CONSTRUCTION MANAGEMENT PLAN REQUIREMENTS MANUAL

Construction projects that exceed **1000 SF** of soil disturbance and/or **400 SF** of building demolition, improvement, or renovation (interior and/or exterior) must submit a construction management plan in accordance with this manual.

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1.0 GENERAL

1.1 PURPOSE

The purpose of this Construction Management Plan Manual is to provide a consistent policy under which certain physical aspects of construction management will be implemented. The elements contained in this document are related to the development process. It is intended that they apply to both public and private work designated herein.

These standards cannot anticipate all situations. They are intended to assist, but not to substitute for competent work by design and construction professionals. The City of Aspen does not intend to limit any innovative or creative efforts that could result in better quality, greater cost savings, or both. Any proposed departure from the manual will be judged on the likelihood that such variance will produce a comparable result, adequate for the user and City resident over the duration of the improvement/project.

If the project changes ownership or contracting services change, the City Engineering Department must be notified, and must agree to comply with an approved CMP in writing. Any departure from the approved CMP must be submitted in writing and approved by the City Engineer. The approved construction management plan must be kept on-site.

1.2 APPLICABILITY

This manual shall govern the construction and development of all public and private construction projects in the City of Aspen. These regulations shall apply to all commercial, industrial, residential, and mixed-use developments which disturb 1000 SF or greater or require demolition, improvement, or renovation (interior and/or exterior) of 400 SF or greater within any twelve-month period. Additionally, these regulations apply to drill sites with depths exceeding 50 feet in depth.

1.3 DEFINITIONS AND TERMS

Construction Management Plan – A Construction Management Plan is a combination of diagrams, documents, drawings, and specifications that clearly define the steps that will be taken to demonstrate how the impacts to the community will be minimized. How the impacts associated with any construction project will be managed. Herein described as “Plan” throughout the remainder of this policy.

Construction Mitigation Officer – An appointed employee of the City of Aspen whose charge is to ensure that all aspects of a Construction Management Plan are followed, and to further ensure that the impacts associated with construction activities within the City of Aspen are effectively managed and impacts associated with those projects are the least necessary to accomplish the project.

Disturbance Area – A portion of land where topsoil or native soils have been removed for purposes of construction (development).

Best Management Practices (BMP's) – Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMP's also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, waste disposal, or drainage from material storage.

Tree Dripline and Protection Zone - Use the longest branch of the tree as a radius from the center of the tree and make a circle. The circle is then defined as the dripline and thus is the tree protection zone.

Final Stabilization – Uniform vegetative cover has been established with a density of at least 70 percent of pre-disturbed levels.

Major Impact - Major projects as defined by the Urban Runoff Management Plan (URMP).

Minor Impact - Minor project as defined by the URMP and located outside of the CRA.

URMP Triggers can be found in Table 1.1 of the URMP. A link to the table can be found at:
http://www.aspenpitkin.com/Portals/0/docs/Chapter%201.pdf

1.4 CMP SUBMISSION CERTIFICATION

Anyone submitting a CMP as part of a City of Aspen construction project must have passed the online certification class, provided by the City of Aspen's Engineering Department, and provide a copy of your certificate with your submission. The online training course is available at cmpaspen.com.

1.5 REFRENCES

A. City of Aspen Construction and Mitigation Standards for Work in the Public Rights-of-Way
B. City of Aspen Municipal Code Titles 8.56, 13, 21, 26, 28 and 29
C. City of Aspen Ordinance 35
D. Manual on Uniform Traffic Control Devices for Streets and Highways – most recent edition
E. Colorado Department of Public Safety General Permit Part IB
F. Colorado Department of Transportation M&S construction standards
G. Colorado Department of Public Health and Environment – Air Pollution Control Division

2.0 PROJECT LOCATION

2.1 DISTURBANCE AREA

The Plan shall describe and compute the total project disturbance area. Soil disturbance shall be kept to a minimum. Construction staging and phasing shall occur, where applicable, to minimize soil disturbance time.

2.2 LOCATION

A project vicinity map shall be included in the Plan. The map should accurately depict general project location within the City of Aspen and delineate project extents. The map shall be a scaled drawing that includes a directional arrow and adjacent street descriptions.

2.3 DESCRIPTION

The Plan shall include an overview of the construction project including background information, proposed development type and general information. The proposed effect on public utilities such as storm sewer, sanitary sewer, water main, etc. should also be described. The plan must describe the extent of excavation and detail any method of stabilization employed.

3.0 PROJECT DOCUMENTATION

3.1 PERMITS / OTHER DOCUMENTS

The contractor shall maintain all applicable local, state and federal licenses and permits that apply to the construction project. Applicable permits shall be listed, described and copies of the documents shall be attached in Plan appendices. In addition to permits all PUD's, Subdivision Improvement Agreements, and Related City Ordinances must also be attached in the Plan appendices.

3.2 PUBLIC NOTIFICATION

A project update shall be provided to the public on a basis no less than monthly, via website, newspaper, on-site notices, or other accepted means of notification (per request of the City of Aspen). The first public notification shall occur no later than 10 days prior to construction.

The update shall include a description of the current project phase, list any traffic and/or pedestrian concerns, and describe hauling/staging operations.

Additionally, it shall include information of the kinds of equipment, expected noise levels and durations of loud work.

Communication with neighbors can prevent complaints from arising and resolve concerns before there is a problem. Provide a phone number where the foreman can be reached prior to the start of the job.

The above notification shall specifically be distributed to neighbors located within 300 feet of the project property.

Projects that request variances from typical allowances for the yellow, orange, and red encroachment zones as defined by Appendix F may be required to notify and meet with neighbors to discuss construction and encroachment impacts prior to the approval of construction management plan.

The Plan shall designate a project representative, date, and time for a required preconstruction meeting. The purpose of the meeting is to discuss the project and summarize the project specific Construction Management Plan. The contractor and subcontractors are required to attend the meeting. Utility personnel, applicable City departments, the Roaring Fork Transit Authority, neighboring property owners, and the Aspen School District shall also be notified.

3.3 PROJECT SIGN

A project sign shall be constructed and posted that includes the items shown in Appendix A: Required Construction Sign. All signs shall be 18” x 24” in size.

Regulatory and safety signs are also permitted, refer to code 26.510.030B4.

The sign shall be posted in a location where it is readable from the street or driveway and shall meet criteria in City Municipal Code 26.510.030B4.

3.4 CONTACT DESIGNATION

The Plan shall have a contact list with associated phone numbers located at the front of the document. The list will include: the owner, contractor appointed overall site supervisor, a state certified safety officer, a state certified traffic control officer, and a state certified erosion control representative.

Other information shall include city and county phone numbers, fire department, police department, Roaring Fork Transit Authority (RFTA), school district, and all applicable utility company contact information. The contact list should include hospital contact information and the Emergency 911 reminder.

4.0 PROJECT IMPLEMENTATION

4.1 DATES OF CONSTRUCTION

Dates of construction shall be specified in the Plan. Any work being performed within City ROW shall be completed as per the City of Aspen Right of Way permit requirements.

4.2 HOURS OF CONSTRUCTION

Construction hours shall be limited to 7:30am – 5:30pm Monday through Friday and 9am – 5pm on Saturday. No construction is permitted on Sundays, 4th of July day and/or weekend if it falls on a Friday or Monday, Memorial Day and Labor Day weekends, Thanksgiving Day, Christmas Day, New Year's Day.

During Presidents Day:

- Projects located in the Central Resort Area (CRA) are not permitted to work on any exterior elements, however interior work may be permitted with prior approval.
- Projects outside the CRA will be permitted to work.

During the Christmas week (12/26-12/31):

- Projects located in the Central Resort Area (CRA) are not permitted to work on any exterior elements, however interior work may be permitted with prior approval.
- Projects outside the CRA will be permitted to work.

During Holiday Season:

- Holiday Season is defined as the days of the week leading up to Christmas until New Year's Day. Refer to Appendix I for Holiday Season dates.
- Projects located in the Core are not permitted to work on any exterior elements, however interior work will be permitted.

During the Food & Wine Festival in June (Friday through Saturday):

- Projects located in the Central Resort Area (CRA) are not permitted to work, projects outside the CRA will be permitted to work.

The CRA and Core areas are defined in Appendix E.

Specific indoor activities during restricted periods may be permitted with

approval from the City of Aspen Engineering Department; specific conditions will be applied to each project separately. During the off-season 24 hour a day interior work may be permitted within the CRA, the applicant must present a work plan to the City of Aspen Engineering Department and the plan must be approved prior to working outside of the normal construction hours.

Additional restrictions on construction hours and encroachments will be applied for Aspen Special Events. Examples of events that will require additional restrictions include the USA Pro Cycling Challenge and the Farmer's Market.

Additional restrictions on construction hours will also be applied based on the project's specific impacts on adjoining properties. This includes limiting work during sales events (for a maximum of two sales events per year), maintaining site lines to these businesses, and providing signage on the construction site advertising the adjacent business. For example, if an adjoining business has an event (such as a semiannual sale) the project will accommodate this adjoining business to ensure the construction activities do no adversely affect that business's event.

4.3 SEQUENCE (PHASING) OF CONSTRUCTION

A construction schedule including all project phasing, with item details, and specific item completion dates or duration of phasing is required.

4.4 NEIGHBORING PROPERTIES

No person shall excavate on land close enough to a property line to endanger any adjacent public street, sidewalk, and alley, other public or private property, or easement, without supporting and protecting the property from any damage that might result from construction operations.

Additionally, the project must identify which adjoining properties will be most affected by the project and how the project intends on mitigating the impacts to those properties. This includes identifying adjacent businesses and understanding what events (such as sale events) and programs that business has scheduled throughout the year. The project will be required to work with the adjoining properties to mitigate impacts to their events and programs. This also includes maintaining sight lines to adjacent businesses.

Also, in the event there are other construction projects underway or pending, near where the project is being constructed, the construction management plan shall take into account individual and cumulative effects that will result to the neighborhood. The construction management plan shall demonstrate to the satisfaction of the Engineering Department that the individual and cumulative impacts on the neighborhood have been sufficiently mitigated in the CMP.

Lastly the needs of adjoining construction projects must not be compromised.

4.5 PROJECT FENCING

All construction areas shall have a non-removable construction fence or other approved device securely placed around the areas to be protected. The fence shall be six feet (6') in height and constructed out of chain-link fence with mesh windscreens (visual barriers). The type and look of fencing must be approved by the Engineering Department. Please see Section 11 for fencing noise suppression techniques.

4.6 PUBLIC HEALTH AND WELFARE

All construction projects located within the City of Aspen shall uphold utmost respect to public health and welfare and be reflected in prepared Plan.

4.7 NATURAL ENVIRONMENT

Project construction shall be oriented to minimize harm to all aspects of the City of Aspen's natural environment. All tree and natural resource protection measures must be identified in the Plan and in place prior to the commencement of any construction or demolition activities. Refer to section 13.20.020b of the Municipal Code for tree protection and removal requirements and process.

The Plan must contain a site map showing exact tree protection fence location and accurate tree driplines (refer to Section 1.3 for dripline definition).

Proposed projects should be consistent with the character of existing land use in the surrounding area.

5.0 SITE AND RIGHT OF WAY MANAGEMENT

5.1 RIGHT OF WAY MANAGEMENT PLAN

A Plan outlining the use the of the Right-of-way (ROW) must be submitted as part of the CMP. This plan will identify areas of encroachments including the use of parking spaces for the project. The use of the ROW will be limited according to the requirements outlined below.

