

E-470 PUBLIC HIGHWAY AUTHORITY PERMIT MANUAL

SEPTEMBER 2025

E-470 Public Highway Authority
Permit Manual
Table of Contents

1.	INTRODUCTION	5
	1.01 Purposes	5
	1.02 Authorization	5
	1.03 Applicability.....	5
2.	DEFINITIONS	5
3.	PERMITTING PROCESS	8
	3.01 Permit Process	8
	3.02 Information Required in Permit Application	8
	3.03 Fees	9
	3.04 Insurance	9
	3.05 Payment, Performance and Warranty Bond	9
	3.06 Indemnification.....	10
4.	CONDITIONS ON GRANTS OF ACCESS TO AUTHORITY PROPERTY	10
	4.01 Access.....	10
	4.02 Trespass	10
	4.03 Suspension and Cancellation of Permit	11
	4.04 General Use of Multi-Use Easement	12
5.	GENERAL CONSTRUCTION REQUIREMENTS.....	12
6.	ALIGNMENT, COVER, CLEARANCE	14
	6.01 General Design Requirements.....	14
	6.02 Aerial and Ground-Mounted Electric and Communications Utilities.....	14
	6.03 Underground Electric and Communication Utilities	15
	6.04 Water, Sanitary Sewer, Natural Gas, and Hydrocarbon Pipeline Utilities	16
	6.05 Irrigation and Drainage Pipes, Ditches, Canals and Stormwater Drainage Facilities .	16

7.	TRENCHING, BORING, JACKING, ENCASEMENT.....	17
	7.01 General Requirements.....	17
	7.02 Trenched Construction and Backfill.....	17
	7.03 Trenchless Installations	17
	7.04 Utility Installations Near Drainage Ways and Watercourses.....	18
	7.05 Encasement of Utility Lines.....	19
8.	SAFETY AND CONTROL MEASURES	19
	8.01 Traffic Control	19
	8.02 Clear Roadside Considerations	20
9.	ENVIRONMENTAL CLEARANCES AND EROSION CONTROL.....	21
	9.01 Environmental Considerations	21
	9.02 Stormwater	22
10.	AUTHORITY FIBER OPTIC LINE (TOLL BELT MANAGEMENT SYSTEM)	22
	10.01 Procedures for Excavation.....	22
	10.02 Liquidated Damages	23
11.	PROTECTION, CONSTRUCTION AND RESTORATION OF AUTHORITY PROPERTY.....	23
12.	MARKERS, LOCATIONS AIDS AND LOCATION ASSISTANCE	24
13.	INSPECTION AND ACCEPTANCE.....	24
	13.01 Inspection	24
	13.02 Restoration	25
	13.03 Acceptance.....	25
	13.04 As Builts.....	26
14.	OPERATIONS AND MAINTENANCE	26
15.	WARRANTY	27
16.	FUTURE RELOCATION	27
17.	ABANDONMENT, RETIREMENT AND CHANGE IN OWNERSHIP	27

APPENDICES

Appendix A – E-470 Public Highway Authority Resolutions:

Appendix A-1 Resolution 04-01 Establishing A Policy Regarding Trespassers

Appendix A-2 Resolution 25-03- Stormwater Discharge Regulations

Appendix B - Construction Site Stormwater Management Manual

1. INTRODUCTION

1.01 Purposes

The purpose of the E-470 Public Highway Authority Permit Manual (the “Permit Manual”) is to implement the policies of the E-470 Public Highway Authority (the “Authority”) by providing a uniform and consistent process for accommodating utility and other development within Authority fee right-of-way and Multi-Use Easement (collectively, the “Authority Property”), while at the same time ensuring that the current and future operational needs of the Authority are not adversely affected.

The Permittee shall be responsible for the design, construction, installation, operation, maintenance, inspection and repair of all the facilities to be installed within the Authority’s Property. All aspects of the facilities are subject to prior review and approval by the Authority.

The Authority permit process is required for the following activities within the Authority Property:

- a. Installation of new utilities;
- b. Maintenance of existing utilities;
- c. Grading and landscaping;
- d. Development construction such as widening a cross street within Authority Property;
- e. Access for temporary, short term activities such as surveying, utility potholing or traffic control;
- f. Annual Access to the Authority Property for routine maintenance activities; and
- g. Other activities as considered by the Authority.

1.02 Authorization

This Permit Manual is promulgated pursuant to the Authority’s broad grant of power to operate and maintain the E-470 Public Highway under Sections 43- 4-501, et seq., C.R.S., the Public Highway Authority Law.

1.03 Applicability

This Permit Manual establishes uniform criteria and procedures governing the location, design and methods for installing, adjusting, accommodating, maintaining and relocating Facility Improvements, including Utility Improvements, on Authority Property.

The provisions of this Permit Manual shall apply to all publicly, privately, cooperatively, municipally or governmentally owned Facility Improvements that are to be accommodated, adjusted, relocated, installed or maintained within Authority Property, including:

- a. New Facilities to be installed in, on, along, over, across, through or under Authority Property.
- b. Existing Facility Improvements presently occupying Authority Property, including reconstruction, maintenance, modification, adjustment or relocation of existing Facility Improvements.

Where laws, rules, regulations or orders of any public agency or governmental authority or industry codes prescribe more stringent requirements than provided by the provisions of this Permit Manual, such laws, rules, regulations, orders or codes shall prevail.

When circumstances are encountered which make the literal application of the Permit Manual requirements impossible or impractical, alternate proposals may be submitted in writing by a permit applicant to the Authority for consideration. The Executive Director may waive provisions of this Permit Manual, upon receiving such written proposal, if he or she determines that literal application of the Permit Manual requirements is impossible or impractical and that variance from the Permit Manual requirements will not adversely impact operation or maintenance of the E-470 Public Highway.

2. DEFINITIONS

The following definitions shall apply to the terms used in this Manual:

- a. **As-Built** – shall mean plans which conform to the As-Built Standards set out at Part 13.04 of this Manual and which accurately depict the constructed horizontal and vertical alignment of the Facility Improvement and are produced under the supervision of a Colorado registered land surveyor or engineer.
- b. **Authority** – shall mean the E-470 Public Highway Authority
- c. **Authority Permit Manual or Manual** – shall mean this E-470 Public Highway Authority Permit Manual, as the same may be amended from time to time, previously referred to as the Utilities Procedure Manual and the Facilities Improvement Manual.
- d. **Authority Property** – shall mean the land owned, by easement or in Fee, or controlled by the E-470 Public Highway Authority, including without limitation the MUE and the Fee.
- e. **Clear Zone or Clear Recovery Area** – shall mean that portion of the roadside, within the Fee, free of nontransverseable hazards and fixed objects. The Clear Zone is an integral design feature of the E-470 Highway and is related to design speed, horizontal alignment and embankment slope. Utilities are to be located in a manner that preserves the measure of safety afforded by the Clear Zone. The Clear Zone width shall be established to avoid the need for traffic barriers as further defined in the AASHTO “Road Side Design Guide” (with current revisions), as it currently exists and as amended and updated by the AASHTO from time to time.
- f. **Construction Activities** – shall mean any activity that involves land disturbance, and activities and materials associated with the construction site, moving fences or signs or survey monuments, which include, but are not limited to clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials and borrow areas. Construction Activities does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the Facility.
- g. **Contractor** – shall mean any company or individual which has entered into a design/build or construction contract with the Authority, pursuant to which the company or individual has undertaken to negotiate with Facility Owners for the accommodation, installation, adjustment or relocation of facilities.
- h. **E-470 Highway** – shall mean the improvements comprising the E-470 Highway as currently existing and including any future expansion.
- i. **Facility** – shall mean any Surface Improvement or Utility Improvement.
- j. **Facility Owner** – shall mean any individual, public or private company, developer, political subdivision or Utility who owns or operates a Facility Improvement occupying or to be installed in, on, along, over, across, through or under Authority Property.
- k. **Fee** – shall mean the land owned by the Authority in fee simple at any given time.
- l. **Final Acceptance** – shall mean the form of approval granted by the Authority after all work authorized and required under the Permit has been completed to the Authority’s satisfaction and in accordance with all applicable laws, rules and regulations and the Authority has received As-Built’s satisfactory to the Authority.
- m. **Highway Structure** – shall mean any structure located in, on, along, over, across, through or under the Fee and constructed for the purpose of carrying water or vehicular, rail or pedestrian traffic over a depression, stream, obstacle, roadway, walkway or railroad.
- n. **Landscape Zone** – shall mean the portion of the MUE that is reserved for the accommodation of landscaping and which is generally the outer 25 feet of the MUE.
- o. **Longitudinal Utility Installation** – shall mean any Utility Improvement placed in, on, over, along, across, through or under Authority Property generally parallel to the mainline of the E-470 Highway.
- p. **MHFD** – shall mean the Mile High Flood District.

- q. **Municipal Separate Storm Sewer System or MS4** shall mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
- i. Owned or operated by a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having authority over disposal of
- r. **Multi-Use Easement or MUE** – shall mean the land on which the Authority owns, at any given time, an easement, generally located adjacent to the Fee, and generally designated for slope construction, drainage structures, access control, sight distance control, multi-use trails, and accommodation of Facility Improvements.
- s. **Person** – shall mean any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, interstate body, or other legal entity of any type whatsoever. Person shall not mean a person who uses the E-470 Highway solely for transportation purposes.
- t. **Permit or Authority Permit** – shall mean either an Authority Construction Permit/Permit to Occupy, Authority Construction Permit or an Authority Access Permit as the context may require.
- u. **Permittee** – shall mean the Person to whom the Permit is issued by the Authority.
- v. **Right-of-Way** – shall mean the 300' wide E-470 Highway roadway right-of-way owned in fee by the Authority.
- w. **Stormwater** – shall mean stormwater runoff, snow melt runoff and surface runoff and drainage.
- x. **Stormwater Facility** – shall mean facilities associated with flood control and water quality, including but not limited to flood control ponds and post-construction control measures.
- y. **Surface Improvement** – shall mean any landscaping, change to existing grade, irrigation or authorized surface use, other than a Utility Improvement, installed or maintained by any Facility Owner.
- z. **Surface Improvement Owner** – shall mean any individual, public or private company, developer or political subdivision who owns or operates a Surface Improvement occupying or to be installed in, on, along, over, across or through Authority Property.
- aa. **Transverse Crossing** – shall mean any Facility Improvement placed in, on, over, along, across, through or under Authority Property, generally perpendicular to the mainline of the E-470 Highway.
- bb. **Unsatisfactory Work** – shall mean work that does not conform to the requirements of this Manual, or does not conform to the requirements and conditions contained in the Person's Permit.
- cc. **Utility or Utilities** – shall mean any public or private communication, electric, light, power, gas, sanitary sewer, storm sewer, water or other pipeline company, developer or political subdivision authorized to do business under the laws of Colorado, which owns or operates a Utility Improvement occupying or to be installed in, on, along, over, across, through or under Authority Property.
- dd. **Utility Improvement** – shall mean any pipes, mains, conduits, cables, wires, towers, poles and other equipment and appliances, or connections thereto, installed or maintained by any Utility for the purpose of transporting, transmitting, furnishing and/or distributing hydrocarbons and the products thereof, electric power and energy, communications including telecommunications, water, storm sewer, steam, chemicals and/or sewage.
- ee. **Utility Zone** – shall mean that the portion of the MUE that is reserved for accommodation of utilities and which is generally 50 feet in width and nearest to the Fee.
- ff. **Work** – shall mean the following activities in, on, over, across, through, or under Authority Property: the installation, construction, reconstruction, maintenance, modification, adjustment or relocation of a Surface

Improvement or Utility Improvement; construction activities other than installing a Surface Improvement or Utility Improvement; and any activities that will affect the movement of traffic or traffic safety.

3. PERMITTING PROCESS

3.01 Permit Process

The following process shall be used for the application and execution of a Permit.

- a. Application Submittal. Depending on the nature and scope of the proposed Work, the Authority may require the submittal of construction plans, construction specifications, traffic control plans, erosion and sediment control plans, appropriate environmental documentation, proof of third-party permits, as well as geotechnical, traffic and drainage reports. Upon submittal of the all the required permit documentation, the Authority will conduct a review. This review may involve several Authority departments and typically takes 10 - 20 business days, although complex submittals may take longer to review. All comments received during the review will be provided to the applicant. The applicant will resolve all comments to the Authority's satisfaction, make appropriate revisions and re-submit the applicable portions for final review.

Permit applications which have sat dormant with no activity or response from the applicant for a period of three (3) months from the date of submittal of the permit application will be closed.

- b. Permit Fees. After all review comments have been addressed, the Authority will determine the Permit Fee and Administration Fee.
- c. Permit Issuance. A Permit will be issued after the Authority's final review, provided that performance bond and insurance certificates meeting the Authority's requirements have been submitted and approved and there are no other outstanding issues.
- d. Pre-Construction Meeting. When applicable, a Pre-Construction meeting will be scheduled by the Authority when the permit has been issued.
- e. Permit Close Out and Warranty. After the Work has been completed and punch list items identified during the final walkthrough identified and completed, the Work authorized under the Permit will be regarded as complete. The Permit will not begin the one-year warranty period until the Authority has received the final As-Built Plans. The Authority will not process any future Permits until As-Built Plans for the current permit have been submitted.

3.02 Information Required in Permit Application

- a. Letter of Request. Provide detailed description of the purpose, scope and nature of the proposed work together with location, schedule, anticipated traffic impacts to the Authority operations and any other relevant information to allow the Authority to fully understand the scope of work. Provide documentation that the owner concurs in the application, if the applicant is other than the Permittee.
- b. Permit Form. The application must be in writing on the Authority's prescribed form, which is available from the Authority's website.
- c. Insurance and Bond. The Permittee shall obtain and maintain at all times during the performance of work authorized by this Permit, insurance and bonds as described below.
- d. Plans. Applicant shall provide engineering plans that accurately depict the proposed work to be performed. Released for Construction plans shall be stamped by a Professional Engineer licensed in the State of Colorado. Plans shall be depicted on E-470 Highway As-Built in both Adobe Portable Document Format (PDF) and Microstation V8 or such other compatible format as required by the Authority. The Authority will supply the necessary As-Built on request. Plans at a minimum shall include:
 - i. Location map showing E-470 Highway and nearest intersecting streets and significant topographical features;
 - ii. Authority ROW and MUE boundaries relative to proposed work;
 - iii. Distance from edge of pavement;

- iv. Dimensions of proposed work within Authority ROW and MUE;
- v. Utility type (water, gas, phone, electric, fiber optic cable, oil, ~~stormwater~~, etc.);
- vi. Nature of installation (buried, overhead or attached to a highway structure);
- vii. Cross-section showing clearances from the proposed work to existing utilities and features such as the Authority's Toll Beltway Management System (TBMS) fiber optic line;
- viii. Other relevant logistical information such as work access routes, staging and parking areas.

