terminated.

Major grading activities will start on 02/2018:

Date(s) when construction activities permanently cease on a portion of the site: 12/2018

Date(s) when an area is either temporarily or permanently stabilized: 10/2018

9.2 Log of Changes to the SWMP

Any changes will be referenced in APPENDIX

9.3 Training

Individual(s) Responsible for Training:

All personnel on site will trained on the site specific SWMP requirements to be conducted by the SWMP Inspector and/or the site superintendent.

9.4 SWMP Location

The on-site SWMP will be located at the SE corner of Fontaine Boulevard and Old Glory Drive as indicated on Exhibit 1.

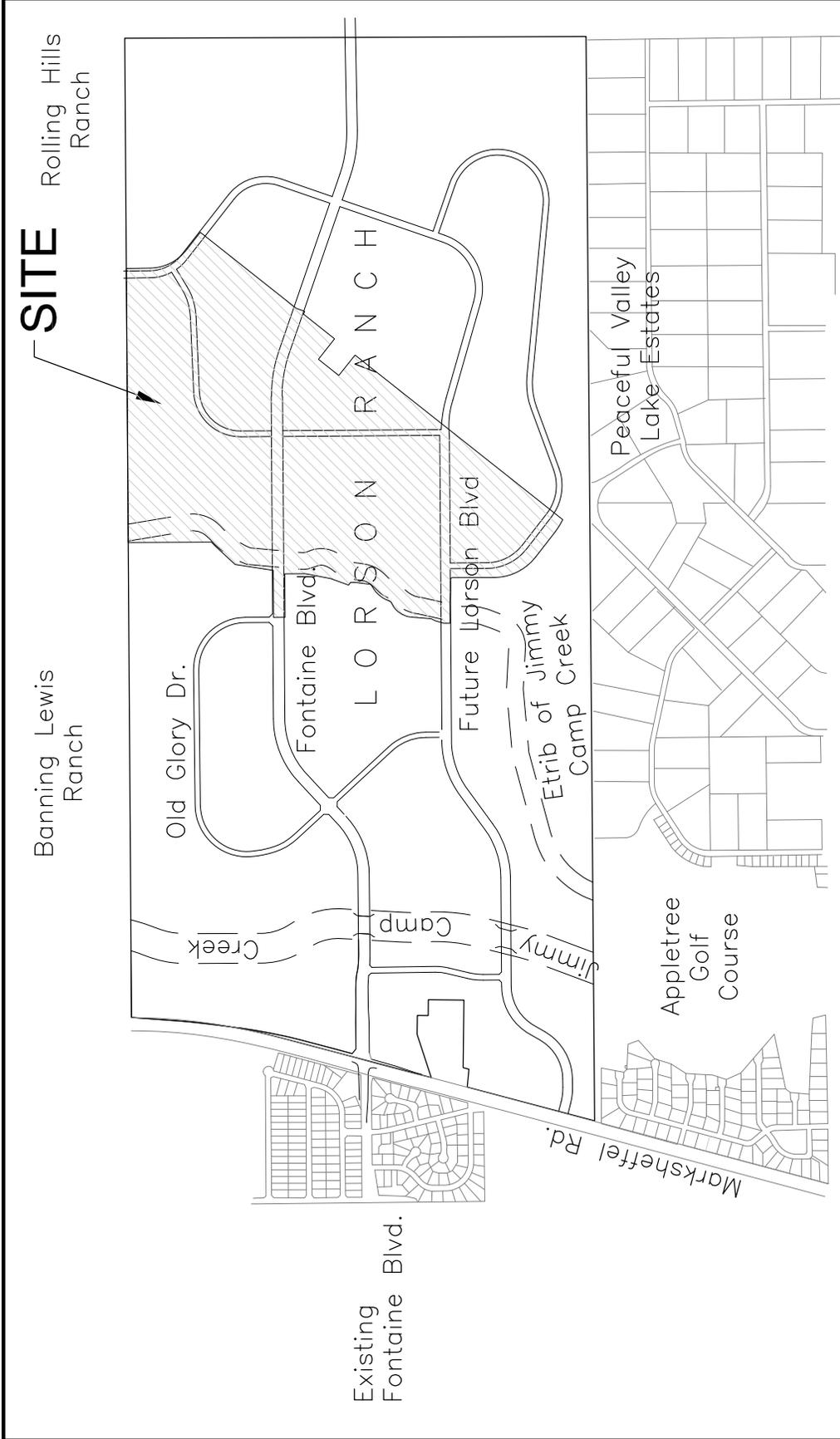
10.0 FINAL STABILIZATION

Final stabilization will be accomplished by contractors to re-vegetate the area of disturbance per the approved plans and specifications. Final stabilization will include permanent seeding/mulching of disturbed areas, sediment forebays, erosion control blankets, turf reinforcement mats, and permanent BMP's.

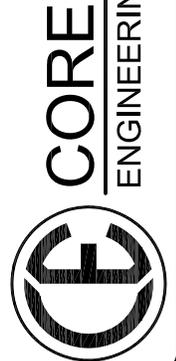
Once 70% of the pre-development vegetative cover has been established and has been accepted, temporary BMP's will be removed and the permit will be terminated and filed.