5.2 EMERGENCY VEHICLE ACCESS AND ORDINANCE 35

The contractor shall maintain continuous emergency vehicle access, on and around site, including but not limited to police, fire, and ambulance services.

This includes projects adjacent to roads and alleys.

5.3 CONSTRUCTION PARKING DETAILS

Specific construction parking spaces/areas may be requested for use by craftsman, subcontractors, and contractors involved in the site construction process. Prior to the City allowing for construction parking spaces, the project must demonstrate that it has minimized the number of vehicles traveling to the site. This will be demonstrated through Traffic Demand Management (TDM) Plan. A site's TDM plan will consist of the following:

Minor Impact – Select one or more of the following

Moderate Impact – Select two or more of the following

Major Impact – Select three or more of the following

Project-Sponsored Vanpool - Employer-sponsored vanpool programs entail an employer purchasing or leasing vans for employee use and subsidizing the cost of program operations and administration. The driver usually receives personal use of the van, often for a mileage fee. Scheduling is within the employer's purview, and rider charges are normally set based on vehicle and operating cost. The successful project will implement an employer-sponsored vanpool, thus reducing the need for SOV trips to and from the worksite. Note: To receive credit, project staff must park and be picked up no further up valley than the Brush Creek Intercept Lot. Enforcement: A vanpool route and schedule should be submitted as part of the CMP. Staff may audit the route to ensure its presence.

Project Shuttle - Offering employees a customized trip to work via private shuttle reduces the need for SOV trips. The successful project will provide a convenient, regularly scheduled employee shuttle from a Park & Ride, Intercept lot or other identified pick up points to the worksite. To receive credit, project staff must park and be picked up no further up valley than the Brush Creek Intercept Lot. Enforcement: A shuttle route and schedule should be submitted as part of the CMP. Staff may audit the route to ensure its presence.

Carpool Program – The successful project will require employees to form carpool groups of two or more adults to reach the worksite. To receive credit, carpools should originate no further up valley than the Brush Creek Intercept Lot.
Enforcement: carpool passes should be kept may be requested.

Transit Fare Subsidy - The successful project will provide fully subsidized daily or monthly public transit passes for the RFTA valley system. Enforcement: Records of the purchase and subsidies must be

kept and may be requested.

Parking Cash-out - The term cash-out is used to describe the provision of employee choice of forgoing their current subsidized/free parking for a cash payment equivalent to the cost of the parking space. The successful project will require provide no free parking for workforce and will provide a cash subsidy to those who in Aspen City limits via transit, vanpool, bicycle or walk modes.
Enforcement: records of the parking cash out must be kept and may be requested.

Customized Program – This option allows for the project to propose a measure not listed above. If this option is chosen, a narrative should appear below and must include the following information for staff review:

- Description of measure
- Justification of measure
- Route and schedule if applicable
- Enforcement options

After demonstrating that the project has minimized the number of vehicles traveling to the site, using a TDM (which includes the measures above), the City will allow minimal on-site parking

No construction parking will be permitted within the free two-hour residential parking areas without a valid permit.

5.4 STAGING AREAS

The Plan shall specify construction staging area locations. Alleyways are preferred short term staging locations without blocking access to neighboring properties. The number of truckloads expected to and from the site should be estimated (including soil hauling and materials transport). The timing and duration of the transport vehicles should also be noted.

City of Aspen personnel can limit project staging locations, number of trucks, and duration of operations depending on project location and site surroundings.

Projects that require crane operations and have little or no setbacks are required to use a tower crane. The City prefers electric type cranes to reduce noise and fumes.

Right-of-Way encroachments are used as a last resort in all cases. In the case where a ROW encroachment occurs, a permit must be obtained from the City Engineering Department. Refer to Section 5.5 for limitations on the use of the ROW.

5.5 RIGHT OF WAY LIMITATIONS

a. The following activities may require the use of the ROW:
    - Temporary construction of guardrail, pedestrian walkways, scaffolds, protective canopies, etc.
    - Temporary storage of materials, merchandise, commodities, construction materials, etc.
    - Park or stage and operate construction equipment, crane, bulldozer, skid steer, etc.
    - Temporary placement of a field office, dumpster, loose material container, or construction fencing
    - Earth retention methods and associated removal

b. The requests for the use of the ROW (i.e. encroachments) are reviewed by the Engineering Department. The follow factors are considered before granting any use of the ROW:

    - **Location**: Depending on location, there will be limitations on the use of the ROW. Particularly, the core area has on-season restrictions. Refer to Section 5.5 (c).

    - **Size**: The encroachment must occupy as small a footprint as applicable and may not affect safe lane widths or bus routes. Additionally, the encroachment may not interfere with City snow removal process. If lane closures are anticipated, we recommend that the applicant completes the work before 10am to lessen the impact.

    - **Safety**: The encroachment must accommodate pedestrians. Conflict between pedestrians and construction traffic must be minimized. Additionally, all encroachments shall ensure sight distances of 35 feet from the intersection. There must be no overhead hazards (crane swing, etc...) and there must be adequate room for Emergency Response.

    - **Schedule**: Aspen has many re-occurring special events scheduled throughout the year. Some encroachments may be limited or not approved based on impacts to these events. Holidays and special events that affect ROW closures in the core area include, but may not be limited to: Food and Wine (mid-June), USA Pro Cycling Challenge (mid-August), Saturday Farmer's Market (mid-June through mid-October), Holiday/Christmas Week and the July 4th Parade.

    - **Aesthetics**: Consideration should be given to the aesthetics, public information, and signage for adjacent businesses, site barricades, fencing, enclosed walkways etc. can be more than barren plywood walls. Whether its artwork, information about

the project or for local businesses there is an opportunity to minimize the aesthetic impact.

c. Limitations for Encroachment Zones: There are seasonal limitations for temporary encroachments (refer to Appendix F for zone designations). These limitations include the following:

   i. Red Zone: Five-foot encroachment allowed on the mall during the on season. For areas abutting a street, a 15- foot encroachment will be allowed during the on season. For corner lots, only one side of the building will be permitted an encroachment during the on season. Sites will be limited to one on season encroachment.
   ii. Orange Zone: A fifteen-foot encroachment will be allowed during the on season. For corner lots, only one side of the building will be permitted an encroachment during the on season. Sites will be limited to two on season encroachments.
   iii. Yellow Zone: A fifteen-foot encroachment will be allowed during the on season. For corner lots, only one side of the building will be permitted an encroachment during the on season. Sites will be limited to three on season encroachments.
   iv. The City may allow for larger encroachments if the site can demonstrate the benefits of doing so. For sites requesting larger encroachments they must not only demonstrate the benefit to the City but also submit two construction schedules one with the larger encroachment request and one without.

d. On-Season Time Frame: On seasons are defined as June 1st through Labor Day and November 15th through March 31st.

5.6 SITE PLAN

As specified in Section 5.1, construction trailer, job materials storage, portable restrooms, waste management and recycling container locations shall be clearly designated on the project site plan. Loose job material storage is not allowed in ROW under any circumstance.

The City of Aspen Engineering Department strongly recommends job trailer, waste management containers, and portable restrooms be stored on private property and not within City ROW.

The plan must also depict the extent of excavation and detail any method of stabilization employed. The plan will also depict any non- surcharge areas associated with the stabilization plan.

Sites that utilize cranes must supply a diagram of the off-property swing radius as well as the written permission of the affected property owners.

Cranes will not be permitted to weather vane within the ROW.

The City of Aspen requires recycling of construction materials. In instances where recycling containers cannot be accommodated onsite, the City Engineering Department will consider locating recycling containers within public ROW where feasible. The encroachment permit fee will be waived if it pertains to recycling containers. If at any time such a container is not being used for recycling operations, the property owner will be responsible to pay at least three months calculated land lease fee.

5.7 WASTE MANAGEMENT

The City of Aspen requires recycling of materials, both conventional and construction related, according to this document and City of Aspen Municipal Code Title 12. A waste management plan must be submitted to the City prior to beginning demolition or construction. Recycling requirements included in this section do not supersede project specific Building Code requirements. Refer to Appendix H for the waste management plan requirements.

Project site conventional recycling of co-mingled materials (plastics #1-#7, tin, aluminum, and glass), and cardboard must have an assigned space/area and be separated on-site during the project. Sites must comply with Colorado and Aspen landfill bans, i.e. no disposal of electronic waste, fluorescent light bulbs, hazardous waste or yard waste. These materials may not be disposed of in the trash.

During the demolition phase of a project, deconstruction related activities are required (recycling and/or salvaging of material such as wood products, drywall, flooring, etc.). Concrete and scrap metals must be sorted and kept separate on-site and must have an assigned space/area.

Field inspections will occur throughout the permit process. If sorting of materials is not occurring onsite, other means of verification may be provided to City of Aspen as deemed appropriate. Acceptable verifications include (but are not limited to) a receipt from the recycling facility, an invoice from the company receiving the materials for recycling/salvaging or other proof the materials are being repurposed or recycled.

Per municipal code (12.08.010), any dumpster or other trash receptacle that is used for food refuse must be constructed in such a manner as to render it bear proof. All containers shall be adequately covered at all times until transferred to the landfill. The City of Aspen municipal code states it shall be unlawful to permit accumulated debris, litter, or trash on any construction site to blow or scatter onto adjoining properties (12.04.020).

An on-site hazardous material spill cleanup kit is required, as specified by the City Engineer, that contains, at a minimum, a 25-pound bag of Floor-Dry (or equal), absorbent pads, and other spill kit materials.

6.0 TRAFFIC CONTROL

6.1 GENERAL

All traffic control operations shall be managed by the designated certified traffic control supervisor. All construction related vehicle activities shall be defined. Maximum vehicle weights and sizes shall be specified.

6.2 HAUL ROUTES

The City of Aspen has designated specific project haul roads throughout the City (Appendix B). The project must follow the designated routes and specify any additional routes necessary to complete hauling operations. Project haul routes shall be oriented to minimize traffic congestion and maximize pedestrian safety.

6.3 DELIVERY REQUIREMENTS

Traffic control required for deliveries must be fully coordinated with the City of Aspen Engineering Department. Roads will not be closed under any circumstances, unless granted permission from the City of Aspen Engineering Department.

The maximum number of delivery vehicles onsite must be specified, along with the hours the deliveries will occur, and any exceptions to the delivery schedule.

Delivery vehicles and all other onsite vehicles are not allowed to idle for more than five (5) minutes, except for generators or PTO type operations. The general contractor must include an idling policy in the Plan that meets City requirements.

6.4 TRAFFIC CONTROL PLAN

A preliminary Traffic Control Plan (TCP) shall be submitted as part of the Construction Management Plan if necessary to be determined by City Engineer. The TCP shall be completed by a State Certified Traffic Control Supervisor and must conform to the most current edition of the Manual of Uniform Traffic Control Devices for Streets and Highways (MUTCD). The TCP shall contain all information specified in Section 6C.01 of the MUTCD.

A School Traffic Control Plan should be submitted in addition to the TCP in

school areas according to Chapter 7A of the MUTCD. If the project is not located in a school area, but abuts a school bus stop or school walk route, extra traffic control personnel and devices shall be implemented to ensure school pedestrian safety.

7.0 PEDESTRIAN PROTECTION

7.1 GENERAL

The Plan shall comply with pedestrian safety per City code 21.04.060, MUTCD Chapter 6D, the Americans with Disability Act, and IBC Chapter 33.