A copy of the Permit and approved plans shall be kept on site during Work. Revisions or changes in scope of work from the authorized plans must be approved by the Authority. Permittee shall promptly notify the Authority's inspector of any unforeseen conditions which may occur during the Work.

- e. Stormwater Plans. Applicant shall provide a Stormwater Management Plan, erosion control plan and any third-party permit(s) required from CDPHE or another jurisdiction, if applicable, in accordance with the Construction Site Stormwater Management Manual attached as Appendix B.

3.03 Fees

Prior to issuance of the Permit, Permittee shall pay the applicable fees, as determined during the Permit review in accordance with the Authority Board Resolution No. 05-04. Permittee can obtain a copy of the current schedule of fees in effect from Authority staff, as described below.

- a. Permit Fee. The Authority charges and collects a Permit Fee for construction as set forth on the Authority's current fee schedule, unless waived or partially waived by the Executive Director. Fees for other miscellaneous construction activities, developments or improvements will be determined by the Executive Director on a case-by-case basis. The Authority charges and collects a Permit Fee for temporary occupation of Authority Property for activities such as grading, construction staging areas, bore pits, etc. in such amounts as set forth on the Authority's current fee schedule.

The Authority, in its sole discretion, may accept materials/services and/or other things of value to the Authority in lieu of cash payment for the Permit Fee from the Permittee in an amount determined by the Authority.

- b. Administration Fee. The Authority charges and collects an Administrative Review Fee to review permit applications and associated documentation and process the permit.
- c. Inspection fees. All inspections will be conducted by the Authority or a consultant working for the Authority and are for the benefit of the Authority. The Permittee may be required to provide material testing services for some construction activities to assure quality within Authority ROW. If a consultant inspector is employed by the Authority to oversee the work, the Permittee shall reimburse the Authority for all costs associated with the consultant's inspection and transportation (including travel time) at the rates as set forth on the Authority's current fee schedule. Inspection fees will be payable prior to the permit issuance and will be based on the Permittee's projected schedule.

3.04 Insurance

The Authority requires a Certificate of Insurance prior to authorizing commencement of any Work on Authority Property. Permittee and its contractor shall procure at their own expense and maintain in full force and effect for the duration of the Work, inclusive of warranty periods, if any, the minimum insurance coverages and limits set forth on the Authority's website <https://www.e-470.com/permits/>.

3.05 Payment, Performance and Warranty Bond

Prior to issuance of a Permit, the Authority may require the Permittee to provide the Authority with a Payment, Performance and Warranty Bond in a form acceptable to the Authority. The Payment, Performance and Warranty Bond shall be in a sum determined by the Authority. The Payment, Performance and Warranty Bond shall be increased to such amounts as directed by the Authority. Sample Payment, Performance and Warranty Bonds can be obtained on the Authority's web site (www.e-470.com) or by calling **303.537.3470**. The Authority will consider Payment, Performance and Warranty Bonds currently in effect between the Contractor and Permittee in satisfaction of this

requirement, provided that the Authority is named as dual obligee and accepts the terms of the Payment, Performance and Warranty Bonds. The Payment and Performance Bonds shall not be released until an acceptable As-Built has been submitted to the Authority.

3.06 Indemnification

Permittee shall indemnify, defend, and hold harmless the Authority and each of the governmental entities that is now or may in the future become a party to the Authority's Establishing Contract, and each of its directors, employees, agents, and consultants, from and against any and all claims, demands, suits, actions, proceedings, judgments, losses, damages, injuries, penalties, costs, and expenses (including reasonable attorneys' fees), and liabilities, of, by, or with respect to third parties ("Any Claims") to the extent they arise from or may be alleged to arise, directly or indirectly, in whole or in part, from the intentional or negligent acts or omissions of the Permittee or any of its subcontractors, material suppliers, agents, representatives, or employees, or the agents, representatives, or employees of any subcontractors or material suppliers in connection with the Permit and/or the Permittee's work hereunder, including, without limitation, any Claims which cause or allow to continue a condition or event which deprives the Authority or any of its directors or employees of its sovereign immunity under the Colorado Governmental Immunity Act, Sections 24-10-101, *et seq.*, Colorado Revised Statutes. Provided, however, that the Permittee shall not be liable for any claim, loss, damage, injury, or liability arising out of the negligence of the Authority, its directors, employees, agents, and consultants.

The obligations of the indemnifications extended by the Permittee to the Authority under this Section shall survive termination or expiration of this Contract.

Permittee's defense, indemnification, and insurance obligations shall be to the fullest extent permitted by law and nothing in the Permit shall be construed as requiring the Permittee to defend in litigation, indemnify, or insure the Authority against liability for damage arising out of the death or bodily injury to persons or damage to property caused by the negligence or fault of the Authority or any third party under the control or supervision of the Authority.

This indemnification shall be enforceable irrespective of whether the Authority shall have approved, either express or implied, the design, construction, installation, operation, maintenance or repair of such work within the Authority's Property.

4. CONDITIONS ON GRANTS OF ACCESS TO AUTHORITY PROPERTY

4.01 Access

Work on Authority Property shall not commence prior to issuance of a fully endorsed and validated permit. Permittee shall notify the Authority inspector at least two (2) working days prior to commencing work or resuming operations which have been suspended for five (5) or more consecutive working days. Work shall not proceed beyond the completion date specified in the Permit without the Authority's written approval.

Permittee shall obtain prior Authority approval for point of access onto and routes over Authority Property utilized in connection with the performance of work associated with the Permit.

4.02 Trespass

- a. Any unauthorized access or work performed on Authority Property without a Permit or any work performed on Authority Property in violation of any Permit requirements may be considered trespassing in accordance with the Resolution of the Board of Directors of the E-470 Public Highway Authority Establishing a Policy Regarding Trespassers adopted April 8, 2004, Resolution 04-01 and a violation of the Resolution of the Board of Directors of the E-470 Public Highway Authority Regarding Stormwater Discharge Regulations adopted September 11, 2025, Resolution 25-03.
- b. Violators may be subject to written warnings, cease and desist orders, fines or prosecution. Specifically, the Executive Director of the Authority, or his or her designee, is authorized under this Manual to take any of the following actions, in their discretion, against a violator:
 1. Issue a verbal warning explaining the requirement to obtain a permit/permission before entry onto Authority Property and/or the requirement to remain in compliance with the applicable Permit while on Authority Property

2. Issue a written warning explaining the requirement to obtain a permit/permission before entry onto Authority Property and/or the requirement to remain in compliance with the applicable Permit while on Authority Property
 3. Issue a written corrective order with a schedule to obtain compliance with the Permit requirements
 4. Issue an order to cease and desist trespassing or cease the performance of any activity on Authority Property and to immediately exit Authority Property.
 5. Impose a fine in an amount no greater than twice the amount of the applicable Permit Fee (for obtaining required Permit) per unauthorized entry, based on the totality of the circumstances including the danger to E-470 Highway users and whether the trespassing individual, or other persons employed by the individual's employer, has trespassed on Authority Property before.
 6. Contact law enforcement agents and request that the trespasser be prosecuted for third degree criminal trespass and any other relevant criminal offenses.
 7. Commence a civil action.
 8. Deny the issuance of future Permits for work on Authority Property.
- c. The Authority may remove any unauthorized work or improvements installed by a trespasser, at the trespasser's expense and prohibit future access until fines and expenses have been paid. The Authority may also bar a trespasser from any entry onto Authority Property until said trespasser has paid all imposed fines and any expenses related to the removal of unauthorized work.
 - d. If the individual trespasser is an agent, employee, officer, contractor or subcontractor of a Facility Owner or of a Facility Owner's contractor, the Authority may also impose a fine against the Facility Owner and/or the contractor in an amount no greater than twice the amount of the applicable Permit Fee (for obtaining required Access Permit or Construction Permit) per unauthorized entry. The Authority may bar the Facility Owner and/or contractor from entering Authority Property until it has paid all imposed fines and has applied for and received a valid Construction Permit or Access Permit.
 - e. An individual, Facility Owner or Facility Owner's contractor may appeal the imposition of a trespassing fine by filing a letter of protest with the Authority at the address listed below, which letter must be received by the Authority within thirty (30) days of the fine being imposed. The protest must be mailed to:

E-470 Public Highway Authority
Attn: Permit Coordinator
22470 E. Stephen D. Hogan Parkway, Suite 100
Aurora, Colorado 80018
 - f. Upon timely filing of a protest letter, the individual, Facility Owner or Facility Owner's contractor shall be entitled to a hearing before the Chief Engineer and Deputy Executive Director of the Authority, or their designee, regarding the imposition and amount of the fine. The Chief Engineer and Deputy Executive Director of the Authority, or their designee, may affirm, reverse or modify the fine imposed.
 - g. The individual, Facility Owner or Facility Owner's contractor may then file a written appeal of the decision of the Chief Engineer and Deputy Executive Director of the Authority with the Executive Director of the Authority within thirty (30) days of the date of the decision. If no such written appeal is filed, the decision of the Chief Engineer and Deputy Executive Director of the Authority shall be final. If a timely appeal is filed, the Executive Director or their designee may affirm, reverse or modify the decision and the Executive Director's or their designee's decision shall be final.

4.03 Suspension and Cancellation of Permit

In addition to the foregoing Section, the Authority inspector or its representative may suspend or stop work, or revoke

the Permit for any cause including but not limited to the following:

- a. Non-compliance with the provisions of the Permit.
- b. Adverse weather or traffic conditions.
- c. Concurrent E-470 Highway construction or maintenance in conflict with Permit work.
- d. Any condition deemed unsafe for workers or for the general public.

Work may resume upon disposal of grounds for suspension.

The Permit is subject to termination due to:

- a. Persistent non-compliance with the provisions of the Permit;
- b. Abandonment or transfer of ownership;
- c. Permit is superseded by a new permit covering the same installation;
- d. Conflict with planned E-470 Highway construction; and/or
- e. Any other reason at the sole discretion of the Authority.

Permittee must promptly terminate occupancy upon notice of cancellation of the Permit.

Where Permittee does not fulfill an obligation to repair or maintain any portion of the highway facility, or control and safely maintain the flow of traffic thereon, the Authority reserves the right, in lieu of canceling this permit, to accomplish the required work by any other appropriate means, and Permittee shall be liable for the actual costs thereof.

4.04 General Use of Multi-Use Easement

In certain locations, the Authority acquired an MUE adjacent to Fee for current and future slope construction, drainage structures, multi-use trails, access control, sight distance control, right of access, as well as installation, construction, reconstruction, relocation, maintenance and enlargement of utilities.

In general, a contiguous fifty feet of the MUE nearest the Fee is reserved for accommodation of utilities ("Utility Zone") and the outer twenty-five feet of the MUE is reserved for multi-use trail construction and/or landscaping ("Landscape Zone"). Surface Improvements shall not interfere with potential uses by the Authority.

Structures and signs that are not owned by the Authority are prohibited within the Fee or MUE.

The following permitted landscape improvements will be allowed within the MUE and are listed to provide guidance concerning the types of improvements that will not interfere with the Authority's use of the MUE:

- a. Within the Utility Zone:
 - 1) Landscaping shall consist of native grasses (Authority will provide a seed mix) and drought tolerant shrubs.
 - 2) Irrigated grasses and shrubs are allowed if irrigated by systems constructed outside of the Utility Zone. Maintenance and operation of irrigation systems will be by the Permittee.
 - 3) Irrigation trunk service lines will be allowed to cross the Utility Zone.
- b. Within the Landscape Zone:
 - 1) Landscaping may consist of native grasses, shrubs and trees.
 - 2) Irrigation systems are allowed. Maintenance and operation of irrigation systems will be by the Permittee.
 - 3) Paved parking may be permitted if there is no interference with the design or placement of multi-use trail, future slope, drainage structure construction or retaining walls.

Any surface improvements (including landscaping) within the MUE are only allowed in accordance with an Authority Permit and shall conform to the regulations and ordinances of the local jurisdiction.

5. GENERAL CONSTRUCTION REQUIREMENTS

- a. Median Crossings. Permittee shall not cross the E-470 Highway median but shall instead travel to the nearest interchange to safely change direction and access the other side of the highway.

- b. Preservation of Property and survey monuments. Permittee shall perform a pre-construction survey of all survey monuments and property corners and submit same to the Authority. Any monument marking the boundaries of Authority Property, the Fee or the MUE that is destroyed, disturbed, moved or otherwise damaged in any way shall be restored or replaced at the Permittee's sole expense in accordance with CDOT Specification 629.05. This includes documentation of the replacement monument by a Professional Land Surveyor with the State Board.

The Permittee shall restore any Authority Property that is damaged or disturbed during the monument restoration process. Such restoration shall include reinstatement of vegetation.