Final stabilization is anticipated to be completed in December, 2018

APPENDIX A



VICINITY MAP
NO SCALE



CORE
ENGINEERING GROUP

15004 1ST AVE. S.
BURNSVILLE, MN 55306
PH: 719.570.1100

CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

LORSON RANCH EAST
VICINITY MAP

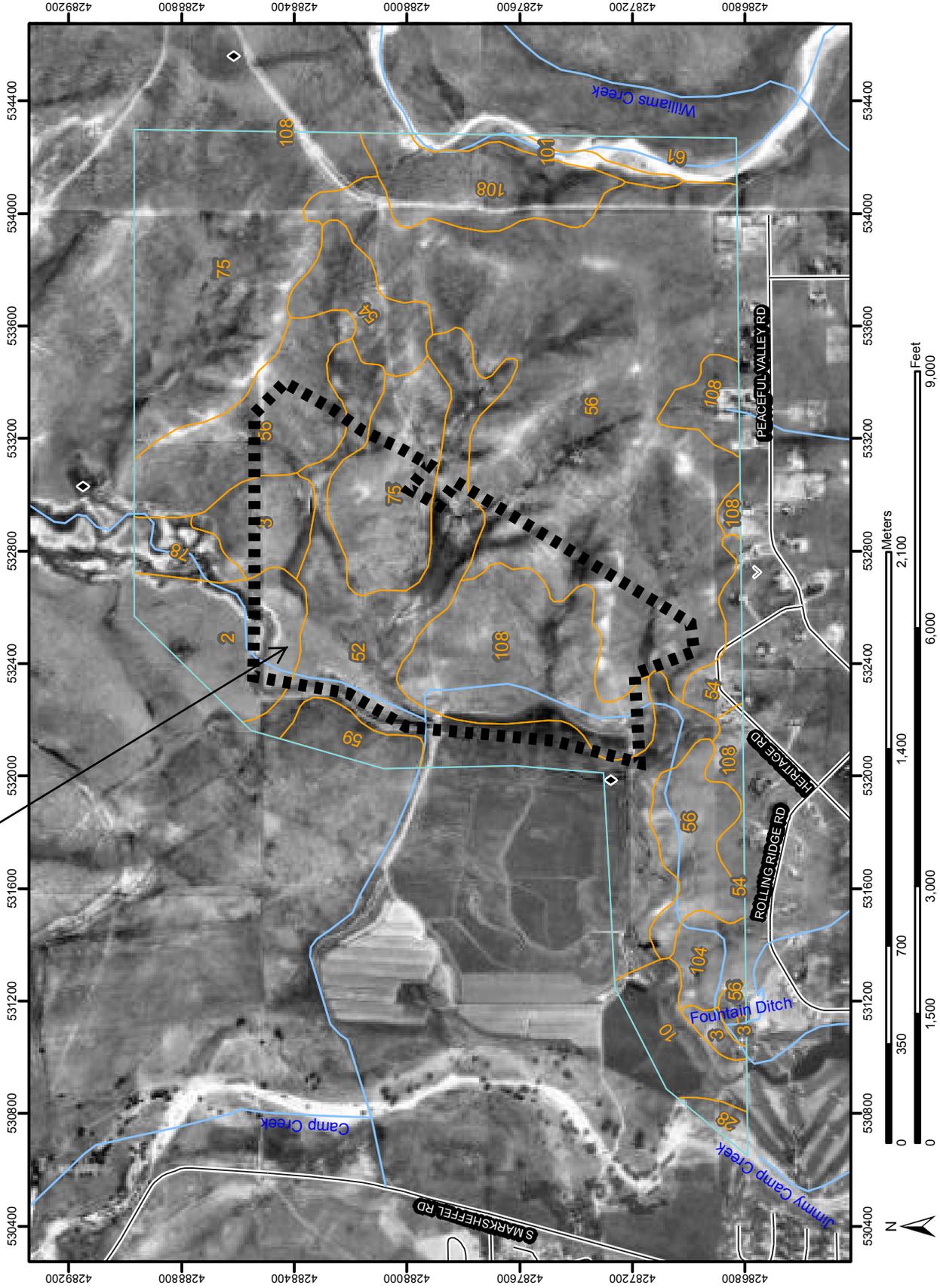
SCALE:
NTS

DATE:
JUNE 30, 2017

FIGURE NO.

Soil Map—El Paso County Area, Colorado
(LORSON RANCH EAST)

**PRELIMINARY
PLAN SITE**



Natural Resources
Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

Map Unit Legend

El Paso County Area, Colorado (CO625)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ascalon sandy loam, 1 to 3 percent slopes	54.4	4.2%
3	Ascalon sandy loam, 3 to 9 percent slopes	32.6	2.5%
10	Blendon sandy loam, 0 to 3 percent slopes	29.0	2.2%
28	Ellicott loamy coarse sand, 0 to 5 percent slopes	5.5	0.4%
52	Manzanola clay loam, 1 to 3 percent slopes	180.3	14.0%
54	Midway clay loam, 3 to 25 percent slopes	46.2	3.6%
56	Nelson-Tassel fine sandy loams, 3 to 18 percent slopes	476.6	37.0%
59	Nunn clay loam, 0 to 3 percent slopes	16.8	1.3%
61	Olney sandy loam, 3 to 5 percent slopes	18.8	1.5%
75	Razor-Midway complex	213.9	16.6%
78	Sampson loam, 0 to 3 percent slopes	16.4	1.3%
101	Ustic Torrifluvents, loamy	11.3	0.9%
104	Vona sandy loam, 1 to 3 percent slopes	17.4	1.4%
108	Wiley silt loam, 3 to 9 percent slopes	170.2	13.2%
Totals for Area of Interest (AOI)		1,289.3	100.0%



APPROXIMATE SCALE IN FEET
500 0 500

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
EL PASO COUNTY,
COLORADO AND
INCORPORATED AREAS

PANEL 957 OF 1300
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:
COMMUNITY