7.2 LIMITATIONS

Sidewalk closures in the core will not be permitted. Pedestrians must be accommodated without having to cross the street. Short duration closures in the core may be considered during the off season.

8.0 SEDIMENT AND EROSION CONTROL

8.1 REQUIREMENTS

A Stormwater Management Plan (SMP) shall be completed as outlined in Appendix G.

The main objective of the storm water management plan shall be to identify Best Management Practices, which will minimize erosion and sediment transport.

Onsite sediment and erosion control operations shall be managed by a state certified erosion control supervisor.

Sites may not have to complete a SMP if they are less than 1000 sf of disturbance. However, these sites will still be required to provide sediment and erosion control measures depending on the type of work.

8.2 SMUGGLER MOUNTAIN RESTRICTIONS

All projects located within the Smuggler Mountain Superfund Zone (Appendix E) are required to meet additional standards for erosion control measures and are required to file an additional soil removal permit. These requirements shall be instituted on all projects disturbing (excavating or exposing) more than one cubic yard of soil. All projects located in the superfund site will also be required to handle disturbed and excavated soils

with an additional level of care.

1. A Smuggler Mountain Superfund Site Soil Removal Permit must be completed prior to any soil disturbance in this area. (Appendix D)
2. All contaminated soils must be disposed of at a duly licensed and authorized facility, usually the Pitkin County Landfill, and the receiving location must be made aware of the contaminated nature of the soils.
3. Soils must always be contained and covered unless actively being worked. Working will be defined as moving, compacting, backfilling, exposing, or grading the soils at least once in a sixty-minute period. If any stockpile of soil is to be left for more than sixty minutes, it must be contained and covered.
4. Containment and Covering is required. This can be accomplished using a non-permeable tarp placed below the stockpile and the same type of material shall be used to cover the stockpile.
5. After completion of the project an uncontaminated soil cap will be required. This cap shall consist of twelve inches of clean fill or gravel. This can also be accomplished by paving the area with asphalt or concrete.
6. To obtain a "clean letter" from the City of Aspen, which, will be required prior to the release of the Certificate of Occupancy, all the above conditions must be met.

9.0 FUGITIVE DUST CONTROL

9.1 FUGITIVE DUST CONTROL PLAN

All projects that result in fugitive dust emissions must submit a fugitive dust control plan and file an application for a construction permit with the Colorado Department of Public Health and Environment.

The approval of a Dust Prevention and Control Plan does not relieve the owner or contractors of the responsibility to implement whatever additional measures may be required by the City Engineer to properly prevent and control dust.

9.2 REQUIREMENTS

The plan shall demonstrate that the discharge of dust from the construction site will not occur or can be controlled to an acceptable level depending on the individual site conditions and circumstances.

1. The plan shall address site conditions during construction operations, after normal working hours, and during various phases of construction.
2. The plan shall include the name and the 24-hour phone number of a responsible party.
3. If the importing or exporting of dirt is necessary, the plan shall also include the procedures necessary to keep the public streets and private properties along the haul route free of dirt, dust, and other debris.
4. When an entire project is to be graded and the subsequent construction on the site is to be completed in phases, the portion of the site not under construction shall be treated with dust preventive substance or plant materials and an irrigation system.
5. All phased projects shall submit a plan demonstrating that dust will not be generated from future phase areas.

For all construction within the site, the contractor shall have a water truck available for dust control. Wetting shall be completed once three times a day under dry conditions or as directed by the City Construction Mitigation Officer.

Vehicle speeds should not exceed 15 mph on construction access roads and construction site.

10.0 EMISSIONS

10.1 GENERAL

All vehicles and equipment used on site will be properly maintained such that the engines will function within manufacture's standards or parameters.

10.2 EMISSIONS FROM DIESEL POWERED ENGINES

Emissions from diesel engines operated within the City of Aspen shall be of a shade or density no darker than 40% opacity, except for starting motion no

longer than 10 seconds or for stationary operation not exceeding 10 seconds.

11.0 NOISE SUPPRESSION

11.1 GENERAL

The noise limit for construction is measured at the property line of the construction site. All construction equipment shall be adequately muffled and maintained to minimize project noise.

11.2 NOISE SUPPRESSION PLAN

Each site must include information on noise blocking methods, techniques, and common equipment and activities that require noise suppression (Refer to Appendix C) to meet the decibel limits in the following section.

Major impact projects that include reinforced earth retention are required to have a site-specific Noise Suppression Plan. This plan will outline how the project will mitigate the noise of mechanical soil stabilization to conform to the allowable construction decibel limit.

In certain cases, the City will accept a Noise Suppression Plan that does not require a sound engineer/consultant to model the site. The minimum requirements for a non-modeled plan are a 14-foot tall fence of noise dampening material completely surrounding the construction site. In the Noise Suppression Plan, please provide a drawing showing the location of the fence. Include the property line, where the earth retention will be, the extent of excavation, any trees that are to be left throughout the construction, and location of gate. Also include a detail of how the fence will be supported and the noise dampening material used.

A more detailed Noise Suppression Plan will be required if the project wants or needs any variations from the 14-foot sound fence or if the City of Aspen Engineering Department deems it necessary due to site location, complexity, or constraints. This Plan requires a sound engineer/consultant to model the site, insert noise sources, and specify noise mitigation measures to see how noise levels will be reduced. The models should show the anticipated noise levels at various locations surrounding the project. The plan may propose a variety of mitigation measures.

Each site is responsible for staying within the allowable noise limits. If after implementation, an approved Noise Suppression Plan fails to stay within City noise regulations, additional measures will be required.

11.3 NOISE SUPPRESSION BARRIER SCREENING

All temporary barriers or curtains implemented for noise suppression will utilize a 100% vinyl or equivalent material wrap or fence banner in all areas that are visible from the roadway, Right-of-Way or Open Space. The graphics on the wrap will include either a neutral solid color or will be a depiction that represents the heritage of the City of Aspen. This includes graphics depicting aspen trees, the Maroon Bells area or other aspect of Aspen's natural environment. Renderings of the proposed development, advertising or text of any form are not acceptable.

11.4 NOISE LIMITS AND SUPPRESSION REQUIREMENTS

- Projects are limited to 70 decibels (dB) at the property line during the summer on season.
- In addition to the decibel limit listed above, projects located on the Mall will be limited to 70 decibels (dB) at the property line during the winter on season.
- All other times projects will be limited to 80 decibels (80dB) at the property line.

On Season Summer Time Frame: June 1st through Labor Day

On Season Winter Time Frame: November 15th through March 31st

Allowances of an additional 10 dB from the limits above will be made for short durations. However, under no circumstance can the decibel limit exceed 80 dB at the property line.

Allowance for an excess noise exception from the above limits will be reviewed by the City Engineer. Criteria for the exemption include:

- Where it is in the interest of public safety
- Public infrastructure work within the Right of Way
- Other activities within the Right of Way where there is no other reasonable alternative
- Short duration residential roofing repair projects

Work associated with any allowances described above will not be permitted to start before 9am on weekdays and will not be permitted on Saturdays.

Sites will be required to operate equipment in accordance with manufacturer's specifications and with all standard manufacturers' mufflers and noise-reducing equipment in use and in properly operating condition. The use of radios on the site before 8:00 am is not allowed.

Sites may be required to move portable loud equipment including generators,

compressors, and cement mixers to different sides of the property to reduce impacts on individual neighbors.

Sites are required to post notices to inform workers, including sub-contractors, about the basic noise requirements, as well as noise restrictions specific to the project.

Appendix C includes recommended noise suppression methods.

11.5 NOISE LEVEL MEASUREMENTS

Noise level measurements shall be made with a sound level meter using the "A" weighting scale set on "slow" response.

Measurements shall be taken at the property line of the site. The meters shall be used according to manufacturer specifications.

Background noise levels may be taken for comparison with a given source for accuracy of a measurement. Extraneous or momentary spikes in the background noise readings shall not be used to compare with the source noise readings.

Enforcement actions will be taken if the source of the noise is greater than the permissible levels.

11.6 CONTINUNED NOISE MONITORING

Major construction sites that require reinforced earth stabilization will be required to perform continued noise monitoring. Additionally, sites that receive two correction notices or one red tag for noise violations will be required to provide continued noise monitoring.

This monitoring must be recorded and be made available remotely through online access to the City's Construction Mitigation Officer.

For those sites not required to provide continued noise monitoring but receive verified noise complaints, the City will monitor noise on site If the noise complaints are verified, the site will be required to install its own continued noise monitor at its own expense.

11.7 SPECIFIC RESTRICTIONS RELATED TO MANUFACTURING ON SITE

Considering that some structures will require an increase in the level of manufacturing of certain materials to complete the desired finish of the structure, additional restrictions will be placed on those activities. The primary concern is that extending the duration, for which neighbors are exposed to high levels of noise, could cause specific unwanted responses. To reduce those risk factors to neighboring properties all manufacturing efforts must be limited on-site and when possible shall be conducted off-site, or in

such a manner as to not contribute to any long-term noise impacts off of the property.

Manufacturing activities that are in excess of a maximum of 80 decibels must be accompanied by an Extended Impact Permit, this will require that the activity is enclosed completely and limited to 90 days in duration. Air exchange / venting systems shall be installed or otherwise supplied within the enclosure to provide a clean air source for laborers. The enclosure must be constructed in a manner which prevents noise and dust from escaping. This may be accomplished with the use of plastic sheeting to contain dust and a more dense and rigid material (ply wood, foam insulation boards) erected to contain sound. Noise levels will be measured at the property line, while facing the source of the sound, and shall not exceed 65 decibels during working operations.

Activities will be considered manufacturing if alterations to a material that is readily available on the market are made for the material to meet the needs of the end user. An example of this would be masonry wall construction. If all of the stone was delivered as a rough-cut product to the site, and each of the stones were to be cut square and fit into place. In this example the stone cutting is considered the manufacturing portion of the masonry wall and should be conducted off site. This would allow the stones to be cut square and to the appropriate dimensions and additional work to fit the stones would be permitted on site.

All work which requires a limited amount of additional manufacturing to achieve the desired finish (including fitting) shall be conducted between 9am and 5pm and shall have an approved noise suppression plan on site, relating to the activity.

12.0 ENFORCEMENT

12.1 CITY CONSTRUCTION MITIGATION OFFICER

A City Construction Mitigation Officer will complete random site visits to determine if the project is following approved Plan and City requirements. The officer is not intended to take the place of a City of Aspen building inspector.

12.2 CORRECTIVE ACTION

The City of Aspen will enforce construction mitigation corrections as follows:

1. The first corrective action is a verbal warning and explanation of the violation with a timeframe for completion.
2. The second corrective action is a written warning or correction notice with timeframe for compliance.
3. Third and final notice is a “Stop Work Order” (red tag). If a stop work order is issued, no more work can be completed until the violation is corrected.
4. The City may forgo steps one and two as outlined above and go directly to the “Stop Work Order” and or a summons and compliant may be issued for violations under the following circumstances:

    - Work without a permit
    - Work that is endangering Public Safety
    - Work that is endangering Public Health including work that may affect water quality.
    - Work on holidays or Sundays (unless the site received an exemption to work during these times)

The owner and general contractor are responsible for assuring compliance and both will be charged by summons and complaint in municipal court when necessary. This applies even if a sub-contractor violates the construction mitigation rules.

Failure to correct violations and/or any threat to public safety could subject the owner, contractor or both to a maximum penalty of up to a year in jail and/or a fine of up to $2,650 for each violation. Each day a violation continues is a separate offense determined by the municipal court.