- c. Fencing. Any right-of-way, snow or deer fence damaged or removed due to construction or access requirements shall be re-established to its original position one foot inside the right-of-way boundary upon restoration of any destroyed, disturbed, or moved survey markers or monuments.
- d. Third Party Permits. Any additional permits and clearances required by federal, state or local government agencies, railroad companies and ditch companies are the responsibility of the Permittee.
- e. Laws. Permittee shall comply with all relevant laws, regulations, codes and other rules and requirements of all relevant government agencies, including those referenced in this Permit Manual, Denver International Airport, Centennial Airport and Buckley Air Force Base. Permittee shall specifically comply with any local ordinances regarding noise.
- f. Pavement. No paved surface shall be cut unless allowed as part of the Permit. Pavement removals shall be saw cut to assure a straight edge for patching. Pavement shall be replaced to a design equal to or greater than that of the surrounding undisturbed pavement structure. Pavement reinstatement shall be completed in accordance with CDOT specifications or the approved plans.
- g. Utility Locates. The contractor shall be responsible for contacting the Utility Notification Center of Colorado (Call before you dig), 811. Call two business days prior (not including the day of the call) to digging, grading or excavating for the marking of underground member utilities. The Authority will perform locates for Authority owned utilities.
- h. Design Standards incorporated by reference. The current versions of these documents at the date of the permit application shall be used.

Construction shall comply with the provisions of the most current and latest edition of the CDOT Standard Specifications for Road and Bridge Construction, and with the Colorado Standard Plans (M & S Standards).

All Utility installations shall be designed to, at a minimum, meet the following requirements, as applicable:

1. Electric power or communication facilities shall conform with all applicable Federal, State, and local jurisdiction codes.
 2. Pipelines shall conform with the applicable provisions of industry standards and Federal and State rules and regulations.
 3. Liquid petroleum pipelines shall conform with the most current and latest edition of the Recommended Practice for Liquid Petroleum Pipelines Crossing Railroads and Highways, American Petroleum Institute, Division of Transportation, API Recommended Practice 1102,
 4. Pipelines carrying natural or other gas shall conform to the rules and regulations of the US Department of Transportation, Title 49, CFR, Part 192.
 5. Any pipeline carrying hazardous liquids shall conform to the rules and regulations of the US Department of Transportation governing the transportation of such materials, Title 49, CFR, Part 195.
- i. Material Specifications. The Utility facility shall be of durable materials in conformity with accepted practice or industry standards, designed for long service life and relatively free from routine servicing or maintenance.

6. ALIGNMENT, COVER, CLEARANCE

6.01 General Design Requirements

- a. Location and alignment of Permittee's facilities shall be as specified in the Permit or as otherwise indicated in the approved plans or work sketch.
- b. It is the Authority's policy that whenever practical, all Utilities located within the Authority's Property shall be buried and that placement of aerial facilities shall be avoided.
- c. Parallel installations will not be permitted within roadways (including curbing and/or shoulders) or median areas.
- d. Parallel installations should be located as close as practical to the outer edge of the MUE (landscape) area. Crossings shall be as nearly perpendicular to the E-470 Highway as feasible.
- e. Parallel installations shall follow a uniform alignment, wherever practical. Due consideration must be given to conserving space available for future utility accommodations. The standard allowable deviation from the approved horizontal alignment is ± 18 inches.
- f. Minimum cover shall conform to the standards herein. Normal specified cover will be 48 inches or greater; reduced cover may be approved where site conditions warrant, subject to other safeguards as may be specified or approved in the permit. Minimum overhead clearance shall conform to the standards herein.
- g. All proposed buried carrier pipes crossing the E-470 Highway shall be constructed of steel, cast iron or reinforced concrete pipe; or shall be encased; or shall be of such materials and design as may be approved by the Authority. Each question of carrier material and/or encasement requirements shall be considered on an individual basis, based on design data submitted by the Utility. The encasement shall extend completely across the access control locations and shall extend at least from the toe of slope to the toe of the opposite slope of the proposed ultimate E-470 Highway configuration, or as otherwise directed by the Authority.
- h. Due to the restricted available space within the Authority's MUE, some utilities may be located within the same footprint as pre-existing utilities but at a different depth. The vertical and horizontal clearances between utilities will be determined based on the various codes for the individual utilities as agreed between the Utility.

6.02 Aerial and Ground-Mounted Electric and Communications Utilities

- a. Aerial Utilities within Authority Property shall be located as close as practicable to the outer edge of the MUE (landscape) area so as not to interfere with normal E-470 Highway maintenance and to minimize conflicts and avoid the need for future relocation. Location shall be such that the Utility will present the minimum danger to the E-470 Highway users. Down guys and anchors shall not be placed upon the cut or fill slopes or within the clear zone.
- b. No ground mounted utilities shall be allowed in the highway median or in permanent water quality facilities.
- c. The minimum vertical clearance to overhead installations shall be as required by the current National Electrical Safety Code ("NESC"), U.S. Department of Commerce, National Bureau of Standards.
- d. Aerial longitudinal utility installations on Authority Property will be limited to single pole construction. The Utility shall arrange for the joint use of single pole construction at locations where more than one utility is involved on the same side of the highway.
- e. The Authority shall review and accept utility plans with respect to location, the manner in which the utility facility is to be installed, measures taken to preserve safe and free flow of traffic, structural integrity of the roadway, highway structure or appurtenance, aesthetic quality of the highway, ease of maintenance, future roadway expansion, and integrity of the utility facility.
- f. Crossings shall be as nearly perpendicular to the highway as feasible.
- g. The vertical clearance for overhead power and communication lines above the highway, structure or ROW surface,

and the lateral and vertical clearance from bridges shall conform with the clearances as shown below in Table 1.

The minimum overhead clearance shall apply to conductors at maximum final sag conditions with specified thickness of ice at 32° F (no wind displacement), at 120° F (no wind displacement), or maximum conductor temperature for which the line was designed to operate, whichever produces the largest final sag. Additionally, the minimum overhead clearance must be maintained at the point where the conductor is nearest the roadway or ground surface, taking both sag of the line and variations in ground surface elevation into account. The minimum vertical clearances between the conductor and the structure, bridge, roadway or ground surface within the ROW shall be as listed in Table 1.

TABLE 1
Minimum Vertical Clearance Within Right-of-Way

Type of Conductor, Cable & Voltage	Over Roadway Template	Outside Roadway Template
Insulated communication conductors & cables; messengers; grounded or effectively insulated guys; effectively grounded neutral conductors; 230C1 supply cables.	24 ft.	20 ft.
Noninsulated communication conductors; supply cables 0-750 Volts (multiplex wire)	24 ft.	20.5 ft.
Open Supply Conductors 0 - 750 Volts	24 ft.	21 ft.
Open Supply Conductors >750 Volts to 22 kVolts	25 ft.	23 ft.
Voltages exceeding 22 kVolts to 50 kVolts	25 ft.*	23 ft.*
Voltages exceeding 50 kVolts	25.5 ft.**	23 ft.**
Communication lines (including fiber)	18 ft.	18 ft.

* plus 0.4 inch per 1,000 Volts in excess of 22 kVolts

** plus [0.4 inch per 1,000 Volts in excess of 22 kVolts] X [1.0 + (.03 per 1,000 feet above 3,300 feet above sea level)] or alternate method for voltages exceeding 98 kVolts

Voltages are phase to ground for effectively grounded circuits and those other circuits where all ground faults are cleared by promptly de-energizing the faulted section, both initially and following subsequent breaker operations.

6.03 Underground Electric and Communication Utilities

- The Utility shall place buried facilities at a cover depth of not less than ninety-six inches (96") from the lowest point of the Authority's Property surface.
- Where the Authority reasonably anticipates the Utility will need to expand its future line capacity along the same alignment as the permitted facilities, the Utility shall place spare conduit or duct, when directed in the permit, to accommodate such future needs and to avoid possible future disturbance to the highway or to traffic.
- The Utility shall locate pedestals, or other ground mounted appurtenances to a buried facility as near as practicable to the outer MUE line.

- d. If the Authority approves a variance for less than the minimum cover depth specified above, the Utility shall encase buried fiber optic communications lines either in a steel pipe of minimum 6 inches inside diameter and 0.25 inch wall thickness, or in concrete, Class B or better, of minimum 2 inches thick on all sides of the lines.

6.04 Water, Sanitary Sewer, Natural Gas, and Hydrocarbon Pipeline Utilities

- a. The Utility shall install pipeline facilities at not less than the following minimum depths of cover from the lowest point of the Authority's Property surface:
 - water and sanitary sewer pipelines—4 feet 6 inches or the local frost penetration depth, whichever is greater, or as directed by the Authority in the permit; and
 - natural gas transmission lines, mains, and service lines, and liquid hydrocarbon pipelines—48 inches, or as directed by the Authority in the permit.
- b. The Utility shall reroute, or protect the pipeline, as determined by the Authority, where less than the minimum cover described above is available for any reason, including conflict with other utilities, water table, or local codes.
- c. Joints in all pipelines operating under pressure shall be of mechanical or welded, or other leak-proof type of construction. The Utility shall not use mortar, grout, or other Portland cement materials as pipeline joint sealants.
- d. The Utility shall construct sanitary sewers of materials and install them in a manner that will minimize the potential for any leakage. Such sewer lines shall be located below and at a minimum of ten feet horizontal separation between pipes from all water lines and storm sewer lines. Where sanitary sewers are located such that any leakage that might occur could reach surface waters, the Utility shall establish a schedule for routine inspection of the sewer line. Any observed leaks from sanitary sewers within the Authority ROW shall be reported to the Colorado Department of Public Health and Environment (CDPHE) immediately upon discovery and repaired as soon as possible.
- e. Sanitary sewers larger than 24 inches, lift stations, and other certain wastewater treatment facilities are subject to the design criteria, design review and approval of the CDPHE-Water Quality Control Division (WQCD). Other Federal, State and local jurisdiction codes may also apply.
- f. Potable water treatment facilities and certain related distribution system facilities are subject to the design criteria, design review and approval of the WQCD. Other Federal, State and local jurisdiction codes may also apply.
- g. Thrust blocks shall be required on all vertical and horizontal bends in pressure pipes.

6.05 Irrigation and Drainage Pipes, Ditches, Canals and Stormwater Drainage Facilities

- a. Irrigation and drainage pipelines shall meet the applicable requirements for Water, Sanitary Sewer, Natural Gas, and Hydrocarbon Pipeline Utilities. The utility shall locate open ditches and canals in conformance with the general requirements above for above ground utility accommodations.
- b. Irrigation facilities shall be constructed as directed by the Authority.
- c. Drainage pipelines carrying any type of wastewater effluent must be approved and receive a CDPS permit from the CDPHE-WQCD.
- d. Stormwater Drainage Facilities: The Code's definition of "utility" includes "storm water not connected with highway drainage." Stormwater facilities constructed within the Authority ROW which carry stormwater originating outside of the Authority ROW and pass through the Authority ROW without any connection to highway drainage are subject to the provisions of these permitting requirements.
 - When a utility permit must be obtained to install or perform maintenance on storm drainage facilities, the design and construction of such facilities shall conform to CDOT and AASHTO standards and specifications. All plans must be submitted to the Authority for approval. Detailed design or construction requirements may be specified in the utility permit.
 - Stormwater originating outside of the Authority ROW which flows into the Authority ROW and mixes with highway drainage shall be subject to permitting requirements.
 - Connections of other stormwater drainage systems to the Authority's highway drainage system shall

be submitted for to the Authority for approval.

7. TRENCHING, BORING, JACKING, ENCASEMENT

7.01 General Requirements

- a. Unless otherwise specified, buried crossings shall be bored or jacked beneath the roadway, at least from toe of slope to toe of opposite slope of the proposed ultimate E-470 roadway configuration.
- b. Portals for un-trenched crossings more than five feet (5') in depth shall be bulk headed in conformance with OSHA construction and safety standards. Portal limits of un-trenched crossings shall be established safely beyond the highway surface and clear zone and in no case shall the lateral distance from the surfaced area of the highway to the boring or jacking pit be less than the vertical difference in elevation between such surface and the bottom of the pit. Water jetting or tunneling is not permitted.
- c. Water assisted boring may be permitted as determined by the Authority Inspector.
- d. Boring hole shall be oversized to the minimum amount required to allow pull-through of the conduit being installed. Resultant voids shall be grouted or otherwise backfilled, subject to Authority approval.
- e. Ends of bored sections shall not be covered before being inspected.
- f. Encasement shall be consistent with provisions below.
- g. The Authority may require protective casing for shallow installations or certain conduit materials. Encased crossings shall extend at least from toe of slope to toe of slope of the proposed ultimate E-470 roadway configuration, or the full width between the outer edges of the MUE.
- h. The Authority will require pavement surface monitoring of all utility crossings 6" and larger beneath the roadway. The Authority may require additional settlement monitoring in accordance with standard industry practice for larger utility crossings. These may be installed in the pavement shoulder as well as the supporting embankment and may include extensometers. This is to ensure the road pavement is not adversely affected by the Permittee's construction operations. The Permittee will survey the monitoring points for 3 days prior to construction and on a daily basis during construction and submit the results to the Authority inspector on a daily basis.

7.02 Trenched Construction and Backfill

- a. The Utility shall construct vertical-sided trenches, of uniform width, and no wider than the line diameter plus three feet, unless the Utility demonstrates to the Authority's satisfaction that such construction is impracticable.
- b. Shoring or bulk-heading shall comply with all applicable Federal, State and local jurisdiction construction and safety standards.
- c. The Utility shall provide drainage from excavation areas.
- d. The Utility shall not perform construction or compaction by means of jetting, puddling, or water flooding within the ROW; however, a limited amount of puddling may be allowed up to the springline of the pipe when free-flowing granular backfill materials are used, when necessary to obtain proper compaction of pipeline bedding.
- e. Unless otherwise directed or approved by the Authority, the Utility shall replace excavated material with flowable backfill as specified by the Authority within toes of slopes or place backfill in 6 inch layers, each consolidated by mechanical tamping and controlled addition of moisture to a density equal to or greater than that of the surrounding undisturbed soil outside toes of slopes.
- f. The Permittee shall test trench compaction for compliance as directed by the Authority.

7.03 Trenchless Installations

- a. Portal limits of un-trenched crossings shall be established safely beyond the highway surface and clear zone, and

in no case shall the lateral distance from the surfaced area of the highway to the boring or jacking pit be less than the vertical difference in elevation between such surface and the bottom of the pit.