NUMBER PANEL SUFFIX
080060 0957 F
080059 0957 F
080061 0957 F

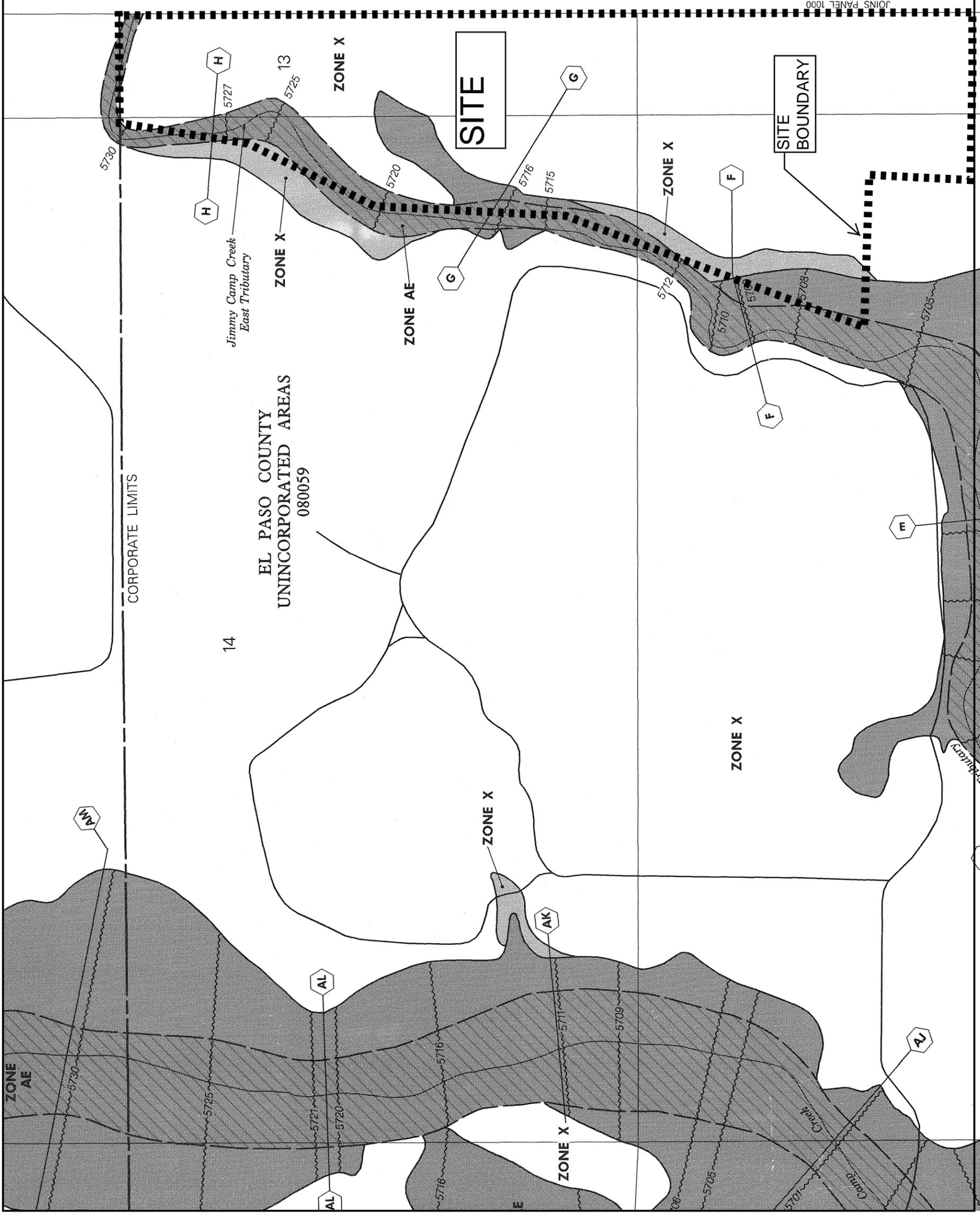
MAP NUMBER
08041C0957 F

EFFECTIVE DATE:
MARCH 17, 1997



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov





APPROXIMATE SCALE IN FEET
0 2000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
EL PASO COUNTY,
COLORADO AND
INCORPORATED AREAS

PANEL 1000 OF 1300
(SEE MAP INDEX FOR PANELS NOT PRINTED)