13.0 CONSTRUCTION MITIGATION COMMITTEE

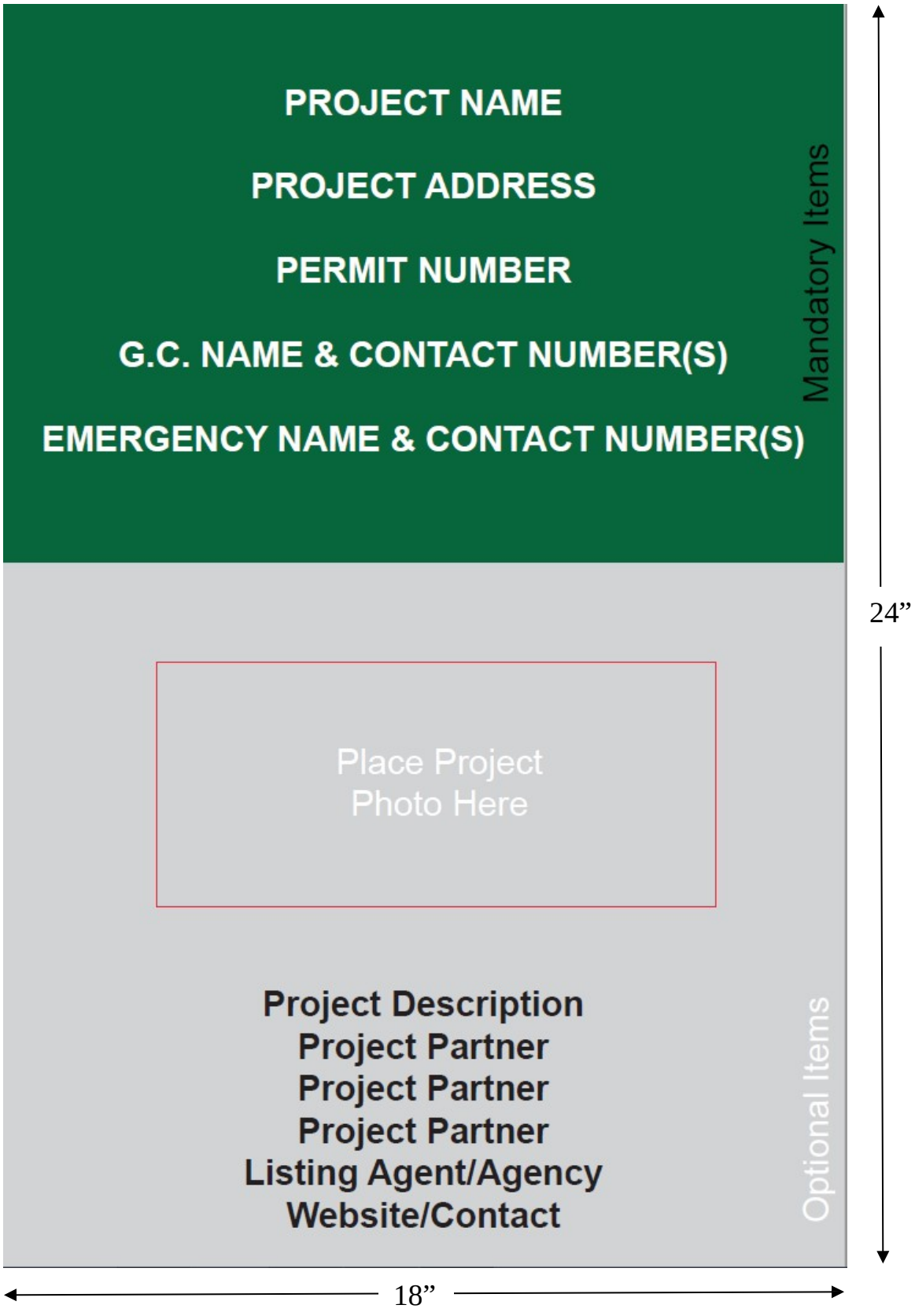
Projects seeking exemptions may seek an exemption from project durations, number of encroachments. These exemptions will be reviewed by the Construction Mitigation Committee. The committee consists of representatives from the Engineering, Parking and Building departments. If an exemption is granted, then the project will be subject to the exemption fees as outlined in Title 2.

Considerations for exemptions include impact of exemption on adjacent properties, duration of exemption and season that exemption is being requested.

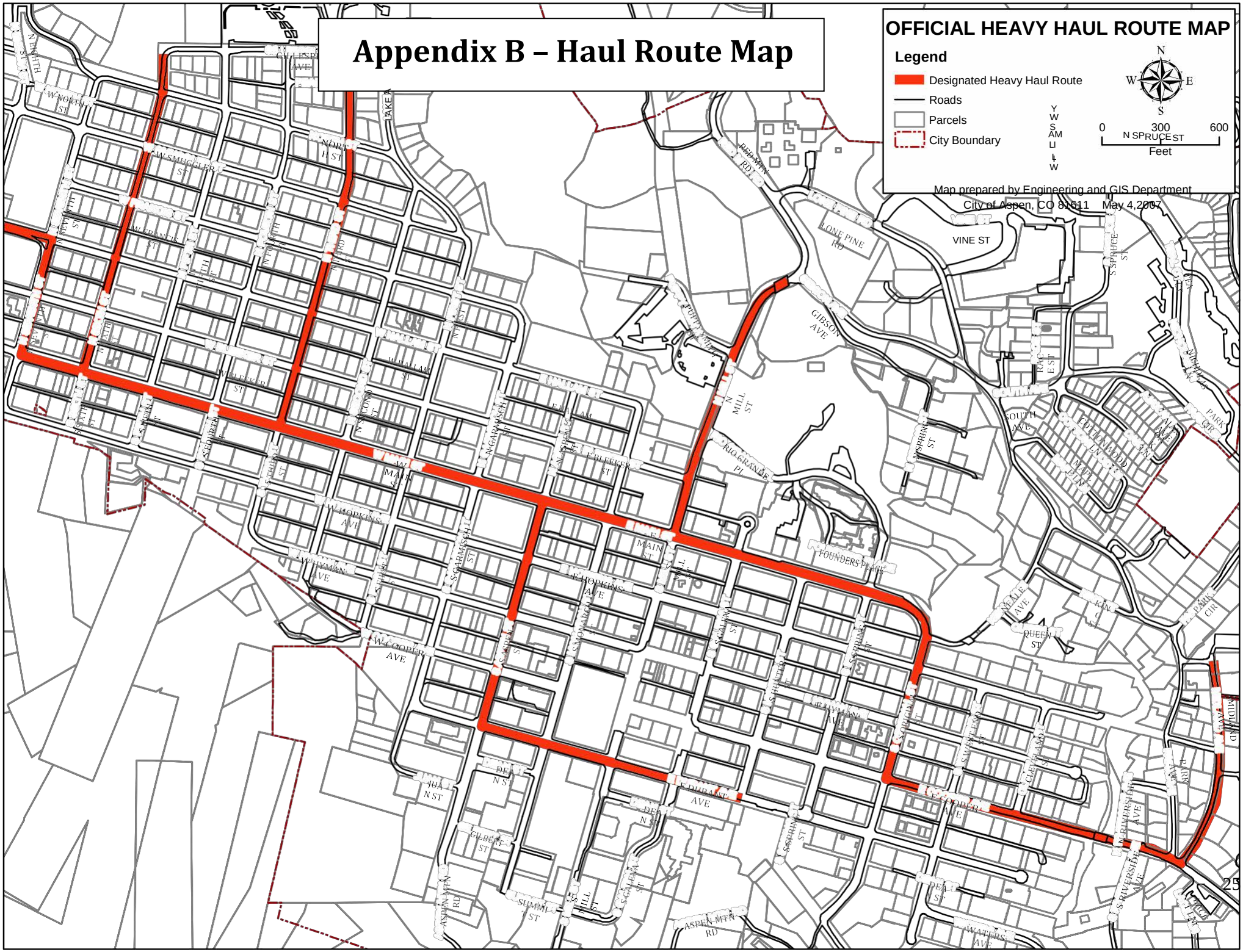
14.0 APPEAL PROCESS

Projects may appeal the decision of the Construction Mitigation Committee and/or the City Engineer. All appeal will be forwarded to the City Manager or their designee. If the appeal is approved and results in an exemption, then the project will be subject to the exemption fees as outlined in Title 2.

Appendix A – Project Sign



Appendix B – Haul Route Map



Appendix C –
Noise Suppression Plan, Techniques and Equipment

Noise Blocking Methods

Contractors shall require all subcontractors and vendors to use:

- "Residential" grade combustion engine exhaust silencers
- Electrical vs. pneumatic hand power tools
- Hydraulic vs. air powered rock drills
- "Silenced" pile drivers vs. Diesel pile drivers

Temporary Noise Barrier Materials:

Temporary barriers shall be constructed of 3/4-inch Medium Density Overlay (MDO) plywood sheeting, or other material of equivalent utility and appearance having a surface weight of 2 pounds per square foot or greater. The temporary barriers shall be lined on one side with glass fiber, mineral wool, or other similar noise curtain type noise-absorbing material at least 2-inches. The materials used for temporary barriers shall be sufficient to last through the duration of the construction project and shall be maintained in good repair. Prefabricated acoustic barriers are available from various vendors. An equivalent barrier design can be submitted in lieu of the plywood barrier described above.

Noise Control:

- Replace worn, loose, or unbalanced machine parts that cause vibration.
- Keep machine parts well lubricated to reduce friction.
- Acoustical enclosures and barriers around generators
- Sound absorbing material and vibration isolation systems on hand tools
- Shields, shrouds, or intake and exhaust mufflers.
- Noise-deadening material to line hoppers, conveyor transfer points, storage bins, or chutes.
- Noise barriers using materials consistent with the Temporary Noise Barrier Materials Section.
- Noise curtains
- Plywood with concrete blankets at the height of the equipment and that it surrounds the activity such that it directs noise up more than out from the property.
- Portable three-sided enclosures made from plywood to move with the activity such as jack hammering.
- Internal combustion engines are to be fitted with a suitable muffler in good repair.
- Noisy equipment such as cement mixers should be placed on the site to maximize the distance from neighboring houses and/or rotate location so as to not impact just one neighbor. Noise levels drop quickly with distance from the source.
- All equipment should be properly maintained, with special attention to mufflers and

other noise control devices.

Revised 11/17/09

- Between work periods, builders are required by city ordinance to shut down machines such as backhoes, bobcats, loaders and generators.
- All vehicular movements to and from the site must only be made during the scheduled normal working hours. This includes off-site noise that is associated with a specific project such as staging of concrete trucks.