- b. Shoring or bulk-heading shall comply with applicable Federal, State and local jurisdiction construction and safety standards.
- c. The Utility shall not use water jetting or tunneling, but water-assisted or wet boring may be permitted if determined by the Authority to not result in excessive erosion or unacceptable moisture conditions in the roadway subgrade.
- d. The boring hole shall be oversized to the minimum amount required to allow pull-through of the conduit being installed, based upon equipment and product manufacturer's specifications. If the oversize excavation is not already filled by the drilling slurry after product pull through, the void shall be grouted to the satisfaction of the Authority. Grout or other approved backfill material shall be used for pipe of 12 inches or more in diameter, and for overbreaks, unused holes or abandoned pipe. The composition of the grout shall be a cement mortar, a slurry of fine sand or fine granular materials, subject to Authority approval.
- e. The Utility shall follow manufacturer's guidelines and industry standards for equipment set-up and operation. The utility shall assess soil conditions to determine the most appropriate installation technique. Underground borepaths or tunnels shall be tracked and recorded by the utility. Failed bores shall be appropriately abandoned by the utility.
- f. Drilling fluids shall be prepared and used according to fluid and drilling equipment manufacturer guidelines. The utility shall use fluid containment pits at both bore entry and exit points, and shall use appropriate operational controls in order to avoid heaving or loss of drilling fluids from the bore.
 - i. Antifreeze additives shall be non-toxic and biodegradable products.
 - ii. Depending upon chemical composition or the specific method of disposal, improperly disposed drilling fluids may be classified as solid wastes or illicit discharges, and in general, shall be pumped or vacuumed from the construction area, removed from the ROW and disposed of at permitted facilities that specifically accept such wastes.
 - iii. Disposal of drilling fluids into storm drains, storm sewers, roadside ditches or any other type of man-made or natural waterway is strictly prohibited.

7.04 Utility Installations Near Drainage Ways and Watercourses

- a. The Utility shall not install any facility along or across the ROW of an irrigation ditch or canal company without first obtaining the written approval of such company.
- b. The Utility shall install facilities that cross a stream or other drainage only at a point beneath the bed of that watercourse and only at a depth that adequately allows for scour or ditch maintenance requirements. The Utility shall also take the added measures to protect such lines that the Authority deems necessary in areas subject to erosion or other disturbance.
- c. In establishing the depth of cover below an unpaved channel, the Authority will consider potential scour, ditch maintenance operations and/or future needs to increase the channel capacity. The utility line shall be installed a minimum of three feet below the lowest expected level of scour or degradation as determined by the Permittee's Engineer.
- d. Utility construction operations within or near live streams, ditches, wetlands or other bodies of water shall include adequate provision to protect or maintain surface and/or ground water quality, and may require appropriate clearances as described above.
- e. The Utility shall not install utility lines within culverts where the primary purpose of that culvert is to carry drainage. For culverts or culvert-like structures where the primary purpose of the culvert is something other than drainage, such as providing passage for livestock, wildlife, pedestrians or vehicles, utility installations shall be considered by the Authority on a case by case basis.
- f. In order to avoid any interference with the operations or maintenance of either utility lines or of drainage structures, the Utility shall not install utility lines inside any such drainage structure or inside the trench that surrounds any drainage structure, and shall maintain a horizontal and vertical clearance from any such drainage structure or surrounding trench if further directed to do so by the Authority in the utility permit.

7.05 Encasement of Utility Lines

The Utility shall protect buried utility lines and structure attachments, as follows:

1. Buried facilities which are subject to damage from construction or maintenance operations, as determined by the Authority, may require additional protective measures, such as: a concrete cap, Class B or better, minimum 4 inches thickness, the full width of the installation trench, concrete encasement, Class B or better, minimum 2 inches on all sides, and/or encasement in 0.25 inch wall thickness steel conduit, or other acceptable material, and/or a tunnel or gallery.
2. Where metal pipelines are installed in a corrosive environment and encasement is not employed, the Utility shall demonstrate that the welded steel carrier pipe will provide sufficient strength to withstand the internal design pressure and the dead and live loads of the pavement structure and traffic. Additional protective measures shall include: heavier wall thickness, higher factor of safety in design, or both, adequate coating and wrapping in accordance with industry standards, cathodic protection, and the use of Barlow's formula regarding maximum allowable operating pressure and wall thickness as specified in 49 CFR § 192.105. Corrosion protection shall be required for all steel carrier pipes. Cathodic protection shall be mandatory for natural gas and hazardous material pipelines in accordance with 49 CFR, Parts 192 and 195.
3. At locations subject to settlement or displacement, including but not limited to: areas of unstable ground, near highway structure footings, where the method of installation or use of flexible pipe may result in subsidence or reduced pavement support, a cradle or wall, casing pipe, concrete encasement, extra strength or heavy wall thickness pipe, or leak-proof construction shall be required.
4. Where water, high-pressure gas, or hazardous material pipelines are either in or suspended from a highway structure, a casing pipe shall be required.

The Utility shall utilize casing pipe: when necessary to facilitate bored or jacked installations, or to protect coated carrier pipes from damage during insertion, or as a means of conveying leaking fluids or gases to points safely beyond the traveled way, or when necessary to provide for the future adjustment, removal or replacement of the carrier line.

Where a casing is required and the use of a metal casing could defeat the cathodic protection circuit applied to a carrier pipe, the utility shall take the protective measures determined by the Authority to be appropriate in the circumstances, including: use of non-metallic casings, or use of carrier/ casing insulation systems, or cathodically protecting casing and carrier pipes as a unit.

The Utility shall use tunnels or galleries when determined by the Authority to be appropriate in the circumstances, including: where several utility lines must share a crossing location, or as a provision for future increase in line size or additional lines; or as a means of inspecting carrier lines in the crossing.

On highway crossing installations, the Utility shall extend any required protection at a minimum: beyond slope and ditch lines on uncurbed sections, or beyond the outer curbs on curbed sections or the full width between access control lines on expressways, freeways and Interstates. For installations other than crossings, the utility shall extend the protection as specified by the Authority.

8. SAFETY AND CONTROL MEASURES

8.01 Traffic Control

Whenever the work will affect the movement or safety of traffic, Permittee shall develop and submit to the Authority for acceptance a Traffic Control Plan ("TCP") for any work that will affect traffic movement or safety. The Permittee shall implement the TCP and utilize traffic control devices as necessary to ensure the safe and expeditious movement of traffic around and through the work site and also ensure the safety of the Permittee's work force. The TCP shall include provisions for the passage of emergency vehicles through the work zone, and shall conform to the requirements of the Americans with Disabilities Act.

The TCP and the application of traffic control devices shall comply with the Manual on Uniform Traffic Control Devices (MUTCD), and Colorado Supplement thereto, and with Authority requirements.

All work that requires traffic control shall be supervised by a registered professional traffic engineer or by a Traffic

Control Supervisor (TCS) certified by the American Traffic Safety Services Association (ATSSA) or the Colorado Contractors Association (CCA). All flaggers shall be certified and hold a current flagger certification card.

The TCS shall be responsible for the planning, preparation, coordination, implementation, maintenance and inspection of the TCP. The TCS shall monitor traffic control devices when in use during lane closures etc., and when devices are left in place for multiple days.

Permittee shall provide certification of the TCS as Worksite Traffic Supervisor, as such terms are defined in the MUTCD, by the American Traffic Safety Services Association or other recognized authority.

Permittee's traffic control plan shall be subject to the Authority's approval prior to commencing work on Authority Property. A copy of the approved TCP shall be available on site during work.

Permittee shall ensure that the TCP is reviewed and approved by the appropriate jurisdictions for any work that impacts traffic on adjoining cross-streets.

Any damage to any E-470 Highway facilities including traffic control devices shall be repaired immediately by Permittee at no cost to the Authority and prior to continuing other work. Any mud or other material tracked or otherwise deposited on the E-470 Highway shall be removed daily by Permittee, or as ordered by the Authority inspector.

During the implementation of the work, the TCP is subject to continued review by the Authority, and revisions may be required by unsafe, changed or unforeseen condition.

All work shall be planned to keep traffic interference to an absolute minimum. Permittee's operations shall not interfere with traffic during peak periods of traffic flow. The Permittee shall not work at night or on Saturdays, Sundays, or Public Holidays, except as approved by the Authority. The Authority may specify and/or restrict the Permittee's access to construct or service utility facilities during peak traffic flow or due to adverse weather, insufficient visibility, or other conditions not conducive to safe and efficient traffic operations. No work shall be permitted that impacts the mainline lanes and no traffic control devices shall be placed within two feet from the outermost solid white line on weekdays during the hours of 6:00A.M. – 9:00A.M. and 3:00P.M. – 7:00 P.M., on Public Holidays and on the day prior to Public Holidays.

8.02 Clear Roadside Considerations

The Authority is committed to providing a roadside area that is as free as practical from non-traversable hazards and fixed objects of 30 feet from the edge stripe of the nearest travel lane ("Clear Zone"). New above ground installations are prohibited within the Clear Zone. However, if the Authority determines that a new above ground installation may be permitted within the Clear Zone, the Utility shall provide countermeasures as directed by the Authority in the permit. Countermeasures shall include, without limitation: locations which minimize exposure to out-of-control vehicles, use of breakaway features, use of impact attenuation devices, and use of delineation and/or shielding.

Materials and equipment shall not be located or stored within the 30' Clear Zone. Permittee shall remove materials and equipment from the E-470 Highway ROW at the close of daily operations. The traffic control plan shall include adequate protective measures if materials and equipment are stored on Authority Property outside the Clear Zone.

Protection of open trenches and other excavations within highway ROW shall be addressed in the Permittee's traffic control plan. All excavations shall be closed at the end of daily operations, and no open excavation will be allowed in the clear zone after dark.

Permittee agrees to promptly undertake mitigating or corrective actions acceptable to the Authority upon notification by the Authority that the installation permitted herein has resulted in a hazardous situation for E-470 Highway users.

Parking within or upon the E-470 Highway of vehicle loading/unloading or other business-related activities is strictly prohibited.

Overnight staging of construction vehicles or construction materials/equipment outside the clear zone is subject to Authority approval.

Construction workers personal vehicles shall not be parked on Authority Property at any time during construction.

Access to perform permitted work shall be from the ROW fence wherever possible.

No equipment will be allowed on travel lanes at any time during construction without an approved Methods of Handling Traffic.

9. ENVIRONMENTAL CLEARANCES AND EROSION CONTROL

9.01 Environmental Considerations

- a. It is the responsibility of the Permittee to determine which environmental clearances and/or regulations apply to their activities and to obtain any clearances that are required directly from the appropriate regulatory agency prior to commencing work. Failure to comply with regulatory requirements may result in suspension or revocation of the permit, or enforcement actions by other agencies. The Authority shall not be responsible for any fines, penalties, or consequential damages imposed on the Permittee for violations of any environmental regulation, policy, or otherwise, brought against the Permittee. Further, the Permittee will be required to indemnify the Authority as described in Section 3.06 of this Manual.
- b. The permit shall list any specific environmental clearances or permits that the Authority has been notified by the Permittee or by the administering regulatory agency applicable to the operations authorized by this permit. The Permittee shall obtain the listed environmental clearances/permits prior to beginning work and provide a copy of the permits to the Authority. It is the sole responsibility of the Permittee to identify and secure all necessary environmental permits required to complete the work. Further, it is the sole responsibility of the Permittee to adhere to all environmental regulations, permits, approvals, etc., associated with the work authorized under the permit.
- c. Disturbance of environmental resources, including but not limited to, state and/or federally listed threatened or endangered species, wetlands, ground water, and other waters, migratory birds, floodplains, historic and/or archaeological resources, hazardous materials, air quality, etc., shall be avoided to the maximum extent practicable. Where disturbances cannot be avoided, the Permittee may need to secure approvals and/or permits, where applicable, and implement mitigation measures as appropriate. All costs associated with securing regulatory authorizations, and adhering to environmental regulations and authorizations, shall be borne exclusively on the Permittee and not the Authority.
- d. All discharges of stormwater or process water are subject to the applicable provisions of the Colorado Water Quality Control Act and the Colorado Discharge Permit Regulations.
- e. There shall be no disposal of hazardous materials in the right of way. Solid waste, including drilling fluids, shall be removed from the right of way and disposed of at a permitted facility or designated collection point (such as the Permittee's own dumpster).
- f. If pre-existing solid waste or hazardous materials contamination (including petroleum-impacted soil/groundwater, asbestos, chemicals, mine tailings, etc.) are encountered during the performance of work, the Permittee shall halt work in the affected area. The Permittee may need to secure the services of an environmental professional to assist in the evaluation of a discovery, and the proper management of suspicious materials.
- g. Spills shall be reported immediately to the Authority's Communication Center at (303) 537- 3400. Spills on the highway, into waterways, or that may otherwise present an immediate danger to the public, shall be reported by calling 911 or the Colorado State Patrol at (303) 239-4501, and the Colorado Department of Public Health and Environment at 1-(877) 518-5608. All costs related to management of spills shall be borne exclusively by the Permittee, and not the Authority.