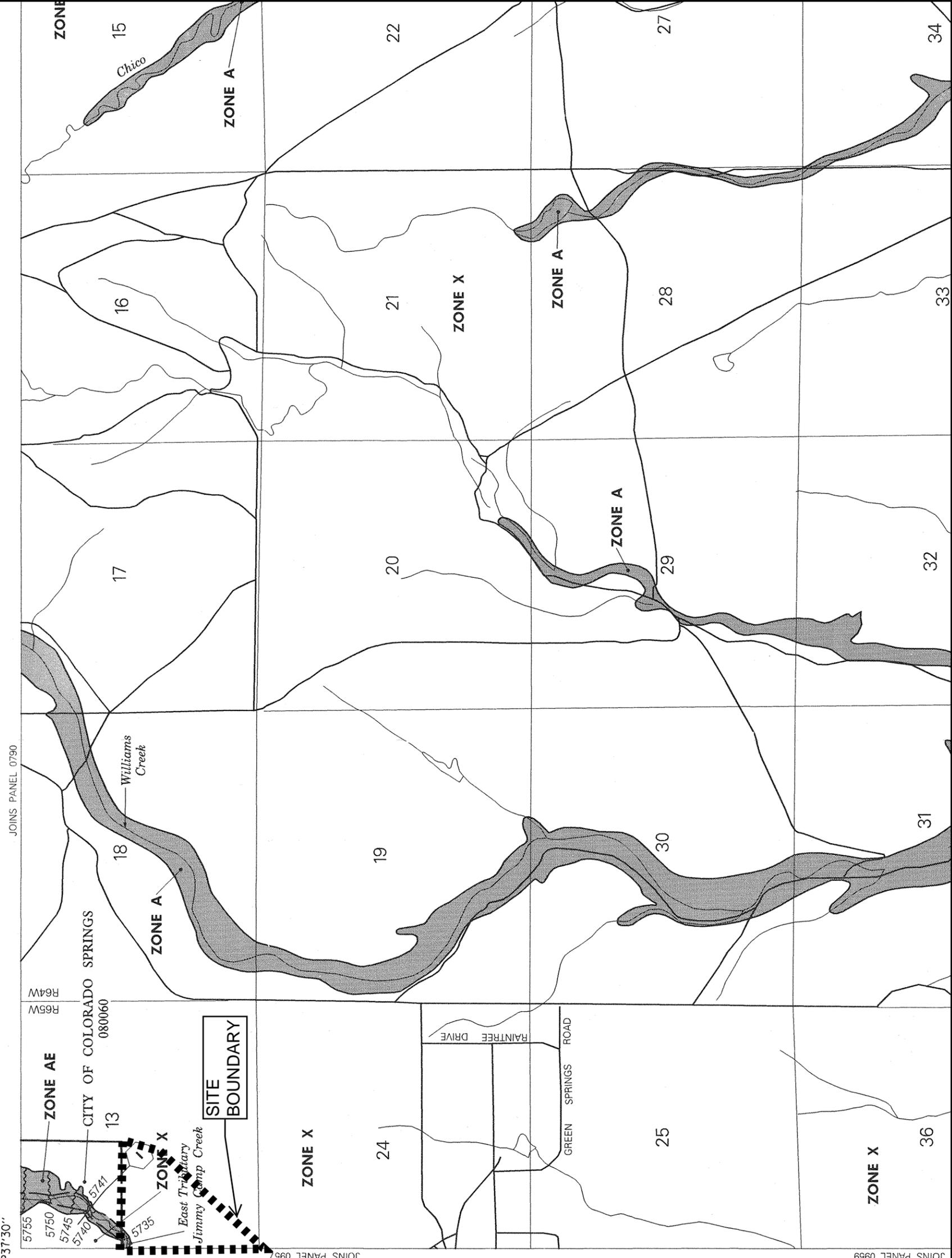
CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
	COLORADO SPRINGS, CITY OF	080060	1000	F
	EL PASO COUNTY UNINCORPORATED AREAS	080069	1000	F

MAP NUMBER
08041C1000 F
EFFECTIVE DATE:
MARCH 17, 1997



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



104°37'30"