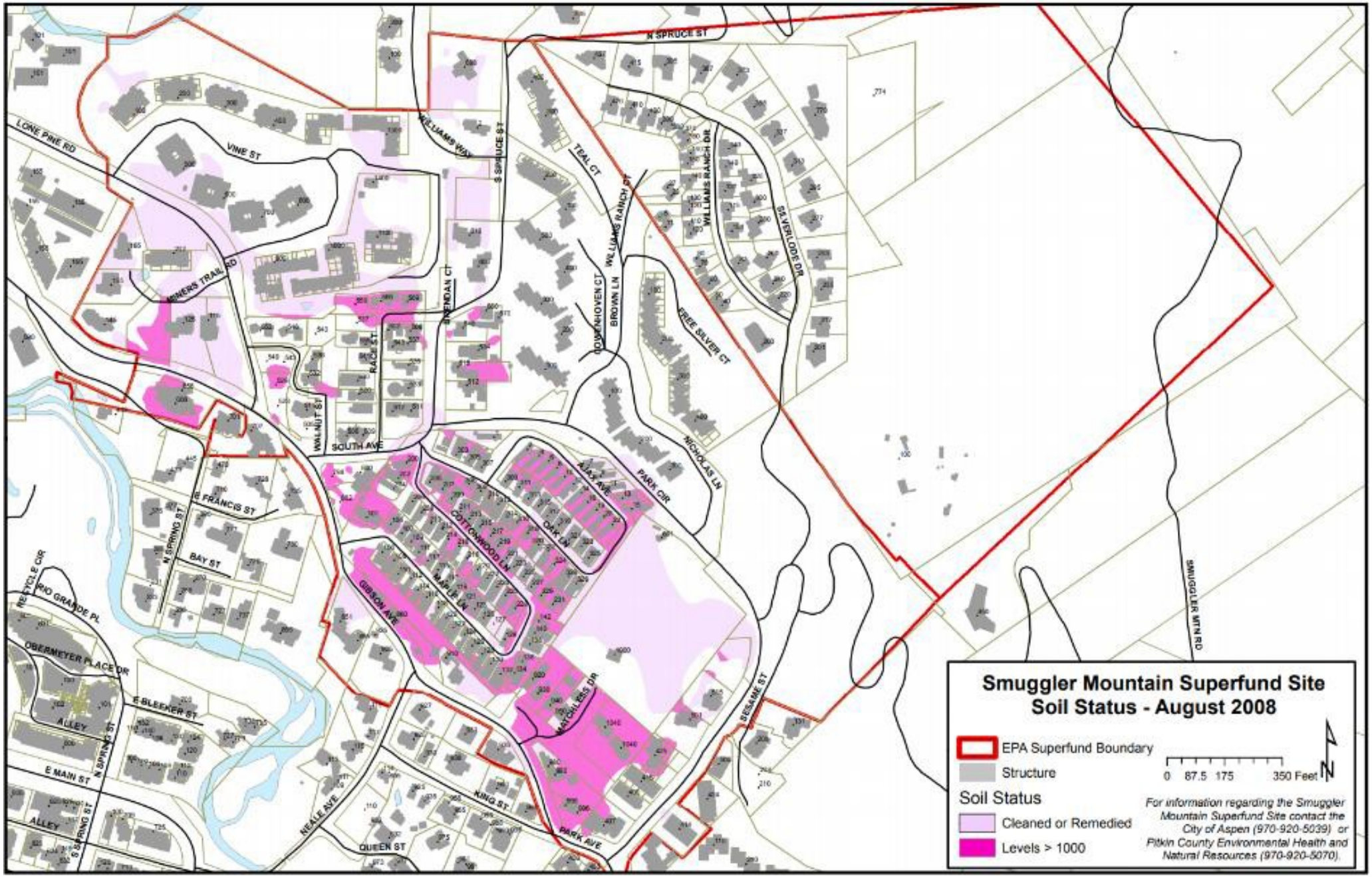
Equipment / Activity	**Noise Controls**
Pile Driver	Enclosure, muffler
Stone Saw Cutting	Noise control pad with water
Handheld Impact Drills	Reduction of reflected sound
Circular Saw Blades	15º tooth angle, new tooth configuration, slotted saw blades, viscoelastic damping
Pneumatic Tools	Muffler
Pavement Breaker/ Rock Drill	Muffler, enclosure of cylinder case and front head, moil damping
Portable Air Compressor	Muffler, acoustic enclosures
Bulldozer	Bulldozer Cab-liner material, enclosure, sound absorption in canopy, sealing of all openings
Wheeled Loader	Absorption of sound cooling air route
Vibratory Roller	Flexible mounting for pump compartment
Joint Cutter	Anti-vibration mounting fixtures
Dropping from Height (Re-Roofing)	When dropping materials from a height—for example, into or out of a truck, or when loading or unloading scaffolding, noise suppression plans require a chute or side baffles.
Generators	Acoustical enclosures and barriers surrounding equipment
Generators25 KVA:	The local power grid shall be used wherever feasible to limit generator noise. No generators larger than 25 KVA shall be used and, where a generator is necessary, it shall have maximum noise muffling capability.
Hand Tools	Sound absorbing material and vibration isolation systems on hand tools
Dismantling Formwork	use rubber mallets to erect and dismantle formwork

Backup Alarms	All equipment with backup alarms operated by the Contractor, vendors, suppliers, and subcontractors on the construction site shall be equipped with either audible self-adjusting ambient-sensitive backup alarms or manually-adjustable alarms. The ambient-sensitive alarms shall automatically adjust to a maximum of 5 dBA over the surrounding background noise levels. The manually-adjustable alarms shall be set at the lowest setting required to be audible above the surrounding noise. Installation and use of the alarms shall be consistent with the performance requirements of the current revisions of Society of Automotive Engineering (SAE) J994, J1446, and OSHA regulations.
Compressors	The unit with the lowest noise rating which meets the requirements of the job should be used where work is conducted in the City of Aspen, installed with mufflers and/or enclosed in a noise barrier.
Jackhammer	All jackhammers and pavement breakers used on the construction site shall have exhaust systems and mufflers that have been recommended by the manufacturer as having the lowest associated noise and shall be enclosed with shields or acoustical barrier enclosures.
Concrete Crushers or Pavement Saws	Pre-augur pile holes to reduce the duration of impact or vibratory pile driving and tie to local power grid to reduce the use of generators and shall be enclosed with shields or acoustical barrier enclosures.
Pneumatic Hand Power Tools	All pneumatic tools operated in the City of Aspen must be fitted with an effective silencer on their air exhaust port.

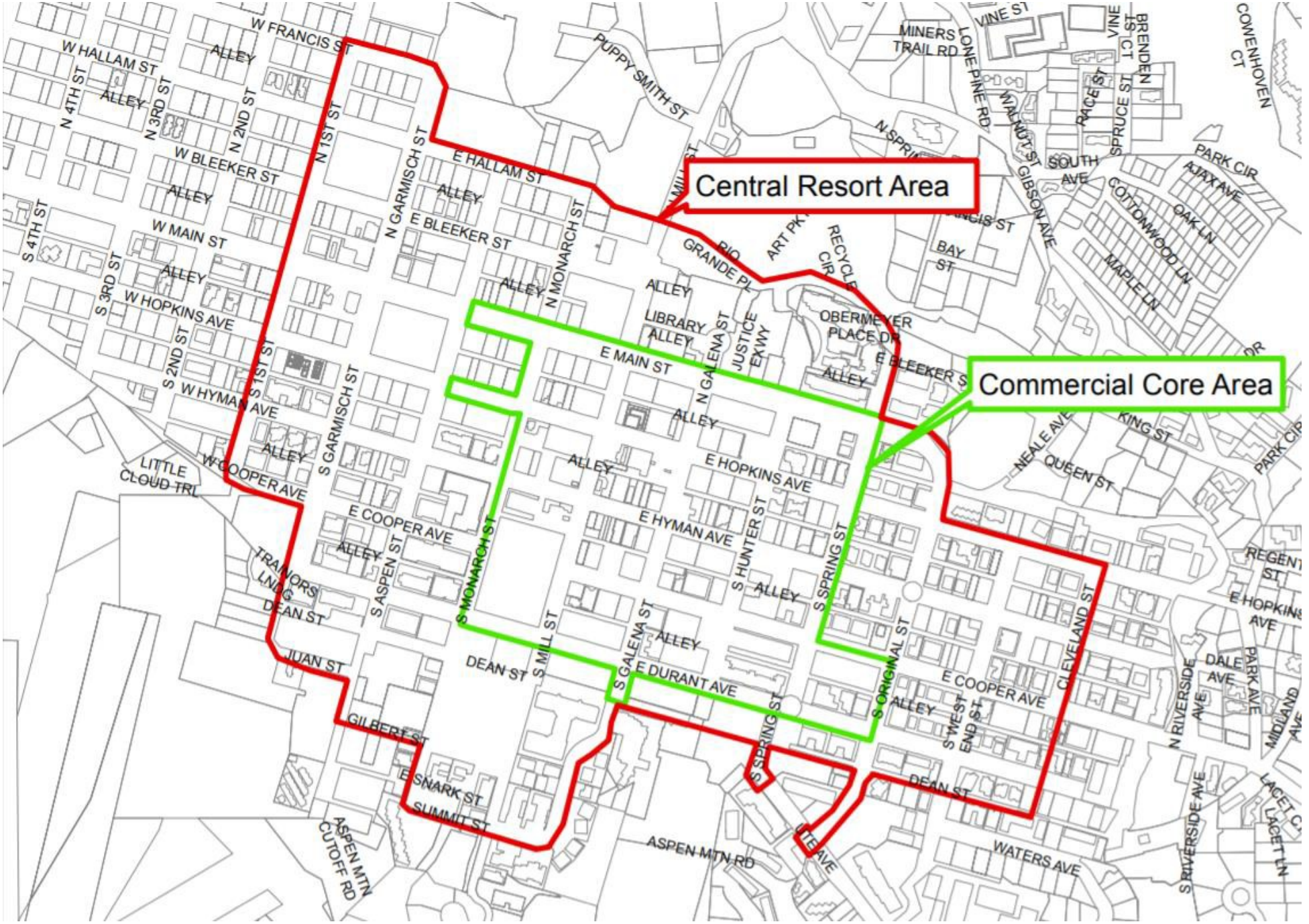
TABLE 1

NOISE CONSTRUCTION EQUIPMENT REQUIRING NOISE SUPPRESSION PLANS

Equipment Category
Auger Drill Rig
Backhoe
Chain Saw
Clam Shovel
Compressor (air)
Concrete Mixer
Concrete Pump
Concrete Saw
Crane (mobile or stationary)
Dozer
Drill Rig
Excavator
Front End Loader
Generator (more than 25 KVA)
Gradall
Grader
Horizontal Hydraulic Boring Jack
Impact Pile Driver (diesel or drop)
Impact Wrench
Jackhammer*
Mounted Impact Hammer (hoe ram)
Paver
Pneumatic Tools
Rock Drill
Scraper
Scarifier
Slurry Machine
Vibratory Pile Driver