9.02 Stormwater

- a. During construction, erosion and sediment controls must be implemented in accordance with the most current versions of the Authority's Non-standard MS4 stormwater permit, Colorado Water Quality Control Regulation 72, CDPS COR400000 Construction Stormwater Discharge Permit and Appendix B of this Manual.
- b. Any development or redevelopment project that disturbs one acre or more of land must obtain coverage under the Colorado Discharge Permit System (CDPS) General permit for Stormwater Discharges Associated with Construction Activities (COR400000). In locations within the Cherry Creek Reservoir Basin, erosion and sediment control requirements apply for disturbances less than one acre.
- c. Any development or redevelopment that disturbs less than one acre of land inside the Cherry Creek Reservoir Basin must implement erosion and sediment control measures described in this Manual.
- d. Construction phase stormwater controls must be designed, implemented, and maintained in accordance with CDOT standards or Volume 3 of the Mile High Flood District Manual unless justification is provided to the Authority for use of alternate construction stormwater control design criteria. The Authority may allow additional practices at its discretion. For multi-jurisdictional projects (CDOT, SEMSWA, Arapahoe County, Adams County, Douglas County, City of Aurora, City/County of Denver, City of Brighton, City of Commerce City, City of Thornton, Town of Parker, etc.), alternative criteria and or practices may be substituted as approved by the Authority.
- e. Prior to Permit issuance, Permittee shall develop an Erosion and Sediment Control Plan or Stormwater Management Plan (SWMP) for Authority review and approval in accordance with the Construction Site Stormwater Management Manual, Appendix B to this Manual.
- f. If the Authority is fined by the Colorado Department of Public Health and Environment or the Environmental Protection Agency because of the actions of the Permittee and/or its contractor(s), the Permittee will be responsible for indemnifying the Authority for any amounts paid by the Authority as a result, including the amount of any fines, consultant fees and attorneys' fees. If the Authority incurs any additional damages as a result, in whole or in part, of the Permittee and/or its contractors' failure to comply with BMPs, the Authority shall be entitled to recover the amount of damages from the Permittee and/or contractor.
- g. If the Permittee fails to perform the required inspections and if applicable, removal and proper disposal of unauthorized release(s) or discharges(s), the Authority may undertake any enforcement mechanisms as set forth in this Manual and the Construction Site Stormwater Management Manual attached as Appendix B to this Manual.
- h. The Authority will enlist the assistance of the Colorado State Patrol in enforcing the State Littering Statute, § 18-4-511, C.R.S., against any Person who deposits, throws or leaves any material, other than storm water, into a storm sewer system within the boundaries of the Authority in violation of the policy contained in Board Resolution 25-03 contained in Appendix A.
- i. The Permittee shall conduct any remediation required by the local, state or federal government, at Permittee's own cost. If Permittee fails to perform the required remediation, such remediation may be performed by the Authority and the Permittee shall reimburse the Authority for all costs and expenses that it incurs in connection with such remediation. If the Permittee fails to reimburse the Authority for the costs and expenses, the Authority may make a claim against the Permittee's Bond.

10. AUTHORITY FIBER OPTIC LINE (TBMS)

10.01 Procedures for Excavation

- a. Prior to any excavation, Permittee will arrange for all existing utilities, including the Authority's fiber optic Toll Beltway Management System (TBMS), to be located and marked. The TBMS backbone conduits shall be located in the vertical and horizontal planes using vacuum excavation or other pre-approved non-invasive procedure. The conduits must be physically observed by the Authority's inspector and their location recorded prior to work progressing. The Authority shall be notified at least forty-eight (48) hours prior to location of the conduit to allow inspectors to witness the procedure.
- b. Warning tape may be encountered between eighteen inches (18") and twenty-four inches (24") above the conduit.

- c. No new utility will be placed within four feet (4') vertically or horizontally of the TBMS backbone.
- d. In the event that the utility passes under the TBMS backbone, the conduits shall be supported in the following manner:
 - i. Bind the four TBMS conduits together at four foot intervals, minimum two (2) locations within excavation, using Mule tape or similar material.
 - ii. Support the backbone at three foot intervals, minimum two (2) locations along excavation.
 - iii. Support will be accomplished by suspending the backbone with Mule tape or similar strapping material to four inch by four inch treated timber posts, two inch steel pipe or number eleven rebars, placed perpendicular across the trench at ground level.
- e. In the event that the proposed utility crosses above the TBMS backbone, the above procedure to locate the TBMS will be followed as necessary. Once located, the backbone shall be backfilled a minimum of eighteen inches (18") and temporarily protected by positioning two - four by eight by one-quarter inch sheets of steel over the conduits until the new utility is installed and the trench backfilled.

10.02 Liquidated Damages

Cutting of the Fiber Optic Line. In the event that the Permittee or the Permittee's Contractor, in the performance of the work, damages the fiber optic line currently existing at the worksite, the Permittee understands and agrees that as a result of such event, the Authority will suffer substantial losses and damages, which the Parties are unable to ascertain at the time of the work. Such losses and damages may include the loss of telecommunications services to the Authority's Toll Beltway Management System and to other points of connection, as well as loss of revenues incidental to the operation of the E-470 Highway, reduced public confidence and adverse public relations which would reduce future tolls. The Permittee agrees to pay the Authority, as liquidated damages for damage to the operations of the fiber optic line, except when such damage is the sole result of the Authority's failure to accurately locate the line, the amount of \$50,000 per day/per occurrence, which amount the Parties agree is a reasonable estimate of the Authority's losses.

11.0 PROTECTION, CONSTRUCTION AND RESTORATION OF AUTHORITY PROPERTY

- a. The Permittee shall avoid disturbing or damaging all Authority Property, and shall be responsible for the prompt reconstruction, alteration, repair or maintenance of Authority Property, to repair any damage caused by the utility work, and to restore the Authority ROW to pre-existing or better conditions as may be specified in the permit.
- b. Cleated or tracked equipment shall not work on or move over paved surfaces without mats or pads on tracks.
- c. The Permittee shall not spray, cut or trim trees, or other landscaping elements, or remove any landscaping material, unless such work is specifically described in the permit application and approved in the permit.
- d. The Permittee shall employ erosion and sediment control measures, to protect storm water quality, in conformance with current Federal, State and local jurisdiction codes and CDOT standards. At a minimum, the Permittee shall employ the following measures, as applicable:
 - minimize the length of open trench; and
 - minimize the area of disturbance to ground cover and vegetation; and
 - manage necessary stockpiles in accordance with the permit requirements.
- e. The Permittee shall perform any required construction or restoration of Authority Property as directed by the Authority, permit requirements, and with current CDOT standard specifications and standard plans. Material removed from any portion of the roadway template must be replaced in like kind with better or equal compaction. Segregation of material is not permitted.
- f. All construction or restoration work shall be subject to Authority approval, and the Permittee shall promptly replace all unsatisfactory work as determined by the Authority.
- g. Except for landscaping and irrigation which must be maintained by the Permittee in perpetuity, the Permittee shall

maintain any such finished work for a period of twenty-four months following completion and acceptance, and shall post a bond to assure the adequacy of construction or maintenance.

- h. The Permittee shall remove all debris, refuse, waste, salvage, and surplus materials resulting from utility accommodation work from Authority ROW in a safe and expedient manner, daily during installation and upon completion of such work.
- i. The Permittee shall restore ditch flow lines and shall reseed or re-sod, as conditions dictate and in accordance with the Construction Site Stormwater Management Manual attached as Appendix B, all areas which are denuded of vegetation during utility operations. The seed species, origin and application rates required for each location shall be as approved by the Authority. Seed mixtures and mulch must be certified free of noxious weed seeds. The Permittee shall clean equipment before transporting it into or out of the State in order to prevent the migration of noxious weeds. Refer to Appendix B, Construction Site Stormwater Management Manual for seed mix.

12.0 MARKERS, LOCATION AIDS AND LOCATION ASSISTANCE

- a. The Permittee shall take all practical measures to ensure that buried utility facilities are surface- detectable by standard methods. Where the utility facilities, by the nature of their material properties, burial depth or other factors, may by themselves not be surface-detectable, the Permittee shall incorporate detection wire or other detection aids in the installation of those facilities. In instances where detection aids are not feasible or would be ineffective and surface-detectability cannot be ensured, surface markers shall be installed as directed by the Authority, and as built plans, as described below, and showing the accurate horizontal and vertical location of the buried facilities, shall be provided to the Authority.
- b. All plowed or trenched installations must include appropriate color-coded warning tape placed not less than 12 inches vertically above the top of the line. The warning tape shall be surface detectable if needed to facilitate detection of the line.
- c. The Permittee shall place readily identifiable markers at the ROW line where it is crossed by pipelines carrying transmittants which are flammable, corrosive, expansive, energized, or unstable, except where a vent will serve as a marker.
- d. The Permittee shall place markers for longitudinal underground facilities vertically above the facilities or at a known horizontal offset, unless otherwise approved in writing by the Authority. Each marker shall provide a foresight and backsight to succeeding and preceding markers. Markers shall be installed at suitable intervals along tangent sections, at angle points or points of curvature, and at reasonable intervals along curves.
- e. The Permittee shall maintain any markers for the life of the installation.
- f. In response to the UNCC notification of planned excavations, utility owners shall surface-mark their buried utility facilities that are located within the Authority ROW in order to facilitate Authority coordination of third-party engineering and design activities, and at no cost to the Authority. The Permittee shall respond to such request within the UNCC guidelines. The accuracy of the surface marking shall be within 18 inches of either side of the actual location of the buried facility.

13.0 INSPECTION AND ACCEPTANCE

13.01 Inspection.

- a. The Permittee shall submit its Quality Control Plan to the Authority prior to the start of work. The testing program shall include, but not be limited to, type, frequency and specifications of all items of work requiring testing by the contractor within Authority Property. Permittee will notify the Authority a minimum of forty-eight (48) hours prior to work requiring testing. The minimum testing frequency shall follow the requirements of the controlling municipality or unincorporated county that the parcel resides within or CDOT Standards, whichever is more stringent. The Authority retains the right to direct additional testing by the Contractor and to conduct its own tests. The Permittee will bear the cost and responsibility for all testing within Authority Property. All Permittee tests and associated data conducted within Authority Property shall be submitted to the Authority within forty-eight (48) hours of completion.
- b. The Authority will determine the extent of inspection services necessary for a given Permit. Permittee shall attend

final inspection as may be required.

- c. Permittee shall provide copies of all testing reports for work performed on E-470 Highway within 72 hours of receipt of testing reports by Permittee.
- d. Unacceptable work is work that does not conform to the requirements of the Permit. If there is unacceptable work, resulting from any cause, the Authority may order the Permittee to promptly remove and replace said unacceptable work or to undertake any corrective measures necessary to attain compliance with the Permit, at Permittee's expense, and prior to proceeding with further construction. The fact that the inspector may have overlooked the unacceptable work during previous inspections shall not be the basis of a waiver for the requirements to remove and replace unacceptable work.
- e. If there is an immediate danger to the public's health, environment, safety or welfare, the Authority may order the Permittee to cease all operations and if necessary, to remove all equipment and facilities from the ROW, and further take any actions in accordance with the provisions of this Manual, Authority policies and/or Authority resolutions.
- f. Inspectors employed by or under contract with the Authority are authorized to inspect all work done and materials furnished within Authority Property. This inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used.
- g. All materials and each part or detail of the work may be subject to Authority inspection. The inspector shall be allowed access to all parts of the work and shall be furnished with information and assistance by the Permittee as required to make a complete and detailed inspection.
- h. Any work completed without inspection by the inspector may be ordered uncovered, removed, and restored at the Permittee's expense.
- i. A final walk through of all construction activities located within Authority Property will be conducted at the conclusion of the project. The Permittee, within thirty (30) calendar days, shall repair, replace or restore any defective item of work noted at this walk through.
- j. Final acceptance does not relieve Permittee of maintenance obligations toward those elements of the facility constructed under the Permit. Final acceptance begins the one-year warranty period (see requirement under "Operation and Maintenance" below).

13.02 Restoration.

- a. Disturbed areas shall be kept to a practical minimum. Restoration of Authority Property disturbed shall include reseedling or re-sodding to restore pre-construction conditions. This work shall consist of seeding or sodding all areas which are affected by construction operations. The scope of the restoration work will be as directed by the Authority and in accordance with the Construction Site Stormwater Management Manual attached to this Manual as Appendix B, if applicable. The seed mix and application rates will be directed by the Authority.
- b. Trees and other landscaping elements located within the Fee shall not be disturbed unless such work is otherwise specified in the permit, or clearly indicated on the approved plans.
- c. If the Permittee does not adequately repair or maintain any portion of Authority Property or adequately control and maintain the flow of traffic, the Authority may accomplish the required work by any other appropriate means, and the Permittee will be liable to the Authority for any associated costs. Failure to reimburse the Authority in a timely manner may result in a claim against the Permittee's bond.

13.03 Acceptance.

Prior to final acceptance, all disturbed portions of highway right of way shall be cleaned up and restored to their original condition, subject to Authority approval. Damaged fences shall be repaired or replaced and all survey monuments and corners re-established as directed by the Authority. Seeding, sodding, and planting shall be as specified, or otherwise approved by Authority. Construction, maintenance and watering requirements shall conform to the CDOT Standard Specifications. Where landscape restoration must be delayed due to seasonal requirements, such work may be

authorized by separate permit. Permittee shall use only Authority approved seed and mulch. Permittee shall clean equipment before transporting it into or out of the state to prevent the migration of noxious weeds.

13.04 As Builts.

Before Final Acceptance is issued and the one-year warranty period begins, the Permittee shall submit "As-built" plans, in an acceptable format showing in detail all construction changes, modifications and revisions. All changes, modifications or revisions shall be stamped by a Colorado registered Professional Engineer. All As-builts shall:

1. Be prepared by a licensed surveyor/mapper or professional engineer or prepared by others under a surveyor or engineer's direction with Authority approval;
2. Tie to a minimum of two (2) E-470 Highway proximate survey control monuments;
3. Use field measurements of vertical or horizontal dimensions of constructed work;
4. Have a six (6) inch vertical and horizontal accuracy so that the Authority can determine whether the work was constructed consistent with planned locations;
5. Conform to Authority recorded property documents;
6. Tie to the Authority's Coordinate System;
7. Be submitted within thirty (30) calendar days of the Authority's acceptance of the work; and
8. Be submitted in both Adobe Portable Document Format (PDF) and Microstation V8 format (or such other compatible format as required).
9. As-builts are subject to Authority review and approval.

Failure to submit As-builts in a timely manner may result in the Authority completing the As-builts and the Permittee shall be liable to the Authority for any associated costs. Failure to reimburse the Authority in a timely manner may result in a claim against the Permittee's Bond.

In addition, before Final Acceptance is issued, the Permittee shall be required to certify permanent water quality facilities that have been disturbed /constructed as follows:

Permanent water quality facilities constructed after the effective date of CRS 37-2-602(8) (also referred to as Senate Bill 15-212) must complete certain reporting requirements in accordance with the statute.

Permanent water quality facilities constructed prior to the effective date of CRS 37-92-602(8) shall be recertified to original plan or updated to current approved drainage criteria

A copy of the certification and reporting (if applicable) shall be provided to the Authority.