45'00"

JOINS PANEL 0790

R64W
R65W

080060

ZONE AE

CITY OF COLORADO SPRINGS

13

5755
5750
5745
5740
5735

104°37'30"

East Tributary
Jimmy Camp Creek

ZONE X

SITE
BOUNDARY

RAINTREE DRIVE

GREEN SPRINGS ROAD

ZONE X

24

25

26

27

28

29

30

31

32

33

34

35

36

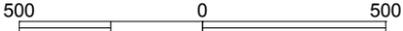
JOINS PANEL 0959

Legend

-  1% annual chance (100-Year) Floodplain
-  1% annual chance (100-Year) Floodway
-  0.2% annual chance (500-Year) Floodplain



APPROXIMATE SCALE IN FEET



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

EL PASO COUNTY,
COLORADO AND
INCORPORATED AREAS

**REVISED TO
REFLECT LOMR
EFFECTIVE: January 29, 2015**

PANEL 957 OF 1300

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COLORADO SPRINGS, CITY OF	080060	0957	F
EL PASO COUNTY UNINCORPORATED AREAS	080059	0957	F
FOUNTAIN, CITY OF	080061	0957	F

MAP NUMBER
08041C0957 F

EFFECTIVE DATE:
MARCH 17, 1997



Federal Emergency Management Agency

JOINS PANEL 0769

104°37'30"
38°45'00"

NOTE: MAP AREA SHOWN ON THIS
PANEL IS LOCATED WITHIN TOWNSHIP
15 SOUTH, RANGE 65 WEST.

CITY OF
COLORADO SPRINGS
080060

13

*Jimmy Camp Creek
East Tributary*

5730

5731

5733

5729

**REVISED
AREA**

5727

H

ZONE AE

5725

5724

5723

5722

5719

5711

G

5710

5707

SITE

**AREA REVISED BY LOMR
DATED AUGUST 29, 2007.**

EL PASO COUNTY
UNINCORPORATED AREAS
080059

**SITE
BOUNDARY**

5703

5704

PROFILE
BASELINE

23

*Jimmy Camp Creek
East Tributary*

5702

5699

E

5694

ZONE
AE

5693

D

5689

5690

5692

5696

5698

5697

E

5701

5700

ZONE AE

24

JOINS PANEL 1000

Legend

-  1% annual chance (100-Year) Floodplain
-  1% annual chance (100-Year) Floodway
-  0.2% annual chance (500-Year) Floodplain



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
EL PASO COUNTY,
COLORADO AND
INCORPORATED AREAS

PANEL 1000 OF 1300
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL SUFFIX
COLORADO SPRINGS, CITY OF	080060	1000 F
EL PASO COUNTY, UNINCORPORATED AREAS	080059	1000 F