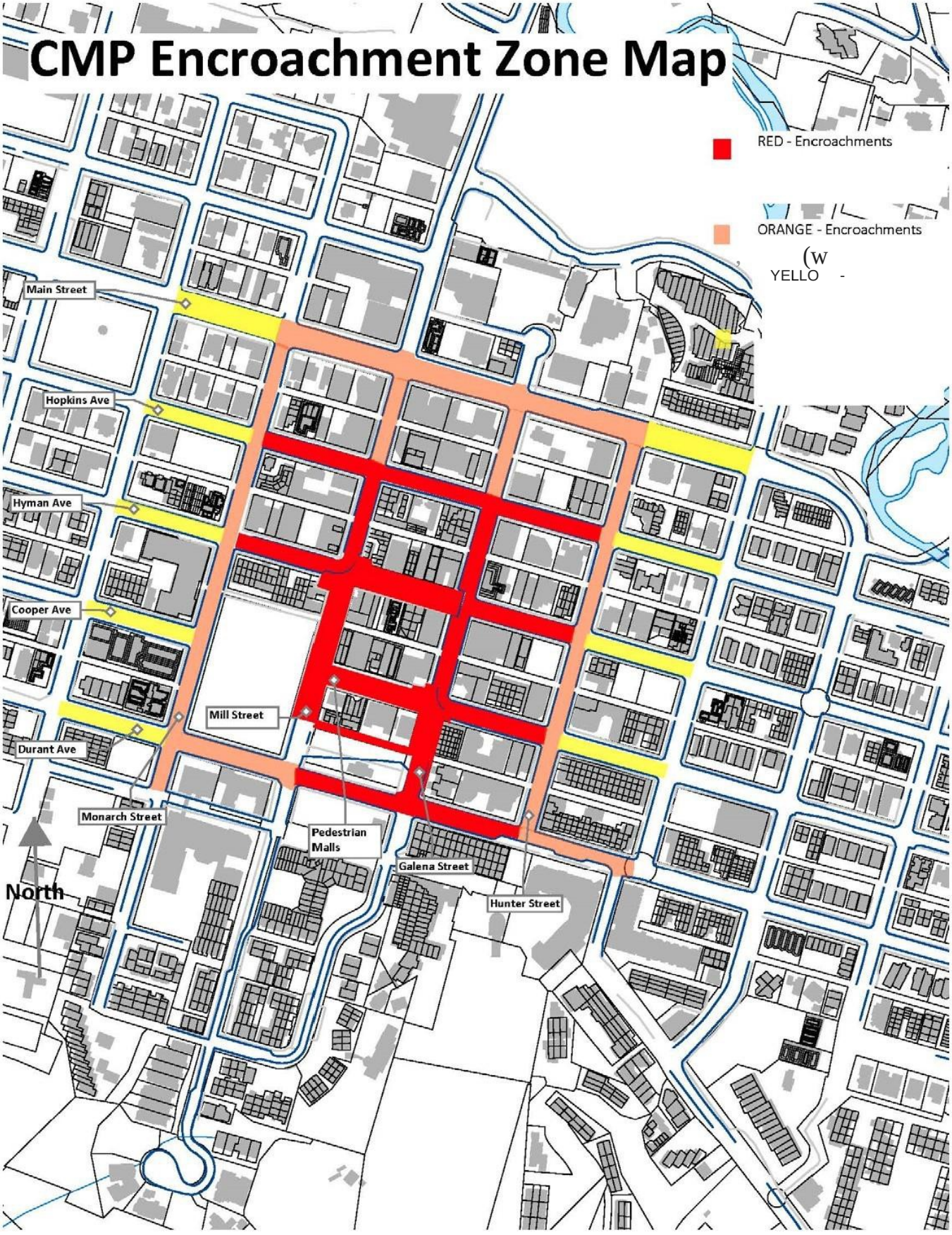


Appendix D – Smuggler Mountain Superfund Site Map



Appendix E - Central Resort Area and Commercial Core Area Map

Appendix F – Encroachment Zone Map



Appendix G – Stormwater Pollution Plan Requirements

Stormwater Management During Construction

The purpose of this chapter is to provide requirements and guidance for selecting and implementing Best Management Practices (BMPs) that will eliminate or reduce the discharge of pollutants from construction and other land-disturbing activities to local waters. The City of Aspen Engineering Department is the administrative authority for stormwater management and erosion prevention and sediment control on construction sites within the City's jurisdiction. By policy, Aspen's requirements for stormwater management during construction are consistent with those of the Colorado Department of Public Health and Environment's (CDPHE) Construction General Permit. The CDPHE Construction General Permit requires a stormwater management plan (SWMP) for development disturbing greater than one acre of land. However, **Aspen requires a Construction SWMP** detailing pollution prevention and erosion prevention and sediment control measures to be installed **for projects that exceed 1000 square feet of soil disturbance,** not just those that disturb greater than one acre. Wherever the City of Aspen and the CDHPE Construction General Permit requirements are in conflict, the more restrictive requirements should be applied.

The regulations and guidelines stated in this chapter incorporate information from a variety of sources including:

- The United States Environmental Protection Agency (EPA),
- State of Colorado/Colorado Department of Public Health and the Environment (CDPHE),
- Urban Drainage and Flood Control District (UDFCD), and
- Northwest Colorado Council of Governments (NWCCOG).

It is important to understand that these regulations are subject to change and/or alterations. For the most up to date copy please contact the City of Aspen Engineering Department.

1.1 PURPOSE

Some construction activities and materials have the potential to pollute our streams, rivers, and lakes if transported during storms or snowmelt. When construction disturbs land, the soil is more easily eroded during rainfall, snowmelt, and wind events. Eroded soil, referred to as sediment, is the greatest pollutant to rivers in Colorado and Aspen. Sediment endangers water resources by reducing water quality and causing the siltation of aquatic habitat for fish and other desirable species. Other pollutants, such as petroleum products, metals, and nutrients, easily attach to soil making sediment even more toxic. Eroded soil also necessitates the cleaning and/or repair of sewers and ditches and the dredging of water bodies. Therefore clearing, grading, and vehicle tracking during construction creates the need for erosion prevention and sediment control on construction sites.

Pollutants other than sediment, such as concrete, solvents, oil, grease and metals, also cause degradation of water quality in receiving streams, and therefore must also be prevented or reduced through construction site stormwater management practices.

The City of Aspen requires compliance with the criteria in this chapter in order to

eliminate or reduce the discharge of pollutants in stormwater runoff and prohibits the discharge of pollutants from construction sites to the City's stormwater system.
These criteria should be followed from start of earth disturbance until final landscaping and stormwater quality measures are effectively in place and accepted by the City. The goal of these requirements is to decrease the amount of pollutants entering the stormwater system from construction and other land disturbing activities.

The following erosion prevention, sediment control, and pollution prevention measures are designed to safeguard persons, protect property, minimize water quality and other environmental impacts, and promote the public welfare by guiding, regulating, and assisting the design, construction, use, and maintenance of **any development or activity which disturbs or breaks the topsoil or results in the movement of earth on land greater than 1000 square feet** in the City of Aspen, Colorado.

1.11 General Requirements

A Construction Stormwater Management Plan (Construction SWMP) must be developed before a project begins that identifies pollution prevention measures and erosion prevention and sediment control (EPSC) measures that are appropriate for the actual site conditions and construction plans for each site – generic plans will not be approved.
The Construction SWMP shall contain a narrative report as well as site plan maps for each phase of the project. The appropriate schedule of implementation shall be identified as well as detailed plans shown on plan sheets with appropriate contours for each phase of the project that will minimize pollution, erosion, and sediment transport.

The Construction SWMP shall be submitted to the City of Aspen as part of the Construction Mitigation Plan (CMP) and along with the grading and drainage plans in order to obtain a building or landscape and grading permit. Plans for grading and erosion control should be considered in the early stages of site planning and drainage design. The Construction SWMP may have to be modified at the time a final site development plan is prepared to better address the site conditions as the plan changes. This modified plan, the *final* Construction SWMP, must be approved by the City of Aspen before ground-breaking activities can occur.

EPSC measures must be designed according to size, slope, and soil type of disturbed drainage areas to prevent erosion and to capture sediment. Potential sources of pollution that might affect quality of stormwater discharges from the site, and practices that will be implemented to prevent that pollution, must be identified and described as part of the Construction SWMP. In addition, sites discharging directly to waters of the state or the City's stormwater system might be required to meet stricter requirements as determined by the City Engineer or City Stormwater Manager.

Implementation of the Construction SWMP (i.e., installation of measures) begins when construction begins, before the initial clearing, grubbing, and grading operations, since these activities can usually increase erosion potential on the site. Implementation and maintenance of pollution prevention measures and EPSC measures are the responsibility of the permit holder and the project/property owner. Because site conditions will affect the suitability and effectiveness of pollution prevention and EPSC measures, the SWMP is a dynamic document that should be referred to frequently, amended and updated as necessary, and kept on site available for review by City of Aspen staff upon request. The City reserves the right to require the permit holder and/or property owner to develop and implement additional measures to prevent and control pollution as needed.

Pollution Prevention

Pollution prevention for construction within the City of Aspen requires compliance with the following criteria:

1. **Develop Construction SWMP** - The Construction SWMP must identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharging from the site.
2. **Practice Good Housekeeping** - The Construction SWMP must describe standard operating procedures and practices that will be implemented to prevent the release of pollutants to the stormwater system from construction activities.
    a. Perform activities in a manner to keep potential pollutants from coming into contact with stormwater.
    b. Prevent spills and leaks (i.e. hydraulic fluid from leaky vehicles or equipment)
    c. Use phasing principals to limit areas of disturbance.
3. **Contain Materials and Waste** – Areas used for staging of construction activities and the storage of soil, chemicals, petroleum-based products and waste materials, including solid and liquid waste, shall be designed to prevent discharge of pollutants in the runoff from the construction site.
    a. Store construction, building, and waste materials in designated areas, protected from rainfall and contact with stormwater run-on and runoff.
    b. Dispose of all construction waste in designated areas (e.g. concrete may only be disposed of in a designated concrete wash-out area) and keep stormwater from flowing onto or off of these areas.
    c. Properly clean and dispose of spilled materials.
4. **Dewatering –** If it is determined that site dewatering will be required, the permit holder / and or property owner must obtain a Construction Dewatering Permit for the CDPHE division of water resources.

Erosion Prevention and Sediment Control

Erosion prevention and sediment control for construction within the City of Aspen requires compliance with the following criteria:

1. **Develop Construction SWMP** – The Construction SWMP plan must demonstrate how stormwater, erosion, and sediment will be handled throughout construction.
2. **Control Site Perimeter** – Construction activities and their impacts must be controlled within the limits of the site.
    a. Delineate the site perimeter on the plans and in the field to prevent disturbing areas outside of the project limits.
    b. Divert upstream run-on safely around or through the construction project. Diversions must not cause downstream property damage and cannot be diverted into another watershed.
    c. Construction vehicles and equipment may enter and exit the site at only one designated access point. This exit must be stabilized with gravel or other appropriate material throughout the duration of the project.
3. **Minimize Disturbed Areas** – Construction activities must be scheduled in correct sequences to minimize the total amount of exposed soil at any given time.
    a. Only clear land which will be actively under construction in the near term (e.g. within the next 1-2 months).
    b. Minimize new land disturbance during the spring runoff/snow melt season.

c. Avoid clearing or disturbing sensitive areas, such as steep slopes and natural waterways, where site improvements will not be constructed or are not necessary.

4. **Stabilize Disturbed Areas** – Disturbed areas must be permanently or temporarily stabilized as soon as possible, but no later than 14 days after last worked, whenever active construction is not occurring on that portion of the site. Disturbed areas must be stabilized by November 15th of each year to minimize erosion and sediment transport that occurs during spring snow melt.
5. **Protect Slopes and Channels** – Concentrated stormwater flows shall be avoided, or the conveyance system shall be protected sufficiently to prevent significant erosion.
    a. Safely convey runoff from the top of the slope and stabilize disturbed slopes as quickly as possible.
    b. Avoid disturbing natural channels.
    c. Ensure the runoff velocity caused by project does not erode channel bottoms.
6. **Install and Maintain EPSC Measures** – All sites must minimize pollution potential by installing and maintaining erosion prevention and sediment control measures throughout the duration of any project.
    a. Erosion prevention measures are those BMPs used to limit erosion of soil from disturbed areas on the site. Erosion prevention measures are required for all disturbed areas. Examples include: Contour Tracking, Rolled Erosion Control Products, Hydro Mulching and similar activities.
    b. Sediment control measures are those BMPs the limit the transport of sediment off-site or downstream of disturbed areas. Sediment control measures are required for all disturbed areas. The most commonly used sediment containment is silt fencing.
    c. Use non-structural and structural best management practices (BMPs) described in this chapter.
    d. All sites must be inspected regularly by a representative from the project to document the condition and effectiveness of BMPs.
7. **Retain Sediment** - Sediment control measures are required at all points where stormwater leaves the site as concentrated flow and at any other points where sediment has the potential to leave the site. **Sediment-laden runoff will be considered a violation of City of Aspen code and can receive fines up to $1000 per day that the site is in violation.**

Best Management Practices

Best Management Practices (BMPs) are activities or controls that are implemented to reduce the potential of discharging pollutants to the stormwater system and include pollution prevention measures and EPSC measures.