14. OPERATIONS AND MAINTENANCE

Upon completion, Permittee agrees to own and maintain the utility or facility permitted herein. The facility shall be kept in an adequate state of repair and maintained in such a manner as to cause the least interference with the normal operation and maintenance of the E-470 Highway.

Routine, periodic maintenance of the facility may be performed only if the anticipated maintenance requirements are authorized in the Permit. Any significant repair or maintenance activities, new excavation, or any other disturbance within Authority Property that is not included in the Permit shall require a separate permit.

Repairs of an emergency nature, necessary for the safety of the traveling public, may be immediately performed without prior approval, provided that the Facility Owner notifies the Authority immediately by telephone and that it shall provide a written report of the emergency within 72 hours thereafter to the Authority. When such emergency repairs could conceivably constitute a traffic hazard, the Authority and Colorado State Patrol shall be immediately verbally notified to coordinate safety measures. Advance arrangements shall be made between the Facility Owner and the Authority for emergency maintenance procedures.

Following completion and acceptance of the permanent work included in the permit, the Permittee or owner is required to obtain an Annual Access Permit (\$150 fee). The Annual Access Permit allows the owner annual access only (no construction), to access Authority ROW, MUE, and Fee. Prior to accessing Authority ROW/MUE, a minimum of forty-eight hours notification must be provided to the Authority's Permit Supervisor at 303-537-3751 or Permits@e-470.com. A traffic control plan will be required if access will affect traffic.

15. WARRANTY

Permittee warrants that the work constructed as part of the Permit shall be free from defects in workmanship and materials for a period of one (1) year from the Final Acceptance Date. If any element of the work constructed as part of this Permit fails within 1 year due to improper construction or materials, Permittee will be responsible to make all repairs as soon as practical but not more than thirty (30) calendar days once notified in writing by the Authority.

If Permittee fails to perform warranty or maintenance work with thirty (30) calendar days, or other period as agreed upon by Permittee and the Authority, the Authority may perform the warranty or maintenance work. The Permittee shall be responsible to reimburse the Authority for all costs and expenses incurred. If Permittee fails to reimburse the Authority in a timely manner, the Authority reserves the right to make a claim against the Permittee's Bond, as appropriate.

16. FUTURE RELOCATION

In the event any changes are made to the E-470 Highway in the future that would necessitate removal, adjustment or relocation of a Surface Improvement or Utility Improvement, Permittee will do so promptly, at no cost to the Authority, within thirty (30) calendar days of receipt of written notice from the Authority.

The Permittee shall perform the relocation at or within a time convenient to and in proper coordination with the project or transportation-related activity, to minimize public inconvenience and cost, as directed by the Authority in the permit authorizing the relocation. The utility company shall pay for damages caused by the company's delay in the performance of utility relocation work or interference with the performance of transportation project work done by others. Such damages include, but are not limited to, payments made by the Authority to any third party based on a claim that performance of the transportation project work was delayed or interfered with as a direct result of the utility company's failure to timely perform the utility relocation work. Damages resulting from delays in the performance of the utility relocation work or interference with the transportation project work that are caused by events beyond the utility company's ability to reasonably foresee or control (a force majeure) shall not be charged to the utility company.

17. ABANDONMENT, RETIREMENT AND CHANGE IN OWNERSHIP

- a. The Permittee shall notify the Authority in writing of the planned retirement or abandonment of its facility or any portion thereof and must remove any or all portions of such retired or abandoned facility as may be directed by the Authority. The Authority will notify the Permittee in writing if it determines that the facilities may be retired or abandoned in place, along with any special conditions that may apply.
- b. Retired facilities shall remain the Permittee's sole responsibility, subject to all the terms and conditions of the permit issued for that facility, including maintenance and relocation requirements.
- c. The Permittee shall promptly remove all abandoned facilities from the ROW and promptly restore the ROW to pre-existing or other conditions prescribed by the Authority unless the Authority in writing expressly allows the facility to remain in place. Written notice from the Authority, allowing an abandoned facility to remain in place, may include special conditions.
- d. If utility facilities are retired or abandoned in place, the utility shall comply with that decision if directed by the Authority:
 - i. cap, plug or fill lines,
 - ii. furnish suitable location records for any such buried facilities,
 - iii. maintain its own records of such facilities and respond to locate notices/requests from the UNCC and/or excavators. In providing such locates, the utility will indicate to the requesting entity whether or not the subject facilities are retired or abandoned.
 - iv. perform any other actions as deemed necessary by the Authority to protect the transportation facility and/or the traveling public.
- e. If the ownership of utility facilities is transferred, both the original Permittee and the new owner shall notify the Authority in writing prior to the change in ownership, and such notice shall state the planned date of change in ownership. The notice from the new owner shall include a written statement accepting all terms and conditions of

the existing permit, effective upon the planned date of the change in ownership.

- f. Utility facilities containing asbestos may not be abandoned in-place. Ordinarily, such facilities must be removed from the ROW when taken out of service.

APPENDIX A

E-470 Public Highway Authority Resolutions

Appendix A-1

Resolution 04-01 Establishing a Policy Regarding Trespassers

**RESOLUTION
OF THE
BOARD OF DIRECTORS
OF THE
E-470 PUBLIC HIGHWAY AUTHORITY**

Establishing A Policy Regarding Trespassers

WHEREAS, the Authority was created pursuant to the Public Highway Authority Law, Sections 43-4-501, *et seq.*, C.R.S., to finance, construct, operate and maintain the E-470 Public Highway (the "Highway"); and

WHEREAS, pursuant to section 43-4-505(3)(c), C.R.S., the Board of Directors (the "Board") is authorized to pass resolutions "necessary for the government and management of the affairs of the authority and the execution of the powers vested in the authority"; and

WHEREAS, the Board finds that establishing and implementing a trespass policy is necessary for the operation and maintenance of the Highway and that the policy will promote the safety of the public traveling on the Highway and the protection of the Highway and other fee and easement property and facilities owned and operated by the E-470 Public Highway Authority (the "Authority").

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE E-470 PUBLIC HIGHWAY AUTHORITY:

1. No person shall be allowed on the Highway or any Authority fee or easement property (collectively, the "E-470 Property"), for any purpose other than transportation, unless such person has in his or her possession a valid, current E-470 Construction Permit or E-470 Access Permit. Any such person not possessing a valid, current permit may be deemed a trespasser, except that nothing herein shall deem as a trespasser a law enforcement or emergency services agent or Authority contractor acting in the course of his or her duties.

2. In the event of an emergency, a utility company that owns an existing utility facility in or on E-470 Property may enter E-470 Property without an E-470 Construction Permit or E-470 Access Permit to remedy the emergency, provided that the utility company shall notify the Authority's command center immediately by telephone and that it shall provide a written report of the emergency within 72 hours thereafter to the Authority.

3. The Executive Director of the Authority, or his or her designee, is hereby authorized to take any of the following actions, in his or her discretion, against a trespasser:

- A. Issue a written warning to the trespasser explaining the requirement to obtain a permit before entry onto E-470 Property.
- B. Issue an order to cease and desist trespassing or performing any activity on E-470 Property and to immediately exit E-470 Property.

C. Impose a fine in an amount no greater than twice the amount of the applicable permit fee per unauthorized entry, based on the totality of the circumstances, including the danger posed to individuals traveling on the highway and whether the individual or other persons employed by the individual's employer has trespassed on E-470 Property before.

D. Contact law enforcement agents and request that the trespasser be prosecuted for third degree criminal trespass and any other relevant criminal offenses.

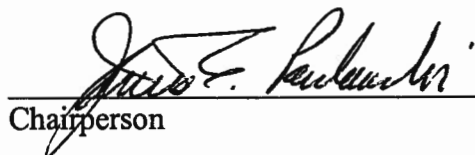
E. Commence a civil action.

4. The Authority may remove any unauthorized work or improvements installed by a trespasser, at the trespasser's expense. The Authority may also bar a trespasser from any entry onto E-470 Property until he/she has paid all imposed fines and any expenses related to the removal of unauthorized work.

5. If the individual trespasser is an agent, employee, officer, contractor or subcontractor of a utility company or of a utility company's contractor, the Authority may also impose a fine against the utility company and/or the contractor in an amount no greater than twice the amount of the applicable permit fee per unauthorized entry. The Authority may bar the utility company and/or contractor from entering E-470 Property until it has paid all imposed fines and has applied for and received a valid E-470 Construction Permit or E-470 Access Permit.

6. The Executive Director shall have the responsibility and authority to direct legal counsel to commence a civil action and to develop, approve and implement procedures, standards, forms of orders and agreements necessary to carry out these policies.

DONE and adopted this 8th day of April, 2004, by the Board of Directors of the E-470 Public Highway Authority.


Chairperson

ATTEST:



Appendix A-2

Resolution 25-03 Stormwater Discharge Regulations

**RESOLUTION NO. 25-03 OF THE
BOARD OF DIRECTORS
OF THE
E-470 PUBLIC HIGHWAY AUTHORITY**

**Resolution 25-03
Stormwater Discharge Regulations**

WHEREAS, the E-470 Public Highway Authority (the "Authority") is a body corporate and political subdivision of the State of Colorado; and

WHEREAS, the Authority was created pursuant to the Public Highway Authority Law, Sections 43-4-501, *et seq.*, C.R.S., to finance, construct, operate and maintain the E-470 Public Highway ("E-470"); and

WHEREAS, pursuant to Section 43-4-505(3)(c), C.R.S., the Authority's Board of Directors (the "Board") is authorized to pass resolutions necessary for the government and management of the affairs of the Authority and the execution of the powers vested in the Authority; and

WHEREAS, the Colorado Department of Public Health and the Environment (the "CDPHE") has issued the Authority a Colorado Discharge Permit System ("CDPS") General Permit for Stormwater Discharges Associated with Non-Standard Municipal Separate Storm Sewer Systems (MS4s), Permit No. COR070000 (the "Permit"); and

WHEREAS, Part I, Section E(2) of the Permit requires the Authority to develop, implement and enforce a program to detect and eliminate illicit discharges into municipal storm sewer systems; and

WHEREAS, as part of the illicit discharge program, the Authority must "to the extent allowable under State or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the storm sewer system, and implement appropriate enforcement procedures and actions;" and

WHEREAS, for the purpose of this Resolution the term "stormwater" means stormwater runoff, snow melt runoff, and surface runoff and drainage; and

WHEREAS, the Board intends for this Resolution to fulfill the Permit requirements and to establish the Authority's procedure for enforcing the prohibition on discharging non-stormwater into the storm sewer system; and

WHEREAS, the Board finds that establishing and implementing a policy prohibiting non-stormwater discharges is necessary for the operation and maintenance of E-470 and that the policy will promote the safety of the public traveling on E-470 and the protection of the property and facilities owned and operated by the Authority; and

WHEREAS, the Authority entered into that certain *Intergovernmental Agreement to Provide Traffic and Law Enforcement on E-470 Public Highway* with the Colorado State Patrol, dated June 13, 2024, as amended by that certain First Amendment to Intergovernmental Agreement to Provide Traffic and Law Enforcement on E-470 Public Highway dated June 12, 2025 (the "Agreement"), pursuant to which the Colorado State Patrol agreed to provide traffic and law enforcement on E-470; and

WHEREAS, Section 3 of the Agreement provides that the "State Patrol shall enforce all applicable laws of the State of Colorado on E-470, in accordance with State Patrol policies, rules, and procedures. In addition, the State Patrol shall enforce all lawful policies promulgated by the Authority;" and

WHEREAS, Colorado State Patrol officers are explicitly authorized, empowered, and directed, pursuant to Section 18-4-511(7), C.R.S., to enforce the provisions of the Section 18-4-511, C.R.S. (the "Colorado Littering Statute"); and

WHEREAS, the Colorado Littering Statute prohibits depositing, throwing or leaving any litter-including all waste material, debris or other foreign substance, solid or liquid, of every form, size, kind and description on any public or private property or in any waters; and

WHEREAS, the Authority desires for the Colorado State Patrol to enforce the Colorado Littering Statute against individuals who violate the prohibition on discharging non-stormwater into the storm sewer system contained herein; and

WHEREAS, Adams County, Arapahoe County, Douglas County, the City of Aurora, the City of Brighton, the City of Commerce City, the Town of Parker, and the City of Thornton (the "Member Jurisdictions"), are members of the Authority, and segments of E-470 running through portions of these Member Jurisdictions are subject to the Permit; and

WHEREAS, the Member Jurisdictions each have a policy or procedure for enforcing prohibitions on illicit discharges into storm sewer systems; and

WHEREAS, Adams County adopted Ordinance No. 11 Concerning Illicit Discharges to the Public Storm Drainage System or Water of the State of Colorado within Unincorporated Adams County dated October 10, 2017 ("Ordinance 11") pursuant to Section 30-15-401 (11), C.R.S., prohibiting illicit discharge into the storm drainage system and allows for the County to perform an abatement for a violation of Ordinance No. 11, assess the costs of the abatement upon the property which may be recorded as a lien, pursue criminal prosecution against any person violating Ordinance No. 11, pursue public nuisance remedies, or any other remedies available under law; and

WHEREAS, Arapahoe County adopted Ordinance No. 2019-02 dated December 18, 2019, pursuant to Section 30-15-401, C.R.S., prohibiting non-stormwater discharge into its storm drainage system and allowing Arapahoe County to pursue civil enforcement, criminal enforcement, and any other remedies available under law against individuals who have violated Ordinance No. 2019-02; and

WHEREAS, Douglas County adopted *Douglas County Stormwater Ordinance Regarding Grading, Erosion and Sediment Control; Operations and Maintenance of Stormwater Management Facilities; and Illicit Discharge Detection and Elimination* dated August 23, 2022 (“Ordinance No. O-022-001”) pursuant to Section 30-15-401, etc. seq., C.R.S., prohibiting any person from discharging non-stormwater into Douglas County’s storm sewer system and provides for civil prosecution, abatement or and any other remedies available under law for violations of Ordinance O-022-001; and

WHEREAS, the Aurora City Code, Section 138-439, makes it unlawful to discharge to the storm drainage system any polluting material or any other material not composed entirely of stormwater, and provides enforcement mechanisms and penalties in Sections 138-443 and -444 of the Aurora City Code; and

WHEREAS, the City of Brighton (“Brighton”) prohibits the discharge of any materials, including but not limited to pollutants or waters containing any pollutants other than stormwater, into any storm drainage system under Section 14-6-60 of the Brighton Code and Section 14-6-130 of the Brighton Code allows Brighton to undertake abatement for a violation of the article, assessing the costs of the abatement upon the property, which may then be recorded as a lien; and

WHEREAS, the City of Commerce City (“Commerce City”) makes it unlawful for any person to discharge or cause to be discharged into the municipal separate storm sewer system or any watercourse within Commerce City any materials other than stormwater pursuant to Sec. 10-3002 of the Commerce City Code and any violation thereof is deemed a civil infraction under Section 10-3009 of the Commerce City Code; and

WHEREAS, the Town of Parker (the “Town”) prohibits depositing, throwing or placing any litter upon any street, public property or public place in the Town except in public receptacles or authorized private receptacles, pursuant to Section 06.01.210 of the Town Code, and prohibits creating, operating, maintaining or conducting any nuisance, pursuant to Section 06.01.030 of the Town Code. Section 06.01.020 of the Town Code defines "litter" as including any liquid except clean water, and "public nuisance" as including "Any illicit discharge or other unlawful pollution or contamination of any surface or subsurface waters in the Town, or of the air, or of any water, substance or material intended for human consumption."; and

WHEREAS, the City of Thornton (“Thornton”) makes it unlawful to discharge any pollutant or any other material which is not composed entirely of storm water into the storm drainage system of Thornton pursuant to Sections 18-658 of the Thornton Code, and may further enforce the elimination of illicit discharge pursuant to Article X, Nuisances of the Thornton Code; and

WHEREAS, as a secondary enforcement mechanism, the Authority will cooperate with local law enforcement agents from the Member Jurisdictions, to enforce the discharge policy set forth herein.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE E-470 PUBLIC HIGHWAY AUTHORITY AS FOLLOWS:

1. No person shall discharge, spill, dump or dispose of any material, other than stormwater, into a storm sewer system within the boundaries of the Authority.