REVISED TO REFLECT LOMR EFFECTIVE: January 29, 2015

MAP NUMBER
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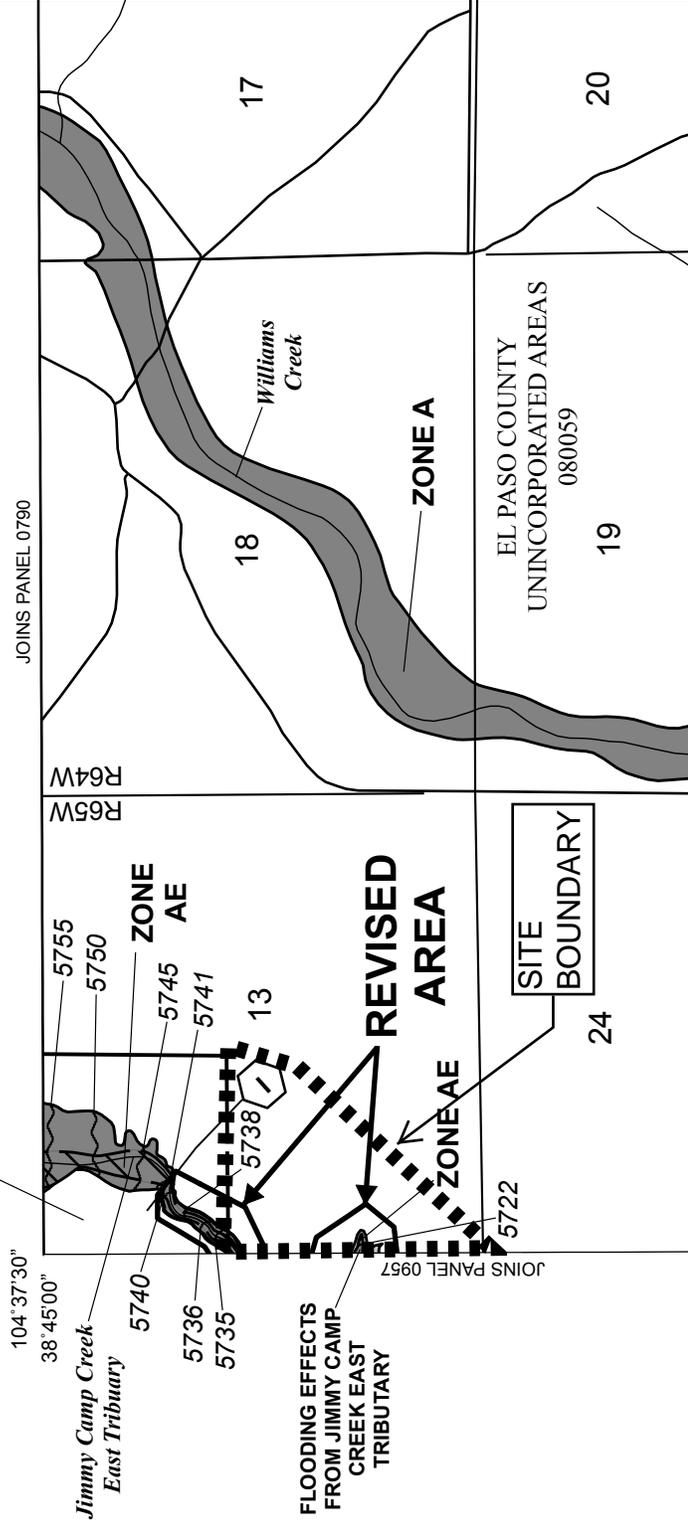
EFFECTIVE DATE:
MARCH 17, 1997



Federal Emergency Management Agency

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 15 SOUTH, RANGE 64 WEST AND TOWNSHIP 16 SOUTH, RANGE 65 WEST.

CITY OF
COLORADO SPRINGS
0800060



APPENDIX B

EARLY GRADING PLANS (BY REFERENCE ONLY)

APPENDIX C

STORMWATER INSPECTION REPORT

Stormwater Inspection Report

Project Name and Location: _____

Inspector Name and Title: _____ Director: _____

Date/Time of Inspection: _____ Weather Conditions: _____

Schedule Completion Date: _____ Construction Stage (circle all that apply):
 Clearing/Grubbing Paving Rough Grading Infrastructure Building Construction Final
 Grading Final Stabilization Terminate Permit _____

Type of Control	Describe status, identify problems, maintenance needs, or non-conformance with details or temporary alteration	Problem addressed (date and description of corrective action)
Structural:		
Silt Fence <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Tears/Holes <input type="checkbox"/> Burial <input type="checkbox"/> Sed. Accum. <input type="checkbox"/> Sediment bypass	
Const. Exit <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Voids Filled <input type="checkbox"/> Trackout	
Check Dam <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Sediment Accumulation	
Inlet Protection <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Sed. Accum. <input type="checkbox"/> Sed. Bypass <input type="checkbox"/> Application not appropriate	
Diversion Ditch/Berm <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Erosion <input type="checkbox"/> Stabilization	
Sediment Trap <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Sediment Accumulation	
Sediment Basin <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Sed. Accumulation <input type="checkbox"/> Bank erosion <input type="checkbox"/> Stabilization	
Discharge Point <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Erosion <input type="checkbox"/> Sediment Discharge	
Material Storage/Secondary Contain. <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Not shown on Site Map <input type="checkbox"/> Spills <input type="checkbox"/> Out of design. area <input type="checkbox"/> Improper storage: chemicals; solvents; paint; fuels, etc.	