2.1 Permit and Construction Process

Step 1 – Develop Construction SWMP

The owner or the contractor should secure the services of a professional engineer knowledgeable in construction management practices and the City of Aspen requirements for stormwater management during construction to develop the Construction SWMP. The SWMP must be submitted as a portion of the CMP along with the building permit application. The Construction SWMP will be reviewed by the City and its comments will need to be addressed before a building permit will be issued.

Projects that disturb greater than one acre of land will also need to apply for a Construction General Permit with the CDPHE. This application also requires the submittal of a SWMP. The Construction SWMP developed for the purposes of construction within the City of Aspen should be adequate to submit with the Construction General Permit Application.

The Construction SWMP shall consist of a written **narrative report and a site plan map** describing the erosion prevention and sediment control measures to be implemented at the site.

Narrative Report

The narrative report must contain, or refer to, the drainage report for the site and should contain, at the minimum, the following:

1. Contact Information – The names, addresses, email addresses and phone numbers of the project/property owner, the applicant or permit holder, the professional engineer preparing the Construction SWMP, and the site person that will be responsible for implementation of the Construction SWMP.
2. Project Description - A brief description of the nature and purpose of the land disturbing activity, the total area of the site, the area of disturbance involved, and project location including township, range, section, and quarter-section, or the latitude and longitude, of the approximate center of the project.
3. Existing Site Conditions - A description of the existing topography, vegetation, and drainage; and a description of any water bodies or conveyances on the site.
4. Downstream/Receiving Waters - Identification of the stormwater system downstream of the site including the receiving water body (e.g. Roaring Fork River).
5. Adjacent Areas - A description of neighboring areas including streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.
6. Soils - A brief description of the soils on the site including information on soil type and character.
7. Historic Conditions – Areas of historic contamination (natural, mining, industrial or agricultural) should be described.
8. Areas and Volumes - An estimate of the quantity (in cubic yards) of excavation and fill involved, and the surface area (in square feet and acres) of the proposed disturbance.
9. Pollution Prevention Measures – A description of the potential sources of pollution from construction activities and materials and the methods described in this chapter which will be used to prevent pollution to the stormwater system. Descriptions
10. Timing of Construction Activity – A schedule indicating the anticipated starting and completion time periods of the site grading and/or construction sequence, including the installation and removal time periods of erosion and sediment control measures, and the time of exposure of each area prior to the installation of temporary EPSC measures.

11. EPSC Measures - A description of the methods described in this chapter which will be used to prevent erosion and control sediment on the site. Descriptions must be site specific. Generic or general statements are not acceptable.
12. Permanent Stabilization - A brief description, including specifications and the landscaping plan, of how the site will be stabilized after construction is completed.
13. Stormwater Management Considerations – A description of how stormwater runoff from and through the site will be handled during construction. Provide a brief description of the post-construction stormwater quality control measures to be included as a part of the site development.
14. Inspection and Maintenance - A description of how each EPSC and pollution prevention measure will be maintained and a statement that the site will be inspected at least once every 14 calendar days and 24 hours before / after forecasted storm events to determine SWMP accuracy and effectiveness; proper installation, location, and condition of EPSC measures; and implementation of construction activity pollution prevention measures. An alternative of inspecting every 7 calendar days regardless of precipitation events or forecasts may also be used. Inspection and maintenance reports should be completed and kept on site following each inspection and made available to City of Aspen staff upon request. Any loss of sediment from the site should be noted and kept in file with these reports, including date and estimated amount of sediment loss and what activities were performed to ensure that sediment loss would not occur again.
15. Calculations - Any calculations made for the design of such items as sediment basins, diversions, or waterways; and calculations for runoff and stormwater detention basin design (if applicable).
16. Other information or data as may be reasonably required by the City of Aspen.
17. The following note - "This Construction Stormwater Management Plan has been placed in the City of Aspen file for this project and appears to fulfill the City of Aspen criteria for the management of construction activities and associated erosion and sedimentation controls. I understand that additional control measures may be needed if unforeseen pollutant transport problems are determined by City of Aspen to occur during this project or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the owner until such time as the project covered by this plan is properly completed, modified or voided."
18. Signature page for owner/developer acknowledging the review and acceptance of responsibility, a statement by the Professional Engineer acknowledging responsibility for the preparation of the SWMP, and a signature of the site representative that will be responsible for implementation of the SWMP in the field acknowledging that they have reviewed and agree to implement and maintain the proposed measures as designed or altered as necessary while meeting the intent of the design.

Site Plan

A plan sheet(s) size 24”x36” that shows the location of erosion prevention and sediment control measures with appropriate contours for each phase of the project must be submitted in addition to the narrative report. The site plan(s) must show:

1. A general location map at a scale of 1-inch to 1,000-feet to 1-inch to 8,000-feet indicating the general vicinity of the site location.
2. The property lines for the site on which the work will be performed.
3. The construction SWMP at a scale of 1-inch to 20-feet up to 1-inch to 200-feet with separate sheets for each phase of site development construction.
4. Existing topography at one- or two-foot contour intervals. The map should extend a minimum of 100-feet beyond the property line or beyond the project’s soil disturbance limits, whichever is larger.

5. Proposed topography at one- or two-foot contour intervals. The map should show elevations, dimensions, location, extent and the slope of all proposed grading, including building site and driveway grades.
6. Delineation **of the entire area draining to the site, drainage areas within the site, and discharge points from each drainage area.**
7. Location of all existing structures and hydrologic features on the site.
8. Location of all structures and natural features on the land adjacent to the site and **within a minimum of 100 feet of the site boundary line.**
9. Delineation of trees and natural feature conservation areas such as steep slopes or natural channels.
10. Location of the storm sewer, street gutter, channel or other waters receiving storm runoff from the site.
11. Location of all proposed structures including drainage features, paved areas, retaining walls, cribbing, plantings and development for the site.
12. Limits of clearing and grading.
13. Location of construction entrance/exit.
14. Location of soil stockpiles - Areas designated for topsoil and subsoil storage.
15. Location of storage equipment maintenance and temporary disposal areas - Areas designated for equipment, fuel, lubricants, chemicals and all temporary construction waste storage. All these areas shall be cleaned out and reclaimed at end of project and waste disposed at legal disposal sites.
16. Location of designated concrete washout and a statement that concrete washout must occur within this location or hauled back to the batch plant.
17. Location of temporary roads designated for use during the construction period.
18. Location of temporary and permanent soil erosion control measures and sediment control measures. Depict all EPSC measures using the standard map symbols given in Figure C1-1. If the project will experience several phases of construction, a plan sheet must be submitted for each phase with the appropriate contours and EPSC measures depicted on the plan for that phase.
19. Detail drawings and specifications - Design drawings and specifications for erosion and sediment controls, temporary diversions and all other practices used for each phase of site development.
20. Other information or data as may be reasonably required by the City.
21. The following note: "This Construction Stormwater Management Plan has been placed in the City of Aspen file for this project and appears to fulfill applicable erosion control and construction management criteria. I understand that additional measures may be required of the owner due to unforeseen erosion, sediment or other pollutant transport off the site or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the owner until such time as the project covered by this plan is properly completed, modified or voided".

19. Signature block for owner/developer acknowledging the review and acceptance of responsibility, a signed and stamped statement by the Professional Engineer acknowledging responsibility for the preparation of the SWMP, and a signature of the site representative that will be responsible for implementation of the SWMP in the field. Should the field representative change, this block should be updated with a signature of the current site representative that will be responsible for implementation of the SWMP.

Step 2 – Approval of Construction SWMP

The Construction SWMP must be approved prior to issuance of a Building Permit by the City. The final SWMP must be consistent with a Drainage Report accepted by the City of Aspen Engineering Department. However, approval of the SWMP does not imply acceptance or approval of Drainage Plans, Utility Plans, Street or Road Plans, Design of Retaining Walls or any other aspect of site development.

2.2.1 Exemptions and Variances

These are generally processed according to the applicable municipal regulations and reviewed on a case-by-case basis.

1. Exemptions from the erosion control planning process may be considered for any of the following by the local jurisdiction if their MS4 permit so allows; however, exempting the owner from the preparation and submittal of a SWMP and/or from applying for a grading permit does not exempt the owner from controlling erosion and sediment movement off the construction site:

a. Agricultural use of land.

b. Grading or an excavation below finished grade for basements, footings, retaining walls, or other structures on single family lots not a part of a larger development or redevelopment project and disturbing a total land surface of less than one (1) acre in size unless required otherwise by local jurisdiction.

c. A sidewalk or driveway authorized by a valid permit.

d. Land-disturbing activities involving less than a total of one (1) acre of disturbed area. Individual lots involving less than one (1) acre of disturbed area in a larger land use change project shall not be considered separate development projects, but rather as a part of the subdivision development as a whole and are not eligible for an exemption. It will be the responsibility of the homeowner or homebuilder to conform to all requirements of the locally-approved SWMP for the development or redevelopment. As part of any Building Permit within a larger development for which an individual erosion control plan is not required, it is recommended the following statement be included: "We have reviewed the Construction Storm Water Management Plan for (subdivision name) and agree to conform to all requirements contained therein and all erosion control requirements of the (insert name of municipality) and the State of Colorado. We further agree to construct and maintain all erosion and sediment control measures required on the individual lot(s) subject to this Building Permit and/or in accordance with the provisions of the Construction Best Management Practices chapter of the *Manual* published by the Urban Drainage and Flood Control District."

e. Underground utility construction including the installation, maintenance and repair of all utilities under hard-surfaced roads, streets or sidewalks provided such land-disturbing activity is confined to the area which is hard-surfaced and if runoff and erosion from soil stockpiles are confined and will not enter the drainage system.

f. Gravel, sand, dirt or topsoil removal as authorized pursuant to approval of the Colorado Mined Land Reclamation Board, provided said approval includes a construction activities management, erosion and sediment control plan that meets the minimums specified.

g. Projects having a period of exposure (from time of land disturbance until permanent erosion control measures are installed) of less than 14 days.

h. Where the owner certifies in writing to the City of Aspen **and the City of Aspen agrees in writing** that the planned work and the final structures or topographical changes will not result in, or contribute to, soil erosion or sediment discharges to any waterway or irrigation ditch and will not interfere with any existing drainage course or waterway in such a manner as to cause damage to any adjacent property, or result in the deposition of debris or sediment on any public right-of-way, will not present any hazard to any persons or property, and will have no detrimental influence upon the public welfare, or upon other properties in the watershed.

2. Variances – The City of Aspen may consider waiving or modifying any of the criteria which are deemed inappropriate or too restrictive for site conditions by granting a variance, provided such variance does not violate the laws of the State of Colorado or the Federal government. Variances may be granted at the time of plan submission or request for plan revision. Variances must be requested in accordance with the subdivision regulations and must define:
a. The criteria from which the applicant seeks a variance.
b. The justification for not complying with the criteria.
c. Alternate criteria or standard measures to be used in lieu of these criteria. The criteria and practices specified within this section of the *Manual* relate to the application of specific erosion and sediment control practices. Other practices or modifications to specified practices may be used if approved by the municipality prior to installation. Such practices must be thoroughly described and detailed to the satisfaction of the local municipality reviewing and approving the erosion control plan. To expedite the review and decisions on variance requests, it is suggested that a variance request be included with, or submitted prior to, the initial SWMP submittal.