2. Notwithstanding any provision to the contrary, unless the Authority or the Water Quality Control Division (the "Division") of the Colorado Department of Public Health and Environment identify them as significant sources of pollutants to the waters of the state, discharging, spilling, dumping or disposing of the following is not prohibited:

- A. Landscape irrigation
- B. Lawn watering
- C. Diverted stream flows
- D. Irrigation return flow
- E. Rising ground waters
- F. Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers
- G. Uncontaminated pumped ground water in accordance with the Permit
- H. Springs
- I. Flows from riparian habitats and wetlands
- J. Water line flushing in accordance with the Division's *Low Risk Policy Discharge Guidance: Potable Water*
- K. Discharges from potable water sources in accordance with the Division's *Low Risk Discharge Guidance: Potable water*.
 - a. The potable water shall not be used in any additional process including but not limited to, any type of washing, heat exchange, manufacturing, and hydrostatic testing of pipelines not associated with treated water distribution systems
- L. Foundation drains, water from crawl space pumps, and footing drains, in accordance with the Permit
- M. Air conditioning condensation
- N. Individual residential car washing
- O. Dechlorinated swimming pool discharges in accordance with the Division's *Low Risk Discharge Guidance: Discharges from Pools, Fountains, and Other similar type facilities that are Fed Solely by Potable Water*
- P. Water incidental to street sweeping (including associated sidewalks)

and medians) and that is not associated with construction

- Q. Dye testing in accordance with the manufacturer's recommendations
- R. Stormwater runoff with incidental pollutants
- S. Discharges resulting from emergency firefighting activities
- T. Drainage from watercraft, vehicles, and trailers used for recreation, wildlife management operations, or maintenance operations when removed from a water body. Drainage must not contain other non-stormwaters and must not contain a sheen or discoloration.
- U. Discharges authorized by a CDPS or National Pollutant Discharge Elimination System (NPDES) permit
- V. Agricultural stormwater runoff
- W. Discharges that are in accordance with the Division's Low Risk Policy guidance documents or other Division policies, and guidance documents where the Division has stated it will not pursue permit coverage or enforcement for specified point source discharges.
- X. Other discharges that the Authority will not consider as an illicit discharge when approved by the Division in accordance with the Permit

3. The Authority will enlist the assistance of the Colorado State Patrol, pursuant to the Agreement, in enforcing the Colorado Littering Statute against any person who deposits, throws or leaves any material, other than stormwater, into a storm sewer system within the boundaries of the Authority in violation of the policy contained herein.

4. As a secondary enforcement measure, the Authority shall work with local law enforcement agents from the Member Jurisdictions, the CDPHE, and the Federal Environmental Protection Agency to ensure enforcement of the prohibition on discharging non-stormwater within the boundaries of the Authority.

5. The Executive Director shall have the responsibility and authority to develop, approve and implement procedures, standards and agreements necessary to carry out these policies. Authority staff and legal counsel for the Authority are authorized and directed to take all actions necessary and appropriate now and as may be needed in the future to effectuate this Resolution and compliance with the Permit, as may be amended from time to time. All actions not inconsistent with the provisions of this Resolution heretofore taken by Authority staff or legal counsel for the Authority and directed toward effectuating the purposes stated herein are hereby ratified, approved and confirmed.

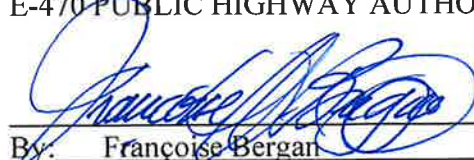
6. This Resolution shall take effect on the date and at the time of its adoption.

7. All prior policies, acts, orders or resolutions, or parts thereof, by the Authority related to policies or procedures for enforcing prohibitions on illicit discharge into municipal storm sewer systems pursuant to the Permit are hereby repealed and superseded, including, but not limited to the November 11, 2004 Resolution of the Board of Directors of the E-470 Public Highway Authority Establishing A Policy Prohibiting Discharge of Non-Stormwater into Storm Sewer System, except that this repeater shall not be construed to revive any act, order or resolution, or part thereof, heretofore repealed.

[Remainder of page intentionally left blank.]

ADOPTED AND APPROVED THIS 11TH DAY OF SEPTEMBER 2025.

BOARD OF DIRECTORS
E-470 PUBLIC HIGHWAY AUTHORITY


By: Françoise Bergan
Its: Chairperson

ATTEST: 
By: _____
Its: Vice Chair

APPENDIX B

Construction Site Stormwater Management Manual

**E-470 Public Highway Authority
Construction Site Stormwater Management Manual
Table of Contents**

1. Introduction
2. Construction Site Stormwater Management Requirements
3. Construction Site Stormwater Management Plan Requirements
4. Construction Site Stormwater Control Measure Design Standards
5. Maintenance of Construction Site Stormwater Control Measures and Final Stabilization Requirements
6. Inspections, Corrective Measures and Enforcement
7. Submittals and Revisions
8. Cherry Creek Reservoir Basin Construction Site Stormwater Management Requirements

Appendix B Construction Site Stormwater Management

1. Introduction

The Authority manages and implements a program to reduce or prevent discharge of pollutants from construction activities to the municipal separate storm sewer (MS4) system, receiving waters and wetlands. The Authority's program complies with its Colorado Discharge Permit System (CDPS) Non-Standard MS4 permit (COR070000) requirements, the statewide CDPS General Permit for Stormwater Discharges Associated with Construction Activity (COR400000), and the Cherry Creek Reservoir Control Regulation (CCR Reg 72) for sites located in the Cherry Creek Reservoir Basin. The Authority adopts Volume 3 of the Mile High Flood District (MHFD) Manual and/or the Colorado Department of Transportation (CDOT) M&S Standards as the basis for design, implementation and maintenance of erosion and sediment control practices. The Authority may allow additional practices at its discretion. For multi-jurisdictional projects (CDOT, SEMSWA, Arapahoe County, Adams County, Douglas County, City of Aurora, City/County of Denver, City of Brighton, City of Commerce City, City of Thornton, etc.), alternative criteria and or practices may be substituted as approved by the Authority.

2. Construction site stormwater management requirements

Table 1 summarizes construction site stormwater management requirements. The Authority requires implementation of structural and non-structural control measures to minimize erosion, sediment transport, and the release of pollutants related to applicable construction activity and construction activity within the Cherry Creek Watershed. These control measures must be selected, designed, installed, and maintained in accordance with good engineering, hydrologic and pollution control practices.

Control measures shall be appropriate for the specific construction activity, applicable pollutant sources, phase of construction and minimize pollutants in stormwater runoff from construction sites to the municipal storm sewer system. Control measures must meet the following minimum requirements:

- A. Appropriate control measures must be approved and installed prior to commencement of construction activities, during each phase of construction, and through completion of final stabilization.
- B. Control measures must be maintained in accordance with good engineering, hydrologic and pollution control practices. The necessary repairs or modification to a control measure requiring routine maintenance must be conducted to maintain effective operating condition.

DUTY TO COMPLY WITH PERMITS AND REGULATIONS

The Authority's Construction Site Stormwater Management criteria incorporate by reference detailed requirements described in the Authority's CDPS MS4 Non-Standard permit, the statewide CDPS General Permit for Stormwater Discharges Associated with Construction Activity and the Cherry Creek Reservoir Colorado Control Regulation 72 (CCR Reg 72). It is the applicant's responsibility to obtain the most current versions of these documents and comply with these regulatory requirements, which are updated periodically by the Colorado Department of Public Health and Environment (CDPHE).

CCR Reg 72 identifies specific requirements for erosion and sediment control measures on construction sites within the Cherry Creek Reservoir Watershed draining into the Cherry Creek Reservoir, including placing limits on the area of land that can be disturbed at any one time. The intent of the regulation is to protect the water quality of the Cherry Creek Reservoir. The Authority's Non-standard MS4 permit area includes a portion of the Cherry Creek Reservoir Watershed area.

REFER TO SECTION 8 IN THIS APPENDIX FOR STORMWATER REQUIREMENTS IN THE CHERRY CREEK RESERVOIR BASIN.

- C. Control measures must be selected, designed, installed, and maintained to minimize potential pollutants including but not limited to sediment, construction site waste/trash, discarded building materials, concrete truck washout, chemicals, sanitary waste, and contaminated soils in discharges to the MS4. Pollutant sources must be addressed at a minimum:
- a. Control Measures for Erosion and Sediment Control
 - i. Control measure selection should prioritize the use of structural and non-structural control measures to minimize the potential for erosion.
 - ii. Stormwater runoff from soil storage and disturbed areas must utilize or flow to at least one or more control measure(s) to minimize erosion or sediment in the discharge. The control measures must be adequately sized for the intended application in accordance with good engineering, hydrologic, and pollution control practices. The control measures must contain or filter flow to prevent the bypass of flow without treatment and must be appropriate for stormwater runoff from disturbed areas and for the expected flow rate, duration and flow conditions (i.e. sheet or concentrated flow).
 - iii. Structural and/or non-structural vehicle tracking controls shall be implemented to minimize vehicle tracking of sediment from disturbed areas.
 - iv. Outlets that withdraw water from or near the surface shall be installed when discharging from basins and impoundments, unless infeasible – not technologically possible, or not economically practicable and achievable in light of best industry practices.
 - v. Maintain pre-existing vegetation or equivalent control measures for areas within 50 horizontal feet of receiving waters, unless infeasible.
 - vi. Soil compaction must be minimized for areas where infiltration control measures will occur or where final stabilization will be achieved through vegetative cover.
 - vii. Unless infeasible, topsoil shall be preserved for those areas of a site that will utilize vegetative final stabilization.
 - viii. Minimize the amount of soil exposed during construction activity, including the disturbance of steep slopes.
 - b. Practices for Other Common Pollutants
 - i. Bulk storage, individual containers of 55 gallons or greater, for petroleum products and other liquid chemicals must have secondary containment, or equivalent protection, in order to contain spills and to prevent spilled material from entering the MS4 or state waters.
 - ii. Control measures designed for concrete washout must be implemented. The Permittee must ensure the washing activities do not contribute pollutants to stormwater runoff, or receiving waters.
 - c. Stabilization Requirements can be referenced in Section 5 of this Appendix.

3. Construction site stormwater management plan requirements

For construction sites with greater than or equal to one acre of disturbance, a Stormwater Management Plan (SWMP/site plan) must be prepared and submitted to the Authority for review and approval. The Authority follows the SWMP requirements identified in statewide CDPS Construction General Permit for Stormwater Discharges Associated with Construction Activity (COR0400000) and the Authority's CDPS Non-Standard MS4 permit (COR0700000).

The SWMP/site plan shall contain installation, implementation and maintenance specifications or a reference to the document with installation, implementation and maintenance specifications for all structural control measures. A narrative description of non-structural control measures must be included in the SWMP/site plan. The SWMP/site plan shall be maintained to reflect current conditions on the construction site.

The SWMP/site plan description shall ensure the following at a minimum:

- a. **Qualified Stormwater Manager.** The SWMP/site plan must list individual(s) by title, and name who are designated as the site's qualified stormwater manager(s) responsible for implementing the site plan in its entirety. This role may be filled by more than one individual.
- b. **Spill prevention and Response Plan.** The SWMP/site plan must have a spill prevention and response plan. The plan may incorporate by reference any part of a Spill Prevention Control and Countermeasure (SPCC) plan under section 311 of the Clean Water Act (CWA) or a Spill Prevention Plan required by separate CDPS Permit. The relevant sections of any referenced plans must be available as part of the site plan.
- c. **Materials Handling.** The SWMP/site plan must describe and locate all control measures implemented at the site to minimize impacts from handling significant materials that could contribute to pollutants to runoff. These handling procedures can include control measures for pollutants and activities such as exposed storage of building materials, paints and solvents, landscape materials, fertilizers or chemicals, sanitary waste material, trash and equipment maintenance or fueling procedures.
- d. **Potential sources of pollution.** The SWMP/site plan must list all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the site. This shall include but is not limited to the following pollutant sources:
 - i. Disturbed and stored soils
 - ii. Vehicle tracking of sediments
 - iii. Management of contaminated soils
 - iv. Loading and unloading operations
 - v. Outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.)