Other Structural Controls <input type="checkbox"/> OK <input type="checkbox"/> N/A		
Non-Structural:		
Good Housekeeping <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Solid Waste <input type="checkbox"/> Sanitary Waste <input type="checkbox"/> Dust Control	

Project Name and Location: _____ Date: _____ Page 2

Equip. Wash/Maint. <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Spills <input type="checkbox"/> Outside designated area	
Concrete Washout <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Spills out of designated area <input type="checkbox"/> Not shown on Site Map	
Stabilization:		
Seed/Sod Mulching, Geotextile, Blankets <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Need Temp. stab. <input type="checkbox"/> Need final stab. <input type="checkbox"/> Health of veg.	
Record Keeping:		
Entrance Postings <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> NOI <input type="checkbox"/> Permits <input type="checkbox"/> Construction Site Notice	
SWPPP Notebook <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Missing Sections <input type="checkbox"/> Missing Forms	
Site Map/Details <input type="checkbox"/> OK <input type="checkbox"/> N/A	<input type="checkbox"/> Activities not up-to-date <input type="checkbox"/> Deviate from details <input type="checkbox"/> BMP Additions <input type="checkbox"/> Modifications <input type="checkbox"/> Not up-to-date	
Other <input type="checkbox"/> OK <input type="checkbox"/> N/A		

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Inspector's Signature

Date

APPENDIX D

SPILL REPORT FORM

Spill Report Form

Project Type and Location: _____

Spill Reported by: _____

Date/Time Spill: _____

Describe spill location and events leading to spill: _____

Material spilled: _____

Source of spill: _____

Amount spilled: _____ Amount spilled to waterway: _____

Containment or clean up action: _____

Approximate depth of soil excavation: _____

List Injuries or Personal Contamination: _____

Action to be taken to prevent future spills: _____

Modifications to the SWPPP necessary due to this spill: _____

Agencies notified of the spill: _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Contractor Superintendent

Date

APPENDIX E

**RECORD OF STABILIZATION AND
CONSTRUCTION ACTIVITY DATES**

SITE STABILIZATION and CONSTRUCTION ACTIVITY DATES

A record of dates when BMPs are installed or removed, stabilization measures are initiated, major grading activities occur, and construction activities temporarily or permanently cease on a portion of the site shall be maintained until final site stabilization is achieved.

MAJOR STABILIZATION AND GRADING ACTIVITIES

Description of Activity: _____

Site Contractor: _____ Begin (date): _____
End(date): _____

Location: _____

Description of Activity: _____

Site Contractor: _____ Begin (date): _____
End(date): _____

Location: _____

Description of Activity: _____

Site Contractor: _____ Begin (date): _____
End(date): _____

Location: _____



APPENDIX F

**FEDERAL, STATE, OR LOCAL STORM WATER OR OTHER
ENVIRONMENTAL INSPECTOR SITE VISIT LOG**

Federal, State, or Local Storm Water or other Environmental Inspector Site Visit Log

Inspectors Name: _____ Agency: _____

Contractors Representative Present: _____

Others Present: _____

Comments: _____

Time and Date: _____ Report Prepared:

Yes No

Inspectors Name: _____ Agency: _____

Contractors Representative Present: _____

Others Present: _____

Comments: _____

Time and Date: _____ Report Prepared:

Yes No

Inspectors Name: _____ Agency: _____

Contractors Representative Present: _____

Others Present: _____

Comments: _____

Time and Date: _____ Report Prepared:

Yes No

APPENDIX G
GENERAL PERMIT