Step 3 – Project Construction – Installation, Maintenance, and Inspections

During the construction phase, the following sequence is recommended for the implementation of the project and the SWMP:

1. During preparation of the Construction SWMP, the contractor designated a manager for the implementation of the SWMP. This person will be responsible for implementing all permit conditions and will communicate with City inspectors and inspectors from other agencies.

2. Install all BMPs shown on the SWMP that need to be installed in advance of proceeding with construction, such as construction fencing and limits of disturbance, tree and other natural area protections, construction exits, silt fences, inlet protection, etc.

3. Identify construction equipment and materials storage and maintenance areas and install BMPs to prevent pollutant migration from them.

4. Notify the City that the site is ready for initial inspection.

5. Install any additional BMPs that are called for in the SWMP before grading begins.

   a. Strip off and stockpile topsoil for reuse. Insure that soil stockpile is not located in a drainage path, downhill of a significant drainage area, is protected from erosion and dust migration, and that a sediment control measure is located downstream.

   b. Mulch areas that will remain undisturbed for more than two weeks during the April through September rainstorm season (e.g., stockpiles and overlot graded areas that will remain dormant for an extended period of time), or for more than a month during the October through March period.

   c. Insure that BMPs that need to be installed at different times during the project are installed when called for in the SWMP or by the City's inspector and are in full operation before construction activities begin in areas served by them.

d. Inspections by site Supervisor / Professional Engineer

e. Inspections by City will occur regularly to inspect for general compliance with the approved plan.

f. Maintenance by the permit holder / and or property owner is required for all BMP's regardless of the stage of construction.

g. Maintenance time frame from City

h. Enforcement from City will occur at any time when a permit holder / and or property owner is in violation of the SWWP. Enforcement will escalate from verbal notices of corrective actions to stop work orders based on the number of violations or the severity of any one single violation.

Step 4 – Project Completion – Stabilization, Re-vegetation, and CO

Re-vegetate the site as called for in the SWMP.

1. After all work has been completed in an area
    a. including stabilization and re-vegetation,
    b. clean out and restore any post construction BMPs that may have been used for construction sediment controls.

After all work has been completed on site, prepare the site for a CO inspection by the City and arrange for this inspection by calling (970) 920-5448. Correct all deficiencies and call for follow- up inspection.

The owner or contractor needs to arrange for inspection by the local jurisdiction when the vegetation has reached acceptable level of coverage and maturity. This could take months. In the meantime, the owner or contractor need to inspect the site on a regular basis to determine if there are deficiencies or damage that need to be addressed. The owner is responsible for the performance of all erosion and sedimentation control installations until such time the site's re-vegetation is deemed acceptable and a written notice is provided to the owner by the local jurisdiction.

Once re-vegetation has been accepted, request release of any surety, letters of credit or other financial guarantees the local jurisdiction may have required the permit holder provide at the time the permit is issued. A closure of the construction activities permit from the State should also be pursued at this time.

Appendix H – Construction Waste Management Plan

CONSTRUCTION WASTE MANAGEMENT PLAN

Company Name:	**Contact Person:**
Address:	**Telephone #:**

Project Location: **Contractor:** **Contact Person:** **Telephone #:**

Recycling Coordinators: **Contact Person:** **Telephone #:**

Project Description:

Waste Management Goals:

- This project will recycle or salvage for reuse a minimum of **_____%** by weight of the waste generated on-site.
- Waste reduction will be achieved through building design, and reuse and recycling efforts will be maintained throughout the construction process.

Waste Prevention Planning:

- Compliance with Chittenden Solid Waste District's (C.S.W.D.) mandatory recycling requirements for businesses. C.S.W.D. mandatory recyclables include:
    - newspaper
    - corrugated cardboard
    - white and colored office paper
    - plastic and glass bottles and jars
    - metal cans

- Compliance with C.S.W.D. and Pitkin County's Landfill Bans, i.e. no disposal of tires, appliances, yard waste, mandatory recyclables, hazardous waste, batteries, fluorescent tubes, electronic waste and large metal items.
- Project Construction Documents – Requirements for waste management which will be included in all work. The General Contractor will contractually require all subcontractors to comply with the C.S.W.D. mandatory recycling requirements.
- The Construction Waste Reduction Plan shall be implemented and executed as follows and as on the chart:
    - Salvageable materials will be diverted from disposal where feasible.
    - There will be a designated area on the construction site reserved for a row of dumpsters each specifically labeled for respective materials to be received.
    - Hazardous waste will be managed by a licensed hazardous waste vendor.

1. Salvage	**Yes**	**No**		
Do you plan to salvage materials from this project prior to demolition or construction?				
If YES, list the materials that will be salvaged (e.g., doors, windows, casing, toilets, sinks, fixtures, wood siding, tiles, etc.)	Facility or Salvage company receiving material		Receipt attached Y/N?	
1.				
2.				
3.				
4.				
5.				
2. Source Separation			**Yes**	**No**
Do you plan to source separate any materials for delivery to a recycling facility (e.g. separation of material such as wood, concrete, metal into separate bins)				

Materials	**Hauler**	**Facility**		
3. On-Site Use			**Yes**	**No**

Do you plan any on-site reuse activities for this project (e.g. reuse of wood forms for concrete, on-site crushing of concrete for on-site use, use of reusable containers or pallets for material deliveries, etc.)? (please provide photos of locations these items were reused)		
If yes, please describe:		
4. Disposal at landfill		
Will any materials be disposed of (not recycled or salvaged) at the landfill?	Yes	No
Estimate the number of tons of material to be taken to the landfill for disposal:		

Construction & Demolition Summary Report (CDSR)

This form must be completed for the following types of projects:

- All New Construction
- All Demolition, (excluding single family & duplex)
- Addition/Alteration with construction valuation exceeding $50,000 (excluding single family & duplex residential)

Completed Summary Reports must be submitted prior to sign off at Final Inspection and issuance of certificate of occupancy or temporary certificate of occupancy. A separate Summary Report is required for each permit issued. Deliver completed CDSR to Building Inspector. Call (XXX) XXX-XXXX or email_____with inquiries regarding this form.

DO NOT ATTACH ADDITIONAL ITEMS

Permit #:_____

Project Address: (include floor, suite, etc.): _____

Contact Name:_____Title:_____

Company: _____

Contact Mailing Address: _____

City_____State_____ZIP_____

Phone:_____Fax:_____Email: _____

For lines 1, 2 &3 please check only 1 item for each

1) Project Type: New Construction Addition/Alteration Demolition

2) Building Type: Non-residential Single Family/Duplex Apartment/Multifamily
Sewer/Storm Drain Streets, Sidewalks, Traffic Bridge
Landscape, Parks, Open Space

3) Tenant Improvement (check one): Yes No

4) Size of Project_____sq. ft. Project Valuation $_____

5) Completion Date___/____/_____

6) Describe any difficulties you encountered in complying with your waste management plan and tell us how to remedy the problem in the future.

_____
_____
_____
_____
_____
_____
_____
_____
_____

For City Use Only: App Filed____/____/____ CDSR Submitted____/____/____ Received___/___/___

Counter Staff _____

Diversion Goal Approved Good Cause Non-Attainment Conditional Approval _____

Not Approved, reason _____

Permit #: **Address:**

REQUIREMENT:

Recycle_____% of Asphalt & Concrete materials and no less than_____% of all other debris (measured in tons).

Instructions: Using receipts and invoices list the tonnage of materials recycled during construction or demolition. See the Conversion Worksheet to change all materials to tons. Complete the chart below and make sure your column totals are correct. Include destinations for all materials.

Use Materials Conversion Worksheet to convert from cubic yards, square feet, board feet, etc. to tons
Column A – Tons of scrap or debris for each material type.
Columns B, C, D – quantities of A to be salvaged or reused, recycled, or disposed. See worksheet for definitions.
Column E – list vendors or facilities used for salvage or reuse, recycling, or disposal.

Material Type (circle all that apply)	**A** Total TONS Discarded	**B** Salvage or Reuse*	**C** Recycling*	**D** Disposal*	**E** Actual Facility Used
Asphalt/Concrete					
DO NOT INCLUDE ASPHALT/CONCRETE IN TOTAL OR CALCULATION BELOW					
Brick, Masonry, Tile					
Cabinets, Fixtures, Doors, Windows, Equipment					
Carpet					
Carpet Padding					
Cardboard					
Ceiling Tile (acoustic)					
Drywall (used or painted)					
Drywall (unpainted scrap or sheets)					
Landscape Debris (brush, chips, trees, stumps, etc.)					
Scrap Metal (all types)					
Wood, Pallets, & Lumber (clean & unpainted, no pressure treated wood)					
Non-Recyclable Debris, ACM, LBP (indicate)					
Other (indicate)					
Recyclable Mixed Debris θ					
Column Totals ⇨	A	B	C	D	Confirm Totals Are Correct

* See instructions for definitions θ See C&D Recycling Options for details

7. Fill in the blanks below to calculate your recycling rate.

Column Totals (B ___ + C ___) = ____ ÷ A ____ = _____ x 100 = _____%

Print Name: _____ Signature:_____ Date___/___/____

Appendix I – Holiday Season Dates

Look for the day that December 25th lands on for the current year that you are doing construction.

Years: 2017, 2023, 2028

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			Dec 21	Dec 22	Dec 23	Dec 24
Dec 25	Dec 26	Dec 27	Dec 28	Dec 29	Dec 30	Dec 31
Jan 1	Jan 2	Jan 3				

Years: 2018, 2029, 2035

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				Dec 21	Dec 22	Dec 23
Dec 24	Dec 25	Dec 26	Dec 27	Dec 28	Dec 29	Dec 30
Dec 31	Jan 1	Jan 2	Jan 3			

Years: 2019, 2024, 2030

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				Dec 20	Dec 21	Dec 22
Dec 23	Dec 24	Dec 25	Dec 26	Dec 27	Dec 28	Dec 29
Dec 30	Dec 31	Jan 1	Jan 2			

Years: 2025, 2031, 2036

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				Dec 19	Dec 20	Dec 21
Dec 22	Dec 23	Dec 24	Dec 25	Dec 26	Dec 27	Dec 28
Dec 29	Dec 30	Dec 31	Jan 1	Jan 2		

Years: 2020, 2026, 2037

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					Dec 19	Dec 20
Dec 21	Dec 22	Dec 23	Dec 24	Dec 25	Dec 26	Dec 27
Dec 28	Dec 29	Dec 30	Dec 31	Jan 1	Jan 2	

Years: 2021, 2027, 2032

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					Dec 18	Dec 19
Dec 20	Dec 21	Dec 22	Dec 23	Dec 24	Dec 25	Dec 26
Dec 27	Dec 28	Dec 29	Dec 30	Dec 31	Jan 1	

Years: 2016, 2022, 2033

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						Dec 18
Dec 19	Dec 20	Dec 21	Dec 22	Dec 23	Dec 24	Dec 25
Dec 26	Dec 27	Dec 28	Dec 29	Dec 30	Dec 31	Jan 1

Holiday Restricted Hours in Core	Christmas Restricted Hours in CRA