- vi. Vehicle and equipment maintenance and fueling
 - vii. Significant dust or particulate generating processes (e.g. saw cutting material, including dust)
 - viii. Routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.
 - ix. On-site waste management practices (waste piles, liquid wastes, dumpsters)
 - x. Concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment
 - xi. Asphalt, concrete batch plants and masonry mixing stations
 - xii. Non-industrial waste sources such as portable toilets and worker trash
(The Authority has a zero-tolerance policy regarding contractor trash as a pollutant) and portable toilets.
- e. **Implementation of control measures.** The SWMP/site plan must include design specifications that contain information on the implementation of the control measure in accordance with good engineering hydrologic and pollution control practices; including as applicable, drawings, dimensions, installation information, materials, implementation processes, control measure specific inspection expectations, and maintenance requirements.
- f. **The SWMP/site plan** must include a documented use agreement between the construction site owner/operator and the owner or operator of any control measures located outside of the permitted construction site area, that are utilized by the owner/operator for compliance with this permit, but not under the direct control of the owner/operator. The site plan must include all information required of and relevant to any such control measures located outside the permitted area, including location, installation specifications, design specifications and maintenance requirements.
- g. **Site description.** The SWMP/site plan must include a site description which includes at a minimum the following:
- i. The nature of the construction activity at the site.
 - ii. The proposed schedule for the sequence for major construction activities and the planned implementation of control measures for each phase (e.g. clearing, grading, utilities, vertical, etc.).
 - iii. Estimates of the total acreage of the site, and the acreage expected to be disturbed by clearing, excavation, grading, or any other construction activities.
 - iv. A summary of any existing data used in the development of the construction site plans or site plan that describe the soil or existing potential for soil erosion.
 - v. A description of the percent of existing vegetative ground cover relative to the entire site and the method for determining the percentage.
 - vi. A description of any allowable non-stormwater discharges at the site, including those being discharged under a CDPHE low risk discharge guidance policy.

- vii. A description of areas receiving discharge from the site. Including a description of the immediate source receiving the discharge. If the stormwater discharge is to a municipal separate storm sewer system, the name of the entity owning that system, the location of the storm sewer discharge, and the ultimate receiving water(s); and
 - viii. A description of all stream crossings located within the construction site boundary.
- h. **Site map.** The SWMP/site plan must include a site map which includes at a minimum, the following:
 - i. Construction site boundaries.
 - ii. Flow arrows that depict stormwater flow directions on site and runoff direction.
 - iii. All areas of ground disturbance including areas of borrow and fill
 - iv. Areas used for storage of soil.
 - v. Locations of all waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt.
 - vi. Locations of dedicated asphalt, concrete batch plants and masonry mixing stations.
 - vii. Locations of all temporary and permanent structural control measures.
 - viii. Locations of all non-structural control measures; non-structural control measures (e.g. sweeping), without specification location may be notated.
 - ix. Locations of springs, streams, wetlands and other state waters, including areas that require pre-existing vegetation be maintained within 50 feet of a receiving water were determined feasible. Maintain pre-existing vegetation or equivalent control measures for areas within 50 horizontal feet of receiving waters, unless infeasible.
 - x. Locations of all stream crossings located adjacent to and/or within the construction site boundary.
 - xi. Locations of permanent water quality facilities within the construction site boundary.
- i. **Final stabilization and long-term stormwater management.** The SWMP/site plan must describe the practices used to achieve final stabilization of all disturbed areas at the site and any planned practices to control pollutants in stormwater discharges that will occur after construction operations are completed, including but not limited to detention/retention ponds, rain gardens, stormwater vaults, etc.
- j. **Inspection reports** The SWMP/site plan must include the documented inspection report in accordance with the CDPS Construction General Permit.
- k. The SWMP/site plan shall include a copy of CDPS COR0400000 stormwater permit certificate upon issuance from the CDPHE.

4. Construction site stormwater control measure design standards

- a. The Authority adopts MHFD and CDOT criteria for construction control measures, including revisions that may be completed periodically. Selection of individual

practices is based on site specific conditions. The Authority may allow additional practices at its discretion. For multi-jurisdictional projects, (e.g., CDOT, SEMSWA, Arapahoe County, Adams County, Douglas County, City of Aurora, City/County of Denver, City of Brighton, City of Commerce City, City of Thornton, etc.), alternative criteria and or practices may be substituted as approved by the Authority. The criteria shall be identified and submitted to the Authority as part of the initial submittal.

5. Maintenance of Construction site stormwater control measures and final stabilization requirements

- a. Construction sites erosion and sediment controls must be maintained until final stabilization has been reached.
- b. Temporary stabilization must be implemented for earth disturbing activities on any portion of the site where ground disturbing construction activity has permanently ceased, or temporarily ceased for more than 14 calendar days. Temporary stabilization methods may include, but are not limited to tarps, soil tackifier and hydroseed. The contractor may exceed the 14 day schedule when either the function of the specific area of the site requires it to remain disturbed, or physical characteristics of the terrain and climate prevent stabilization. The site plan must document the constraints necessitating the alternative schedule, provide the alternate stabilization schedule and identify locations where the alternative schedule is applicable on the site map.
- c. Final stabilization is achieved when all ground surface disturbance at the construction site is complete and:
 - i. Permanent stabilization methods are complete (e.g. permanent pavement, concrete, vegetative cover, etc.).
 - ii. For areas of ground surface disturbance, either a uniform perennial vegetative cover with an individual plant density of at least 70 percent of pre-disturbance levels is established or equivalent permanent alternative stabilization methods are implemented.
- d. Temporary Control measures such as silt fence must be removed from the site and properly disposed of following final stabilization except when the control measure specification allows the control measure to be left in place (i.e. biodegradable control measures, etc.).
- e. Stabilization measures may include but are not limited to seed mix selection and application methods, soil preparation and amendments, and soil stabilization methods.
- f. Construction sites in Cherry Creek Watershed shall follow stabilization requirements outlined in Section 8.

6. Inspections, Corrective Measures, and Enforcement

The Permittee must perform inspections in accordance with the applicable regulations and permits. This includes assessing the adequacy of control measures at the site and the need for changes to ensure continued effective performance. CCR Reg 72 and/or CDPS COR400000 outlines specific requirements for the person responsible for conducting inspection, inspection frequency, scope of inspection and inspection reports (applicable regulations and permits).

- a. When inspections identify inadequate control measures, or changes, the Permittee shall implement and document corrective actions necessary to return the measure to effective operational conditions and properly manage stormwater at the construction site.
- b. If applicable, the Permittee must remove and properly dispose of unauthorized release(s) or discharge(s) (discharge of non-stormwater, leaks, spills, etc.). The Permittee must perform cleanup of contaminated surfaces to minimize discharges of the contaminant in subsequent storm events.
- c. In addition to inspections by Permittees, the Authority will conduct inspections in accordance with the Authority's Nonstandard MS4 permit and conduct enforcement activities in accordance with this manual. Regardless of size or project requirements, the Authority may require remedial actions to address noncompliant conditions caused by construction activity as authorized by this manual.
- d. The Authority can take any actions for enforcement authorized by Section 4 of the Permit Manual, as well as the Authority's applicable resolutions and policies, and State law, including but not limited to the following actions:
 - i. Issue a verbal warning
 - ii. Issue a written notice of non-compliance
 - iii. Issue a written corrective order with schedule to obtain compliance
 - iv. Deny the issuance of future permits
 - v. Issuance of stop work order (SWO)
 - vi. Refer the Permittee to the Colorado State Patrol to request prosecution for trespass and any other relevant criminal offenses
 - vii. Impose fines and seek recovery of expenses
 - viii. Seek civil legal action
 - ix. Suspend or revoke the permit

7. Submittals and Revisions

Submittal requirements vary based on the area disturbed by construction activities and location relative to the Cherry Creek Reservoir basin as described in Table 1. For sites that require a written SWMP, submittals must be in accordance with the applicable regulations and permits and must be reviewed and approved by the Authority prior to start of construction. Upon approval, SWMPs must continue to be maintained and updated through the construction process to reflect current site conditions and be available on site for inspection and review by the Authority and/or

applicable local jurisdiction. Minor and major modifications to the SWMPs have the following requirements for review and approval:

- a. **Minor modifications** - Modifications to the original site plan that do NOT increase the scope or change hydrology of the project but modify/improve specific control measures in use at site, indicate progression in phasing of the project, or specify relocation of previously approved control measures within the project shall be made in the field by the construction site owner/operator and thoroughly documented in the site plan narrative and/or site map drawings, where applicable. Minor modifications involve substitutions of control measure types, and or include alternate details to control measures that are equivalent in performance or more suitable to the specific site conditions. Minor modifications can be made to the SWMP without the Authority's approval, but these changes must be documented in the SWMP. The Authority must evaluate minor modifications made by the construction site owner/operator during site inspections and determine if the modification is adequate.
- b. **Major modifications** -changes to the original site plan that remove or add additional area to the project, modify the final hydrology or drainage of the final design, replace approved site plans or otherwise expand or contract the scope of the original project shall require the submission of the plans for review and approval by the Authority. Major modifications must be submitted to the Authority for approval prior to implementation.

8. Cherry Creek Watershed Requirements

For construction activity within the Cherry Creek Watershed, if a more detailed land use review of the proposed Permit is needed, the Authority may request the Cherry Creek Basin Water Quality Authority to perform a review for compliance with the applicable CCR Reg 72 construction and post construction requirements with technical consultation from the CCBWQA's Technical Manager.

For construction activity within the Cherry Creek watershed that disturbs **LESS** than one acre and is not part of a common plan of development or sale, the Permittee is required to comply with the requirements identified in CCR Reg 72 regarding submittal requirements and technical review of: required construction control measures, ground disturbing/stabilization requirements, minimizing disturbed areas, inspection, operation and maintenance.

For construction activity within the Cherry Creek watershed that results in a land disturbance of **GREATER than or equal to one acre or that is less than one acre but is part of a larger common plan of development or sale that would disturb one acre or more** the requirements in Sections 2 through Section 7 of this Appendix.

9. Overlapping MS4 Permit Areas

There may be instances of applicable development sites with multiple MS4 permit area boundaries (Co-regulating local jurisdictional MS4 standard/non-standard MS4 permittee).

Permits with multiple MS4 permit areas will be reviewed, and a determination made to identify who the lead jurisdiction is or if multiple jurisdictions will have stormwater construction control oversight. Some jurisdictions stormwater requirements may be more stringent than the Authority's requirements.

During the Authority's review of the applicable development site, the Authority will require the Permittee to submit written concurrence (via an agreement, or obtaining a grading/erosion/sediment control (GESC) permit or approved equivalent for that development site from the local jurisdiction.

The GESC permit or approved equivalent will constitute as an agreement that the control measure requirements may be imposed on the Permittee and, will be legally held to the local jurisdiction(s) MS4 permit requirements. This could be by means of multiple agencies via a lead agency or all agencies to review, approve, inspect, and enforce their MS4 permit requirements.

By the Permittee submitting plans and obtaining the appropriate GESC permits/approved equivalent, the local agency(ies) shall have authority to review and approve, implement and enforce its(their) MS4 stormwater programs and regulatory mechanisms within the MS4 jurisdictional boundary(ies).

10. Exclusions and Exemptions

The Authority may exclude activities from the requirements and issue exemptions in accordance with the Authority's Non-Standard MS4 permit, and CCR Reg 72.

11. References

- a. CDPS COR070000 MS4 Nonstandard permit, current version
- b. CDPS COR0400000 MS4 Construction stormwater permit, current version

Table 1 Construction Site Stormwater Management Requirements

Construction Site Stormwater Management Requirements		
Construction Activity	Basis of Requirement	Requirements
Outside Cherry Creek Reservoir Basin		
< 1 Acre of disturbance	Authority Policy	Develop and implement an erosion and sediment control plan using control measures including but not limited to: Vehicle tracking controls, perimeter control, silt fence, inlet protection, and/or erosion control logs, etc. may be required based on site conditions. Refer to Section 5 of this Appendix for stabilization and maintenance requirements
>1 acre of disturbance for applicable construction activities	E-470 CDPS Non-standard MS4 permit (COR070000) CDPS General Permit for Stormwater Discharges Associated with Construction Activity (COR0400000)	1. Obtain and comply with CDPS Construction General Permit 2. Prepare and maintain written SWMP 3. Implement and Maintain construction phase control measures for stormwater management. Refer to Appendix B Maintenance of construction site stormwater control measures and final stabilization for requirements
Inside Cherry Creek Reservoir Basin		
< 1 acre of disturbance	CCR Regulation 72	Reduce stormwater runoff flow to non-erosive velocities when practicable using control measures. Protect state waters located on construction sites from erosion and sediment damages resulting from land disturbance, using control measures. Control sediment before it leaves a construction site including vehicle . All stormwater runoff from disturbed areas must be managed by at least one sediment entrapment control measure before the stormwater exits the site. Refer to Section 8 for requirements.
>1 acre of disturbance for applicable construction activities	E-470 CDPS Non-Standard MS4 Permit (COR070000) CDPS General Permit for Stormwater Discharges Associated with Construction Activity (COR0400000) CCR Regulation 72	Obtain and comply with CDPS Construction General Permit. Prepare and maintain written SWMP. Implement and maintain construction phase control measures for stormwater management. Refer to Section 8 for requirements.

1“Applicable construction activities” include construction activities that result in a land disturbance of greater than or equal to one acre or that is less than one acre but is part of a larger common plan of development or sale that would disturb one acre or more. See the Authority’s CDPS Non-Standard MS4 permit for additional definitions and requirements (or as defined by specific requirements within the Regulation 72 permit area).

¹“Applicable construction activities” include construction activities that result in a land disturbance of greater than or equal to one acre or that is less than one acre but is part of a larger common plan of development or sale that would disturb one acre or more. See the Authority’s CDPS Non-Standard MS4 permit for additional definitions and requirements (or as defined by specific requirements within the Regulation 72 permit area).